2022-

United States Court of Appeals for the Federal Circuit

In Re

NIMITZ TECHNOLOGIES LLC,

Petitioner.

On Petition for a Writ of Mandamus to the United States District Court for the District of Delaware in Case Nos. 1:21-cv-01247-CFC, 1:21-cv-01362-CFC, 1:21-cv-01855-CFC and 1:22-cv-00413-CFC Honorable Colm F. Connolly, Judge

PETITION FOR A WRIT OF MANDAMUS

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NOVEMBER 15, 2022

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CERTIFICATE OF INTEREST

Pursuant to Federal Circuit Rule 47.4, Counsel for the Petitioner Nimitz Technologies LLC ("Nimitz") certifies the following:

1. The full name of every party or *amicus* represented by me is:

   Petitioner Nimitz Technologies LLC

2. The name of the real party in interest represented by me is:

   Not applicable.

3. All parent corporations and any publicly held companies that own 10% or more of the stock of the party or *amicus* represented by me are:

   None

4. The names of all law firms and the partners or associates that appeared for the party or *amicus* now represented by me in the trial court or agency or are expected to appear in this court (and who have not or will not enter an appearance in this case) are:

   Raymond W. Mort, III, The Mort Law Firm, Pllc, 501 Congress Ave. Suite 150, Austin, Texas · 78701

5. The title and number of any case known to counsel to be pending in this or any other court or agency that will directly affect or be directly affected by this court's decision in the pending appeal:

   (all cases pending in the District of Delaware)

Backertop Licensing LLC v. August Home, Inc.	1:22-cv-00573-CFC
Backertop Licensing LLC v. Canary Connect, Inc	1:22-cv-0572-CFC
Lamplight Licensing LLC v ABB, Inc.,	1:22-cv-0418-CFC
Lamplight Licensing LLC v Ingam Micro, Inc.,	1:22-cv-1017-CFC
Mellaconic IP, LLC v. Timeclock Plus, LLC	1:22-cv-0244-CFC
Mellaconic IP, LLC v. Deputy, Inc.	1:22-cv-0541-CFC
Creekview IP LLC v. Skullcandy Inc.	1:22-cv-00427-CFC
Creekview IP LLC v. Jabra Corp.	1:22-cv-00426-CFC

Swirlate IP LLC v. Quantela, Inc.	1:22-cv-00235-CFC
Swirlate IP LLC v. Lantronix, Inc.	1:22-cv-00249-CFC
Waverly Licensing LLC v. AT&T Mobility LLC	1:22-cv-00420-CFC
Waverly Licensing LLC v. Granite River Labs Inc.	1:22-cv-00422-CFC

6. Provide any information required under Fed. R. App. P. 26.1(b) (organizational victims in criminal cases) and 26.1(c) (bankruptcy case debtors and trustees). Fed. Cir. R. 47.4(a)(6).

None.

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INTRODUCTION

Petitioner asks the Court to review and reverse the attached Memorandum Order. (Appx1-5). The *sua sponte* Order is an unprecedented abuse of discretion by which the district court demands disclosure by one party of its highly confidential litigation-related information, including materials protected by the attorney client privilege and work-product immunity. The information that the district court demands to be produced is not only confidential and irrelevant to any issue before the Court, but the Patent Act and the Federal Rules of Civil Procedure implicitly prohibit any consideration of the facts that the district court demands.

The road to the Memorandum Order began with the district court implementing a Standing Order that required parties to disclose details about any third-party non-recourse funding that applied to their cases. The Standing Order in and of itself constituted an abuse of discretion as it has no basis in the Patent Act or the Federal Rules of Civil Procedure. But Petitioner had no details to disclose because Petitioner had not utilized any such non-recourse funding and so advised the district court.

In response, on the pretense of ensuring that Petitioner had complied with the statement about non-recourse funding, the district court *sua sponte* ordered Petitioner to appear at a hearing to be interrogated by the district court about its statement. The district court also required that two other sets of plaintiff patent

owners appear at the same hearing. The district court never explained why it ordered Petitioner and other patent owner plaintiffs to appear for hearings to testify as to the accuracy of their statements about non-recourse funding, but did not call any of the Defendants even though Defendants also implicitly denied any such non-recourse funding.

At the hearing, the district court's questions extended far beyond anything relevant to third-party non-recourse funding, which was the ostensible purpose of the hearing.

After the hearing, the district court issued the attached Memorandum Order to Petitioner and essentially the same Order to the other plaintiff patent owners who appeared at the hearing. It demands Petitioner and its counsel disclose, and potentially place on the public record, a wide range of normally protected confidential documents such as the Petitioner's bank statements, and, most dramatically, Petitioner's internal discussions relating to the present ongoing litigations which are protected by the attorney-client privilege and work-product immunity.

The district court now justifies its broad inquisition of the Petitioner and the other plaintiff patent owners as necessary to disclose facts about "the real parties in interest" in the litigations. But both the Patent Act and the Rules of Civil Procedure prohibit the court's consideration of such facts. The district court, however, is

ignoring the law in pursuit of its own crusade to enforce its own version of patent policy without regard that its policy defies governing law.

In *Schlagenhauf v. Holder*, 379 U.S. 104 (1964), the Supreme Court held that mandamus was appropriate to review a district court's order for the mental and physical examination of a party. The Court held that "the petition was properly before the court on a substantial allegation of usurpation of power in ordering any examination of a defendant, an issue of first impression that called for the construction and application of Rule 35 in a new context" and further the "meaning of Rule 35's requirements of 'in controversy' and 'good cause'" also raised issues of first impression." 379 U.S. at 111.

This is a much stronger case for mandamus because the district court has "usurped power" by its *sua sponte* inquisition of the Petitioner, solely in pursuit of the district court's personal views of appropriate patent policy and in defiance of Congress' statutory policy.

RELIEF SOUGHT

Petitioner respectfully requests that the Court issue a writ of mandamus reversing the Memorandum Order, and directing the district court to terminate its judicial inquisition of the Petitioner.

ISSUE PRESENTED

Did the district court abuse discretion in entering its Memorandum Order which includes the following subsidiary issues:

1. Did the district court abuse discretion in entering its Standing Order Regarding Third-Party Litigation Funding Arrangements because third-party funding is not relevant to any issue that the district court may consider?

2. Does the Memorandum Order contradict the Patent Act and the Rules of Civil Procedure by seeking to identify a "real party in interest" that Congress has deemed irrelevant?

3. Does the Memorandum Order violate Petitioner's attorney-client privilege and work-product immunity?

FACTUAL BACKGROUND AND PROCEDURAL HISTORY

A. Nimitz Was Owner of a Patent and Sued Defendants

The Petitioner is Nimitz Technologies LLC ("Nimitz"). Nimitz filed the four cases that form the caption of the Memorandum Order. Nimitz' complaint against CNET Media, Inc. is Appx23-81; Nimitz' complaint against Buzzfeed, Inc. is Appx82-155; Nimitz' complaint against Imagine Learning, Inc. is Appx156-252; and Nimitz' complaint against Bloomberg L.P. is Appx253-351. All four complaints alleged infringement of U.S. Patent No. 7,848,328, entitled "Broadcast Content Encapsulation" (the "'328 Patent") (Appx30-56).

All four complaints affirm that Nimitz is the named assignee of the '328 Patent with the right to enforce the patent. (Appx25 at ¶8; Appx83 at ¶8; Appx157 at ¶7; Appx254 at ¶7). That Nimitz is the lawful assignee of the '328 Patent is reflected in the public records of the United States Patent and Trademark Office as reflected in Appx402-404 of which the Court can take judicial notice.

B. The District Court's Standing Order and Nimitz' Responses

On April 19, 2022, the district court issued a "Standing Order Regarding Third-Party Litigation Funding Arrangements." It required that parties disclose all

> arrangements to receive from a person or entity that is not a party (a "Third-Party Funder") funding for some or all of the party's attorney fees and/or expenses to litigate this action **on a non-recourse basis** ….

(Appx353-354).[1]

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[1] The ordinary distinction between "recourse basis" and "non-recourse basis" is reflected in, for example, publications of the United States Internal Revenue Service:

> There are two types of debts: recourse and nonrecourse. A recourse debt holds the borrower personally liable. All other debt is considered nonrecourse.

(https://apps.irs.gov/app/vita/content/36/36_02_020.jsp). See also *Bennett v. Donovan*, 703 F.3d 582, 585 (D.C. Cir. 2013) ("Reverse mortgages are generally non-recourse loans, meaning that if a borrower fails to repay the loan when due, and if the sale of the home is insufficient to cover the balance, then the lender has no recourse to any of the borrower's other assets"); *First Indep. Bank of Nev. v. Mohave State Bank*, 2010 U.S. Dist. LEXIS 34517 at *6 (D. Ariz. 2010) ("A non-recourse loan is a 'secured loan that allows the lender to attach only the collateral, not the

Nimitz responded that it "has not entered into any arrangement with a Third-Party Funder, as defined in the Court's Standing Order Regarding Third-Party Litigation Funding Arrangements." (Appx357).

C. The District Court *Sua Sponte* Begins Judicial Inquisition of Nimitz

After Nimitz filed its statement, the district court *sua sponte* ordered Nimitz's managing member, Mark Hall, to fly from his home in Houston, Texas to testify in Wilmington, Delaware, at a hearing allegedly directed "to determine whether Plaintiff has complied with the Court's standing order regarding third-party litigation funding." (Appx358-359). The district court directed no such order to any of the Defendants.

Mark Hall appeared and testified at the hearing on November 4, 2022, and answered all the questions that the district court posed to him. (Appx360; Appx373-380). The district court conducted the hearing in a manner of a prosecuting attorney examining an adverse witness at trial. *Id*. That the district court was conducting itself as the investigator, prosecutor and fact-finder was evidenced during the questioning of another patent owner when the district court interrupted questions and

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borrower's personal assets, if the loan is not repaid'") (quoting *Black's Law Dictionary* 1020-21 (9th ed. 2009)).

precluded the patent owner's attorney from asking leading questions. (Appx385 at 104:3-4).

Mr. Hall confirmed that Nimitz had not entered into any non-recourse funding. Indeed, he testified that Nimitz (and potentially he personally) was responsible for all costs and liabilities:

> Q. Now, you said that you would assume liability for the patent, is that right, when you took ownership of it?
>
> A. Correct.
>
> Q. What does that mean?
>
> A. Liability in case of -- any monetary liability from a case that did not proceed well.
>
> Q. So is it your understanding, then, if, in this case, for instance, the Court assigned -- or awarded attorney fees to the other side, that you personally would have to pay for them; is that right?
>
> A. I believe that's true, yes.

(Appx377 at 71:8-18).

Moreover, Nimitz' counsel represented to the district court that he had personal knowledge that in each of the four Nimitz cases the only "funding for some or all of the party's attorney fees and/or expenses to litigate this action" was that

provided by counsel on an advancement basis and Nimitz was obliged to reimburse counsel for all such funds. (Appx370 at 43:17-22; Appx370 at 44:8-11).[2]

In short, notwithstanding the district court's cryptic questioning "whether Plaintiff has complied with the Court's standing order regarding third-party litigation funding," there is no evidence whatsoever of Nimitz receiving any non-recourse funding and plain sworn testimony contradicting such non-recourse funding.

Despite the order for the hearing stating that the purpose of the hearing was to investigate third-party litigation funding, most of the district court's questioning of Mr. Hall had nothing to do with litigation funding. Instead, the district court's inquisition was directed to Nimitz' relationship with Mavexar LLC, a consulting agency which brought the '328 Patent opportunity to Mr. Hall and which is assisting Nimitz in the litigations and licensing of the '328 Patent. (Appx376 at 68:1-19). Mr. Hall testified that he formed Nimitz (Appx375 at 63:19). Nimitz then acquired the

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[2] Rule 1.8(e)(1) of The Delaware Lawyers' Rules Of Professional Conduct specifically allow such advancements:

> (e) A lawyer shall not provide financial assistance to a client in connection with pending or contemplated litigation, except that:
>
> (1) a lawyer may advance court costs and expenses of litigation, the repayment of which may be contingent on the outcome of the matter….

(https://courts.delaware.gov/forms/download.aspx?id=160568).

'328 patent as "an investment, just like stocks." (Appx378 at 74:21). Nimitz left the day-to-day management of the investment vehicle to its consulting agent Mavexar and Nimitz' lawyer. (Appx378 at 74:25-75:2). Mr. Hall testified that his relationship with Mavexar was similar to that of any management agent:

> My understanding of what it is, it's a business opportunity presented to me from Mavexar, similar to when I retained a management company for my rental properties. I don't know the renters. I don't deal with the renters. They do. That's the agreement that we have. If there's proceeds to be made, there's an agreement between us as to what we split. If there's losses incurred, it's my property, I pay for the losses, similar to this.

(Appx378 at 73:20-74:3).

Notably, at the conclusion of the hearing the district court did not voice any concern that Mr. Hall's testimony or any of the documents requested by the district court during the hearing evidenced any third-party "funding for some or all of the party's attorney fees and/or expenses to litigate this action on a non-recourse basis" which was the ostensible issue for which the hearing was ordered. (Appx353-354; Appx358-359). Instead, the district court lamented a dissatisfaction with the lack of existing rules governing the disclosure of persons with interest in the litigation:

> I think the testimony has to give pause to anybody who really is concerned about the integrity of our judicial system, the abuse of our courts, and potential abuse, lack of transparency as to who the real parties before the Court are, about who is making decisions in these types of litigation.

(Appx386 at 107:14-19). While being critical of what he asserted was an abuse of the judicial system, the district court did not explain that concern, and, more importantly, did not cite to any laws or rules that were breached by Nimitz. Even if it were true that there exists a "lack of transparency as to who the real parties before the Court are, about who is making decisions in these types of litigation," the district court could not cite any laws or rules that required a party to disclose what the district court deemed to be "the real parties before the Court" or "who is making decisions in these types of litigation." The integrity of the judicial system is maintained when litigants follow the law, and following the law is not an abuse of the system. In fact, the lack of transparency which the district court was lamenting was the court's personal dissatisfaction with Congress' choice as to what litigants are required to disclose.

D. In Continuing Pursuit of its Unwarranted and Improper Judicial Inquisition, the District Court *Sua Sponte* Orders Nimitz to Provide Documents, Including Privileged and Work-Product Documents

On November 10, 2022, the district court issued its Memorandum Order. The Order began with a "whereas" assertion that followed the district court's comment at end of the hearing but which remained as conclusory and untethered to any legal issues before the court:

> the testimony of witnesses and representations of counsel at the November 4, 2022 hearing give rise to concerns that include but are not limited to the accuracy of statements in filings made by Plaintiff

> Nimitz Technologies LLC ("Nimitz") with the Court and whether the real parties in interest are before the Court….

(Appx2). The district court did not explain its concerns as to the accuracy of Nimitz statements that there is no non-recourse funding, because there is no reasonable basis for such concerns. More importantly, the district court remained unable to articulate any legal basis into inquiring as to what the district court viewed as the "real parties in interest."

The district court entered a Memorandum and Order requiring Nimitz to produce by December 8, 2022, essentially all documents relating to Nimitz and the litigations, including "all communications and correspondence, including emails and text messages" between Nimitz and Mavexar (Nimitz' licensing and litigation agent) and between Mavexar and Nimitz' attorneys. (Appx3-4, Section 3). These documents are manifestly privileged and/or protected by the work-product immunity. The district court further ordered Nimitz to produce by December 8, 2022, irrelevant confidential financial information, including "[a]ny and all monthly statements for any and all bank accounts held by Nimitz for the period July 1, 2021 through April 30, 2022." and that Nimitz:

> submit no later than December 8, 2022 a sworn declaration from Mark Hall that identifies any and all assets owned by Nimitz as of (1) August 30, 2021; (2) September 27, 2021; (3) December 31, 2021; and (4) March 30, 2022.

(Appx4-5).

The Memorandum Order required production of documents that included those that were manifestly privileged and/or protected by the work-product immunity. (Appx3-4, Section 3). No similar Order was issued to any of the Defendants.

E. The District Court's Inquisition and Order Are Unprecedented

At the conclusion of the hearing, the district court essentially admitted that its inquisition was unprecedented and raised novel issues, as the district court asked the parties to identify potential *amici* who could help in the unbounded judicial discovery process the district court had undertaken:

> But it's a lot to digest, and I may ask for supplemental briefing. I'm actually considering inviting *amici* to come in to help. And I would be open to receiving recommendations for amici. *** If you have any recommendations for *amici*, please submit them no later than a week from today. And the cases are going to remain where they are, as I consider these issues.

(Appx386 at 107:20-23). Although not expressly stated, the manifest implication from the district court's request for *amici* is that the district court could not find any precedent for its actions or fashion a legal justification for the inquisition.

F. Essentially Same Memorandum Order Issued in Other Cases

Nimitz was not the only target of the district court's inquisition. The hearing was held jointly with two other series of cases as reflected in the caption of the hearing. (Appx360-361).

Thereafter, the district court issued essentially the same Memorandum Order to the other patent owners in those cases, but not to any Defendants. (Appx405-408, Appx409-413). The district court pursued its inquisition of the plaintiffs in these cases, even though all the cases had already been voluntarily dismissed pursuant to Fed. R. Civ. P. Rule 41(a). (Appx416 item 21; Appx419 item 10; Appx423 item 18; Appx426 item 9).[3]

REASONS FOR ISSUING THE WRIT

Pursuant to the All Writs Act, appellate courts "may issue all writs necessary or appropriate in aid of their respective jurisdictions and agreeable to the usages and principles of law." 28 U.S.C. §1651(a).

Before a court may issue a writ, three conditions must be satisfied:

> First, the party seeking issuance of the writ must have no other adequate means to attain the relief he desires--a condition designed to ensure that the writ will not be used as a substitute for the regular appeals process. Second, the petitioner must satisfy the burden of showing that his right to issuance of the writ is clear and indisputable. Third, even if the first two prerequisites have been met, the issuing court, in the exercise of its discretion, must be satisfied that the writ is appropriate under the circumstances.

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[3] It is well established that a dismissal under Rule 41(a) immediately deprives the court of jurisdiction over the merits of the case. The district court then retains jurisdiction over a very narrow list of collateral issues, such as motions for costs and fees, contempt and Rule 11 sanctions, and motions to confirm arbitral awards. *Cooter & Gell v Hartmarx Corp.*, 496 U.S. 384, 395-98 (1990).

Cheney v. United States Dist. Court, 542 U.S. 367, 380-81 (2004) (internal citations omitted; emphases supplied). See also *In re Volkswagen Grp. of Am.*, 28 F.4th 1203, 1206-07 (Fed. Cir. 2022).

The three conditions will be detailed below. However, the jurisdiction of this Court to issue a writ of mandamus in this case is fully supported by the Supreme Court's decision in *Schlagenhauf v. Holder*, 379 U.S. 104 (1964), in which the Supreme Court held that the circuit court had mandamus jurisdiction to review a district court's order allowing a mental and physical examination of a party under Fed.R.Civ.P. Rule 35. The Supreme Court held that "the petition was properly before the court on a substantial allegation of usurpation of power" and given that the case "raised issues of first impression" which the courts should determine "so as to avoid piecemeal litigation and to settle new and important problems." *Schlagenhauf*, *supra,* 379 U.S. at 111. See also *In re BigCommerce, Inc.*, 890 F.3d 978 (Fed. Cir. 2018) which cited *Schlagenhauf* for the proposition that "the Supreme Court has confirmed that mandamus relief may be appropriate in certain circumstances to decide "basic" and "undecided" questions." *Id*. at 981.

I. Nimitz Has A Clear And Indisputable Right To The Writ

A. The District Court Seeks Information That is Barred From Consideration By Statute and This Court's Precedent

The district court has provided only one justification for the Standing Order Regarding Third-Party Litigation Funding Arrangements, the subsequent Order for

a hearing and the Memorandum Order. That lone justification is the district court's interest in determining "whether the real parties in interest are before the Court." (Appx2). But Congress had already disallowed such inquiries, and, thus, the district court's stated justification only reinforces that the district court's Orders constitute an abuse of discretion.

The Patent Act states plainly and unequivocally that a "patentee shall have remedy by civil action for infringement of his patent." 35 U.S.C. §281.

Congress defined the term "patentee" as "includ[ing] not only the patentee to whom the patent was issued but also the successors in title to the patentee." 35 U.S.C. §100. Thus, Congress provided that the legal title holder to a patent, and only the legal title holder, could enforce a patent.

Further, directly related to the district court's concern of the real parties in interest, Fed. R. Civ. P. Rule 17(a)(1) provides that "[a]n action must be prosecuted in the name of the real party in interest," and then further defined that:

> The following may sue in their own names without joining the *person for whose benefit the action is brought*: ***
>
> (G) a party authorized by statute.

(Emphasis added).

Thus, Congress provided that only the legal title holder of a patent—the patentee—can sue and is the only real party in interest. And Congress explicitly

stated that a "person for whose benefit the action is brought" was *not* the proper plaintiff.

The necessary consequence of the above statutes is that Congress made the choice that "person[s] for whose benefit the action is brought" are inconsequential in patent enforcement. The courts cannot consider facts relating to who might be the beneficiaries of patent enforcement. This is so because where the statutes and rules clearly define the sole real party in interest, the district court has no right to choose to pursue other parties in interest. The classic *expressio unius est exclusio alterius* canon of statutory construction states that the expression of one thing in the Patent Act and the Rules implies the exclusion of others. *Leatherman v. Tarrant Cnty. Narcotics Intel. & Coordination Unit*, 507 U.S. 163, 168 (1993) ("the Federal Rules do address in Rule 9(b) the question of the need for greater particularity in pleading certain actions, but do not include among the enumerated actions any reference to complaints alleging municipal liability under §1983. *Expressio unius est exclusio alterius*.").

Consistent with 35 U.S.C. §§100 and 281 and Rule 17(a)(1), this Court has held that "[t]he Patent Act provides that *only* a patentee shall have remedy by civil action for infringement of his patent.'" *Paradise Creations, Inc. v. U V Sales, Inc.*, 315 F.3d 1304, 1308 (Fed. Cir. 2003) (emphases supplied, internal quotes omitted); see also *Uniloc USA, Inc. v. Apple Inc.*, 784 F. App'x 763, 766 (Fed. Cir. 2019)

(same); *Univ. of S. Fla. Rsch. Found., Inc. v. Fujifilm Med. Sys. U.S.A.*, 19 F.4th 1315, 1319 (Fed. Cir. 2021) ("Only a 'patentee' may bring a civil action for patent infringement").

Further, this Court has also held that "[t]he Supreme Court has long held that 'the profits or damages for infringement cannot be sued for except on the basis of title as patentee, or as such assignee or grantee, to the whole or a part of the patent, and not on the basis merely of the assignment of a right to a claim for profits and damages, severed from such title.'" *Prima Tek II, L.L.C. v. A-Roo Co.*, 222 F.3d 1372, 1381 (Fed. Cir. 2000) (quoting *Crown Die & Tool Co. v. Nye Tool & Mach. Works*, 261 U.S. 24, 42 (1923) in parenthetical).

Nor does it matter that person other than the patent owner has some equitable interest in a patent. "[A] party is not co-owner of a patent for standing purposes merely because he or she holds an equitable interest in the patent" because "a co-owner must hold legal title to the patent." *Taylor v. Taylor Made Plastics*, Inc., 565 F. App'x 888, 889 (Fed. Cir. 2014) (citing *Arachnid, Inc. v. Merit Indus., Inc.*, 939 F.2d 1574, 1578-82 (Fed. Cir. 1991) and *Crown Die & Tool Co. v. Nye Tool & Mach. Works*, 261 U.S. 24, 40-41 (1923)).

Thus, the district court's pursuit of "real parties in interest" is an affront to the plain language of the Patent Act and the Federal Rules, as well as this Court's precedent. It does not matter if a Plaintiff patent owner has funding or if other

persons have some interest in the litigation or even if some third-party may have some equitable rights in the patent. The only relevant issue is whether Nimitz is the legal title holder to the '328 Patent – i.e., is the patentee. Hypothetically, a third-party can by contract own 100% of the recovery in a patent suit but 35 U.S.C. §100 and Rule 17(a)(1)(G) still allow only the patent owner to be the party plaintiff and "real party in interest."

Similarly, there is no abuse or threat to the judicial system if the legal title holders prosecute patent cases without disclosing who might be other parties in interest or who might be making litigation decisions, because that is what Congress has demanded. The only threat and abuse of the judicial system occurs is when anyone defies Congress' choice and attempts to rewrite patent law.

The district court's demands at transparency defy the law by demanding disclosures that Congress deemed irrelevant. Mandamus is necessary to prevent the district court's usurpation of Congress' judgment precluding the type of inquiry that the district court has begun to pursue *sua sponte*. *In re Volkswagen Grp. of Am.*, *supra*, 28 F.4th at 1214 (petition for a writ of mandamus granted because "the district

court's venue conclusions were a clear abuse of discretion for erroneously interpreting governing law and reaching a patently erroneous result").[4]

B. The Memorandum Order Does Not Allow Nimitz to Assert Attorney-Client Privilege or Work Product Immunity

The district court ordered that Nimitz' counsel produce "[a]ny and all communications and correspondence, including emails and text messages" that counsel had with any representative of Mavexar" regarding a wide variety of topics, including litigation-related topics such as:

> d. the nature, scope, and likelihood of any liability….
>
> e. U.S. Patent No. 7,848,328;
>
> f. the retention of O'Kelly & O'Rourke, LLC to represent Nimitz in these cases;
>
> g. the settlement or potential settlement of these cases;
>
> h. the dismissal of these cases; and
>
> i. the November 4, 2022 hearing, including but not limited to the travel expenses and arrangements for Mr. Hall to attend the hearing.

(Appx3-4).

---

[4] There can be no issue as to the fact that Nimitz is the owner of the patent. Courts can take judicial notice that the patent was assigned to Nimitz because the assignment was recorded in the U.S. Patent and Trademark Office as reflected on the official USPTO Patent Center. Cf., *Pandrol USA, LP v. Airboss Ry. Prods*., 320 F.3d 1354, 1368 (Fed. Cir. 2003).

The district court issued the Memorandum Order even after Nimitz' managing member testified that Mavexar was handling the litigation interactions between Nimitz and counsel as Nimitz' "consulting agent." (Appx378 at 73:20-74:3 and 74:25-75:2). The Order is intentionally geared towards disclosing the most profound of all privileged communications which are the documents that pass between client and counsel regarding the details and merits of an ongoing litigation.

These communications between Mavexar and counsel are privileged, however. The communications were manifestly made in confidence for the purpose of obtaining or providing legal assistance for the client and were made between privileged persons. The unchallenged law in all jurisdictions, including federal courts, is that the privileged persons include the client's authorized agent for communications with counsel:

> "Privileged persons" include the client, the attorney(s), and any of their **agents** that help facilitate attorney-client communications or the legal representation.

In re Grand Jury, 705 F.3d 133, 160 (3d Cir. 2012) (quoting *In re Teleglobe Commc'ns Corp*., 493 F.3d 345, 359 (3d Cir. 2007) (quoting Restatement (Third) of the Law Governing Lawyers §§ 68, 70 (2000)).

Similarly, work product immunity applies to work conducted by the agents or consultants for counsel or the client:

> Ordinarily, a party may not discover documents and tangible things that are prepared in anticipation of litigation or for trial by or for

> another party or its representative (including the other party's attorney, **consultant**, surety, indemnitor, insurer, **or agent**).

Fed. R. Civ. P. Rule 26(b)(3)(A) (emphases supplied).

Thus, the district court ordered production of privileged communications.

Mandamus review is appropriate here as to the privilege issue. "[M]andamus may properly be used as a means of immediate appellate review of orders compelling the production of documents claimed to be protected by privilege or other interests in confidentiality." *In re MSTG, Inc*., 675 F.3d 1337, 1341-42 (Fed. Cir. 2012) (citing *Bogosian v. Gulf Oil Corp*., 738 F.2d 587, 591 (3d Cir. 1984)). "In such cases, without mandamus review, litigants might be compelled to disclose documents that are protected from disclosure by strong public policy." *Id*.

Here, the confidentiality of the litigation-related documents "would be lost if review were denied until final judgment, and immediate resolution of this issue would avoid discovery that would undermine the claimed important public interests in protecting settlement discussions from discovery." *In re MSTG, Inc*., *supra*, 675 F.3d at 1342.

C. The Interests of Judicial and Patent Policy Support Issuing the Writ

Patent policy may be considered when interpreting statutes, but patent policy cannot be invoked to change the course promulgated by Congress. "[T]he choice of what patent policy should be lies first and foremost with Congress." *Kimble v.*

Marvel Entm't, LLC, 576 U.S. 446, 463 (2015). Even if there were merit to the district court's concerns, then in this case as in any other "Congress … is [the] proper audience." *Id*. See also *Sony Corp. of Am. v. Universal City Studios, Inc*., 464 U.S. 417, 430-31 (1984) ("[A]s new developments have occurred in this country, it has been the Congress that has fashioned the new rules that technology made necessary"); *Biotechnology Indus. Org. v. District of Columbia*, 496 F.3d 1362, 1373 (Fed. Cir. 2007) ("Congress, as the promulgator of patent policy, is charged with balancing these disparate goals. The present patent system reflects the result of Congress's deliberations. Congress has decided that patentees' present amount of exclusionary power, the present length of patent terms, and the present conditions for patentability represent the best balance between exclusion and free use").

The district court's Standing Order and Memorandum Order do not apply patent policy and instead change it. Congress decreed that only the patent owner may enforce a patent and is the only party in interest. There are manifest reasons for Congress' judgment, not the least being avoiding the disruptions and invasion of privacy that would be incurred in trying to divine who might have "real interests" in a patent as reflected by the district court's Orders. The demanded discovery does not address anything remotely relevant to the laws that Congress wrote.

Although considerations of federal law are sufficient to require rejection of the district court's Orders, it is also plain that the district court's policies are

inconsistent with judicial policies. Allowing the district court's Orders to stand would mean that defendants in any case, patent or otherwise, would be free to inquire into, *inter alia*, plaintiffs' finances and strategies as reflected in the Memorandum Order to determine who are "real parties in interest." Defendants could do so without any basis or evidence just as the district court here has proceeded without any reason to question that Nimitz is the patentee – i.e., the assignee of the patent in suit. The concept should bring fear to every litigant and the bar.

II. Nimitz Has No Other Adequate Means To Obtain Relief

Mandamus is the only way for Nimitz to obtain relief here and there is no opportunity to obtain relief on appeal after final judgment. Without this Court's intervention, the district court will impose its newly formed "real-party in interest in the patent" policy and will force Nimitz to disclose to the public its strategies and privileged communications dealing with the conduct of the litigation.

No appeal from final judgment could remedy the breach of confidentiality and privacy that the district court demands in its Memorandum Order. Indeed, there could be no basis for review after final judgment because none of the documents or "real party interest" issue are matters that are relevant to any issue in the case. Hence, the validity of the Memorandum Order could never be reviewed.

III. Mandamus Is Appropriate Here Because the District Court Has Undertaken an Illegal and Unprecedented Crusade Trying to Enforce its Own Patent Policy In Derogation of Congress' Prerogative and This Court's Precedent

This Court has noted that *Cheney*'s third factor is "a relatively broad and amorphous totality of the circumstances consideration." *Mote v. Wilkie*, 976 F.3d 1337, 1343 (Fed. Cir. 2020) (quoting *In re Kellogg Brown & Root, Inc*., 756 F.3d 754, 762 (D.C. Cir. 2014) (Kavanaugh, J.)). *Cheney's* "phrasing suggests that the third factor is intended more as a final check on granting the writ than as an amorphously discretionary means of denying it, without consulting the other two factors." *Id*.

The hearing and Memorandum Order manifest that the district court is seeking to create a new patent policy requiring disclosure of the "real parties in interest." That the district court is charting a new and not yet fully formulated patent policy is evidenced by its desire for *amici* briefing. (Appx386 at 107:20-23). A district court would not normally request *amici* briefing in applying established law.

But, while seeking further input, the district court has nevertheless proceeded in prosecuting Nimitz to enforce the district court's newly created "real party in interest" patent policy. Whether the policy is laudable or capricious, patent policies are made by Congress, not by district court judges. Nimitz acted according to law, and was entitled to enforce its patent in accordance with established law. The district court's inquisition is plainly designed to establish that persons other than Nimitz

control the litigations and benefit from the litigations. Whether that is true or not, the inquisition is legally irrelevant and the district court's perverse prying into the innards of Plaintiff's finances, business, and prosecution is legally indefensible.

Indeed, it is not even apparent what concerns the district court beyond nebulous concern for who makes litigation decisions or may be a real party in interest. But the district court started with a simple Standing Order directed to non—recourse funding, and is now demanding confidential and privileged litigation documents from Nimitz, untethered to non-recourse funding and lacking any cognizable limit or scope. The district court is effectively a lone-wolf prosecutor, conducting an open-ended investigation of an expanding scope, without any legal justification or providing any basis.

While unusual, the district court's inquisition in this case is not a one-off. As reflected in the caption of the transcript, the district court's hearing involved multiple cases involving two other Plaintiffs.

Further, the district court issued nearly identical Memorandum Orders in all the cases that were heard at the hearing. (Appx405-408, Appx409-413). In addition, the district court is continuing to conduct hearings in other cases raising the same issues. Thus, the district court is creating a novel standard of alleged transparency and public disclosure – to the point of disclosing to the opposite side the details of Plaintiff's inner analyses and discussions that Defendants could not hope to obtain

in discovery because the information is not relevant to any claim or defense in the actions. The new policy is being implemented in a series of cases, and, if allowed, may be introduced by other district courts.

The present exceptional circumstances warrant immediate review, and the district court's aberrant policy is a particularly fit subject for mandamus because its novel policy directly impacts "proper judicial administration" across a number of cases. *In re Volkswagen Grp. of Am.*, *supra*, 28 F.4th at 1207.

Citing *Schlagenhauf*, the Court has also noted that "[t]he Supreme Court has confirmed that the requirements for mandamus are satisfied when the district court's decision involves 'basic' and 'undecided' legal questions." *In re Google LLC*, 949 F.3d 1338, 1341 (Fed. Cir. 2020).

This Court has also held that:

> Importantly, the Supreme Court has confirmed that mandamus relief may be appropriate in certain circumstances to decide "basic" and "undecided" questions. In addition, mandamus may be appropriate "to further supervisory or instructional goals where issues are unsettled and important."

In re BigCommerce, Inc., 890 F.3d 978, 981 (Fed. Cir. 2018) (quoting and citing *Schlagenhauf* and *In re Queen's Univ. at Kingston*, 820 F.3d 1287, 1291 (Fed. Cir. 2016)).

CONCLUSION AND STATEMENT OF RELIEF SOUGHT

For the foregoing reasons, Nimitz respectfully requests that the Court issue a writ of mandamus directing the district court to vacate its Order, and cease the district court's judicial investigation of the Petitioner.

Respectfully Submitted,

November 15, 2022

/s/ George Pazuniak

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ADDENDUM

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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

NIMITZ TECHNOLOGIES LLC, Plaintiff, v. CNET MEDIA, INC., Defendant.	)))))))))	Civ. No. 21-1247-CFC
NIMITZ TECHNOLOGIES LLC, Plaintiff, v. BUZZFEED, INC., Defendant.	)))))))))	Civ. No. 21-1362-CFC
NIMITZ TECHNOLOGIES LLC, Plaintiff, v. IMAGINE LEARNING, INC., Defendant.	)))))))))	Civ. No. 21-1855-CFC

NIMITZ TECHNOLOGIES LLC,	)	
	)	
Plaintiff,	)	
	)	
v.	)	Civ. No. 22-413-CFC
	)	
BLOOMBERG L.P.,	)	
	)	
Defendant.	)	

MEMORANDUM ORDER

Whereas the testimony of witnesses and representations of counsel at the November 4, 2022 hearing give rise to concerns that include but are not limited to the accuracy of statements in filings made by Plaintiff Nimitz Technologies LLC ("Nimitz") with the Court and whether the real parties in interest are before the Court;

NOW THEREFORE, at Wilmington on this Tenth day of November in 2022, it is HEREBY ORDERED that Plaintiff shall produce to the Court no later than December 8, 2022 copies of the following documents and communications that are in the possession, custody, and control of Nimitz, Mark Hall, and/or O'Kelly & O'Rourke, LLC:

1. Any and all retention letters and/or agreements between Nimitz and O'Kelly & O'Rourke, LLC.
2. Any and all communications and correspondence, including emails and text messages, that Mark Hall had with Mavexar, IP Edge, Linh Dietz,

Papool Chaudhari, and/or any representative of Mavexar and/or IP Edge regarding:

a. the formation of Nimitz;

b. assets, including patents, owned by Nimitz;

c. the potential acquisition of assets, including patents, by Nimitz;

d. the nature, scope, and likelihood of any liability, including but not limited to attorney fees, expenses, and litigation costs, Nimitz could incur as a result of its acquisition of and/or assertion in litigation of any patent;

e. U.S. Patent No. 7,848,328;

f. the retention of O'Kelly & O'Rourke, LLC to represent Nimitz in these cases;

g. the settlement or potential settlement of these cases;

h. the dismissal of these cases; and

i. the November 4, 2022 hearing, including but not limited to the travel expenses and arrangements for Mr. Hall to attend the hearing.

3. Any and all communications and correspondence, including emails and text messages, that George Pazuniak and/or any employee or representative of O'Kelly & O'Rourke, LLC had with Mavexar, IP Edge,

Linh Dietz, Papool Chaudhari, and/or any representative of Mavexar and/or IP Edge regarding:

a. the formation of Nimitz;

b. assets, including patents, owned by Nimitz;

c. the potential acquisition of assets, including patents, by Nimitz;

d. the nature, scope, and likelihood of any liability, including but not limited to attorney fees, expenses, and litigation costs, Nimitz could incur as a result of its acquisition of and/or assertion in litigation of any patent;

e. U.S. Patent No. 7,848,328;

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i. the November 4, 2022 hearing, including but not limited to the travel expenses and arrangements for Mr. Hall to attend the hearing.

4. Any and all monthly statements for any and all bank accounts held by Nimitz for the period July 1, 2021 through April 30, 2022.

5. Any and all documents relating to Nimitz's use, lease, purchase, and/or retention of 3333 Preston Road STE 300, #1047, Frisco, TX 75034.

It is FURTHER ORDERED that Plaintiff shall submit no later than December 8, 2022 a sworn declaration from Mark Hall that identifies any and all assets owned by Nimitz as of (1) August 30, 2021; (2) September 27, 2021; (3) December 31, 2021; and (4) March 30, 2022.

CHIEF JUDGE

IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF DELAWARE

STANDING ORDER REGARDING
THIRD-PARTY LITIGATION FUNDING ARRANGEMENTS

At Wilmington on this Eighteenth day of April in 2022, it is HEREBY ORDERED in all cases assigned to Chief Judge Connolly where a party has made arrangements to receive from a person or entity that is not a party (a "Third-Party Funder") funding for some or all of the party's attorney fees and/or expenses to litigate this action on a non-recourse basis in exchange for (1) a financial interest that is contingent upon the results of the litigation or (2) a non-monetary result that is not in the nature of a personal loan, bank loan, or insurance:

1. Within the later of 45 days of this Order or 30 days of the filing of an initial pleading or transfer of the matter to this District, including the removal of a state action, the party receiving such funding shall file a statement (separate from any pleading) containing the following information:

a. The identity, address, and, if a legal entity, place of formation of the Third-Party Funder(s);

b. Whether any Third-Party Funder's approval is necessary for litigation or settlement decisions in the action, and if the answer is in the

affirmative, the nature of the terms and conditions relating to that approval; and

c. A brief description of the nature of the financial interest of the Third-Party Funder(s).

2. Parties may seek additional discovery of the terms of a party's arrangement with any Third-Party Funder upon a showing that the Third-Party Funder has authority to make material litigation decisions or settlement decisions, the interests of any funded parties or the class (if applicable) are not being promoted or protected by the arrangement, conflicts of interest exist as a result of the arrangement, or other such good cause exists.

3. Nothing herein precludes the Court from ordering such other relief as may be appropriate.

Chief Judge

CERTIFICATE OF SERVICE

I hereby certify that I electronically filed the foregoing with the Clerk of the Court for the United States Court of Appeals for the Federal Circuit by using the appellate CM/ECF system on November 15, 2022.

A copy of the foregoing was served upon the following counsel of record by electronic mail and upon the district court by Federal Express:

Via Email to counsel for Defendants:

Jeremy D. Anderson, Fish & Richardson P.C., 222 Delaware Ave., 17th Floor, P.O. Box 1114, Wilmington, DE 19801, janderson@fr.com; and

Neil J. McNabnay and Lance E. Wyatt, Fish & Richardson P.C., 1717 Main Street, Suite 5000, Dallas, TX 75201, mcnabnay@fr.com and wyatt@fr.com.

Via Federal Express to the Court:

The Honorable Colm F. Connolly
J. Caleb Boggs Federal Building
844 N. King Street
Unit 31
Room 4124
Wilmington, DE 19801-3555

November 15, 2022

/s/ George Pazuniak

GEORGE PAZUNIAK
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FORM 19. Certificate of Compliance with Type-Volume Limitations **Form 19**
July 2020

UNITED STATES COURT OF APPEALS
FOR THE FEDERAL CIRCUIT

CERTIFICATE OF COMPLIANCE WITH TYPE-VOLUME LIMITATIONS

Case Number: 22-

Short Case Caption: IN RE NIMITZ TECHNOLOGIES LLC, Petitioner.

Instructions: When computing a word, line, or page count, you may exclude any items listed as exempted under Fed. R. App. P. 5(c), Fed. R. App. P. 21(d), Fed. R. App. P. 27(d)(2), Fed. R. App. P. 32(f), or Fed. Cir. R. 32(b)(2).

The foregoing filing complies with the relevant type-volume limitation of the Federal Rules of Appellate Procedure and Federal Circuit Rules because it meets one of the following:

☑ the filing has been prepared using a proportionally-spaced typeface and includes 5,991 words.

☐ the filing has been prepared using a monospaced typeface and includes _____ lines of text.

☐ the filing contains _____ pages / _____ words / _____ lines of text, which does not exceed the maximum authorized by this court's order (ECF No. _____).

Date: 11/15/2022

Signature: /s/ GEORGE PAZUNIAK

Name: GEORGE PAZUNIAK

2022-

United States Court of Appeals for the Federal Circuit

In Re

NIMITZ TECHNOLOGIES LLC,

Petitioner.

On Petition for a Writ of Mandamus to the United States District Court for the District of Delaware in Case Nos. 1:21-cv-01247-CFC, 1:21-cv-01362-CFC, 1:21-cv-01855-CFC and 1:22-cv-00413-CFC Honorable Colm F. Connolly, Judge

APPENDIX IN SUPPORT OF PETITION FOR A WRIT OF MANDAMUS

GEORGE PAZUNIAK
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NOVEMBER 15, 2022

COUNSEL PRESS, LLC (888) 277-3259

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IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

NIMITZ TECHNOLOGIES LLC, Plaintiff, v. CNET MEDIA, INC., Defendant.	)))))))))	Civ. No. 21-1247-CFC
NIMITZ TECHNOLOGIES LLC, Plaintiff, v. BUZZFEED, INC., Defendant.	)))))))))	Civ. No. 21-1362-CFC
NIMITZ TECHNOLOGIES LLC, Plaintiff, v. IMAGINE LEARNING, INC., Defendant.	)))))))))	Civ. No. 21-1855-CFC

NIMITZ TECHNOLOGIES LLC,	)	
	)	
Plaintiff,	)	
	)	
v.	)	Civ. No. 22-413-CFC
	)	
BLOOMBERG L.P.,	)	
	)	
Defendant.	)	

MEMORANDUM ORDER

Whereas the testimony of witnesses and representations of counsel at the November 4, 2022 hearing give rise to concerns that include but are not limited to the accuracy of statements in filings made by Plaintiff Nimitz Technologies LLC ("Nimitz") with the Court and whether the real parties in interest are before the Court;

NOW THEREFORE, at Wilmington on this Tenth day of November in 2022, it is HEREBY ORDERED that Plaintiff shall produce to the Court no later than December 8, 2022 copies of the following documents and communications that are in the possession, custody, and control of Nimitz, Mark Hall, and/or O'Kelly & O'Rourke, LLC:

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2. Any and all communications and correspondence, including emails and text messages, that Mark Hall had with Mavexar, IP Edge, Linh Dietz,

Papool Chaudhari, and/or any representative of Mavexar and/or IP Edge regarding:

a. the formation of Nimitz;

b. assets, including patents, owned by Nimitz;

c. the potential acquisition of assets, including patents, by Nimitz;

d. the nature, scope, and likelihood of any liability, including but not limited to attorney fees, expenses, and litigation costs, Nimitz could incur as a result of its acquisition of and/or assertion in litigation of any patent;

e. U.S. Patent No. 7,848,328;

f. the retention of O'Kelly & O'Rourke, LLC to represent Nimitz in these cases;

g. the settlement or potential settlement of these cases;

h. the dismissal of these cases; and

i. the November 4, 2022 hearing, including but not limited to the travel expenses and arrangements for Mr. Hall to attend the hearing.

3. Any and all communications and correspondence, including emails and text messages, that George Pazuniak and/or any employee or representative of O'Kelly & O'Rourke, LLC had with Mavexar, IP Edge,

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5. Any and all documents relating to Nimitz's use, lease, purchase, and/or retention of 3333 Preston Road STE 300, #1047, Frisco, TX 75034.

It is FURTHER ORDERED that Plaintiff shall submit no later than December 8, 2022 a sworn declaration from Mark Hall that identifies any and all assets owned by Nimitz as of (1) August 30, 2021; (2) September 27, 2021; (3) December 31, 2021; and (4) March 30, 2022.

CHIEF JUDGE

STAYED,PATENT

U.S. District Court
District of Delaware (Wilmington)
CIVIL DOCKET FOR CASE #: 1:21-cv-01247-CFC

Nimitz Technologies LLC v. CNET Media, Inc.
Assigned to: Judge Colm F. Connolly
Related Cases: 1:21-cv-01246-CFC
1:21-cv-01248-CFC
1:21-cv-01249-CFC
1:21-cv-01360-CFC
1:21-cv-01856-CFC
1:22-cv-00413-CFC
1:21-cv-01363-CFC
1:21-cv-01362-CFC
1:21-cv-01855-CFC
1:21-cv-01364-CFC
Cause: 35:271 Patent Infringement

Date Filed: 08/30/2021
Jury Demand: Plaintiff
Nature of Suit: 830 Patent
Jurisdiction: Federal Question

Plaintiff

Nimitz Technologies LLC represented by **George Pazuniak**
O'Kelly & O'Rourke, LLC
824 North Market Street
Suite 1001a
Wilmington, DE 19801
207-359-8576
Email: GP@del-iplaw.com
LEAD ATTORNEY
ATTORNEY TO BE NOTICED

V.

Defendant

CNET Media, Inc. represented by **Jeremy Douglas Anderson**
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Neil J. McNabnay
Email: mcnabnay@fr.com
PRO HAC VICE
ATTORNEY TO BE NOTICED

Counter Claimant

CNET Media, Inc. represented by **Jeremy Douglas Anderson**
(See above for address)
LEAD ATTORNEY
ATTORNEY TO BE NOTICED

V.

Counter Defendant

Nimitz Technologies LLC represented by **George Pazuniak**
(See above for address)
LEAD ATTORNEY
ATTORNEY TO BE NOTICED

Date Filed	#	Docket Text
08/30/2021	1	COMPLAINT for PATENT INFRINGEMENT filed with Jury Demand against CNET Media, Inc. - Magistrate Consent Notice to Pltf. (Filing fee $ 402, receipt number ADEDC-3688414.) - filed by Nimitz Technologies LLC. (Attachments: # 1 Exhibit 1, # 2 Exhibit 2, # 3 Civil Cover Sheet)(nmg) (Entered: 08/30/2021)
08/30/2021	2	Notice, Consent and Referral forms re: U.S. Magistrate Judge jurisdiction. (nmg) (Entered: 08/30/2021)
08/30/2021	3	Report to the Commissioner of Patents and Trademarks for Patent/Trademark Number(s) 7,848,328. (nmg) (Entered: 08/30/2021)
08/30/2021	4	Summonses Issued (please complete the top portion of the form and print out for use/service). (nmg) (Entered: 08/30/2021)
09/01/2021		Case Assigned to Judge Colm F. Connolly. Please include the initials of the Judge (CFC) after the case number on all documents filed. Associated Cases: 1:21-cv-01246-CFC, 1:21-cv-01247-CFC, 1:21-cv-01248-CFC, 1:21-cv-01249-CFC (rjb) (Entered: 09/01/2021)
09/02/2021	5	SUMMONS Returned Executed by Nimitz Technologies LLC. CNET Media, Inc. served on 8/31/2021, answer due 9/21/2021. (Pazuniak, George) (Entered: 09/02/2021)
09/02/2021	6	Disclosure Statement pursuant to Rule 7.1: No Parents or Affiliates Listed filed by Nimitz Technologies LLC. (Pazuniak, George) (Entered: 09/02/2021)
09/21/2021	7	MOTION to Dismiss for Failure to State a Claim - filed by CNET Media, Inc.. (Attachments: # 1 Text of Proposed Order)(Anderson, Jeremy) (Entered: 09/21/2021)
09/21/2021	8	OPENING BRIEF in Support re 7 MOTION to Dismiss for Failure to State a Claim filed by CNET Media, Inc..Answering Brief/Response due date per Local Rules is 10/5/2021. (Anderson, Jeremy) (Entered: 09/21/2021)
09/21/2021	9	ANSWER to 1 Complaint, with jury demand , COUNTERCLAIM against Nimitz Technologies LLC by CNET Media, Inc..(Anderson, Jeremy) (Entered: 09/21/2021)
09/21/2021	10	Disclosure Statement pursuant to Rule 7.1: No Parents or Affiliates Listed filed by CNET

		Media, Inc.. (Anderson, Jeremy) (Entered: 09/21/2021)
09/21/2021	11	MOTION for Pro Hac Vice Appearance of Attorney Neil J. McNabnay and Lance Wyatt - filed by CNET Media, Inc.. (Anderson, Jeremy) (Entered: 09/21/2021)
09/21/2021		SO ORDERED, re 11 MOTION for Pro Hac Vice Appearance of Attorney Neil J. McNabnay and Lance Wyatt filed by CNET Media, Inc. Signed by Judge Colm F. Connolly on 9/21/2021. (kmd) (Entered: 09/21/2021)
09/21/2021		Pro Hac Vice Attorneys Lance E. Wyatt and Neil J. McNabnay for CNET Media, Inc. added for electronic noticing. Pursuant to Local Rule 83.5 (d)., Delaware counsel shall be the registered users of CM/ECF and shall be required to file all papers. (srs) (Entered: 09/21/2021)
10/01/2021	12	STIPULATION TO EXTEND TIME To File Answering Brief to October 26, 2021 - filed by Nimitz Technologies LLC. (Pazuniak, George) (Entered: 10/01/2021)
10/01/2021		SO ORDERED, re 12 STIPULATION TO EXTEND TIME To File Answering Brief to October 26, 2021 filed by Nimitz Technologies LLC. Set/Reset Answer Deadlines: CNET Media, Inc. answer due 10/26/2021. Signed by Judge Colm F. Connolly on 10/1/2021. (kmd) (Entered: 10/01/2021)
10/12/2021	13	ANSWER to 9 Answer to Complaint, Counterclaim by Nimitz Technologies LLC. (Pazuniak, George) (Entered: 10/12/2021)
10/26/2021	14	ANSWERING BRIEF in Opposition re 7 MOTION to Dismiss for Failure to State a Claim filed by Nimitz Technologies LLC.Reply Brief due date per Local Rules is 11/2/2021. (Attachments: # 1 Exhibit Exh. 1)(Pazuniak, George) (Entered: 10/26/2021)
11/01/2021	15	STIPULATION TO EXTEND TIME Reply Brief In Support of Motion to Dismiss to November 9, 2021 - filed by CNET Media, Inc.. (Anderson, Jeremy) (Entered: 11/01/2021)
11/09/2021	16	REPLY BRIEF re 7 MOTION to Dismiss for Failure to State a Claim filed by CNET Media, Inc.. (Anderson, Jeremy) (Entered: 11/09/2021)
04/28/2022		ORAL ORDER Setting Hearings(An Oral Argument is set for 5/9/2022 at 01:00 PM in Courtroom 4B before Judge Colm F. Connolly.) Ordered by Judge Colm F. Connolly on 4/28/2022. Associated Cases: 1:21-cv-01247-CFC, 1:21-cv-01362-CFC(nmf) (Entered: 04/28/2022)
04/29/2022	17	Joint Letter to The Honorable Colm F. Connolly from George Pazuniak regarding Joint Notice of Related Case In Connection With Hearing Scheduled for May 9, 2022. (Pazuniak, George) (Entered: 04/29/2022)
05/03/2022	18	NOTICE of Citation of Subsequent Authority by Nimitz Technologies LLC re (14 in 1:21-cv-01247-CFC) Answering Brief in Opposition, (10 in 1:21-cv-01362-CFC) Answering Brief in Opposition (Pazuniak, George) (Entered: 05/03/2022)
05/09/2022		Minute Entry for proceedings held before Judge Colm F. Connolly - Oral Argument held on 5/9/2022. (Court Reporter Bonnie Archer.) Associated Cases: 1:21-cv-01247-CFC, 1:21-cv-01362-CFC, 1:21-cv-01855-CFC(nmf) (Entered: 05/10/2022)
05/13/2022		ORAL ORDER: The parties are directed to certify within five days that they have complied with Chief Judge Connolly's April 18, 2022 Standing Order Regarding Disclosure Statements Required by Federal Rule of Civil Procedure 7.1. The parties are also reminded of their obligation to comply with Chief Judge Connolly's April 18, 2022 Standing Order Regarding Third-Party Funding Arrangements. Ordered by Judge Colm F. Connolly on 5/13/2022. (nmf) (Entered: 05/13/2022)

05/18/2022	19	Amended Disclosure Statement pursuant to Rule 7.1: identifying Other Affiliate Red Ventures Hermana UK Ltd, Other Affiliate Red Ventures Porto International UK Ltd, Other Affiliate Red Ventures International UK Ltd, Other Affiliate RV U.S. Pondview Inc, Other Affiliate New Imagitas, Inc., Other Affiliate Red Ventures Intermediate, LLC., Other Affiliate Ruby Sub, LLC., Other Affiliate Ruby Intermediate 2, LLC, Other Affiliate Ruby Intermediate 1, LLC, Other Affiliate GA RV, LLC, Other Affiliate Red Ventures Holdco, LP for CNET Media, Inc. filed by CNET Media, Inc.. (Anderson, Jeremy) (Entered: 05/18/2022)
05/23/2022	20	ORDER TO SHOW CAUSE: Nimitz shall within three days show good cause why it should not be held in contempt for failing to comply with the Court's May 13, 2022 order. Show Cause Response due by 5/26/2022. (See Order for details). Signed by Judge Colm F. Connolly on 5/23/2022. (kmd) (Entered: 05/23/2022)
05/25/2022	21	AMENDED DOCUMENT by Nimitz Technologies LLC. Amendment to 6 Disclosure Statement, Oral Order, . (Pazuniak, George) (Entered: 05/25/2022)
05/25/2022	22	STATEMENT re Oral Order, *Response to Oral Order Re Courts Standing Order Regarding Third-Party Litigation Funding Arrangements* by Nimitz Technologies LLC. (Pazuniak, George) (Entered: 05/25/2022)
05/25/2022	23	RESPONSE to Order re 20 Order to Show Cause, . (Pazuniak, George) (Entered: 05/25/2022)
09/13/2022	24	MEMORANDUM ORDER Setting Hearings: An Evidentiary Hearing is set for 11/4/2022 at 10:00 AM in Courtroom 4B before Judge Colm F. Connolly to determine whether Plaintiff has complied with the Court's standing order regarding third-party litigation funding; Mark Hall shall attend the hearing in person. Signed by Judge Colm F. Connolly on 9/13/2022. Associated Cases: 1:21-cv-01247-CFC, 1:21-cv-01362-CFC, 1:21-cv-01855-CFC, 1:22-cv-00413-CFC(nmf) (Entered: 09/13/2022)
09/28/2022	25	ORDER STAYING CASE: The Court having set an evidentiary hearing for November 4, 2022 to determine whether Plaintiff has complied with the Court's standing order regarding third-party litigation funding; IT IS ORDERED that these cases are stayed pending the outcome of the evidentiary hearing. Signed by Judge Colm F. Connolly on 9/28/2022. Associated Cases: 1:21-cv-01247-CFC, 1:21-cv-01362-CFC, 1:21-cv-01855-CFC, 1:22-cv-00413-CFC(nmf) (Entered: 09/28/2022)
11/04/2022		Minute Entry for proceedings held before Judge Colm F. Connolly - Evidentiary Hearing held on 11/4/2022. (Court Reporter Bonnie Archer.) (nmf) (Entered: 11/04/2022)
11/07/2022	26	Official Transcript of Evidentiary Hearing held on November 4, 2022 before Chief Judge Connolly. Court Reporter/Transcriber Bonnie Archer, Email: bonnie_archer@ded.uscourts.gov. Transcript may be viewed at the court public terminal or order/purchased through the Court Reporter/Transcriber before the deadline for Release of Transcript Restriction. After that date, it may be obtained through PACER. Redaction Request due 11/28/2022. Redacted Transcript Deadline set for 12/8/2022. Release of Transcript Restriction set for 2/6/2023. (nmf) (Entered: 11/07/2022)
11/10/2022	27	MEMORANDUM ORDER. ORDER Setting Deadlines: Notice of Compliance deadline set for 12/8/2022. Signed by Judge Colm F. Connolly on 11/10/2022. (nmf) (Main Document 27 replaced on 11/10/2022) (nmf,). (Entered: 11/10/2022)
11/10/2022		CORRECTING ENTRY: The pdf of the Memorandum Order that issued today has been replaced with a corrected pdf to correct typographical errors. Associated Cases: 1:21-cv-01247-CFC, 1:21-cv-01362-CFC, 1:21-cv-01855-CFC, 1:22-cv-00413-CFC(nmf) (Entered: 11/10/2022)

PACER Service Center			
Transaction Receipt			
11/11/2022 09:59:43			
PACER Login:	goodgolier	**Client Code:**	
Description:	Docket Report	**Search Criteria:**	1:21-cv-01247-CFC Start date: 1/1/1973 End date: 11/14/2022
Billable Pages:	5	**Cost:**	0.50

STAYED,PATENT

U.S. District Court
District of Delaware (Wilmington)
CIVIL DOCKET FOR CASE #: 1:21-cv-01362-CFC

Nimitz Technologies LLC v. BuzzFeed, Inc.
Assigned to: Judge Colm F. Connolly
Related Cases: 1:21-cv-01246-CFC
1:21-cv-01248-CFC
1:21-cv-01249-CFC
1:21-cv-01247-CFC
1:21-cv-01360-CFC
1:21-cv-01363-CFC
1:22-cv-00413-CFC
1:21-cv-01856-CFC
1:21-cv-01364-CFC
1:21-cv-01855-CFC
Cause: 35:1 Patent Infringement

Date Filed: 09/27/2021
Jury Demand: Plaintiff
Nature of Suit: 830 Patent
Jurisdiction: Federal Question

Plaintiff

Nimitz Technologies LLC represented by **George Pazuniak**
O'Kelly & O'Rourke, LLC
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LEAD ATTORNEY
ATTORNEY TO BE NOTICED

V.

Defendant

BuzzFeed, Inc. represented by **Jeremy Douglas Anderson**
Fish & Richardson, P.C.
222 Delaware Avenue, 17th Floor
P.O. Box 1114
Wilmington, DE 19899-1114
302-778-8452
Fax: 302-652-5070
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LEAD ATTORNEY
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Lance E. Wyatt
Email: wyatt@fr.com
PRO HAC VICE
ATTORNEY TO BE NOTICED

Neil J. McNabnay
Email: mcnabnay@fr.com
PRO HAC VICE
ATTORNEY TO BE NOTICED

Counter Claimant

BuzzFeed, Inc. represented by **Jeremy Douglas Anderson**
(See above for address)
LEAD ATTORNEY
ATTORNEY TO BE NOTICED

V.

Counter Defendant

Nimitz Technologies LLC represented by **George Pazuniak**
(See above for address)
LEAD ATTORNEY
ATTORNEY TO BE NOTICED

Date Filed	#	Docket Text
09/27/2021	1	COMPLAINT FOR PATENT INFRINGEMENT filed with Jury Demand against BuzzFeed, Inc. - Magistrate Consent Notice to Pltf. (Filing fee $ 402, receipt number ADEDC-3708128.) - filed by Nimitz Technologies LLC. (Attachments: # 1 Exhibit A, # 2 Exhibit B, # 3 Civil Cover Sheet)(srs) (Entered: 09/27/2021)
09/27/2021	2	Notice, Consent and Referral forms re: U.S. Magistrate Judge jurisdiction. (srs) (Entered: 09/27/2021)
09/27/2021	3	Report to the Commissioner of Patents and Trademarks for Patent/Trademark Number(s) 7,848,328. (srs) (Entered: 09/27/2021)
09/27/2021	4	Summonses Issued (please complete the top portion of the form and print out for use/service). (srs) (Entered: 09/27/2021)
09/29/2021		Case Assigned to Judge Colm F. Connolly. Please include the initials of the Judge (CFC) after the case number on all documents filed. Associated Cases: 1:21-cv-01360-CFC, 1:21-cv-01362-CFC, 1:21-cv-01363-CFC, 1:21-cv-01364-CFC (rjb) (Entered: 09/29/2021)
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10/19/2021		SO ORDERED, re 9 MOTION for Pro Hac Vice Appearance of Attorney Neil J. McNabnay and Lance Wyatt filed by BuzzFeed, Inc. Ordered by Judge Colm F. Connolly on 10/19/2021. (kmd) (Entered: 10/19/2021)
10/20/2021		Pro Hac Vice Attorney Neil J. McNabnay,Lance E. Wyatt for BuzzFeed, Inc. added for electronic noticing. Pursuant to Local Rule 83.5 (d)., Delaware counsel shall be the registered users of CM/ECF and shall be required to file all papers. (myr) (Entered: 10/20/2021)
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11/01/2021	11	STIPULATION TO EXTEND TIME Plaintiff to file Answering Brief in Opposition to Defendant's Motion to Dismiss to November 9, 2021 - filed by BuzzFeed, Inc.. (Anderson, Jeremy) (Entered: 11/01/2021)
11/08/2021	12	ANSWER to 7 Answer to Complaint, Counterclaim by Nimitz Technologies LLC. (Pazuniak, George) (Entered: 11/08/2021)
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11/04/2022		Minute Entry for proceedings held before Judge Colm F. Connolly - Evidentiary Hearing held on 11/4/2022. (Court Reporter Bonnie Archer.) (nmf) (Entered: 11/04/2022)
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11/10/2022	21	MEMORANDUM ORDER. ORDER Setting Deadlines: Notice of Compliance deadline set for 12/8/2022. Signed by Judge Colm F. Connolly on 11/10/2022. (nmf) (Main Document 21 replaced on 11/10/2022) (nmf,). (Entered: 11/10/2022)
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PACER Service Center			
Transaction Receipt			
11/11/2022 10:00:39			
PACER Login:	goodgolier	**Client Code:**	
Description:	Docket Report	**Search Criteria:**	1:21-cv-01362-CFC Start date: 1/1/1973 End date: 11/14/2022
Billable Pages:	4	**Cost:**	0.40

STAYED,PATENT

U.S. District Court
District of Delaware (Wilmington)
CIVIL DOCKET FOR CASE #: 1:21-cv-01855-CFC

Nimitz Technologies LLC v. Imagine Learning, Inc.
Assigned to: Judge Colm F. Connolly
Related Cases: 1:21-cv-01246-CFC
1:21-cv-01248-CFC
1:21-cv-01249-CFC
1:21-cv-01247-CFC
1:21-cv-01360-CFC
1:21-cv-01363-CFC
1:21-cv-01362-CFC
1:21-cv-01364-CFC
1:22-cv-00413-CFC
1:21-cv-01856-CFC
Cause: 35:271 Patent Infringement

Date Filed: 12/31/2021
Jury Demand: Plaintiff
Nature of Suit: 830 Patent
Jurisdiction: Federal Question

Plaintiff

Nimitz Technologies LLC represented by **George Pazuniak**
O'Kelly & O'Rourke, LLC
824 North Market Street
Suite 1001a
Wilmington, DE 19801
207-359-8576
Email: GP@del-iplaw.com
LEAD ATTORNEY
ATTORNEY TO BE NOTICED

V.

Defendant

Imagine Learning, Inc. represented by **Jeremy Douglas Anderson**
Fish & Richardson, P.C.
222 Delaware Avenue, 17th Floor
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Counter Claimant

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Counter Defendant

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12/31/2021	4	Summons Issued with Magistrate Consent Notice attached as to Imagine Learning, Inc. on 12/31/2021. (apk) (Entered: 01/03/2022)
01/05/2022		Case Assigned to Judge Colm F. Connolly. Please include the initials of the Judge (CFC) after the case number on all documents filed. Associated Cases: 1:21-cv-01855-CFC, 1:21-cv-01856-CFC (rjb) (Entered: 01/05/2022)
01/13/2022	5	SUMMONS Returned Executed by Nimitz Technologies LLC. Imagine Learning, Inc. served on 1/12/2022, answer due 2/2/2022. (Pazuniak, George) (Entered: 01/13/2022)
01/29/2022	6	First AMENDED COMPLAINT against All Defendants - filed by Nimitz Technologies LLC. (Attachments: # 1 Exhibit 1, # 2 Exhibit 2)(Pazuniak, George) (Entered: 01/29/2022)
02/01/2022	7	WAIVER OF SERVICE returned executed by Nimitz Technologies LLC: For Imagine Learning, Inc. waiver sent on 1/30/2022, answer due 3/31/2022. (Pazuniak, George) (Entered: 02/01/2022)
03/30/2022	8	MOTION to Dismiss for Failure to State a Claim - filed by Imagine Learning, Inc.. (Attachments: # 1 Text of Proposed Order)(Anderson, Jeremy) (Entered: 03/30/2022)
03/30/2022	9	OPENING BRIEF in Support re 8 MOTION to Dismiss for Failure to State a Claim filed by Imagine Learning, Inc..Answering Brief/Response due date per Local Rules is 4/13/2022. (Anderson, Jeremy) (Entered: 03/30/2022)

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04/19/2022	14	ANSWER to 11 Answer to Amended Complaint, Counterclaim by Nimitz Technologies LLC.(Pazuniak, George) (Entered: 04/19/2022)
04/20/2022	15	REPLY BRIEF re 8 MOTION to Dismiss for Failure to State a Claim filed by Imagine Learning, Inc.. (Anderson, Jeremy) (Entered: 04/20/2022)
04/27/2022		Pro Hac Vice Attorney Neil J. McNabnay and Lance E. Wyatt for Imagine Learning, Inc. added for electronic noticing. Pursuant to Local Rule 83.5 (d)., Delaware counsel shall be the registered users of CM/ECF and shall be required to file all papers. (mpb) (Entered: 04/27/2022)
04/29/2022	16	Joint Letter to The Honorable Colm F. Connolly from George Pazuniak regarding Joint Notice of Related Case In Connection With Hearing Scheduled for May 9, 2022. (Pazuniak, George) (Entered: 04/29/2022)
04/29/2022		ORAL ORDER Setting Hearings(An Oral Argument is set for 5/9/2022 at 01:00 PM in Courtroom 4B before Judge Colm F. Connolly.) Ordered by Judge Colm F. Connolly on 4/29/2022. (nmf) (Entered: 04/29/2022)
05/09/2022		Minute Entry for proceedings held before Judge Colm F. Connolly - Oral Argument held on 5/9/2022. (Court Reporter Bonnie Archer.) Associated Cases: 1:21-cv-01247-CFC, 1:21-cv-01362-CFC, 1:21-cv-01855-CFC(nmf) (Entered: 05/10/2022)
05/25/2022	17	Disclosure Statement pursuant to Rule 7.1: No Parents or Affiliates Listed filed by Nimitz Technologies LLC. (Pazuniak, George) (Entered: 05/25/2022)
05/25/2022	18	STATEMENT *Re Courts Standing Order Regarding Third-Party Litigation Funding Arrangements* by Nimitz Technologies LLC. (Pazuniak, George) (Entered: 05/25/2022)
09/13/2022	19	MEMORANDUM ORDER Setting Hearings: An Evidentiary Hearing is set for 11/4/2022 at 10:00 AM in Courtroom 4B before Judge Colm F. Connolly to determine whether Plaintiff has complied with the Court's standing order regarding third-party litigation funding; Mark Hall shall attend the hearing in person. Signed by Judge Colm F. Connolly on 9/13/2022. Associated Cases: 1:21-cv-01247-CFC, 1:21-cv-01362-CFC, 1:21-cv-01855-CFC, 1:22-cv-00413-CFC(nmf) (Entered: 09/13/2022)
09/28/2022	20	ORDER STAYING CASE: The Court having set an evidentiary hearing for November 4,

		2022 to determine whether Plaintiff has complied with the Court's standing order regarding third-party litigation funding; IT IS ORDERED that these cases are stayed pending the outcome of the evidentiary hearing. Signed by Judge Colm F. Connolly on 9/28/2022. Associated Cases: 1:21-cv-01247-CFC, 1:21-cv-01362-CFC, 1:21-cv-01855-CFC, 1:22-cv-00413-CFC(nmf) (Entered: 09/28/2022)
11/04/2022		Minute Entry for proceedings held before Judge Colm F. Connolly - Evidentiary Hearing held on 11/4/2022. (Court Reporter Bonnie Archer.) (nmf) (Entered: 11/04/2022)
11/07/2022	21	Official Transcript of Evidentiary Hearing held on November 4, 2022 before Chief Judge Connolly. Court Reporter/Transcriber Bonnie Archer, Email: bonnie_archer@ded.uscourts.gov. Transcript may be viewed at the court public terminal or order/purchased through the Court Reporter/Transcriber before the deadline for Release of Transcript Restriction. After that date, it may be obtained through PACER. Redaction Request due 11/28/2022. Redacted Transcript Deadline set for 12/8/2022. Release of Transcript Restriction set for 2/6/2023. (nmf) (Entered: 11/07/2022)
11/10/2022	22	MEMORANDUM ORDER. ORDER Setting Deadlines: Notice of Compliance deadline set for 12/8/2022. Signed by Judge Colm F. Connolly on 11/10/2022. (nmf) (Main Document 22 replaced on 11/10/2022) (nmf,). (Entered: 11/10/2022)
11/10/2022		CORRECTING ENTRY: The pdf of the Memorandum Order that issued today has been replaced with a corrected pdf to correct typographical errors. Associated Cases: 1:21-cv-01247-CFC, 1:21-cv-01362-CFC, 1:21-cv-01855-CFC, 1:22-cv-00413-CFC(nmf) (Entered: 11/10/2022)

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STAYED,PATENT

U.S. District Court
District of Delaware (Wilmington)
CIVIL DOCKET FOR CASE #: 1:22-cv-00413-CFC

Nimitz Technologies LLC v. Bloomberg L.P.
Assigned to: Judge Colm F. Connolly
Related Cases: 1:21-cv-01246-CFC
1:21-cv-01248-CFC
1:21-cv-01249-CFC
1:21-cv-01247-CFC
1:21-cv-01360-CFC
1:21-cv-01363-CFC
1:21-cv-01362-CFC
1:21-cv-01364-CFC
1:21-cv-01855-CFC
1:21-cv-01856-CFC
Cause: 35:271 Patent Infringement

Date Filed: 03/30/2022
Jury Demand: Plaintiff
Nature of Suit: 830 Patent
Jurisdiction: Federal Question

Plaintiff

Nimitz Technologies LLC represented by **George Pazuniak**
O'Kelly & O'Rourke, LLC
824 North Market Street
Suite 1001a
Wilmington, DE 19801
207-359-8576
Email: GP@del-iplaw.com
LEAD ATTORNEY
ATTORNEY TO BE NOTICED

V.

Defendant

Bloomberg L.P. represented by **Jeremy Douglas Anderson**
Fish & Richardson, P.C.
222 Delaware Avenue, 17th Floor
P.O. Box 1114
Wilmington, DE 19899-1114
302-778-8452
Fax: 302-652-5070
Email: janderson@fr.com
LEAD ATTORNEY
ATTORNEY TO BE NOTICED

Lance E. Wyatt
Email: wyatt@fr.com
PRO HAC VICE
ATTORNEY TO BE NOTICED

Neil J. McNabnay
Email: mcnabnay@fr.com
PRO HAC VICE
ATTORNEY TO BE NOTICED

Counter Claimant

Bloomberg L.P. represented by **Jeremy Douglas Anderson**
(See above for address)
LEAD ATTORNEY
ATTORNEY TO BE NOTICED

V.

Counter Defendant

Bloomberg L.P. represented by **Jeremy Douglas Anderson**
(See above for address)
LEAD ATTORNEY
ATTORNEY TO BE NOTICED

Date Filed	#	Docket Text
03/30/2022	1	COMPLAINT FOR PATENT INFRINGEMENT - filed with Jury Demand against Bloomberg L.P. - Magistrate Consent Notice to Pltf. (Filing fee $ 402, receipt number ADEDC-3838474.) - filed by Nimitz Technologies LLC. (Attachments: # 1 Exhibit 1, # 2 Exhibit 2, # 3 Civil Cover Sheet)(mal) (Entered: 03/31/2022)
03/30/2022	2	Notice, Consent and Referral forms re: U.S. Magistrate Judge jurisdiction. (mal) (Entered: 03/31/2022)
03/30/2022	3	Report to the Commissioner of Patents and Trademarks for Patent/Trademark Number(s) 7,848,328. (mal) (Entered: 03/31/2022)
03/31/2022	4	Summons Issued as to Bloomberg L.P. on 3/31/2022. (mal) (Entered: 03/31/2022)
04/06/2022		Case Assigned to Judge Colm F. Connolly. Please include the initials of the Judge (CFC) after the case number on all documents filed. (rjb) (Entered: 04/06/2022)
04/21/2022	5	SUMMONS Returned Executed by Nimitz Technologies LLC. Bloomberg L.P. served on 4/21/2022, answer due 5/12/2022. (Pazuniak, George) (Entered: 04/21/2022)
05/12/2022	6	MOTION to Dismiss for Failure to State a Claim - filed by Bloomberg L.P.. (Attachments: # 1 Text of Proposed Order)(Anderson, Jeremy) (Entered: 05/12/2022)
05/12/2022	7	OPENING BRIEF in Support re 6 MOTION to Dismiss for Failure to State a Claim filed by Bloomberg L.P..Answering Brief/Response due date per Local Rules is 5/26/2022. (Anderson, Jeremy) (Entered: 05/12/2022)
05/12/2022	8	ANSWER to 1 Complaint, with Jury Demand *Affirmative Defenses*, COUNTERCLAIM against Bloomberg L.P. by Bloomberg L.P..(Anderson, Jeremy) (Entered: 05/12/2022)
05/12/2022	9	Disclosure Statement pursuant to Rule 7.1: identifying Corporate Parent Bloomberg L.P., Other Affiliate BLP Acquisition L.P. for Bloomberg L.P. filed by Bloomberg L.P.. (Anderson, Jeremy) (Entered: 05/12/2022)
05/12/2022	10	MOTION for Pro Hac Vice Appearance of Attorney Lance Wyatt and Neil McNabnay - filed by Bloomberg L.P.. (Anderson, Jeremy) (Entered: 05/12/2022)

05/12/2022		SO ORDERED, re 10 MOTION for Pro Hac Vice Appearance of Attorney Lance Wyatt and Neil McNabnay, filed by Bloomberg L.P. Ordered by Judge Colm F. Connolly on 5/12/2022. (kmd) (Entered: 05/12/2022)
05/25/2022	11	Disclosure Statement pursuant to Rule 7.1: No Parents or Affiliates Listed filed by Nimitz Technologies LLC. (Pazuniak, George) (Entered: 05/25/2022)
05/25/2022	12	STATEMENT *Re Courts Standing Order Regarding Third-Party Litigation Funding Arrangements* by Nimitz Technologies LLC. (Pazuniak, George) (Entered: 05/25/2022)
05/25/2022	13	ANSWER to 8 Answer to Complaint, Counterclaim by Nimitz Technologies LLC. (Pazuniak, George) (Entered: 05/25/2022)
05/26/2022	14	ANSWERING BRIEF in Opposition re 6 MOTION to Dismiss for Failure to State a Claim filed by Nimitz Technologies LLC.Reply Brief due date per Local Rules is 6/2/2022. (Pazuniak, George) (Entered: 05/26/2022)
06/02/2022	15	REPLY BRIEF re 6 MOTION to Dismiss for Failure to State a Claim filed by Bloomberg L.P.. (Anderson, Jeremy) (Entered: 06/02/2022)
06/06/2022		CORRECTING ENTRY: The motion for pro hac vice filed today as D.I. 16, has been deleted per request of filer as the document has already been filed in this case. (nmf) (Entered: 06/06/2022)
06/06/2022		Pro Hac Vice Attorneys Neil J. McNabnay and Lance E. Wyatt for Bloomberg L.P. added for electronic noticing. Pursuant to Local Rule 83.5 (d)., Delaware counsel shall be the registered users of CM/ECF and shall be required to file all papers. (srs) (Entered: 06/06/2022)
09/13/2022	16	MEMORANDUM ORDER Setting Hearings: An Evidentiary Hearing is set for 11/4/2022 at 10:00 AM in Courtroom 4B before Judge Colm F. Connolly to determine whether Plaintiff has complied with the Court's standing order regarding third-party litigation funding; Mark Hall shall attend the hearing in person. Signed by Judge Colm F. Connolly on 9/13/2022. Associated Cases: 1:21-cv-01247-CFC, 1:21-cv-01362-CFC, 1:21-cv-01855-CFC, 1:22-cv-00413-CFC(nmf) (Entered: 09/13/2022)
09/28/2022	17	ORDER STAYING CASE: The Court having set an evidentiary hearing for November 4, 2022 to determine whether Plaintiff has complied with the Court's standing order regarding third-party litigation funding; IT IS ORDERED that these cases are stayed pending the outcome of the evidentiary hearing. Signed by Judge Colm F. Connolly on 9/28/2022. Associated Cases: 1:21-cv-01247-CFC, 1:21-cv-01362-CFC, 1:21-cv-01855-CFC, 1:22-cv-00413-CFC(nmf) (Entered: 09/28/2022)
11/04/2022		Minute Entry for proceedings held before Judge Colm F. Connolly - Evidentiary Hearing held on 11/4/2022. (Court Reporter Bonnie Archer.) (nmf) (Entered: 11/10/2022)
11/10/2022	18	MEMORANDUM ORDER. ORDER Setting Deadlines: Notice of Compliance deadline set for 12/8/2022. Signed by Judge Colm F. Connolly on 11/10/2022. (nmf) (Main Document 18 replaced on 11/10/2022) (nmf,). (Entered: 11/10/2022)
11/10/2022		CORRECTING ENTRY: The pdf of the Memorandum Order that issued today has been replaced with a corrected pdf to correct typographical errors. Associated Cases: 1:21-cv-01247-CFC, 1:21-cv-01362-CFC, 1:21-cv-01855-CFC, 1:22-cv-00413-CFC(nmf) (Entered: 11/10/2022)

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Billable Pages:	4	**Cost:**	0.40

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

NIMITZ TECHNOLOGIES LLC, **Plaintiff,** **v.** **CNET MEDIA, INC.,** **Defendant.**	**Case No.** **Jury Trial Demanded**

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Nimitz Technologies LLC, by and through the undersigned counsel, files this Complaint for patent infringement against Defendant CNET Media, Inc., and in support states, all upon information and belief:

PARTIES

1. Plaintiff Nimitz Technologies LLC is a limited liability company organized and existing under the laws of the State of Texas and having its office address at 3333 Preston Road STE 300, #1047, Frisco, TX 75034 ("Nimitz" or "Plaintiff").

2. Defendant CNET Media, Inc. is a corporation organized and existing under the laws of the State of Delaware, with its registered office located at The Corporation Service Company, 251 Little Falls Drive, Wilmington, DE 19808, and provides the interactive service streamed as https://www.gamespot.com. ("CNET/GameSpot" or "Defendant"). The "Terms of Use" for Gamespot.com state:

TERMS OF USE

EFFECTIVE DATE October 30, 2020

> Welcome to the network of interactive services provided by CNET Media, Inc., its affiliates and its subsidiaries (collectively "us," or "we"). These Terms of Use, along with our Privacy Policy (collectively, this "Agreement") govern your use of the websites, Application (as defined herein), and other products and services offered by us or our affiliates that include an authorized link to these Terms of Use (collectively, the "Services").
>
> Please review these Terms of Use as well as our Privacy Policy carefully before using the Services because they affect your rights. By using any of the Services, you: accept this Agreement and agree to be legally bound by it; acknowledge that this Agreement is supported by reasonable and valuable consideration, including, without limitation, your ability to visit, use and/or submit information to our Services; and represent and warrant that you are of legal age and have sufficient capacity and authority to form a binding contract with us, on your own behalf or on behalf of any company or other entity for whom you may be acting. If you do not want to agree to the Agreement, or if you do not meet all of these requirements, you must not access or use the Services (including by installation or use of the Application).
>
> THIS AGREEMENT CONTAINS A BINDING ARBITRATION AGREEMENT, WHICH PROVIDES THAT YOU AND WE AGREE TO RESOLVE CERTAIN DISPUTES THROUGH BINDING INDIVIDUAL ARBITRATION AND GIVE UP ANY RIGHT TO HAVE THOSE DISPUTES DECIDED BY A JUDGE OR A JURY. YOU HAVE THE RIGHT TO OPT OUT OF OUR AGREEMENT TO ARBITRATE. SEE THE "LEGAL DISPUTES" SECTION OF THIS AGREEMENT.

(https://www.redventures.com/legal/cmg-terms-of-use) (CNET Media, Inc. is a division of Red Ventures, LLC, a limited liability company existing under the laws of the State of North Carolina).

JURISDICTION AND VENUE

3. This is an action for patent infringement arising under the patent laws of the United States, 35 U.S.C. § 1 *et seq*., including 35 U.S.C. §§ 271. This Court has subject matter jurisdiction under 28 U.S.C. §§ 1331 and 1338(a).

4. This Court has personal jurisdiction over Defendant at least because Defendant is a corporation organized under the laws of the State of Delaware.

5. Venue is proper in this Judicial District under 28 U.S.C. §§ 1391 and 1400(b) because Defendant is deemed to be a resident of this District.

PATENT 7,848,328

6. U.S. Patent No. 7,848,328, entitled "Broadcast Content Encapsulation" (the "'328 Patent") was duly and legally issued on December 7, 2010. A true and correct copy of the '328 Patent is attached as Exhibit 1.

7. The Patent disclosed and exemplified a unique and valuable system and method for delivering multiple versions of content which are mapped to streams carrying data for those multiple versions. The data streams are encapsulated into User Datagram Protocol (UDP) packets; the UDP destination port fields of the packets are given component-identifying values. A user equipment (UE) receiving the transmitted service identifies desired components based on the UDP destination port field values. The UE further encapsulates desired component UDP packets into Internet Protocol (IP) packets, and may assign component-identifying values to fields of the IP packets (e.g., the IP source address and/or IP destination address).

8. Plaintiff is the named assignee of, owns all right, title and interest in, and has standing to sue and recover all past damages for infringement of the '328 Patent.

9. The method claims of the '328 Patent were allowed by the United States Patent and Trademark Office based on the Office's determination that the method claims included mapping that

> comprises assigning a specific value to each component for a predefined field of a packet according to a second communication protocol, the specific value distinguishing the component from other components, and the encapsulating comprises encapsulating the packet streams according to one or more lower layer protocols without encapsulating the packet streams according to the second communication protocol.

(Notice of Allowability).

10. All the claims differed from the closest prior art, Arad et al. US Pat. 7,590,991, Balakrishnan et al. US Pat. 7,227,899, Poli et al. US Pat Appln. 2005/0122976, Anschutz et al. US Pat. Appln. 2004/0230695 and Rakib, Selim Shlomo US Pat. 6,970, 127, all of which disclosed conventional communication systems, either singularly or in combination, and, thus, failed to anticipate or render the above features obvious. (Notice of Allowability).

11. The method claims are patent eligible under 35 U.S.C. § 101. The claims are not abstract. As reflected in the Notice of Allowance, the claims are directed to a novel improvement that, unlike conventional art, comprises assigning a specific value to each component for a predefined field of a packet according to a second communication protocol, with the specific value distinguishing the component from other components, and the encapsulating comprises encapsulating the packet streams according to one or more lower layer protocols without encapsulating the packet streams according to the second communication protocol.

12. Thus, the '328 Patent claims focus on specific improvements in computer capabilities as opposed to an invention that simply uses computers as a tool. The focus of the claimed advance is on a solution to a technological problem arising in computer operations and provides a specific improvement in computer capabilities or functionality, rather than only claiming a desirable result or function.

13. Further, Claim 1 and its dependent claims, individually and as an ordered combination, recite an inventive concept, which is manifestly more than the application of an abstract idea using well-understood, routine, and conventional activities previously known to the industry. As stated by the Examiner, prior to the present invention, there was no prior art disclosing a system and method for encapsulating data streams, and particularly where the data

streams related to a specific content that is mapped to components of a transmission service that delivers multiple versions of that specific content. Such content may include audio data, video data and/or other types of data, some or all of which may be any combination of real-time and non-real-time data. For example, versions of the content may vary based on a CODEC used to encode media for the content, based on transmission parameters (e.g., bit rate) for a data stream providing such media, based on a language for subtitles or other text associated with the specific content, based on other types of data associated with the content, etc. The data stream for each component is encapsulated into packets according to a communication protocol such as, e.g., User Datagram Protocol (UDP). A common field of each packet header, which in some embodiments is the UDP destination port field, is given a value identifying the corresponding component. A user equipment (UE) receiving a transmission of the service identifies desired components based on the common field value.

COUNT I – INFRINGEMENT OF THE '328 PATENT

14. Plaintiff restates and incorporates by reference the foregoing allegations.

15. In violation of 35 U.S.C. § 271(a), CNET/GameSpot has practiced and continues to practice the method of at least Claim 1 of the '328 Patent by streaming the content as https://www.gamespot.com ("Accused Instrumentality").

16. Attached hereto as Exhibit 2, and incorporated herein by reference, is a claim chart detailing why the Accused Instrumentality infringes at least method Claim 1.

17. As a result of Defendant's infringement of the '328 Patent, Plaintiff has suffered damages.

18. Nimitz is entitled to a money judgment in an amount adequate to compensate for Defendant's infringement, but in no event less than a reasonable royalty for the use made of the invention by Defendant, together with interest and costs as fixed by the Court.

19. Only method claims of the '328 Patent are being asserted, and, thus, patent marking is not an issue. In any event, Nimitz has not commercialized any products under the '328 Patent and has no information that any prior owners of the Patent have not complied with patent marking requirements.

JURY DEMAND

Plaintiff demands a trial by jury on all issues so triable.

PRAYER FOR RELIEF

Plaintiff Nimitz Technologies LLC respectfully requests that the Court find in its favor and against Defendant CNET Media, Inc., and that the Court grant Plaintiff the following relief:

A. an adjudication that Defendant had infringed the '328 Patent;

B. an award of damages to be paid by Defendant adequate to compensate Plaintiff for Defendant's past infringement of the '328 Patent, including pre-judgment and post-judgment interest, costs, expenses, and an accounting of all infringing acts; and

C. any and all such further relief at law or in equity that the Court may deem just and proper, including but not limited to attorneys' fees.

Dated: August 30, 2021 Respectfully submitted by:

/s/ George Pazuniak
George Pazuniak (#478)
O'Kelly & O'Rourke, LLC
824 N. Market Street
Suite 1001A
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(302) 478-4230
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Attorney for Plaintiff Nimitz Technologies LLC

US007848328B2

(12) **United States Patent**
Vare et al.

(10) **Patent No.: US 7,848,328 B2**
(45) **Date of Patent: Dec. 7, 2010**

(54) **BROADCAST CONTENT ENCAPSULATION**

(75) Inventors: **Jani Petteri Vare**, Kaarina (FI); **Harri J. Pekonen**, Raisio (FI); **Jyrki Tapio Alamaunu**, Turku (FI)

(73) Assignee: **Nokia Corporation**, Espoo (FI)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 111 days.

(21) Appl. No.: **12/167,412**

(22) Filed: **Jul. 3, 2008**

(65) **Prior Publication Data**

US 2010/0002696 A1 Jan. 7, 2010

(51) **Int. Cl.**
H04J 3/24 (2006.01)

(52) **U.S. Cl.** **370/392**; 370/474

(58) **Field of Classification Search** ..... None
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

6,970,127	B2 *	11/2005	Rakib	341/173
7,227,899	B2 *	6/2007	Balakrishnan et al.	375/240.26
7,590,991	B2 *	9/2009	Arad et al.	725/15
2004/0230695	A1 *	11/2004	Anschutz et al.	709/232
2005/0122976	A1 *	6/2005	Poli et al.	370/392
2005/0166244	A1	7/2005	Moon	
2006/0062200	A1	3/2006	Wang et al.	
2008/0022321	A1	1/2008	Ver Steeg et al.	

FOREIGN PATENT DOCUMENTS

GB	2408433	5/2005
WO	0115455	3/2001

OTHER PUBLICATIONS

"Generic Stream"Generic Stream Encapsulation (GSE) Protocol, DVB Document A116 (May 2007).
Draft ETSI EN 302 755 v1.1.1 ("Digital Video Broadcasting (DVB); Frame structure channel coding and modulation for a second generation digital terrestrial television broadcasting system (DVB-T2)")(Apr. 2008).
Final Draft ETSI EN 300 468 v1.8.1 ("Digital Video Broadcasting (DVB); Specification for Service Information (SI) in DVB systems")(Oct. 2007).
ETSI EN 301 958 v1.1.1 ("Digital Video Broadcasting (DVB); Interaction channel for Digital Terrestrial Television (RCT) incorporating Multiple Access OFDM")(Mar. 2002).
ETS 300 801 ("Digital Video Broadcasting (DVB); Interaction channel through Public Switched Telecommunications Network (PSTN)/ Integrated Services Digital Networks (ISDN)")(Aug. 1997).

(Continued)

Primary Examiner—Steven H Nguyen
Assistant Examiner—Alex Skripnikov
(74) *Attorney, Agent, or Firm*—Banner & Witcoff, Ltd.

(57) **ABSTRACT**

Components of a transmitted service delivering multiple versions of content are mapped to streams carrying data for those multiple versions. The data streams are encapsulated into User Datagram Protocol (UDP) packets; the UDP destination port fields of the packets are given component-identifying values. A user equipment (UE) receiving the transmitted service identifies desired components based on the UDP destination port field values. The UE further encapsulates desired component UDP packets into Internet Protocol (IP) packets, and may assign component-identifying values to fields of the IP packets (e.g., the IP source address and/or IP destination address).

28 Claims, 15 Drawing Sheets

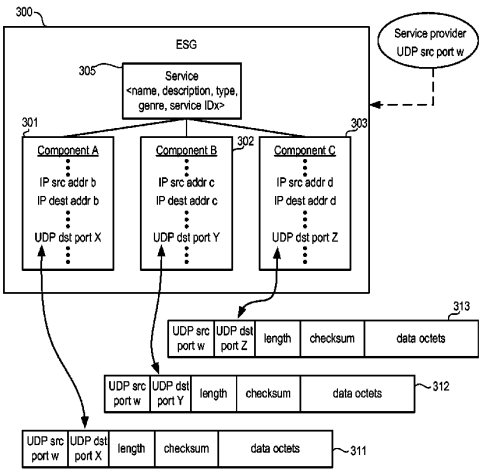
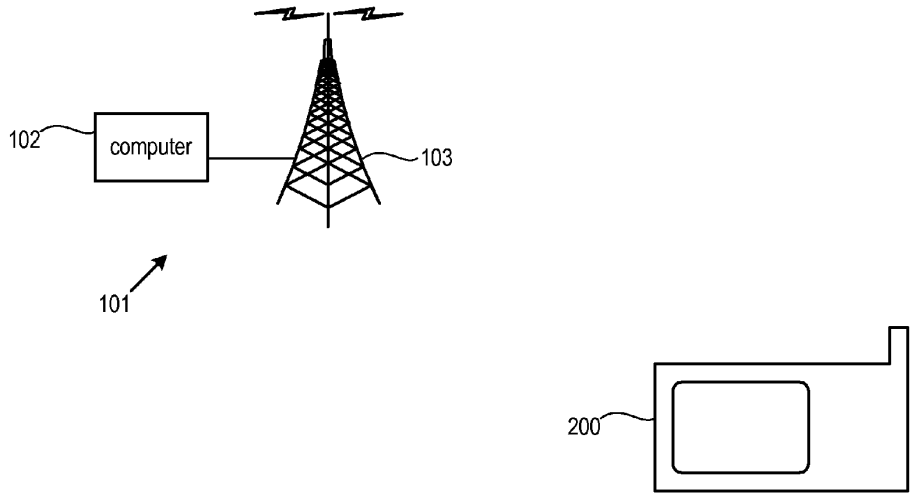


EXHIBIT 1

OTHER PUBLICATIONS

Internet Engineering Task Force RFC 768 ("User Datagram Protocol")(Aug. 28, 1980).
Internet Engineering Task Force RFC 791 ("Internet Protocol")(Sep. 1981).
Internet Engineering Task Force RFC 2460 ("Internet Protocol, version 6 (IPv6)")(Dec. 1998).
EN 301 195 v1.1.1 ("Digital Video Broadcasting (DVB); Interaction channel through the Global System for Mobile communications (GSM)")(Feb. 1999).
International Search Report and Written Opinion for PCT/FI2009/050551 dated Oct. 20, 2009.

* cited by examiner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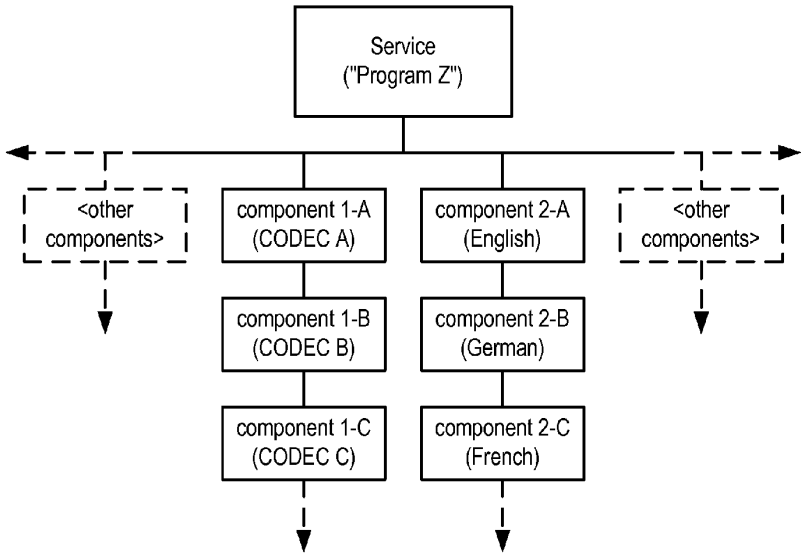
computer
103
101
200

FIG. 1


Service
("Program Z")
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component 2-A (English)
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component 1-B (CODEC B)
component 2-B (German)
component 1-C (CODEC C)
component 2-C (French)

FIG. 2

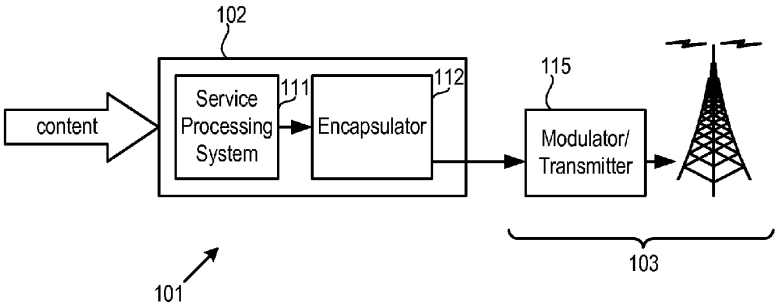
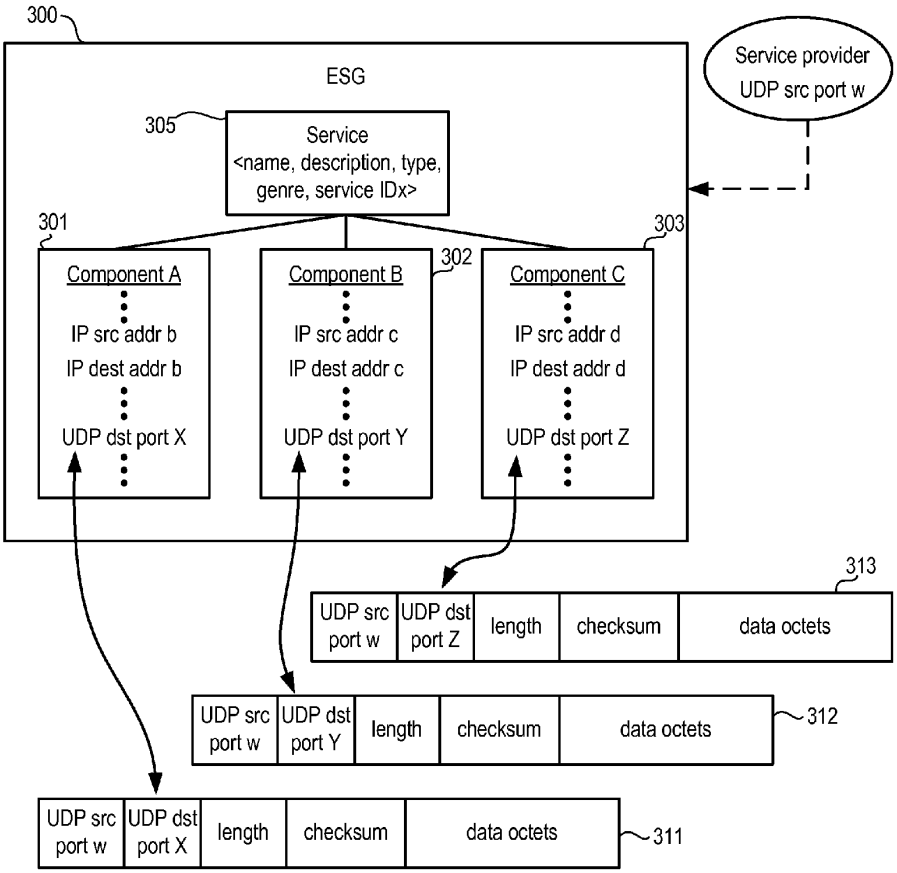

102
content
Service Processing System
111
Encapsulator
112
115
Modulator/ Transmitter
103
101

FIG. 3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301
302
303
Component A
IP src addr b
IP dest addr b
UDP dst port X
Component B
IP src addr c
IP dest addr c
UDP dst port Y
Component C
IP src addr d
IP dest addr d
UDP dst port Z
313
UDP src port w
UDP dst port Z
length
checksum
data octets
312
UDP src port w
UDP dst port Y
length
checksum
data octets
311
UDP src port w
UDP dst port X
length
checksum
data octets

FIG. 4

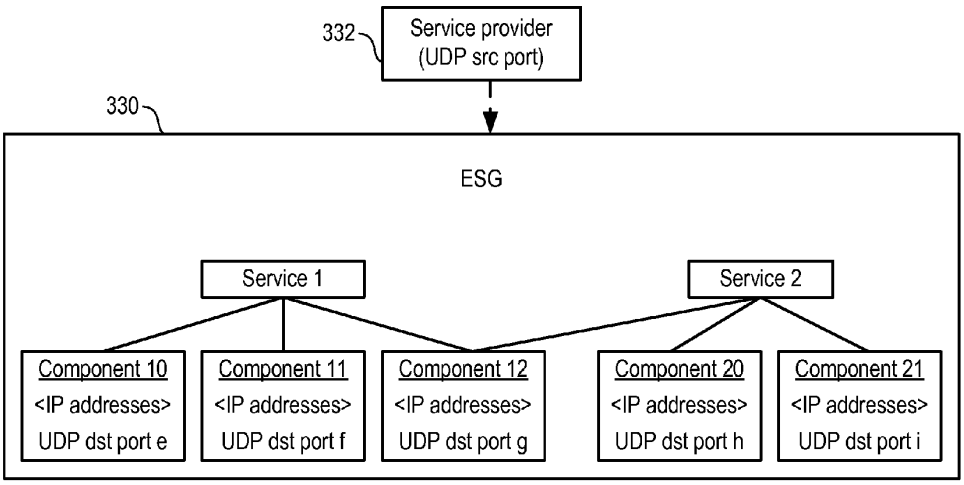

332
Service provider
(UDP src port)
330
ESG
Service 1
Service 2
Component 10
<IP addresses>
UDP dst port e
Component 11
<IP addresses>
UDP dst port f
Component 12
<IP addresses>
UDP dst port g
Component 20
<IP addresses>
UDP dst port h
Component 21
<IP addresses>
UDP dst port i

FIG. 5

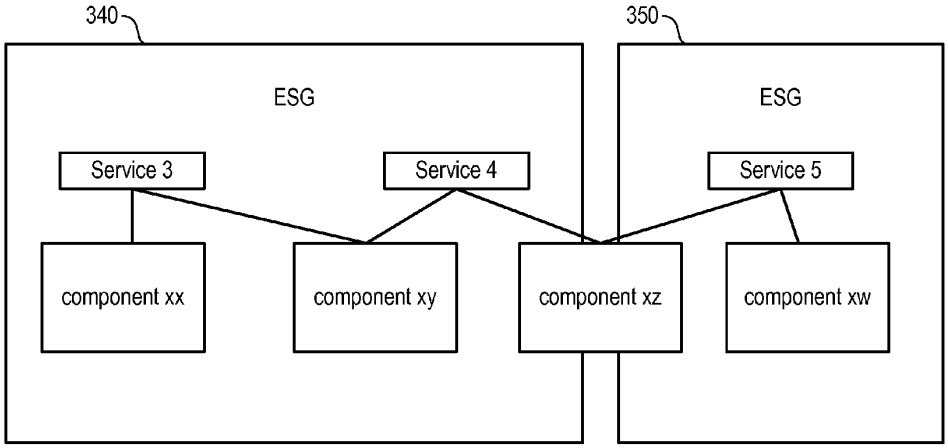

340
350
ESG
ESG
Service 3
Service 4
Service 5
component xx
component xy
component xz
component xw

FIG. 6

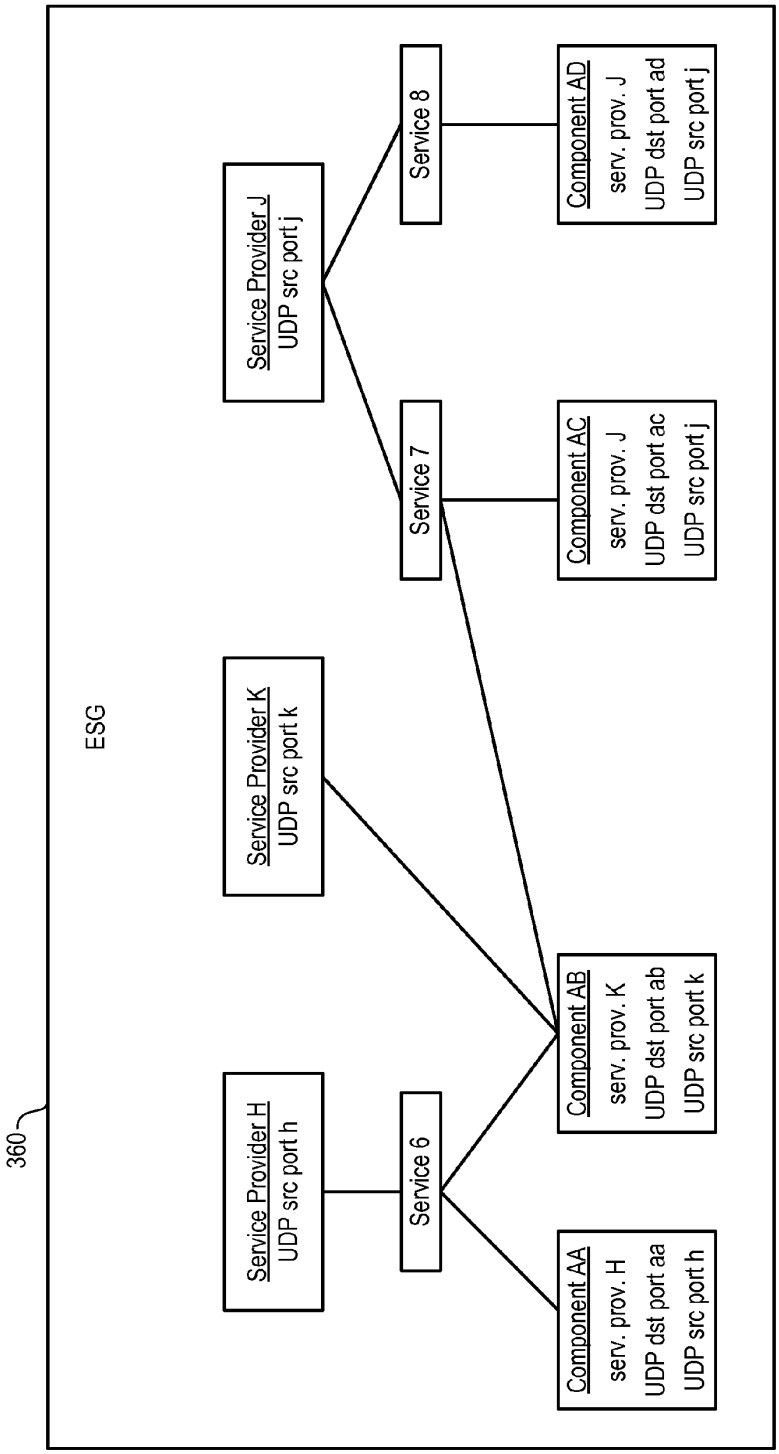

360
ESG
Service Provider H
UDP src port h
Service Provider K
UDP src port k
Service Provider J
UDP src port j
Service 6
Service 7
Service 8
Component AA
serv. prov. H
UDP dst port aa
UDP src port h
Component AB
serv. prov. K
UDP dst port ab
UDP src port k
Component AC
serv. prov. J
UDP dst port ac
UDP src port j
Component AD
serv. prov. J
UDP dst port ad
UDP src port j

FIG. 7

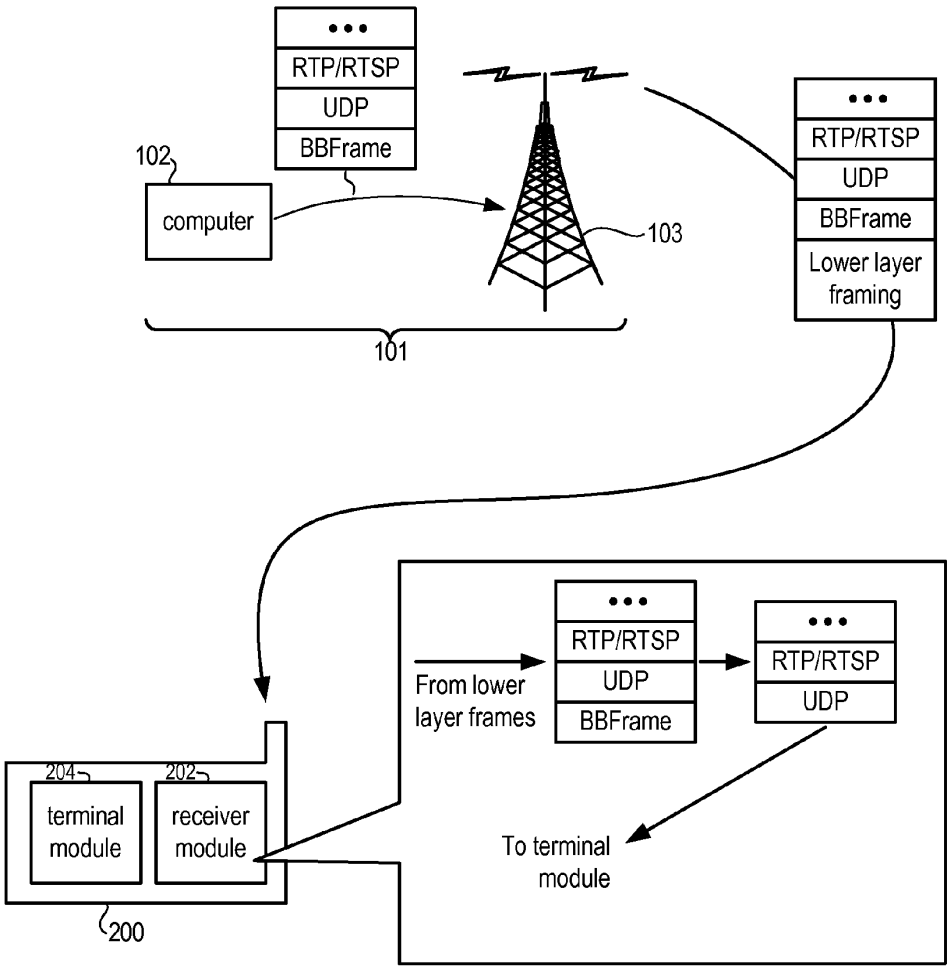

•••
RTP/RTSP
UDP
BBFrame
102
computer
103
101
•••
RTP/RTSP
UDP
BBFrame
Lower layer framing
From lower layer frames
•••
RTP/RTSP
UDP
BBFrame
•••
RTP/RTSP
UDP
To terminal module
204
terminal module
202
receiver module
200

FIG. 8

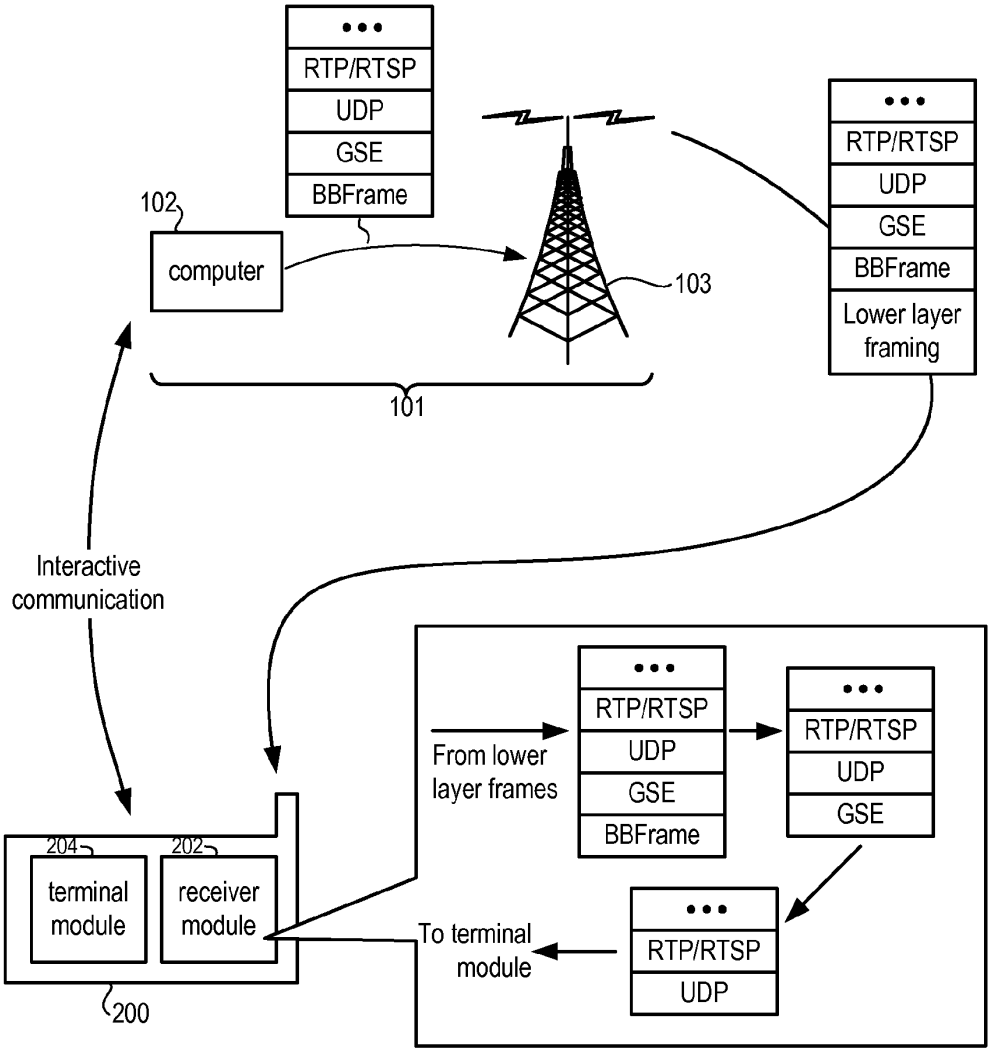

•••
RTP/RTSP
UDP
GSE
BBFrame
102
computer
103
101
•••
RTP/RTSP
UDP
GSE
BBFrame
Lower layer framing
Interactive communication
204
terminal module
202
receiver module
200
From lower layer frames
•••
RTP/RTSP
UDP
GSE
BBFrame
•••
RTP/RTSP
UDP
GSE
To terminal module
•••
RTP/RTSP
UDP

FIG. 9

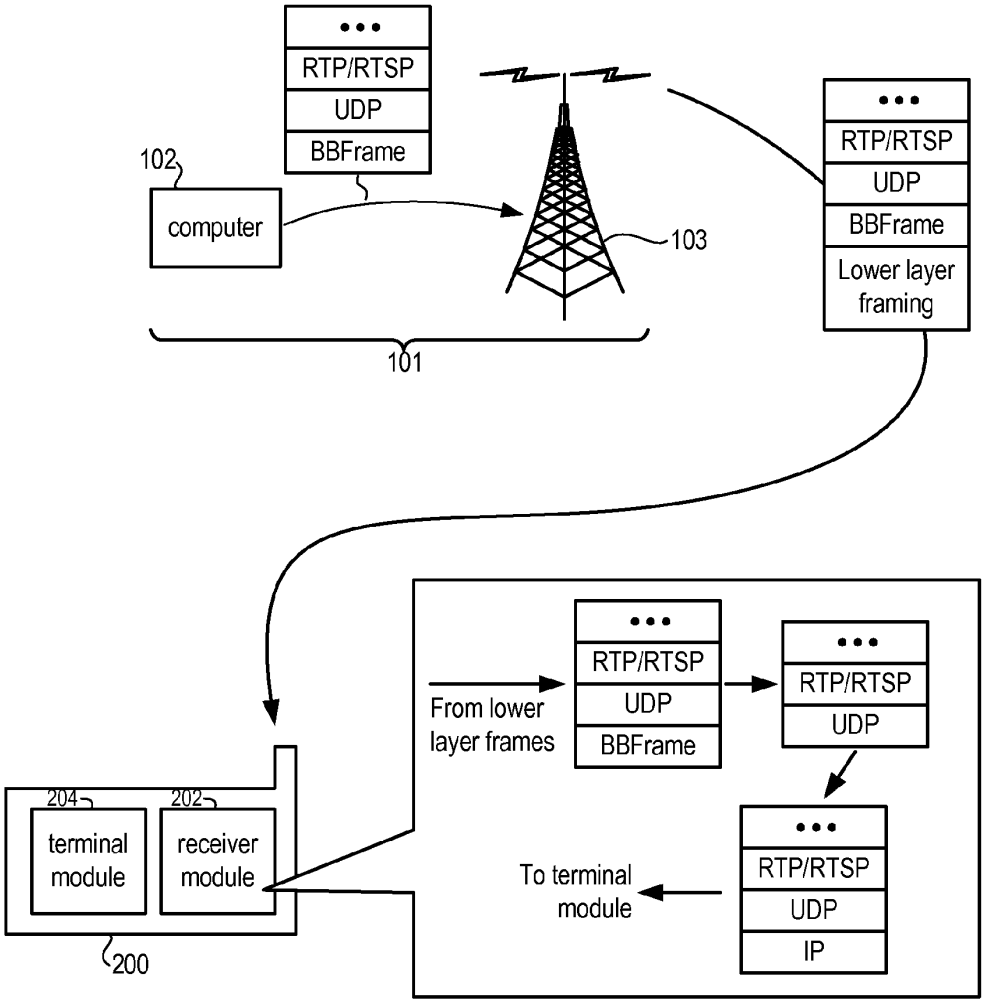

RTP/RTSP
UDP
BBFrame
102
computer
103
101
RTP/RTSP
UDP
BBFrame
Lower layer framing
From lower layer frames
RTP/RTSP
UDP
BBFrame
RTP/RTSP
UDP
RTP/RTSP
UDP
IP
To terminal module
204
terminal module
202
receiver module
200

FIG. 10

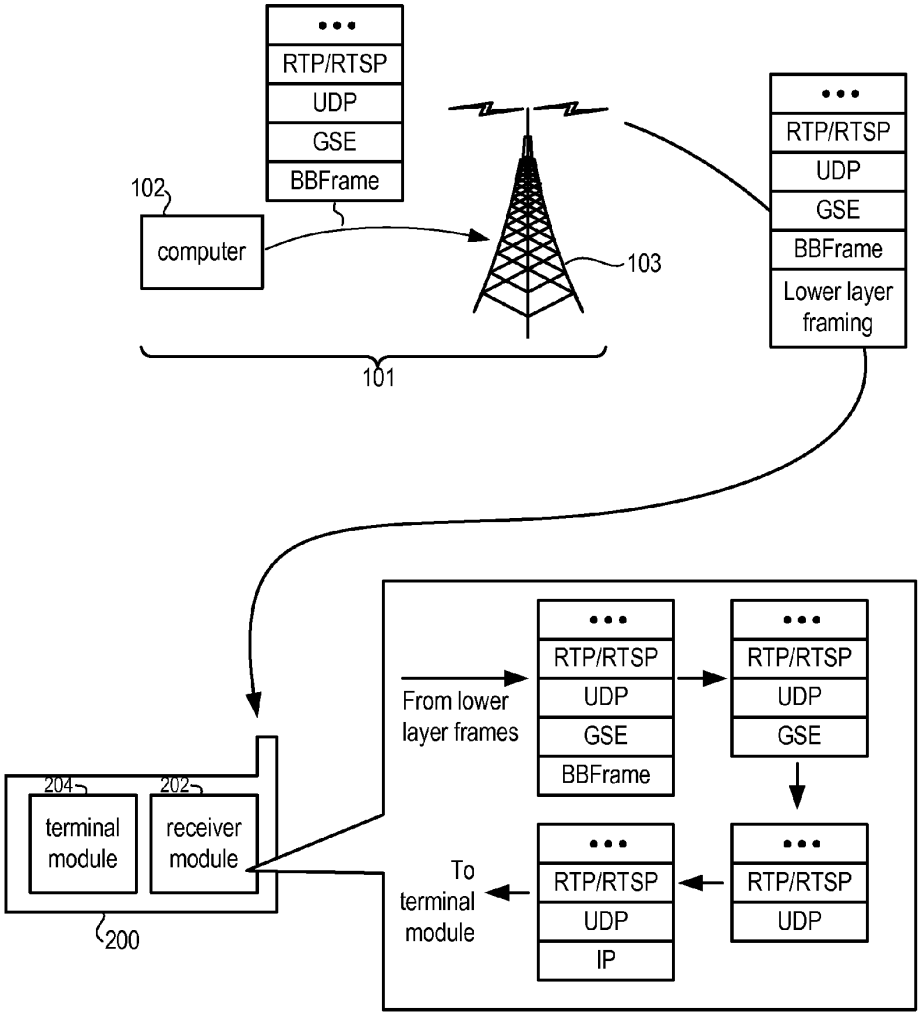

RTP/RTSP
UDP
GSE
BBFrame
102
computer
103
101
RTP/RTSP
UDP
GSE
BBFrame
Lower layer framing
From lower layer frames
RTP/RTSP
UDP
GSE
BBFrame
RTP/RTSP
UDP
GSE
204
terminal module
202
receiver module
200
To terminal module
RTP/RTSP
UDP
IP
RTP/RTSP
UDP

FIG. 11

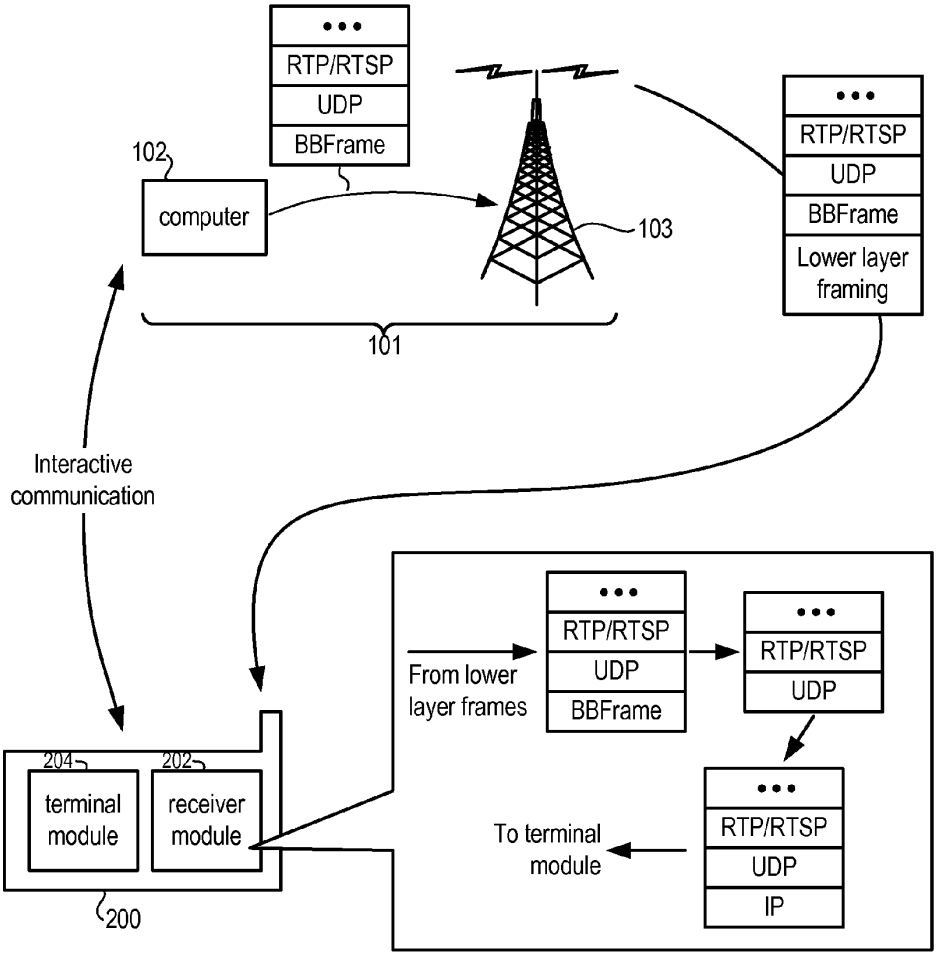

RTP/RTSP
UDP
BBFrame
102
computer
103
RTP/RTSP
UDP
BBFrame
Lower layer framing
101
Interactive communication
From lower layer frames
RTP/RTSP
UDP
BBFrame
RTP/RTSP
UDP
RTP/RTSP
UDP
IP
To terminal module
204
terminal module
202
receiver module
200

FIG. 12

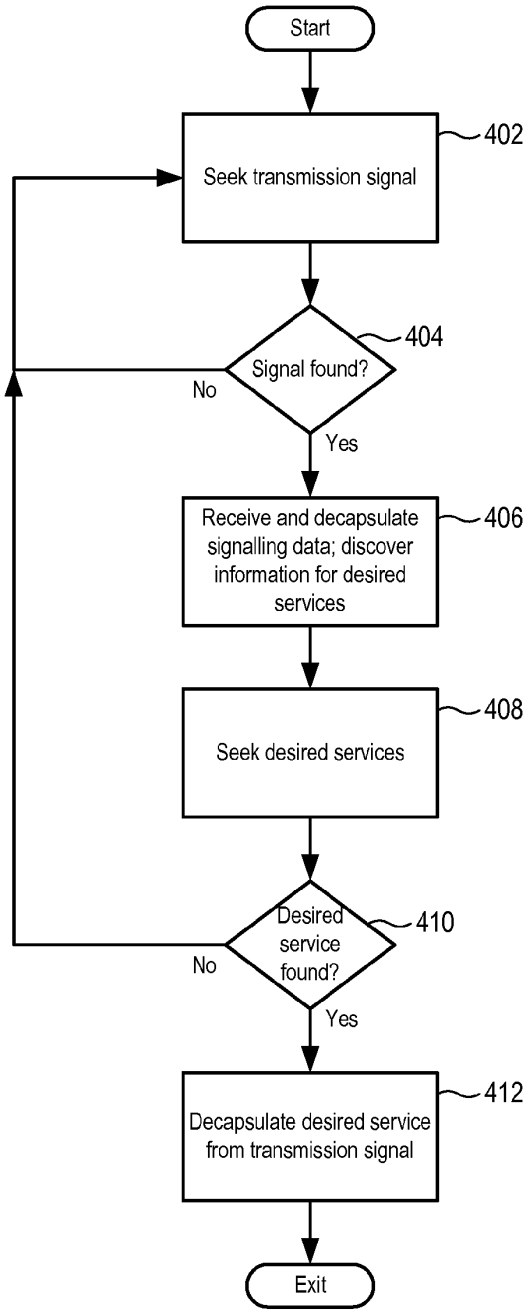

Start
Seek transmission signal
402
Signal found?
404
No
Yes
Receive and decapsulate signalling data; discover information for desired services
406
Seek desired services
408
Desired service found?
410
No
Yes
Decapsulate desired service from transmission signal
412
Exit

FIG. 13

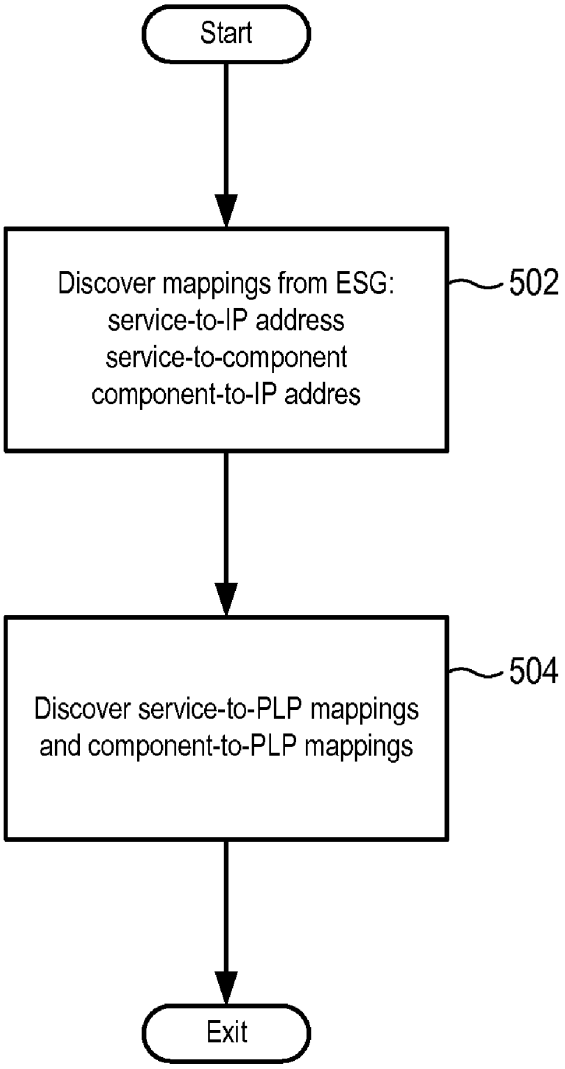

Start
Discover mappings from ESG:
service-to-IP address
service-to-component
component-to-IP addres
502
Discover service-to-PLP mappings
and component-to-PLP mappings
504
Exit

FIG. 14

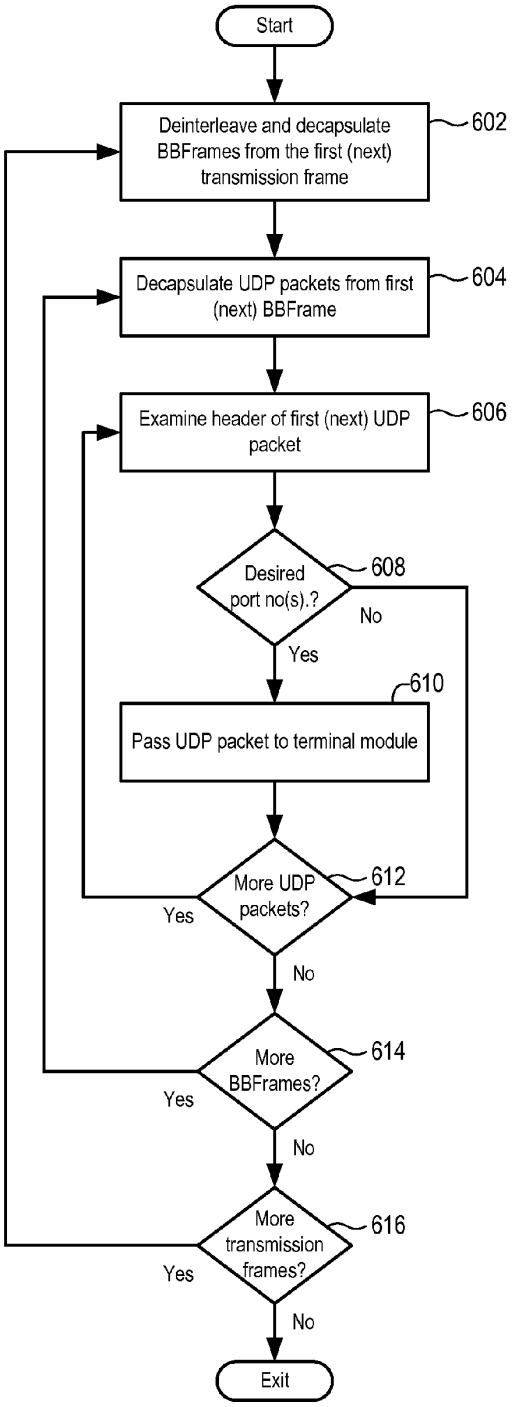

Start
Deinterleave and decapsulate BBFrames from the first (next) transmission frame
602
Decapsulate UDP packets from first (next) BBFrame
604
Examine header of first (next) UDP packet
606
Desired port no(s).?
608
No
Yes
610
Pass UDP packet to terminal module
More UDP packets?
612
Yes
No
More BBFrames?
614
Yes
No
More transmission frames?
616
Yes
No
Exit

FIG. 15

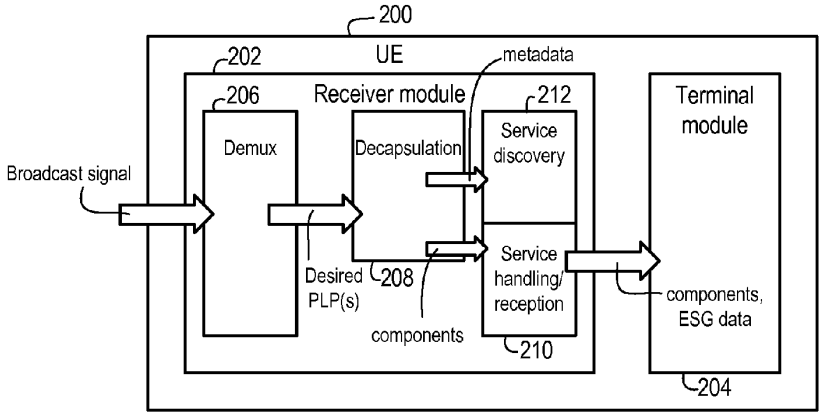

200
UE
202
metadata
206
Receiver module
212
Terminal module
Demux
Decapsulation
Service discovery
Broadcast signal
Service handling/ reception
Desired PLP(s)
208
components
components, ESG data
210
204

FIG. 16

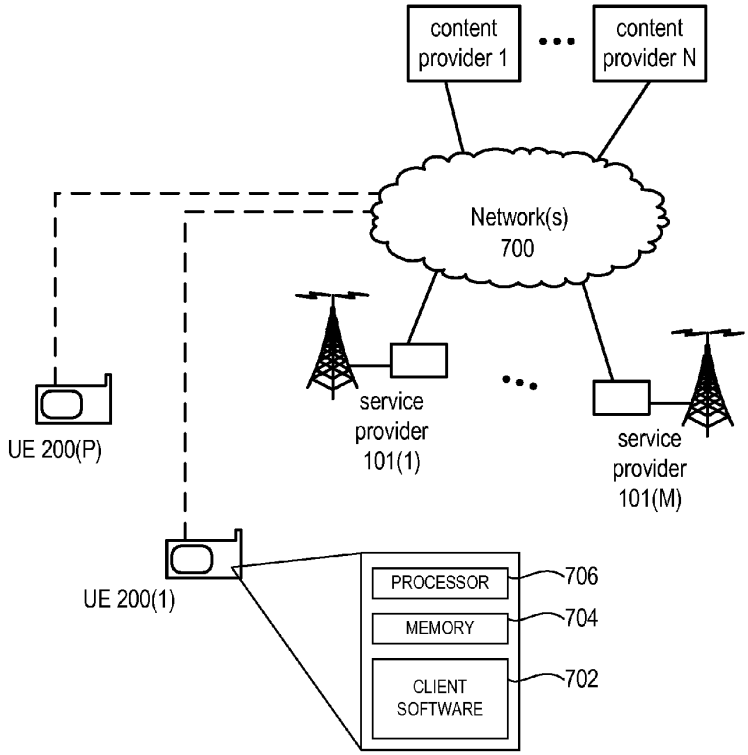

content provider 1
content provider N
Network(s) 700
UE 200(P)
service provider 101(1)
service provider 101(M)
UE 200(1)
PROCESSOR
MEMORY
CLIENT SOFTWARE
706
704
702

FIG. 17

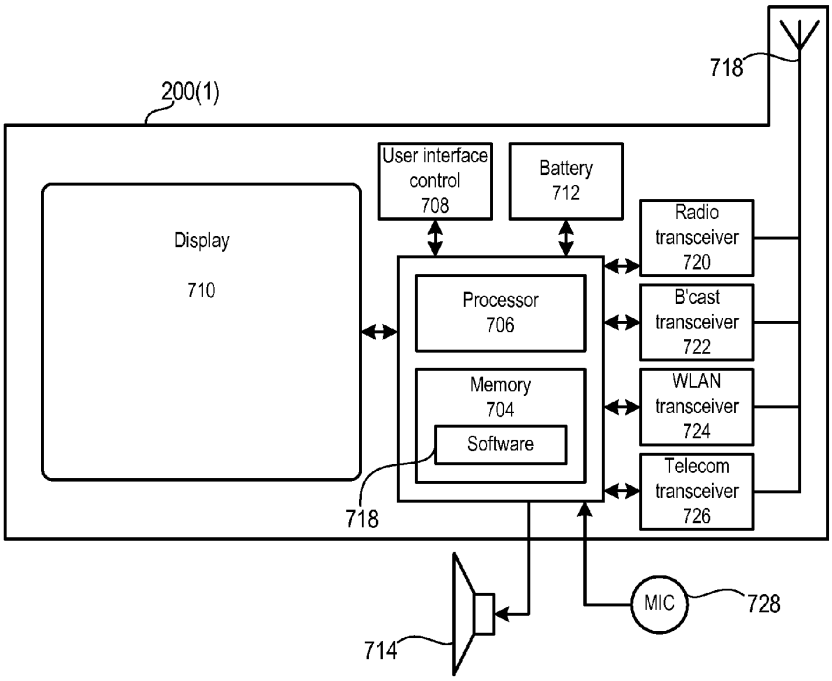

718
200(1)
User interface control 708
Battery 712
Display 710
Processor 706
Memory 704
Software
718
Radio transceiver 720
B'cast transceiver 722
WLAN transceiver 724
Telecom transceiver 726
MIC
728
714

FIG. 18

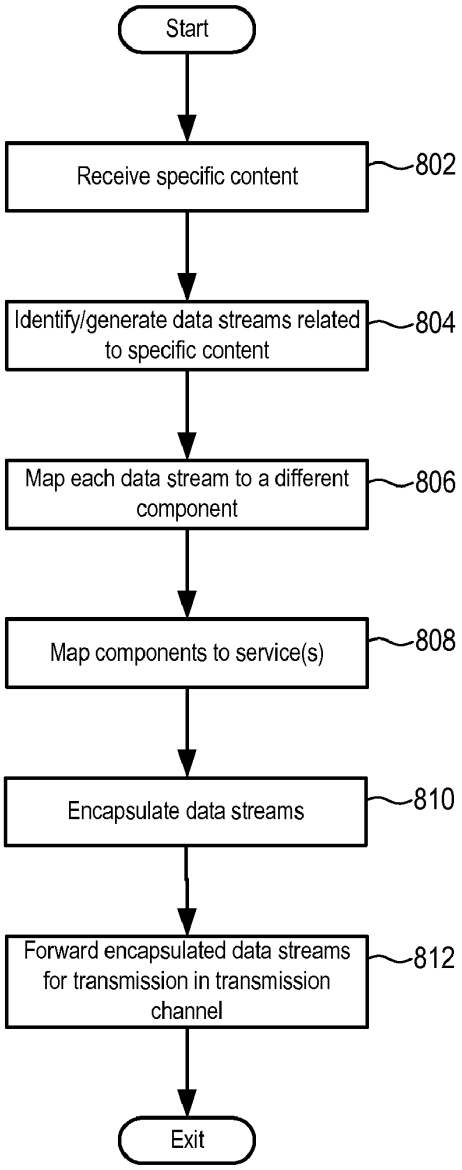

Start
Receive specific content
802
Identify/generate data streams related to specific content
804
Map each data stream to a different component
806
Map components to service(s)
808
Encapsulate data streams
810
Forward encapsulated data streams for transmission in transmission channel
812
Exit

FIG. 19

BROADCAST CONTENT ENCAPSULATION

BACKGROUND

When broadcasting a specific item of content to a diverse population of wireless devices, it may be useful to broadcast, multicast and/or unicast multiple versions of that specific content. As but one example, a specific content item may be a program having audio and/or visual elements that can be encoded using any of variety of different types of coder/decoder software (CODEC), including scalable CODECs. Because numerous different CODECs may be deployed in the population of wireless devices that may be used to receive the specific content item, it is desirable to transmit that content in such a manner so as to make separate CODEC-specific versions available. If multiple versions of the same content are to be broadcast, multicast and/or unicast, it would be useful to have some mechanism for identifying data streams corresponding to the different versions of that content.

SUMMARY

This Summary is provided to introduce a selection of concepts in a simplified form that are further described below in the Detailed Description. This Summary is not intended to identify key features or essential features of the claimed subject matter, nor is it intended to be used as an aid in determining the scope of the claimed subject matter.

In at least some embodiments, data streams related to a specific content are mapped to components of a transmission service that delivers multiple versions of that specific content. Such content may include audio data, video data and/or other types of data, some or all of which may be any combination of real-time and non-real-time data. For example, versions of the content may vary based on a CODEC used to encode media for the content, based on transmission parameters (e.g., bit rate) for a data stream providing such media, based on a language for subtitles or other text associated with the specific content, based on other types of data associated with the content, etc. The data stream for each component is encapsulated into packets according to a communication protocol such as, e.g., User Datagram Protocol (UDP). A common field of each packet header, which in some embodiments is the UDP destination port field, is given a value identifying the corresponding component. A user equipment (UE) receiving a transmission of the service identifies desired components based on the common field values.

In some embodiments, components are also assigned identifying values according to a second communication protocol, which in some embodiments may be Internet Protocol (IP). However, data streams for each component are not encapsulated according to the second protocol. After a UE receiving a broadcast, multicast or unicast of the service identifies the first protocol packets corresponding to desired components, the UE then encapsulates the identified first protocol packets in second protocol packets and includes the assigned identifying values in the second protocol packets.

BRIEF DESCRIPTION OF THE DRAWINGS

Some embodiments of the present invention are illustrated by way of example, and not by way of limitation, in the figures of the accompanying drawings and in which like reference numerals refer to similar elements.

FIG. **1** is a block diagram showing one example of a network environment in which at least some embodiments may be employed.

FIG. **2** is a block diagram showing a relationship between services and components.

FIG. **3** is a block diagram showing operation of a service provider.

FIG. **4** is a block diagram explaining mapping of components to services according to at least some embodiments.

FIG. **5** is a block diagram of an electronic service guide (ESG).

FIG. **6** is a block diagram showing a component mapped to multiple services and/or to services within different ESGs.

FIG. **7** shows an example of a scenario in which an ESG includes services that include components from separate service providers.

FIGS. **8-12** are block diagrams showing encapsulation and transmission of components by a service provider, as well as reception and processing by a user equipment (UE), according to at least some embodiments.

FIG. **13** is a flow chart showing signal and service discovery by a UE according to at least some embodiments.

FIGS. **14** and **15** are flow charts providing additional details of operations in FIG. **13**.

FIG. **16** is a block diagram of a UE showing various operations performed by a receiver module and by a terminal module.

FIG. **17** illustrates a more detailed example of various communication networks in which one or more embodiments may be practiced.

FIG. **18** is a more detailed block diagram of a UE according to some embodiments.

FIG. **19** is a flow chart showing operations performed by one or more computers of a service provider according to at least some embodiments.

DETAILED DESCRIPTION

FIG. **1** is a block diagram showing one example of a communication network environment in which at least some embodiments may be employed. In the example of FIG. **1**, a network service provider **101** includes a computer **102** and transmission facilities **103** for communication of services and other data to user equipment (UE) **200**. UE **200** may be any of various types of devices, including but not limited to a handheld mobile terminal having two-way wireless communication capability, a smart phone, a personal digital assistant (PDA), etc. Further details of UE **200** and examples of other types of UEs are provided herein.

Services, as used herein, include but are not limited to broadcast, multicast and unicast communications having video and/or audio elements. One non-limiting example of such a service having video and/or audio elements is a television program. A service may include multiple associated components. Components can be used to offer multiple versions of a specific item of content being delivered by a service, and a UE receiving that service will not necessarily utilize all of those components. FIG. **2** is a block diagram showing an example of this concept. The service in the example of FIG. **2** is a specific broadcast television program called "Program Z" for purposes of illustration. Component **1**-A is an audio and video media stream for Program Z that has been encoded using a particular type of CODEC (coder/decoder). For simplicity, this is shown generically in FIG. **2** as "CODEC A." Component **1**-B is the same audio and video stream, but encoded with CODEC B. Component **1**-C is the same stream, but encoded with CODEC C. One or more of the CODECs can be a scalable CODEC. Component **2**-A is a stream of textual information, to be overlaid on the video, in a first language (English). Component **2**-B is a stream of

textual information in German, and component **2**-C is a stream of textual information in French. As explained in further detail below, each component represents a stream of data packets that are transmitted by service provider **101** in a particular physical layer pipe (PLP). In at least some embodiments, a PLP represents a particular set of time slots in one or more specific frequency sub-bands. A UE equipped with CODEC B and operated by a person watching Program Z with German text would process components **1**-B and **2**-A. A UE equipped with CODEC C and operated by a person watching the same show with French text would process components **1**-C and **2**-C.

The components shown in FIG. **2** are merely some possible examples. Numerous other types of data can be contained in service components. As but one example, audio and video could be transmitted in separate streams. Separate components could represent audio streams dubbed in different languages or combined audio and visual streams dubbed in different languages. Other types of data that could form different components associated with a service include but are not limited to higher or lower resolution versions of the same media, telemetry associated with events shown in a video broadcast, etc. As but one further illustration, a particular service may be available at a variety of bit rates so as to accommodate a hierarchical content coding scheme. This could be achieved, for example, using scalable CODECs. A baseline stream might be offered, at a low bit rate, and made available to all terminals. Higher bit rate streams offering higher audio and/or video quality could then be offered, perhaps for an increased fee. A service need not be a television program. Additional examples of services include file delivery, software programs, and other types of information that can be consumed by a multimedia-capable handheld computer or other type of UE.

Notably, and as discussed below, a component could be associated with more than one service. Several services might use the same components, even when those services are delivered by different service providers. As but one illustration, several services might offer coverage of the same sporting event. Each of those services might use the same live video feed from a stadium or other venue hosting the event, but may have different audio, subtitles, rich media, graphics and/or other types of media. Several of the services may thus be mapped to a common component for the live video feed, but be mapped to service-specific components for other media.

UE **200** includes elements that operate as a receiver module and elements that operate as a terminal module. The same physical elements may perform both receiver and terminal functions. For example, a microprocessor could simultaneously execute receiver- and terminal-related programming operations in separate threads. The UE receiver module detects components in, and extracts those components from, a received transmission, decodes and decapsulates the components, and in some embodiments re-encapsulates those components before forwarding them to the terminal module. The terminal module receives components and makes them available to one or more appropriate applications being executed by the terminal module or elsewhere. An appropriate application could be, for example, a media player. The terminal module may also forward components to other devices via a wireless local area network (WLAN) and/or via some other type of wired or wireless connection. The terminal module also receives and processes data that allows UE **200** to determine what services are available and to select one or more of those available services for reception. In at least some embodiments, service provider **101** transmits metadata regarding available services, which metadata is used by a UE terminal module to generate an electronic service guide (ESG) or multiple ESGs. The ESG(s) can provide information about available services in a table and/or other format through a graphical user interface presented on a display screen of UE **200**, and may organize service information based on one or more criteria such as time, title, genre, user-defined categories, etc.

FIG. **3** is a block diagram showing an exemplary operation of a service provider **101**. Service provider **101** receives content items from various sources via the Internet, via some other packet data network and/or via some other communication medium. Examples of the received content items include but are not limited to television programs and/or other types of streaming media. Service provider **101** includes one or more computers **102** having processors, memory elements and interface elements, as is known in the art. One or more of computers **102** is programmed via software and/or firmware to operate as a service processing system **111**. Computer(s) **102** could also or alternatively be configured, in whole or in part, to operate as a service processing system through one or more application-specific integrated circuits (ASICs) or other dedicated hardware elements. Service processing system **111** may decode and/or re-encode content using multiple different CODECS, and otherwise process incoming content, so to create one or more content data streams for each received item of content. Service processing system **111** also maps data streams to components, and may map components to services. Service processing system **111** forwards the mapped content data streams to an encapsulator **112**. Encapsulator **112**, which is also physically implemented in hardware and/or programming on the one or more computers **102**, packetizes the content data streams utilizing the component mapping. As explained in more detail below, packetizing the content data includes segmenting the data streams into protocol data units (PDUs) according to a first communication protocol, which in some embodiments is a protocol at the transport layer of the open systems interconnection (OSI) model, and assigning values to data fields of those PDUs based on the mapped component.

In some embodiments, and as also described below, encapsulator **112** further performs one or more additional layers of encapsulation by placing first protocol packets or segments thereof into PDUs according to another protocol. In some embodiments, data in the data stream forwarded to the encapsulator is already encapsulated according to one or more protocols. Upon receipt of such a data stream at the encapsulator, one or more of the headers in the pre-existing encapsulation may be removed. In still other embodiments, a data stream may have pre-existing encapsulation before reaching the encapsulator, but one or more of the headers of that pre-existing encapsulation are removed before the data stream is provided to the encapsulator.

As used herein, "packet" is synonymous with "data unit" and "PDU." For example, a UDP data unit is the same as a UDP packet.

Packets output by encapsulator **112** are forwarded to modulator and transmitter **115**. To the extent not already performed by encapsulator **112**, modulator and transmitter **115** segments those packets and places them into frames used by lower level network protocols, such as, for example, OSI layer **1** and **2** protocols. In practice, this may entail several steps of encapsulating a packet according to several lower level protocols.

In at least some embodiments, encapsulator **112** places content data into User Datagram Protocol (UDP) packets. The user datagram protocol is known in the art and is described by the Internet Engineering Task Force Request for

Comment number 768 (IETF RFC 768). The header of a UDP packet includes a "source port" field and a "destination port" field. In some embodiments, one of these fields is used to identify a service provider and the other of those fields is used to identify a component. In some such embodiments, service provider **101** assigns the source port field a value that corresponds to service provider **101**, and that may in some embodiments be globally unique across a particular transmission network. Further, service provider **101** assigns a value to the destination port field that corresponds to a particular component, which value may be unique for service provider **101**, and which distinguishes the component from other components associated with a particular service. In still other embodiments, the source port field is used to identify a component and the destination port field is used to identify a provider. In yet other embodiments, encapsulator **112** may encapsulate a UDP packet according to the Generic Stream Encapsulation (GSE) protocol, as described in document A116 (dated May 2007) published by the Digital Video Broadcasting (DVB) Project of Geneva, Switzerland.

A service is mapped to components using higher level metadata such as data within an ESG. In some cases, data for an ESG may be provided by a single service provider and only relate to services obtained from that service provider. In other cases, data for an ESG may come from multiple service providers and relate to services from those service providers. In still other cases, a UE may have access to multiple ESGs.

FIG. **19** is a flow chart showing operations performed by one or more computers **102** of service provider **101** according to at least some embodiments. Beginning in block **802**, computer(s) **102** of service provider **101** receive a specific item of content via, e.g., the Internet or other network. Next, computer(s) **102** identify and/or generate data streams relating to the specific content (block **804**). In some cases, computer(s) **102** may receive the specific item of content in the form of multiple pre-prepared data streams, for example in different languages, coded by different CODECs, etc., in which cases computer(s) **102** may simply identify those pre-prepared streams. In other cases, computer(s) **102** may generate data streams by encoding the specific content received in block **802** using different CODECs, etc. Data streams related to the content could also be created in other ways. Flow then proceeds to block **806**, where computer(s) **102** map each of the data streams to a distinct component. The mapping of block **806** may include storing and/or generating one or more component-identifying values for each component. In some embodiments, and as discussed below in connection with block **810**, these component-identifying values will be inserted into UDP destination port fields. In still other embodiments, operations of block **806** include storing and/or generating values for fields of a packet according to another protocol that will not actually be used to encapsulate content data streams prior to transmission in the transmission channel. In some embodiments, that other protocol may be IP.

Computer(s) **102** then map each component to one or more services in block **808**. As explained below, a component could be mapped to multiple services. Service-component mapping may include creation of metadata for an ESG and/or processing and/or storing such metadata received from other sources. Flow proceeds from block **808** to block **810**, where the content data streams are encapsulated. In some embodiments, the data streams are encapsulated in UDP packets and the component-identifying values inserted into the UDP destination port fields. Additional layers of encapsulation may also be performed. For example, and as discussed below, encapsulation into baseband frames may be performed. From block **810**, flow proceeds to block **812**, where frames are forwarded for transmission in a transmission channel.

FIG. **4** is a block diagram explaining mapping of components to services according to at least some embodiments. ESG **300**, which is shown in FIG. **4** as a box for simplicity, includes one or more programs to track available services, to provide information about services to a user, and to retrieve components for a service selected by a user. ESG **300** further accesses one or more databases that contain information about services and that map components to services. A portion of such a database is shown in FIG. **4** as blocks **301** through **305**, which illustrate the mapping of components A, B and C to a service (block **305**). As shown by block **305**, descriptive information may be stored for each service accessible through ESG **300**. In the present example, that information includes a name, a description, a type, a genre, and a service identification number (serviceIDx). ESG **300** further includes data that maps service **305** to associated components A, B and C. Only three components are shown in FIG. **4**, but a service could be associated with more or fewer components. Each component is also identified in this example by a UDP destination port number. In some embodiments, and as is further discussed below, components may also include internet protocol (IP) source and/or destination addresses as identifiers.

Also shown in FIG. **4** is the relationship of components A, B and C to UDP packets **311**, **312** and **313** containing content data mapped to those components. As indicated above, UDP packets are created by a service provider and transmitted to a UE. Each component would be associated with a stream of UDP packets. Packet **311** is one packet in the stream associated with component A, packet **312** is one packet in the stream associated with component B, and packet **313** is one packet in the stream associated with component C. Each UDP packet in the streams for components A, B and C will have the same value ("w") in the UDP source port field, which value corresponds to the service provider offering service **305**. The destination port field of each UDP packet for component A will have the value "X," which value is used by ESG **305** to identify component A. The destination port field in each UDP packet for component B will have the value "Y" and the destination port field in each UDP packet for component C will have the value "Z," which values are used by ESG **305** to identify components B and C. If UDP packets **311**, **312** and **313** were further encapsulated within IP packets (as discussed below in connection with FIGS. **10-12**), the IP source and destination addresses for the encapsulating IP packets could also be used by ESG **305** to identify components A, B and C.

The length field in each UDP packet is the length in bytes of the packet including header, and the data octet field carries the actual user data such as audio, video, text, etc. for the component. The checksum fields contain values used to error-check the data and header in a UDP packet. The checksum field is ignored in some embodiments. In embodiments discussed below where UDP packets are encapsulated in IPv4 packets, the checksum can be calculated as set forth in IETF RFC 768. In embodiments where UDP packets are encapsulated in IPv6 packets, the checksum can be calculated as set forth in IETF RFC 2460.

A receiver module of a UE receives information that allows it determine a physical layer pipe (PLP) carrying data for a particular component. A PLP represents a particular time division multiplex slot or set of slots and/or one or more frequency sub-bands over which lower layer protocol frames carrying packets for a particular component will be received. A PLP may also or alternatively include a spread spectrum spreading code associated with a particular component. In at

least some embodiments, packets containing desired UDPs are mapped to PLPs according to the Next Generation Handheld (NGH) standard as defined in draft European Telecommunications Institute ("ETSI") standard EN 302 755 ("Digital Video Broadcasting (DVB); Frame structure channel coding and modulation for a second generation digital terrestrial television broadcasting system (DVB-T2)"), dated April 2008 (hereinafter, "draft ETSI EN 302 755"). A copy of draft ETSI EN 302 755 is submitted concurrently with the filing of this specification.

Because a service is a virtual construct to which components are mapped by higher level metadata in an ESG, various scenarios can be easily accommodated. As indicated above, the same component can be mapped to multiple services. For example, FIG. **5** is a block diagram of an ESG **330** provided by service provider **332** and that includes metadata for service **1** and service **2**. Components **10** and **11** are mapped to service **1**, components **20** and **21** are mapped to service **2**, and component **12** is mapped to both services **1** and **2**. Although only two services are shown in FIG. **5**, multiple other services could be included, and a component could be shared by more than two services. Indeed, and as shown in FIG. **6**, a component could be mapped to multiple services and/or to services within different ESGs. ESG **340** includes services **3** and **4**. Component xx is only mapped to service **3**, and is thus unique to service **3**. Component xy is mapped to services **3** and **4**. ESG **350** includes service **5**, to which component xw is uniquely mapped. Component xz, however, is mapped to service **4** in ESG **340** and to service **5** in ESG **350**.

FIG. **7** shows an example of a scenario in which an ESG **360** includes services that include components from separate service providers. Service **6** is associated with service provider H, identified by source port data "h" in the UDP header, and services **7** and **8** are associated with service provider J, identified correspondingly by source port data "j" in the UDP header. Component AB is mapped to service **6** and to service **7**. Component AB is associated with a virtual "third party" service provider K that may be identified by source port data "k" in the UDP header. In some embodiments, an ESG associates a component with a service based on data in the component identifying the provider of that service, e.g., based on a data value in the source port field. Implementing a virtual service provider and assigning identifying data corresponding to that virtual provider is one way to avoid a need for two source port fields or to otherwise have two pieces of provider-identifying data in the header of a component AB data packet.

FIG. **8** is a block diagram showing encapsulation and transmission of components by service provider **101**, as well as reception and processing by UE **200**, according to at least some embodiments. In the drawings showing various embodiments, the same reference numbers will be used to identify service provider **101** and UE **200** and elements thereof. It is to be appreciated, however, that differences among the various embodiments may in some cases result from variations in program instructions within elements of service provider **101** and/or of UE **200**. In the embodiment of FIG. **8**, service provider **101** receives content from any of multiple sources that are not shown in FIG. **8**. That content may be in any of various protocols, including real-time transport protocol (RTP), real-time streaming protocol (RTSP), etc. Service provider **101** may perform coding using one of multiple CODECs and/or may perform protocol conversion. Service provider **101** maps data streams to components and places component data into UDP packets. Service provider **101** maps services to components by mapping metadata for services to components that are identified by a particular combination of UDP source port and UDP destination port values. Examples of such service metadata include but are not limited to type, name, genre, group, etc. Service provider **101** then further encapsulates component UDP packets into frames according to one or more lower layer protocols. In the examples of FIGS. **8** through **12**, the UDP packets are encapsulated into baseband frames ("BBFrame") according to draft ETSI EN 302 755. Notably, a baseband frame, or a lower layer frame according to some other protocol, may contain UDP packets for more than one component. For example, a BBFrame may contain UDP packets having different destination port values. The baseband frames, or the otherwise-encapsulated UDP packets, are ultimately transmitted in frames according to still lower layer protocols. In some embodiments, these lower layer protocol frames include T2 frames according to draft ETSI EN 302 755. Notably, component UDP packets in the embodiment of FIG. **8** are not encapsulated in IP packets at service provider **101**.

Receiver module **202** of UE **200** receives and demodulates the transmitted signal from service provider **101**, extracts the baseband frames from the transmission frames, decapsulates the UDP packets from the baseband frames, and makes those UDP packets available to terminal module **204**. In some embodiments discussed below, receiver module **202** may encapsulate UDP packets before providing them to terminal module **204**. Terminal module **204** processes component UDP packets for a desired service using a media player or other appropriate application. Receiver module **202** selectively retrieves UDP packets corresponding to components of a desired service selected by a user of UE **200**, and ignores packets corresponding to undesired components. As discussed above, all of the components mapped to a particular service might not be needed by a particular UE. Accordingly, terminal module **204** identifies the desired components for a selected service based, for example, on the source port and destination port values in the UDP packets, and provides information about the desired packet and service to receiver module **202**. A terminal module may in some embodiments determine desired components in response to an end user's selection, via an ESG UI, of a particular version of a specific content. For example, a user may select a particular program in a particular language and/or at a particular presentation quality.

Using the PLP mapping described above, receiver module **204** looks for and extracts baseband frames or otherwise encapsulated UDP packets from the transmission channel. Receiver module **202** then extracts the UDP packets for the desired components, forwards those packets to terminal module **204**, and disregards UDP packets corresponding to undesired components.

In some cases, terminal module **204** also communicates with service provider **101** using an interactive connection that may be established via one or more wired or wireless networks not shown in FIG. **8**, which wired/wireless network(s) may be distinct from the transmission network over which service provider **101** transmits service components. One example of such an interactive connection is a DVB interaction channel such as is described in European Telecommunication Standard (ETS) 300 801, in ETSI EN 301 958 v1.1.1, in ETSI 301 195 v1.1.1, or in other standards. Although an interactive connection may be through networks other than the transmission network of service provider **101**, UE **200** may nonetheless use some of the same hardware elements for all communications.

FIG. **9** is a block diagram showing encapsulation and transmission of components by service provider **101**, as well as reception and processing by UE **200**, according to at least some additional embodiments. FIG. **9** is similar to FIG. **8**,

except that service provider **101** encapsulates UDP packets corresponding to components in PDUs according to an additional protocol prior to encapsulation in baseband frames. In the example of FIG. **9**, that additional protocol is GSE. Receiver module **202** decapsulates the UDP packets from the baseband frames and from the GSE or other protocol packets.

In some situations, it may be useful to further encapsulate component UDP packets into Internet Protocol version 4 (IPv4) packets or into Internet Protocol version 6 (IPv6) packets. IPv4 and IPv6, which are also well known in the art, are described by IETF RFC 791 and IETC RFC 2460, respectively. Source and destination addresses in an IPv4 or IPv6 packet can similarly be used to identify a service provider and a component. For example, a UE may re-distribute data for service components in a point-to-point IP network such as a WLAN. As another example, a particular terminal module may have an IP stack implementation that requires an IP packet format. However, encapsulating service component UDP packets in IP packets at the service provider has undesirable consequences. In particular, encapsulating UDP packets within IP packets will increase the transmission overhead and reduce the amount of content data that can be transmitted in the transmission channel.

In at least some embodiments, and as shown in FIG. **10**, this is overcome by encapsulating UDP packets into IP packets at the UE receiver module. As in the embodiment of FIG. **8**, service provider **101** maps a service to components by mapping metadata for the service such as type, name, genre, group, etc. to components that are identified by a particular combination of UDP source port and UDP destination port values. Service provider **101** may also map those components to IP source and destination addresses, but does not encapsulate the UDP packets in IP packets. Service provider **101** then encapsulates the component UDP packets into baseband frames and causes those baseband frames to be transmitted. Upon receipt, receiver module **202** of UE **200** decapsulates the UDP packets from the baseband frames. Receiver module **202** then encapsulates the UDP packets into IP packets. In some embodiments, receiver module **202** acquires values for IP source and destination addresses from the service-related metadata. Although not shown in FIG. **10**, the service-related metadata, which is also used by one or more ESGs accessible in UE **200**, may be separately transmitted to receiver module **202** from service provider **101** in UDP packets corresponding to ESG data. After IP-encapsulating the component UDP packets, receiver module **202** forwards those IP packets to terminal module **204** for decapsulation and further processing.

In some embodiments, predefined IP source and destination addresses may not be needed. For example, terminal module **204** may require that service components be encapsulated within IP packets, but the ESG and/or other applications operating in terminal module **204** may identify components based on UDP source and destination ports and the component data will not be forwarded to other devices. In such a case, receiver module **202** can use any appropriate IP address. In some embodiments, a link local address of 127.0.0.1 is used in such cases. In still other embodiments, receiver module **202** encapsulates component UDP packets into packets according to some other protocol.

FIG. **11** is a block diagram of an embodiment that combines aspects of the embodiments of FIGS. **9** and **10**. As in the embodiment of FIG. **10**, service provider **101** also maps components to IP source and destination addresses, but does not encapsulate UDP packets in IP packets. As in the embodiment of FIG. **9**, service provider **101** encapsulates component UDP packets in PDUs according to another protocol such as GSE. Service provider **101** then encapsulates the encapsulated component UDP packets into baseband frames and causes those baseband frames to be transmitted. Upon receipt, receiver module **202** of UE **200** decapsulates the UDP packets from the baseband frames and from the GSE or other protocol packets. Receiver module **202** then encapsulates the component UDP packets into IP packets. As with the embodiment of FIG. **10**, IP source and destination addresses can be obtained from separately-transmitted service metadata. If predefined IP addresses are not required, 127.0.0.1 or another appropriate generic address can be used. In some embodiments, component UDP packets could be encapsulated by receiver module **202** according to a protocol other than IP. Receiver module **202** forwards encapsulated component UDP packets to terminal module **204** for decapsulation and further processing.

FIG. **12** is a block diagram of an embodiment that is similar to the embodiment of FIG. **10**, but in which IP source and destination addresses are obtained in a slightly different manner. As in FIG. **10**, service provider **101** maps a service to components by mapping metadata for the service to components that are identified by a particular combination of UDP source port and UDP destination port values. Service provider **101** also maps those components to IP source and destination addresses without encapsulating those UDP packets in IP packets. Service provider **101** encapsulates the component UDP packets into baseband frames and causes those baseband frames to be transmitted. Upon receipt, receiver module **202** decapsulates the UDP packets from the baseband frames. Receiver module **202** then encapsulates the UDP packets into IP packets. In the embodiment of FIG. **12**, however, terminal module **204** requests that service provider **101** provide values for IP source and destination addresses to be used when encapsulating component UDP packets. Terminal module **204** makes this request through interactive communication over one or more wired or wireless networks, such as an interaction channel, that may be separate from the transmission network over which service provider **101** transmits service components. Terminal module **204** provides those IP addresses, after receipt of same from service provider **101** via the interactive communication, to receiver module **202**. Receiver module **202** then uses those IP addresses when IP-encapsulating component UDP packets.

FIG. **13** is a flow chart showing signal and service discovery by a UE according to at least some of the above-described embodiments. Beginning in block **402**, the UE receiver module searches for a signal that carries service metadata and components. In some embodiments, the receiver module looks for a signal having a predefined preamble indicative of transmissions according to an appropriate protocol and/or identifying a particular transmission network. For example, the receiver module may search for a transmission from a network operating according to the Next Generation Handheld (NGH) standard as defined in draft ETSI EN 302 755 by searching for a P1 symbol. The receiver module may also or alternatively have a list of signals which carry the desired data, and/or may have acquired a list of such signals through bi-directional communication over an interactive network. In block **404** there is a determination of whether the desired signal has been found. If the desired signal is found, flow proceeds on the "yes" branch to block **406**. Otherwise, flow returns to block **402** on the "no" branch and the search is continued.

In block **406**, the receiver module receives and decapsulates signaling data and discovers information relating to desired services. A desired service may be, e.g., a service selected by an end user of the UE via an ESG. In some

embodiments, the signaling data received in block **406** is data needed to find desired service components. Signaling data may also include information such as IP addresses that would be used to encapsulate UDP packets before forwarding those UDP packets to the terminal module. Also received and decapsulated in block **406** is information for one or more ESGs. Data for the ESG, which may include metadata about services and components mapped to those services, may also be transmitted by a service provider in UDP packets. In at least some embodiments, a UE receiver module detects ESG data based on an ESG component identification composed of a UDP source port value corresponding to a specific service provider and a UDP destination port value corresponding to an ESG bootstrap. In addition, or alternatively, the UE may receive ESG data or parts thereof through an interactive communication over another network. A UE may be preprogrammed with PLP mappings for ESG data, or may receive such mappings via a separate interactive communication channel.

From block **406** flow proceeds to block **408**, where the receiver module seeks components for desired services. If data for a desired service is not found (block **410**), flow returns on the "no" branch to block **402**. If data for a desired service is found, flow proceeds on the "yes" branch to block **412**, where data for the desired service(s) is decapsulated.

FIG. **14** is a flow chart providing additional details of operations in block **406** of FIG. **13**. In block **502**, after receiving and decapsulating ESG data packets, the receiver module discovers service-to-component mappings. In embodiments where IP addresses are used, the receiver module also discovers service-to-IP address mappings and/or component-to-IP address mappings. Relevant parameters used for mappings, and as discussed above, include IP address values, UDP port values, other types of component identifiers, and service identifiers. In block **504**, service-to-PLP mappings and component-to-PLP mappings are discovered from signaling data in baseband frames, OSI L**2** or data link layer frames, and/or in other lower layer framing. In some embodiments, the service-to-PLP mappings and component-to-PLP mappings are in L**2** data such as the DVB Program Specific Information/Service Information (PSI/SI) as described in ETSI EN 300 468, titled "Digital Video Broadcasting (DVB); Specification for Service Information (SI) in DVB systems."

FIG. **15** is a flow chart providing additional details of operations in block **412** of FIG. **13**. In block **602**, the receiver module deinterleaves and decapsulates desired baseband frames containing component data for desired services from frames of one or more lower level protocols. For example, baseband frames may be encapsulated within NGH T2 frames. The desired baseband frames are identified based on the service-to-PLP mappings and component-to-PLP mappings described above. Next, the receiver module decapsulates UDP packets from the first or next baseband frame (block **604**). In block **606**, the receiver module examines the source and destination port values in the header of a first or next of those UDP packets. If those port values do not correspond a desired component, the receiver module proceeds to block **612** on the "no" branch; block **612** is discussed below. If the port values do correspond to a desired component, the flow proceeds to block **610** on the "yes" branch, and the UDP packet is passed to the terminal module. In embodiments where the UDP packet is encapsulated in an IP packet, this encapsulation can also be performed as part of the operations of block **610**. From block **610**, flow proceeds to block **612**, where the receiver module determines if there are additional UDP packets in the current baseband frame. If so, flow returns to block **606** on the "yes" branch, where the next UDP packet is examined. If not, flow proceeds to block **614** on the "no" branch to block. In block **614**, the receiver determines if there are any additional baseband frames for the associated transmission channel frame. If so, flow returns to block **604** on the "yes" branch, where the UDP packets in the next baseband frame are decapsulated. If not, flow proceeds to block **616** on the "no" branch. In block **616**, the receiver determines if there are additional transmission channel frames for the associated PLP. If so, flow returns to block **602** on the "yes" branch. Otherwise, flow proceeds to termination on the "no" branch.

FIG. **16** is a block diagram of UE **200** showing various operations performed by receiver module **202** and by terminal module **204**. Demultiplexer **206** extracts signals from the appropriate PLPs of the received transmission channel. Demultiplexer **206** forwards the extracted signal to decapsulator **208**, where the appropriate UDP packets are found, for example, as described in connection with blocks **606-612** of FIG. **15**, and forwarded to a service handling/reception block **210**. Service metadata is forwarded to a service discovery block **212**. Service discovery block **212** processes that metadata and forwards same to terminal module **204** for processing by one or more ESGs. Component UDP packets are forwarded by service handling and reception block **210** to terminal module **204**. If the component UDP packets are to be encapsulated in IP (or other) packets, service handling/reception block **210** performs this encapsulation prior to forwarding the component data to terminal module **204**. Receiver module **202** and terminal module **204** are implemented as one or more ASICs or other integrated circuits having instructions for performing operations as described in connection with one or more of any of the embodiments described herein. Said instructions may be software and/or firmware instructions stored in a machine-readable medium and/or may be hard-coded as a series of logic gates and/or state machine circuits in one or more integrated circuits and/or in one or more integrated circuits in combination with other circuit elements.

FIG. **17** illustrates a more detailed example of various communication networks in which one or more of the herein-described embodiments may be practiced. One or more service providers **101**(**1**) through **101**(M) communicate with one or more of various content providers **1** through N via network(s) **700**. UEs **200**(**1**) through **200**(P) communicate with one or more of service providers **101**(**1**) through **101**(M) via network(s) **700** (e.g., through interactive communications as described above) and receive transmissions over broadcast channels from service providers **101**(**1**) through **101**(M). As used in connection with this description of FIG. **17**, "M," "N" and "P" are arbitrary numbers that can have any value; M may or may not equal N, N may or may not equal P, and P may or may not equal M. Some of UEs **200**(**1**) through **200**(P) may only receive communications from and/or interactively communicate with a single service provider, while other UEs may be able to receive from and/or communicate with multiple service providers. Network(s) **700** may include permanent or temporary connections and such connections may be wired or wireless. Communication through network(s) **700** is not limited to the illustrated devices and may include alternative or additional apparatuses such as a home video storage system, a portable audio/video player, a digital camera/camcorder, a positioning device such as a GPS (Global Positioning System) device or satellite, a mobile television, a STB (Set-top Box), a digital video recorder, and the like and in any combination of the aforementioned.

Although shown as a single cloud in FIG. **17** for simplicity, network(s) **700** may in many embodiments include multiple networks that are interlinked so as to provide internetworked communications. Such networks may include one or more

private or public packet-switched networks such as the Internet, one or more private or public circuit-switched networks such as a public switched telephone network, one or more cellular networks configured to facilitate communications to and from UEs **200**(**1**) through **200**(P) through use of base stations, mobile switching centers, etc., one or more short or medium range wireless communication connection such as a Bluetooth® connection, a UWB (Ultra Wide Band) connection, an infrared connection, a WiBree connection, a wireless local area network (WLAN) according to one or more versions Institute of Electrical and Electronics Engineers standard no. 802.11, or a high-speed wireless data network such as Evolution-Data Optimized (EV-DO) networks, Universal Mobile Telecommunications System (UMTS) networks, Long Term Evolution (LTE) networks or Enhanced Data rates for GSM Evolution (EDGE) networks. Further, UEs **200**(**1**) through **200**(P) may use various communication protocols for communication through network(s) **700**, such as Internet Protocol (IP), Transmission Control Protocol (TCP), Simple Mail Transfer Protocol (SMTP) among others known in the art.

UEs **200**(**1**) through **200**(P) may be configured to interact with each other or other devices using various software. In one example, UE **200**(**1**) may include client software **702** that is configured to coordinate the transmission and reception of information to and from a service provider as described in one or more of the embodiments discussed above. Client software **702** may be stored in memory **704** such as read only or random access memory in UE **200**(**1**) and may include instructions that cause one or more components (e.g., processor **706**, a transceiver, a display) of UE **200**(**1**) to perform various functions and methods including those described herein.

In FIG. **17** the network(s) **700** may be operated by one or more network operators. Some or all of those network operators may be different entities than the content providers **1** through N and/or may be different entities than the service provider **101**(**1**) through **101**(M). In some embodiments, however, a single entity may act as a service provider and as a network operator, as a service provider and as a content provider, as a service provider, network operator and content provider, etc. ESGs may in various embodiments be provided by the network operators and/or by the service providers **101**(**1**) through **101**(M). In some embodiments, the data field in a UDP header identifying a service provider may thus identify a network operator. In some embodiments a network operator may replace service provider identification data in a UDP source port field with data identifying the network operator.

FIG. **18** is a more detailed block diagram of an exemplary UE **200**(**1**). As indicated above, UE **200**(**1**) may include one or more processors **706**. Said processors are communicatively connected to user interface control **708**, memory **704** and/or other storage, and display **710**. UE **200**(**1**) may further include battery **712**, speaker **714**, microphone **728** and antenna(s) **716**. User interface control **708** may include controllers or adapters configured to receive input from or provide output to a keypad, touch screen, voice interface (microphone), function keys, joystick, data glove, mouse and the like.

Instructions readable and executable by processor **706**, as well as data and other elements may be stored in a storage facility such as memory **704**. Memory **704** may be implemented with any combination of read only memory (ROM) modules or random access memory (RAM) modules, optionally including both volatile and nonvolatile memory. Software **718**, which includes client software **702** shown in FIG. **17**, may be stored within memory **704** to provide instructions to processor **706** such that when the instructions are executed, processor **706** and/or other elements of UE **200**(**1**) are caused to perform various functions or methods such as are described herein. Software may include both applications and operating system software, and may include code segments, instructions, applets, pre-compiled code, compiled code, computer programs, program modules, engines and program logic. Computer executable instructions and data may further be stored on computer readable media including EEPROM, flash memory or other memory technology, CD-ROM, DVD or other optical disk storage, magnetic cassettes, magnetic tape, magnetic storage and the like.

Additionally, UE **200**(**1**) is configured to receive, decode and process various types of transmissions including digital broadband broadcast transmissions that are based, for example, on the Digital Video Broadcast (DVB) standard, such as NGH, DVB-H, DVB-T2, or DVB-MHP, through service providers. In particular, UE **200**(**1**) or one or more elements such as broadcast transceiver **722** is configured to receive, decode, and process transmission based on broadcast standards. Similarly, other digital transmission formats may alternatively be used to deliver content and information regarding available services. Additionally or alternatively, UE **200**(**1**) may be configured to receive, decode and process transmissions through FM/AM Radio transceiver **720**, WLAN transceiver **724**, and telecommunications transceiver **726**. Transceivers **720**, **722**, **724** and **726** may, alternatively, include individual transmitter and receiver components (not shown).

In at least some configurations, some or all of the functionalities of UE **200**(**1**) and/or of other devices (e.g., computers associated with service provider **101**(**1**) through **101**(N)) may be implemented in hardware and/or firmware in addition to (or instead of) in software. For example, UE **200**(**1**) may include one or more integrated circuits (ICs) through which one or more of the hereindescribed methods and features may be implemented. An integrated circuit may, for example, be a microprocessor that accesses programming instructions or other data stored in memory. In at least some other embodiments, one or more methods described herein are hardwired into an IC. In other words, the IC is in such cases an application specific integrated circuit (ASIC) having gates and other logic configured to perform the calculations and other operations described herein. In still other arrangements, the IC may perform some operations based on a combination of the above.

Although examples of carrying out the invention have been described, those skilled in the art will appreciate that there are numerous other variations, combinations and permutations of the above described devices and techniques that fall within the spirit and scope of the invention as set forth in the appended claims. The above description and drawings are illustrative only. The invention is not limited to the illustrated embodiments, and all embodiments of the invention need not necessarily achieve all of the advantages or purposes, or possess all characteristics, identified herein. As used in the claims, "controller" generically refers to any of one or more FPGAs, microprocessors, ICs, ASICs, other types of computational devices, or combinations thereof.

The invention claimed is:

1. A method comprising:

mapping, with at least one processor, each of a plurality of data streams related to a specific content to a different component of a service delivering multiple versions of the specific content;

encapsulating each data stream of the plurality into a stream of packets according to a first communication protocol, wherein,

as to each of the packet streams, the packets have a value in a common field identifying the component mapped to the data stream encapsulated by the packet stream; and

forwarding the packet streams for transmission in a transmission channel, and wherein

the mapping further comprises assigning a specific value to each component for a predefined field of a packet according to a second communication protocol, the specific value distinguishing the component from other components, and

the encapsulating comprises encapsulating the packet streams according to one or more lower layer protocols without encapsulating the packet streams according to the second communication protocol.

2. The method of claim **1**, wherein

the first communication protocol is a user datagram protocol, and

the common field is one of a user datagram protocol destination port field and a user datagram protocol source port field.

3. The method of claim **2**, wherein the user datagram protocol source port field of the packets in each of the packet streams has a value identifying a provider of the service, and wherein the common field is the user datagram protocol destination port field.

4. The method of claim **1**, wherein

the first communication protocol is a user datagram protocol,

the common field is one of a user datagram protocol destination port field and a user datagram protocol source port field,

the second communication protocol is an internet protocol, and

the predefined field is one of an internet protocol source address field and an internet protocol destination address field.

5. A non-transitory machine-readable medium storing machine-executable instructions configured to perform a method comprising:

mapping each of a plurality of data streams related to a specific content to a different component of a service delivering multiple versions of the specific content;

encapsulating each data stream of the plurality into a stream of packets according to a first communication protocol, wherein,

as to each of the packet streams, the packets have a value in a common field identifying the component mapped to the data stream encapsulated by the packet stream; and

forwarding the packet streams for transmission in a transmission channel, and wherein

the mapping further comprises assigning a specific value to each component for a predefined field of a packet according to a second communication protocol, the specific value distinguishing the component from other components, and

the encapsulating comprises encapsulating the packet streams according to one or more lower layer protocols without encapsulating the packet streams according to the second communication protocol.

6. The non-transitory machine-readable medium of claim **5**, wherein

the first communication protocol is a user datagram protocol, and

the common field is one of a user datagram protocol destination port field and a user datagram protocol source port field.

7. The non-transitory machine-readable medium of claim **6**, wherein the user datagram protocol source port field of the packets in each of the packet streams has a value identifying a provider of the service, and wherein the common field is the user datagram protocol destination port field.

8. The non-transitory machine-readable medium of claim **6**, wherein

the first communication protocol is a user datagram protocol,

the common field is one of a user datagram protocol destination port field and a user datagram protocol source port field,

the second communication protocol is an internet protocol, and

the predefined field is one of an internet protocol source address field and an internet protocol destination address field.

9. An apparatus comprising:

at least one processor; and

at least one memory storing instructions, the at least one memory and stored instructions configured to, with the at least one processor, cause the apparatus to

map each of a plurality of data streams related to a specific content to a different component of a service delivering multiple versions of the specific content;

encapsulate each data stream of the plurality into a stream of packets according to a first communication protocol, wherein,

as to each of the packet streams, the packets have a value in a common field identifying the component mapped to the data stream encapsulated by the packet stream; and

forward the packet streams for transmission in a transmission channel and wherein

the mapping further comprises assigning a specific value to each component for a predefined field of a packet according to a second communication protocol, the specific value distinguishing the component from other components, and

the encapsulating comprises encapsulating the packet streams according to one or more lower layer protocols without encapsulating the packet streams according to the second communication protocol.

10. The apparatus of claim **9**, wherein

the first communication protocol is a user datagram protocol, and

the common field is one of a user datagram protocol destination port field and a user datagram protocol source port field.

11. The apparatus of claim **10**, wherein the user datagram protocol source port field of the packets in each of the packet streams has a value identifying a provider of the service, and wherein the common field is the user datagram protocol destination port field.

12. The apparatus of claim **9**, wherein

the first communication protocol is a user datagram protocol,

the common field is one of a user datagram protocol destination port field and a user datagram protocol source port field,

the second communication protocol is an internet protocol, and

the predefined field is one of an internet protocol source address field and an internet protocol destination address field.

13. The apparatus of claim **9**, wherein the apparatus is part of a system that comprises a second apparatus, the second apparatus comprising at least one controller configured, upon receiving a transmission of the service, to identify desired components of the service based on values in the common field in packets of the packet streams.

14. A method comprising:

receiving, at a user equipment device, a transmission of a service delivering multiple versions of a specific content, the service including a plurality of components, each component corresponding to a distinct data stream related to the specific content, each of the data streams encapsulated into a stream of packets according to a first communication protocol; and

identifying desired components of the service based on values in a common field in packets of the packet streams, wherein identifying desired components comprises decapsulating the first communication protocol packets of the packet streams from additional layers of encapsulation according to other communication protocols;

encapsulating first communication protocol packets from desired component packet streams according to a second communication protocol, wherein the second communication protocol is not one of the other communication protocols; and

receiving a plurality of distinct specific values, each of the specific values corresponding to a different one of the desired components, and wherein

the encapsulating first communication protocol packets comprises, as to each desired component, inserting the corresponding specific value into a predefined field of a second communication protocol packet.

15. The method of claim **14**, wherein

the first communication protocol is a user datagram protocol, and

the common field is one of a user datagram protocol destination port field and a user datagram protocol source port field.

16. The method of claim **15**, wherein the common field is the user datagram protocol destination port field, further comprising

determining a provider of the service based on a provider-identifying value contained in the user datagram protocol source port field of a user datagram protocol packets in the packet streams.

17. A method comprising:

receiving, at a user equipment device, a transmission of a service delivering multiple versions of a specific content, the service including a plurality of components, each component corresponding to a distinct data stream related to the specific content, each of the data streams encapsulated into a stream of packets according to a first communication protocol;

identifying desired components of the service based on values in a common field in packets of the packet streams, wherein identifying desired components comprises decapsulating the first communication protocol packets of the packet streams from additional layers of encapsulation according to other communication protocols;

encapsulating first communication protocol packets from desired component packet streams according to a second communication protocol, wherein the second communication protocol is not one of the other communication protocols, wherein

the first communication protocol is a user datagram protocol,

the common field is one of a user datagram protocol destination port field and a user datagram protocol source port field, and

the second communication protocol is an internet protocol.

18. The method of claim **17**, wherein

the first communication protocol is a user datagram protocol,

the common field is one of a user datagram protocol destination port field and a user datagram protocol source port field,

the second communication protocol is an internet protocol, and

the predefined field is one of an internet protocol source address field and an internet protocol destination address field.

19. A non-transitory machine-readable medium storing machine-executable instructions for performing a method comprising:

receiving a transmission of a service delivering multiple versions of a specific content, the service including a plurality of components, each component corresponding to a distinct data stream related to the specific content, each of the data streams encapsulated into a stream of packets according to a first communication protocol;

identifying desired components of the service based on values in a common field in packets of the packet streams, wherein identifying desired components comprises decapsulating the first communication protocol packets of the packet streams from additional layers of encapsulation according to other communication protocols;

encapsulating first communication protocol packets from desired component packet streams according to a second communication protocol, wherein the second communication protocol is not one of the other communication protocols; and

receiving a plurality of distinct specific values, each of the specific values corresponding to a different one of the desired components, and wherein

the encapsulating first communication protocol packets comprises, as to each desired component, inserting the corresponding specific value into a predefined field of a second communication protocol packet.

20. The non-transitory machine-readable medium of claim **19**, wherein

the first communication protocol is a user datagram protocol, and

the common field is one of a user datagram protocol destination port field and a user datagram protocol source port field.

21. The non-transitory machine-readable medium of claim **20**, wherein the common field is the user datagram protocol destination port field, and storing further machine-executable instructions for performing

determining a provider of the service based on a provider-identifying value contained in the user datagram protocol source port field of a user datagram protocol packets in the packet streams.

22. A non-transitory machine-readable medium medium storing machine-executable instructions configured to perform a method comprising:

receiving a transmission of a service delivering multiple versions of a specific content, the service including a plurality of components, each component corresponding to a distinct data stream related to the specific content, each of the data streams encapsulated into a stream of packets according to a first communication protocol;

identifying desired components of the service based on values in a common field in packets of the packet streams, wherein identifying desired components comprises decapsulating the first communication protocol packets of the packet streams from additional layers of encapsulation according to other communication protocols; and

encapsulating first communication protocol packets from desired component packet streams according to a second communication protocol, wherein the second communication protocol is not one of the other communication protocols, wherein

the first communication protocol is a user datagram protocol,

the common field is one of a user datagram protocol destination port field and a user datagram protocol source port field, and

the second communication protocol is an internet protocol.

23. The non-transitory machine-readable medium of claim **22**, wherein

the first communication protocol is a user datagram protocol,

the common field is one of a user datagram protocol destination port field and a user datagram protocol source port field,

the second communication protocol is an internet protocol, and

the predefined field is one of an internet protocol source address field and an internet protocol destination address field.

24. An apparatus comprising:

at least one controller; and

at least one memory storing instructions, the at least one memory and stored instructions configured, with the at least one controller, to cause the apparatus, upon receiving a transmission of a service delivering multiple versions of a specific content, the service including a plurality of components, each component corresponding to a distinct data stream related to the specific content, each of the data streams encapsulated into a stream of packets according to a first communication protocol, to

identify desired components of the service based on values in a common field in packets of the packet streams, wherein identifying desired components comprises decapsulating the first communication protocol packets of the packet streams from additional layers of encapsulation according to other communication protocols,

encapsulate first communication protocol packets from desired component packet streams according to a second communication protocol, wherein the second communication protocol is not one of the other communication protocols, and

receive a plurality of distinct specific values, each of the specific values corresponding to a different one of the desired components, and wherein the encapsulating first communication protocol packets comprises, as to each desired component, inserting the corresponding specific value into a predefined field of a second communication protocol packet.

25. The apparatus of claim **24**, wherein

the first communication protocol is a user datagram protocol, and

the common field is one of a user datagram protocol destination port field and a user datagram protocol source port field.

26. The apparatus of claim **25**, wherein the common field is the user datagram protocol destination port field, and wherein the at least one controller is further configured to perform operations that include

determining a provider of the service based on a provider-identifying value contained in the user datagram protocol source port field of a user datagram protocol packets in the packet streams.

27. An apparatus comprising:

at least one controller; and

at least one memory storing instructions, the at least one memory and stored instructions configured, with the at least one controller, to cause the apparatus, upon receiving a transmission of a service delivering multiple versions of a specific content, the service including a plurality of components, each component corresponding to a distinct data stream related to the specific content, each of the data streams encapsulated into a stream of packets according to a first communication protocol, to

identify desired components of the service based on values in a common field in packets of the packet streams, wherein identifying desired components comprises decapsulating the first communication protocol packets of the packet streams from additional layers of encapsulation according to other communication protocols, and

encapsulate first communication protocol packets from desired component packet streams according to a second communication protocol, wherein the second communication protocol is not one of the other communication protocols, wherein

the first communication protocol is a user datagram protocol,

the common field is one of a user datagram protocol destination port field and a user datagram protocol source port field, and

the second communication protocol is an internet protocol.

28. The apparatus of claim **27**, wherein

the first communication protocol is a user datagram protocol,

the common field is one of a user datagram protocol destination port field and a user datagram protocol source port field,

the second communication protocol is an internet protocol, and

the predefined field is one of an internet protocol source address field and an internet protocol destination address field.

* * * * *

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

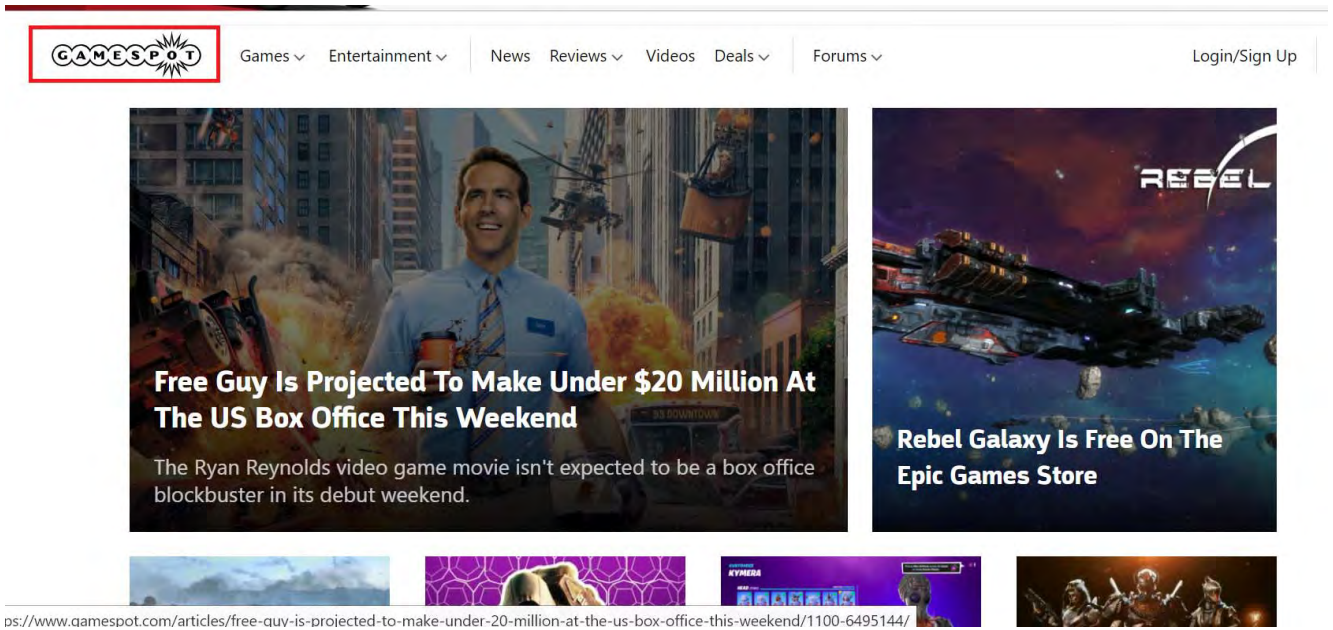
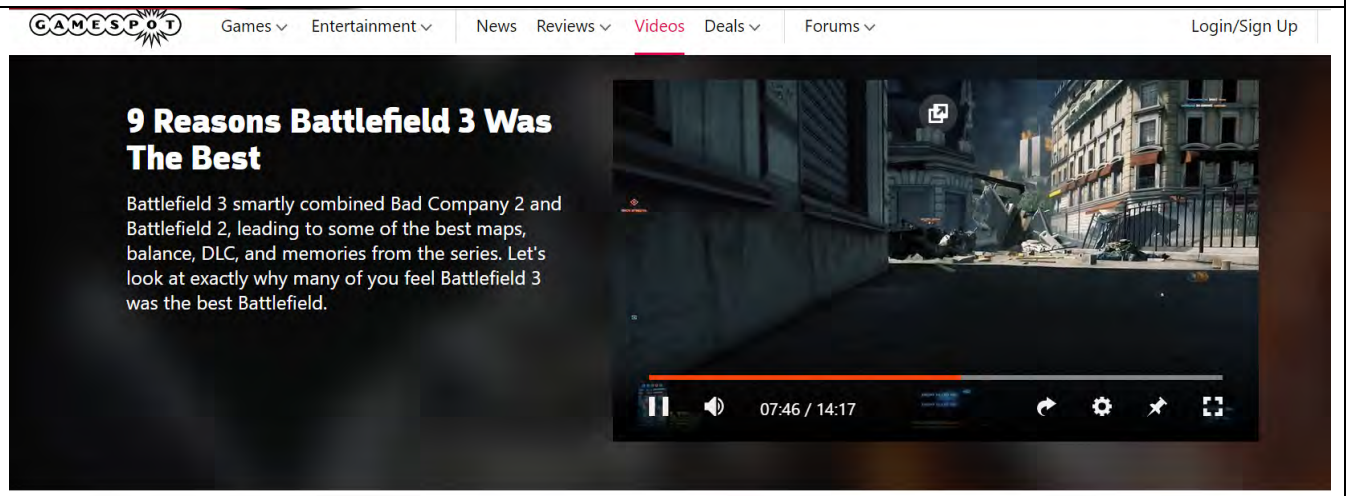
Pat. 7,848,328	Gamespot.com ("Accused Instrumentality")
1. A method comprising: mapping, with at least one processor, each of a plurality of data streams related to a specific content to a different component of a service delivering multiple versions of the specific content;	The defendant streams videos making use of HTTP live streaming (HLS) standard (hereinafter referred to as the standard).  https://www.gamespot.com/

EXHIBIT 2

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

Pat. 7,848,328	Gamespot.com ("Accused Instrumentality")
	 https://www.gamespot.com/videos/ The accused standard discloses a method which comprises mapping, with at least one processor (e.g., processor/transcoder of a server of an HLS service provider), each of a plurality of data streams (e.g., media streams such as audio, video, captions, etc.) related to a specific content (e.g., streaming content such as web streaming, on-demand video on TV) to a different component (e.g., Index file m3u8) of a service (e.g., web streaming, on-demand TV program etc.) delivering multiple versions (e.g., M3U8 Manifest File comprises multiple versions of a data stream) of the specific content (e.g., streaming content such as web streaming, on-demand TV program etc.). As shown below, a server of an HLS service provider converts plurality of data streams such as audio, video, etc. of a streaming content (e.g., specific content) in multiple streams at different bitrates and resolutions in different media segments of a M3U8 Manifest File. For example a media segment may consist of representation of videos and audios. Similarly, different media segments contain many different representations.

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

Pat. 7,848,328	Gamespot.com ("Accused Instrumentality")

	Get Started | Statistics | Inspectors | AutoResponder | Composer | Fiddler Orchestra Beta | FiddlerScript
	Headers | TextView | SyntaxView | WebForms | HexView | Auth | Cookies | Raw | JSON | XML
	GET https://www.gamespot.com/a/v023034f95c288cec0cfedaa07e152f5e/js/compiled/header_js.js HTTP/1.1
	Host: www.gamespot.com
	Connection: keep-alive
	sec-ch-ua: " Not A;Brand";v="99", "Chromium";v="92", "Opera";v="78"
	sec-ch-ua-mobile: ?0
	User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/92.0.4515.131 Safari/537.36 OPR/78.0.4093.147
	Accept: */*
	Sec-Fetch-Site: same-origin
	Sec-Fetch-Mode: no-cors
	Sec-Fetch-Dest: script
	Referer: https://www.gamespot.com/videos/
	Accept-Encoding: gzip, deflate, br
	Accept-Language: en-GB,en-US;q=0.9,en;q=0.8
	Cookie: sptg=%5B%5D; device_view=full; xcr2=us-us; xcab=80-0%7C81-0%7C82-0%7C83-0%7C86-0%7C87-0%7C88-0%7C89-0%7C90-0%7C92-0%7C94-0%7C95-0%7C96-0; sat=5f1f20fd032cd5c07c13afe504681e5b
	Find... (press Ctrl+Enter to highlight all) | View in Notepad
	Transformer | Headers | TextView | SyntaxView | ImageView | HexView | WebView | Auth | Caching | Cookies | Raw | JSON | XML
	],
	"polyfills": [
	"html5media",
	"mediaelementjs",
	"sublimevideo",
	"videojs",
	"leanbackplayer",
	"videoforeverybody"
	]
	}
	!*/o.addTest("video",(function(){var e=g("video");var t=false;try{t=!!e.canPlayType;if(t){t=new Boolean(t);t.ogg=e.canPlayType('video/ogg; codecs="theora"').replace(/^no$/,"");t.h264=e.canPlayType('video/mp4; codecs="avc1.42E01E"').replace(/^no$/,"");t.webm=e.canPlayType('video/webm; codecs="vp8, vorbis"').replace(/^no$/,"");t.vp9=e.canPlayType('video/webm; codecs="vp9"').replace(/^no$/,"");t.hls=e.canPlayType('application/x-mpegURL; codecs="avc1.42E01E"').replace(/^no$/,"")}}catch(e){}return t}));
	/*!
	{
	"name": "canvas.toDataURL type support",
	"property": ["todataurljpeg", "todataurlpng", "todataurlwebp"],

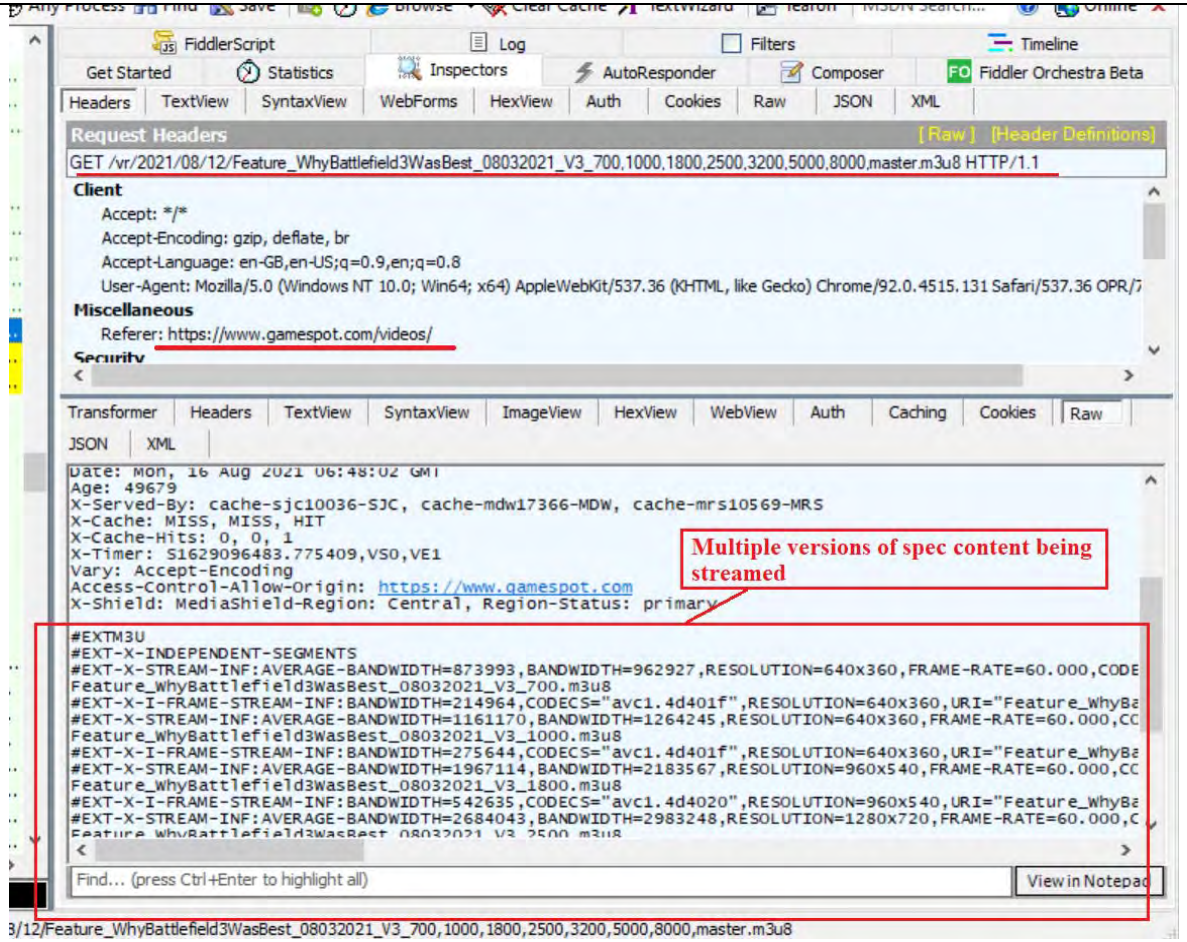
NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

Pat. 7,848,328	Gamespot.com ("Accused Instrumentality")
	Source: Packet capture by Fiddler tool As shown below, a server of an HLS streaming service provider converts plurality of data streams such as audio, video, etc. of a streaming content (e.g., specific content) such as a TV program in multiple versions in different adaptation sets of a M3U8 Manifest File. For example an adaption set may consists of representation of resolution 640 x 360 video, 960 x540 video, etc.

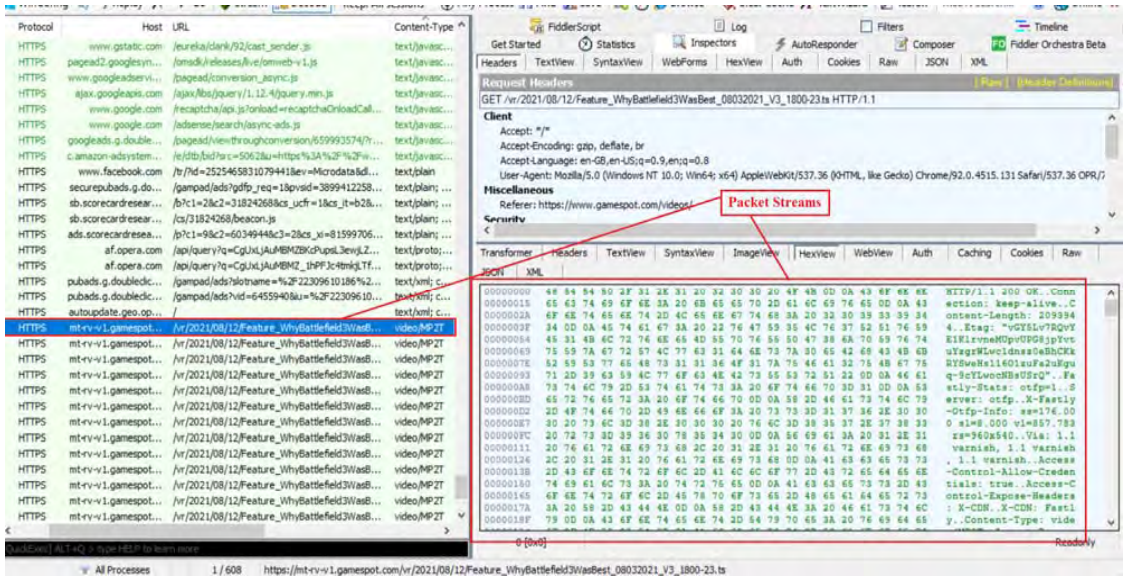
NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

Pat. 7,848,328	Gamespot.com ("Accused Instrumentality")
	

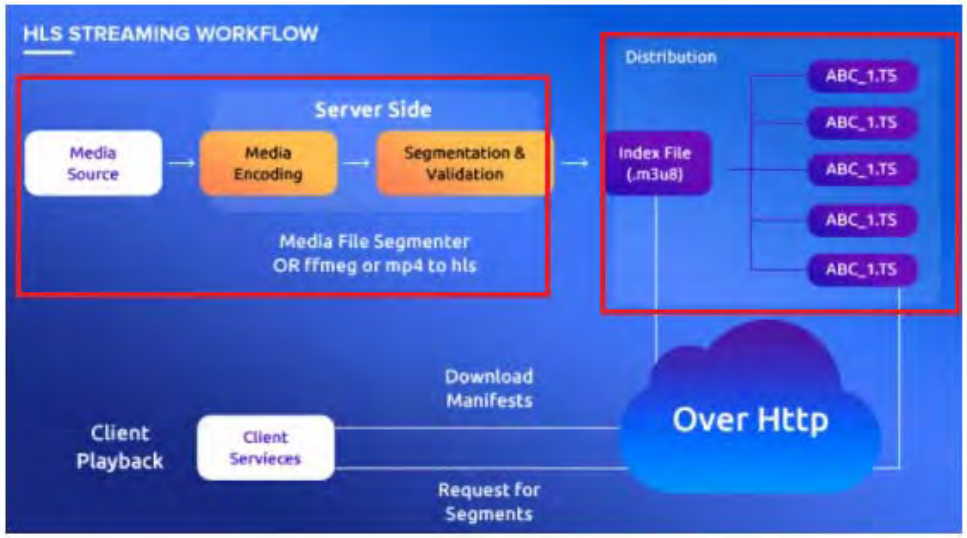
NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

Pat. 7,848,328	Gamespot.com ("Accused Instrumentality")
	Source: Packet capture by Fiddler tool  *Source: Packet capture by Fiddler tool*

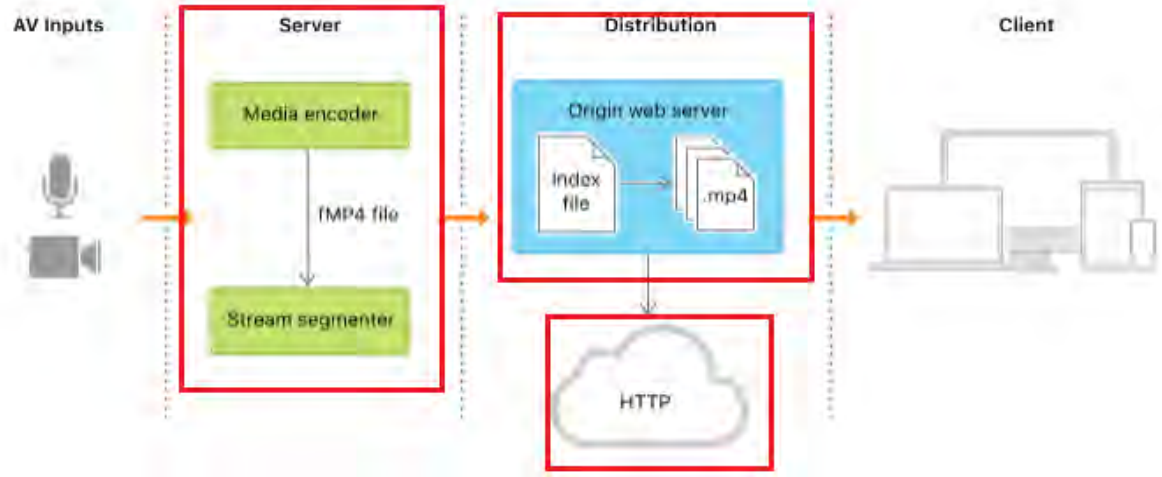
NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

Pat. 7,848,328	Gamespot.com ("Accused Instrumentality")
	 https://martech.zone/http-live-streaming-player-features/

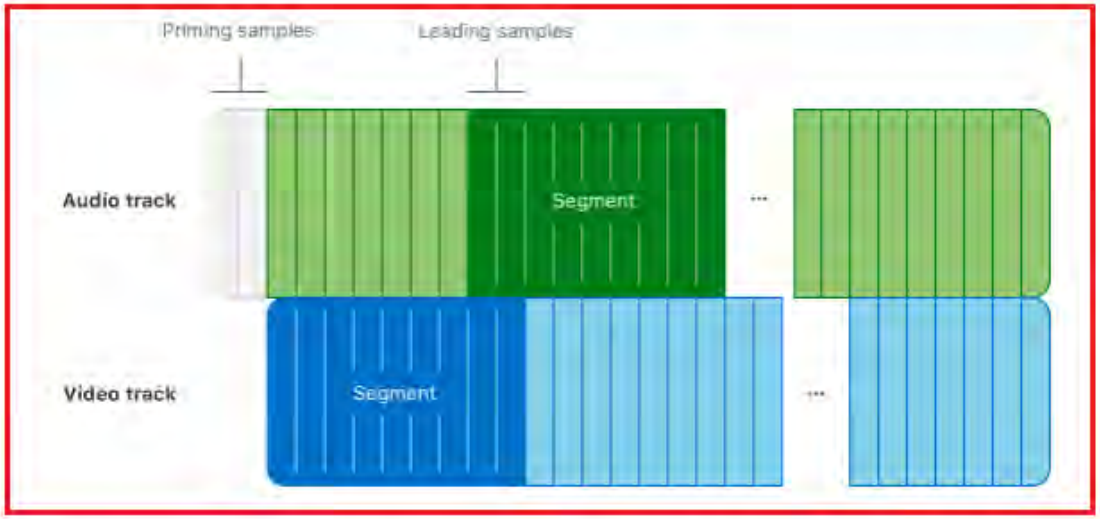
NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

Pat. 7,848,328	Gamespot.com ("Accused Instrumentality")
	HLS supports the following: • Live broadcasts and prerecorded content (video on demand, or *VOD*) • Multiple alternate streams at different bit rates • Intelligent switching of streams in response to network bandwidth changes • Media encryption and user authentication The following figure shows the components of an HTTP Live Stream.  https://developer.apple.com/documentation/http_live_streaming

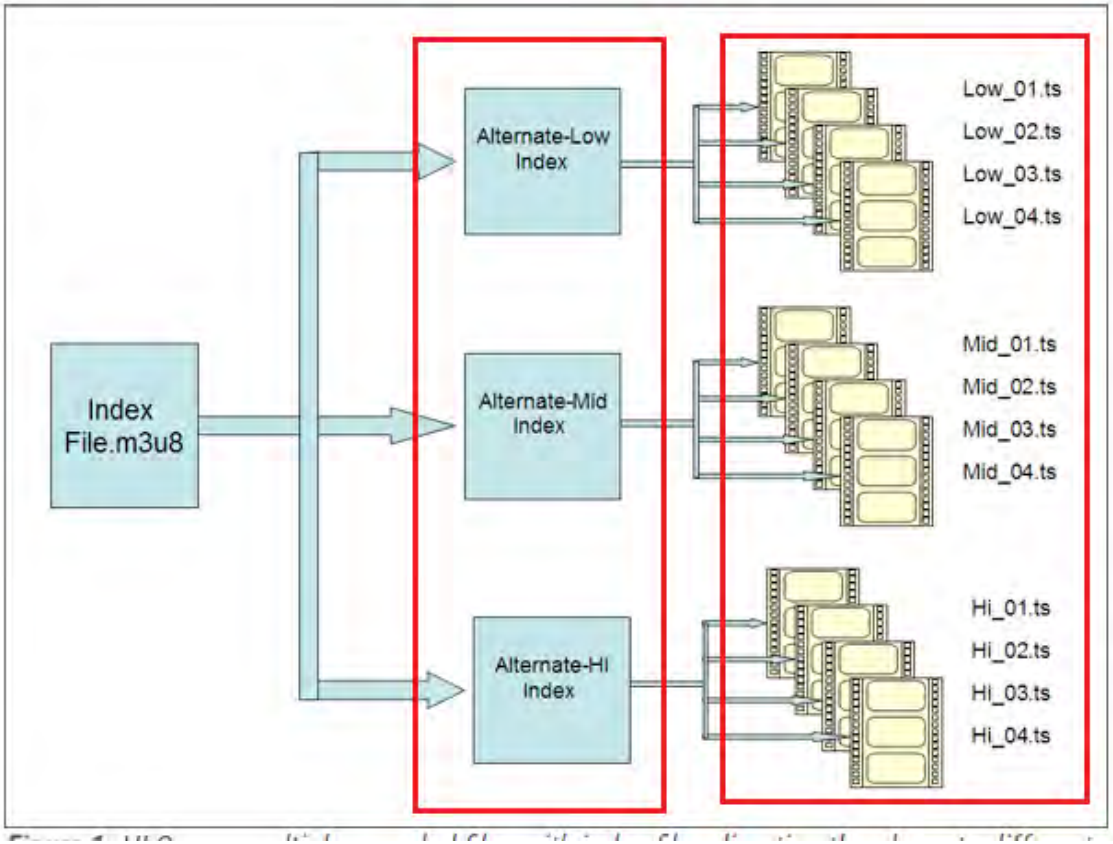
NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

Pat. 7,848,328	Gamespot.com ("Accused Instrumentality")
	AAC audio processing requires a small amount of leading "throw-away" audio to prime the encoder and initialize internal tables. This small amount of audio results from *encoder delay* which happens during encoding to produce properly formed, encoded audio packets, and its duration is commonly referred to as the *priming duration*. This audio needs to occur before the first frame of video; otherwise, there will be no audio for the first few frames of video.  The audio sample rates are normally 44.1 kHz or 48 kHz. For more information, see the HTTP Live Streaming Specification and the HLS Authoring Specification for Apple Devices. https://developer.apple.com/documentation/http_live_streaming/preparing_audio_for_http_live_streaming

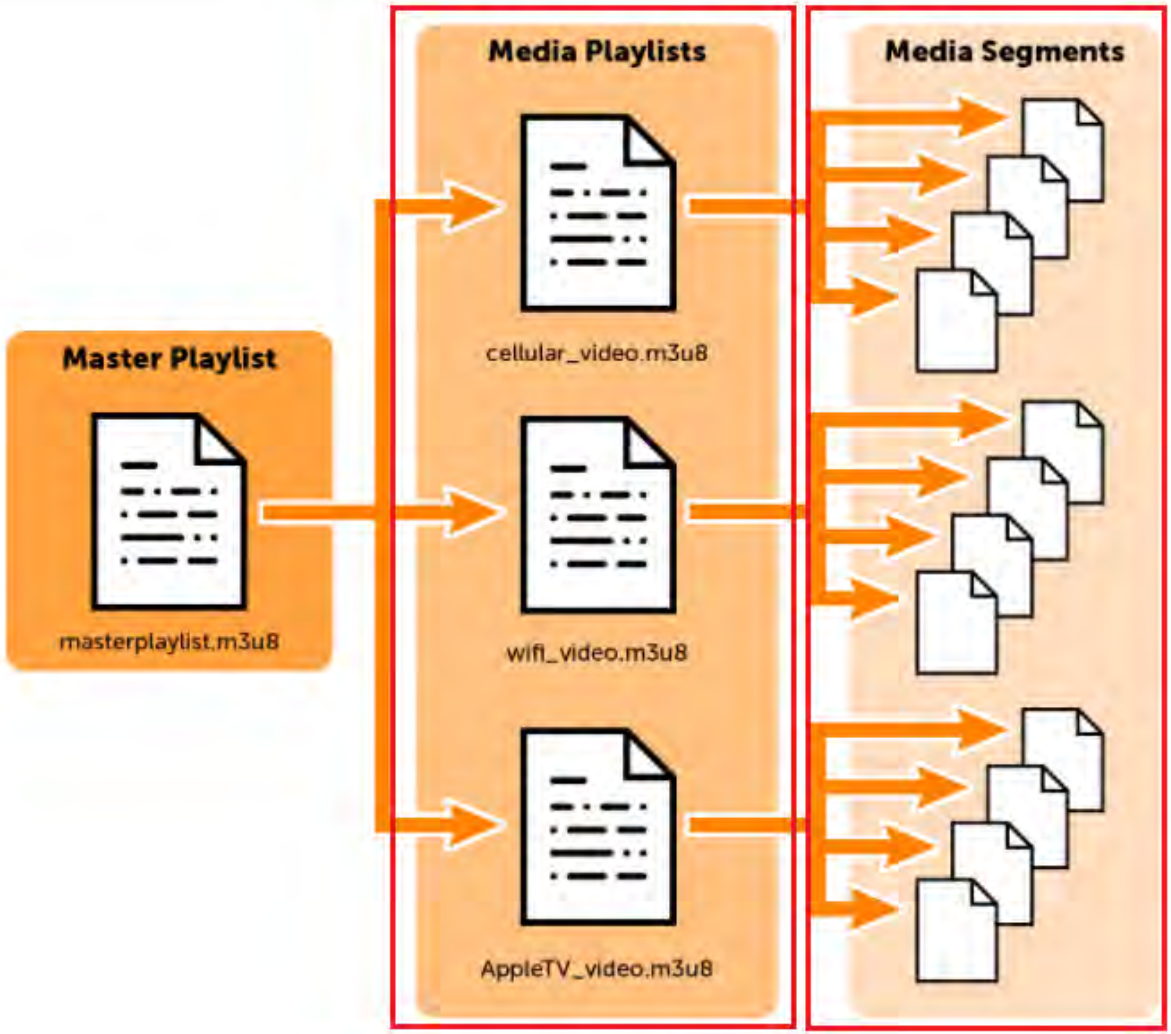
NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

Pat. 7,848,328	Gamespot.com ("Accused Instrumentality")
	 https://www.streamingmedia.com/Articles/Editorial/What-Is-.../What-Is-HLS-(HTTP-Live-Streaming)-78221.aspx?utm_source=related_articles&utm_medium=gutenberg&utm_campaign=editors_selection

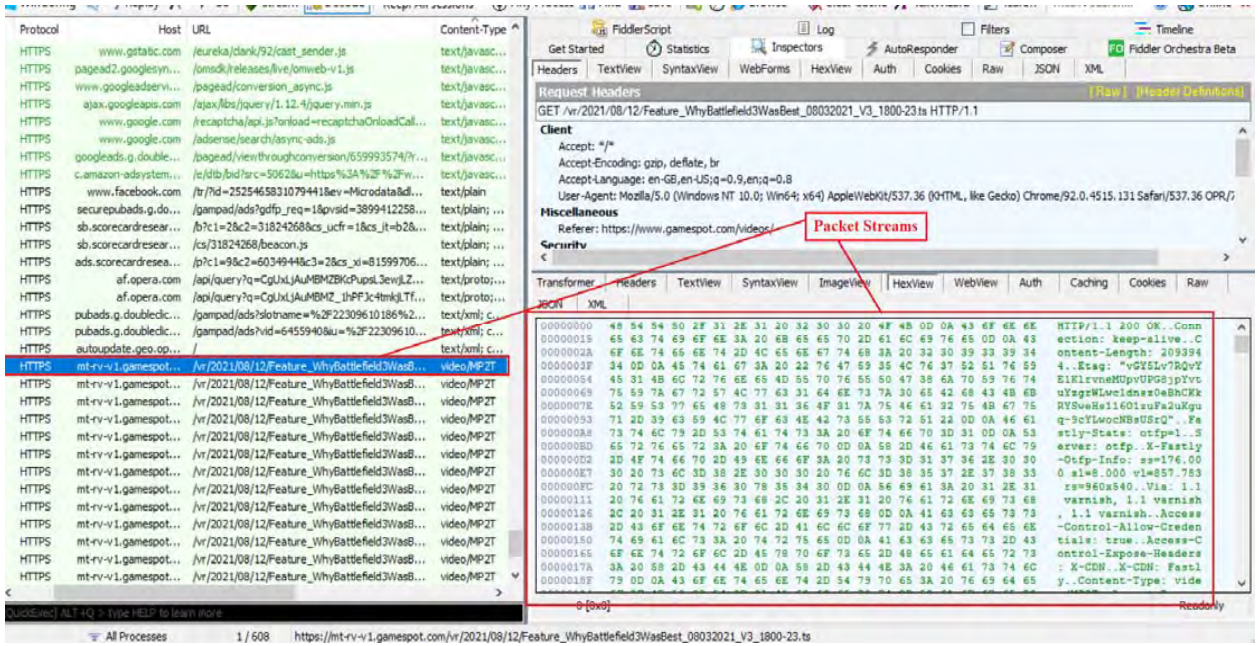
NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

Pat. 7,848,328	Gamespot.com ("Accused Instrumentality")
	 https://www.wowza.com/blog/hls-streaming-protocol 1. Introduction to HTTP Live Streaming

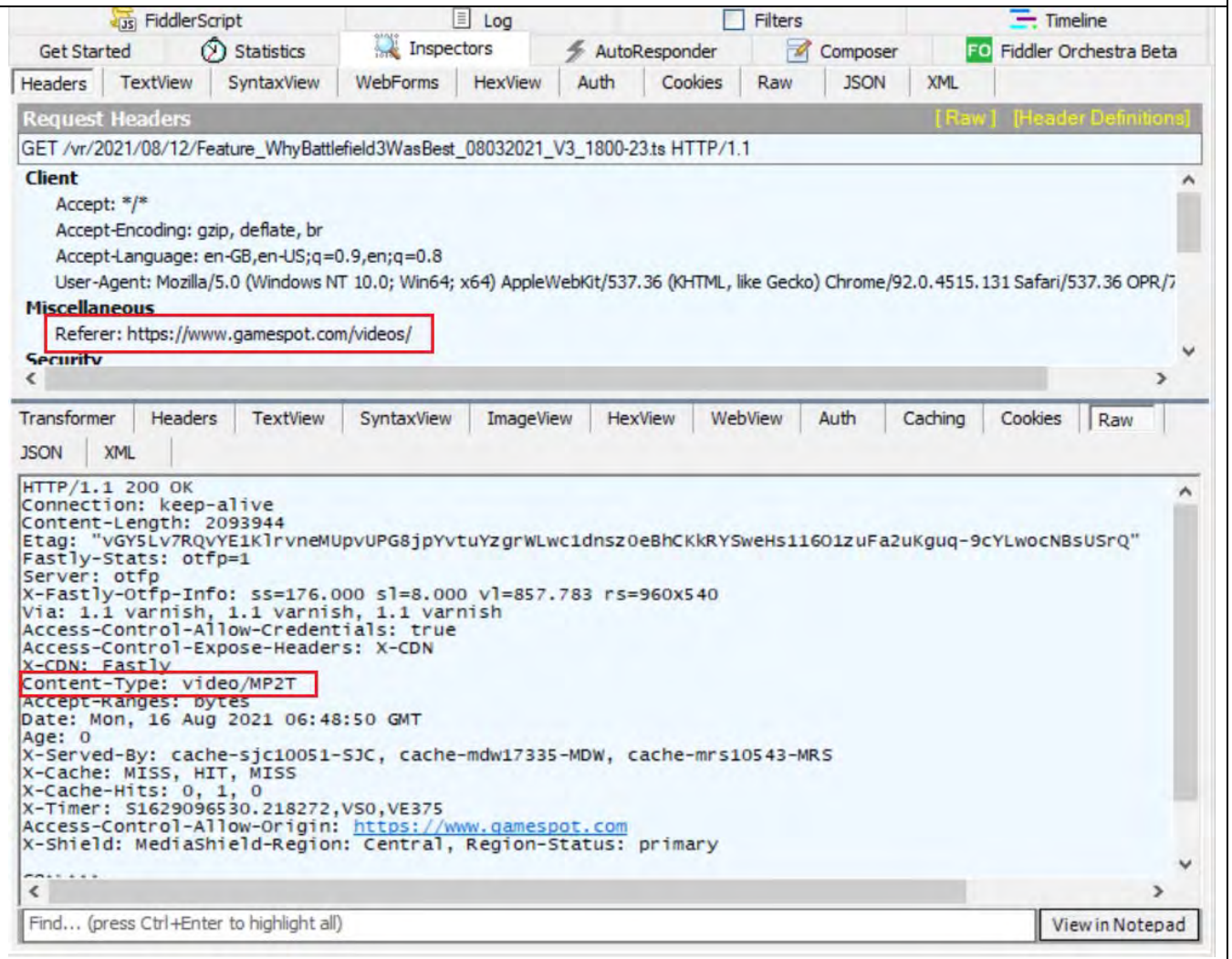
NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

Pat. 7,848,328	Gamespot.com ("Accused Instrumentality")
encapsulating each data stream of the plurality into a stream of packets according to a first communication protocol,	The accused standard discloses encapsulating each data stream (e.g., media streams such as audio, video, captions, etc.) of the plurality into a stream of packets (e.g., index file m3u8 data packets) according to a first communication protocol (e.g., Transmission control protocol). As shown below, For HLS, MPEG-2 transport stream is used to encapsulate the data stream (e.g., media streams such as audio, video, captions, etc.) using first communication protocol (e.g. TCP).  *Source: Packet capture by Fiddler tool*

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

Pat. 7,848,328	Gamespot.com ("Accused Instrumentality")
	

Source: Packet capture by Fiddler tool

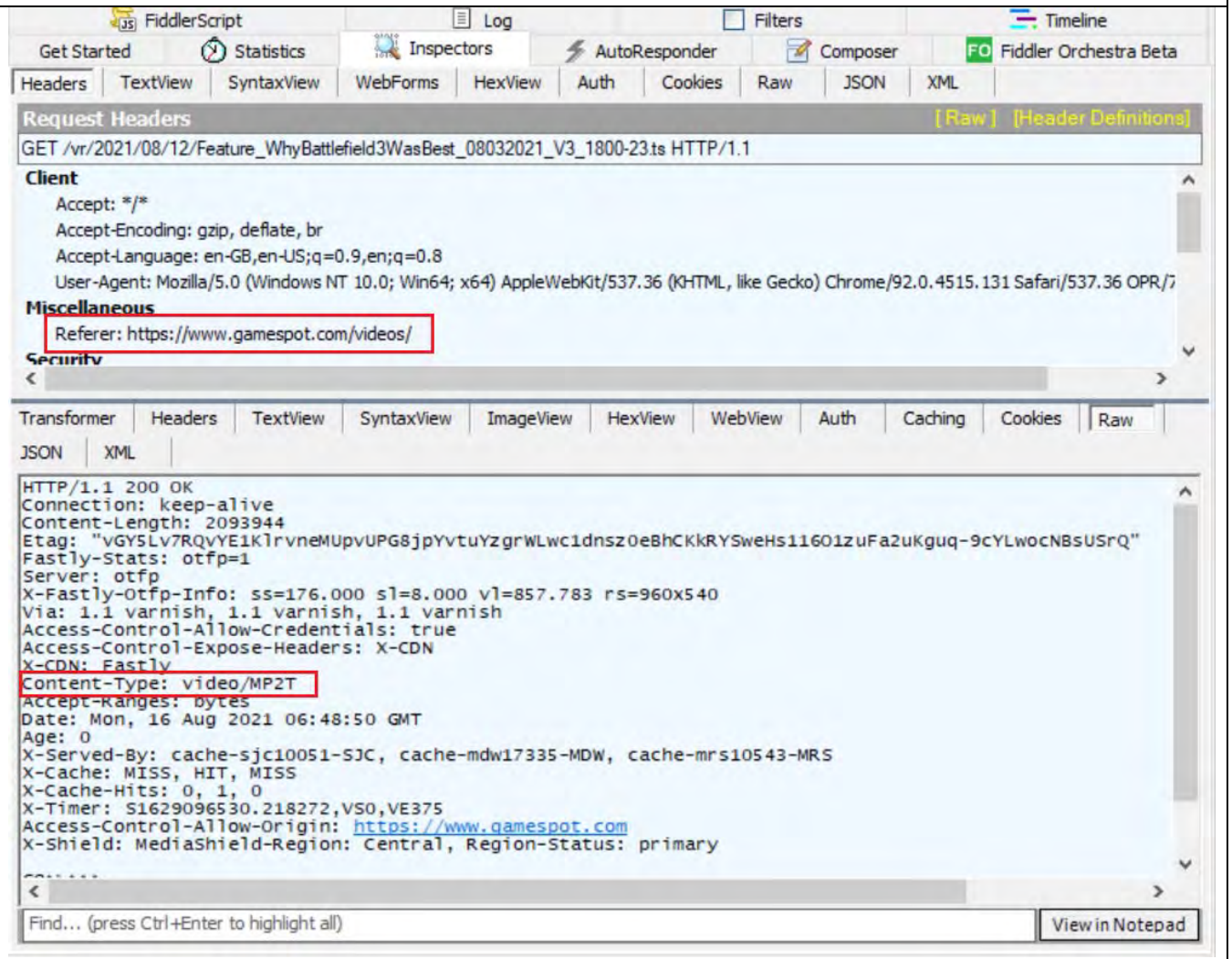
NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

Pat. 7,848,328	Gamespot.com ("Accused Instrumentality")
wherein, as to each of the packet streams, the packets have a value in a common field identifying the component mapped to the data stream encapsulated by the packet stream;	The accused standard discloses wherein, as to each of the packet streams (e.g., m3u8 data packet stream), the packets have a value (e.g., audio/video type, group id, etc.) in a common field identifying the component mapped to the data stream (e.g., media streams such as audio, video, captions, etc.) encapsulated by the packet stream (e.g., m3u8 data packet stream). As shown below, the common field shows "type: video"

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

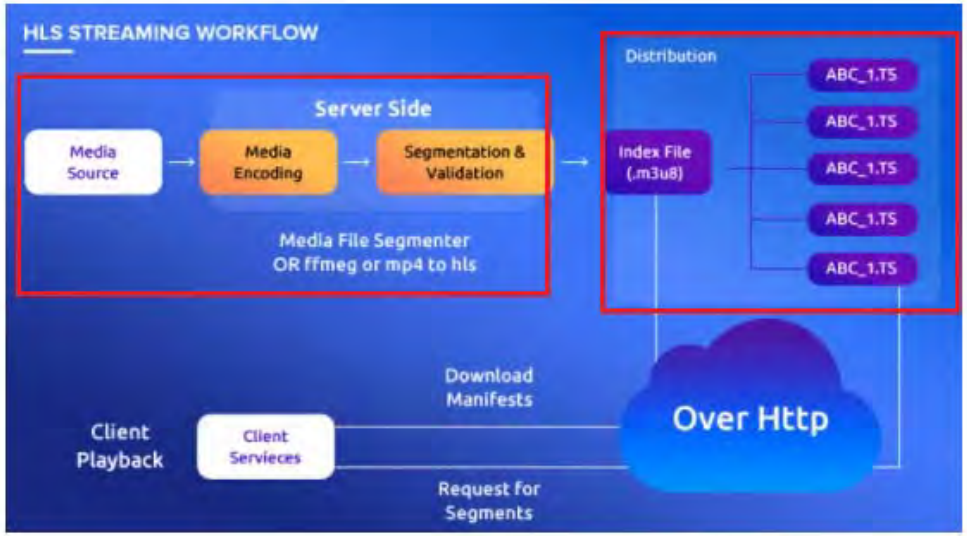
Preliminary charts based on best available information

Pat. 7,848,328	Gamespot.com ("Accused Instrumentality")
	

Source: Packet capture by Fiddler tool

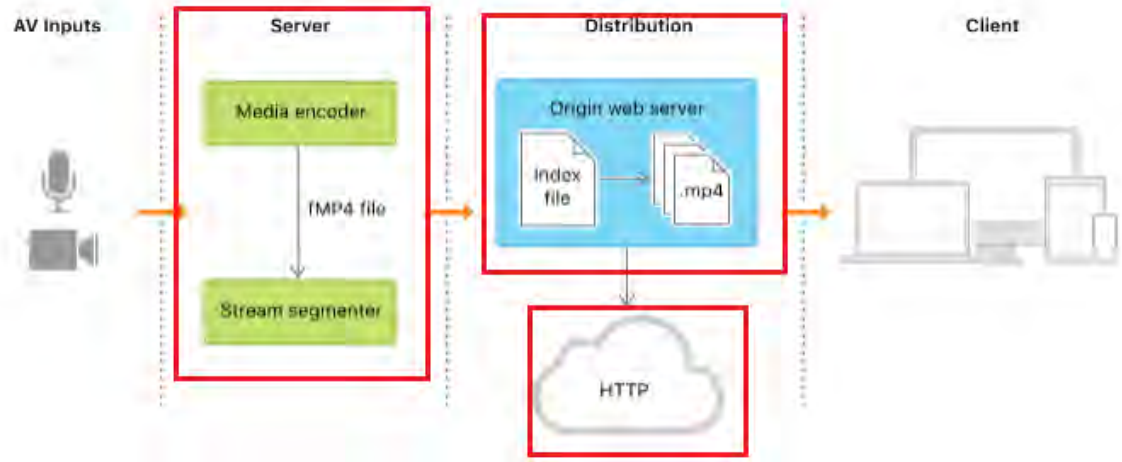
NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

Pat. 7,848,328	Gamespot.com ("Accused Instrumentality")
and forwarding the packet streams for transmission in a transmission channel,	The accused standard discloses forwarding the packet streams (e.g., m3u8 data packet stream) for transmission in a transmission channel (e.g., wired/wireless transmission).  https://martech.zone/http-live-streaming-player-features/

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

Pat. 7,848,328	Gamespot.com ("Accused Instrumentality")
	HLS supports the following: • Live broadcasts and prerecorded content (video on demand, or *VOD*) • Multiple alternate streams at different bit rates • Intelligent switching of streams in response to network bandwidth changes • Media encryption and user authentication The following figure shows the components of an HTTP Live Stream.  https://developer.apple.com/documentation/http_live_streaming
and wherein the	The accused standard discloses wherein the mapping further comprises assigning a specific value (e.g., value

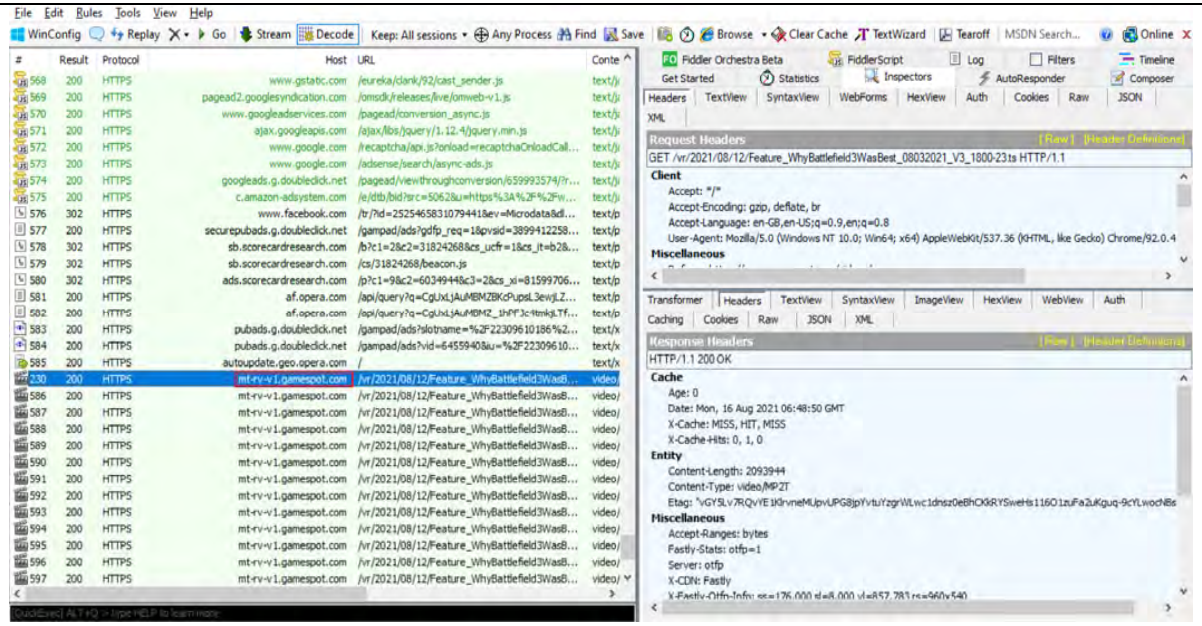
NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

Pat. 7,848,328	Gamespot.com ("Accused Instrumentality")
mapping further comprises assigning a specific value to each component for a predefined field of a packet according to a second communication protocol, the specific value distinguishing the component from other components, and	corresponding to different media stream) to each component for a predefined field of a packet (e.g., segment info) according to a second communication protocol (e.g., HTTP/Hypertext transfer protocol), the specific value (e.g., value corresponding to different media stream) distinguishing the component from other components. As shown below, the accused standard provides m3u8 index file with multiple media playlists. Each media playlist has many representations, wherein every representation has many segments, these segments contains media information of each conversion corresponding to that media playlist. The accused standard provides each segment having information related to a particular HTTP based uniform resource locator for getting a media stream from that particular address. For the video segment shown below, the base URL is mt-rv-v1.gamespot.com and the specific value is "vr/2021/08/12/Feature_WhyBattlefield3WasBest_08032021_V3_1800-23.ts" (http based).

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

Pat. 7,848,328	Gamespot.com ("Accused Instrumentality")
	 *Source: Packet capture by Fiddler tool*

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

Pat. 7,848,328	Gamespot.com ("Accused Instrumentality")
	FiddlerScript · Log · Filters · Timeline Get Started · Statistics · Inspectors · AutoResponder · Composer · Fiddler Orchestra Beta Headers · TextView · SyntaxView · WebForms · HexView · Auth · Cookies · Raw · JSON · XML **Request Headers** [Raw] [Header Definitions] GET /vr/2021/08/12/Feature_WhyBattlefield3WasBest_08032021_V3_1800-23.ts HTTP/1.1 **Client** Accept: */* Accept-Encoding: gzip, deflate, br Accept-Language: en-GB,en-US;q=0.9,en;q=0.8 User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/92.0.4515.131 Safari/537.36 OPR/7 **Miscellaneous** Referer: https://www.gamespot.com/videos/ **Security** Transformer · Headers · TextView · SyntaxView · ImageView · HexView · WebView · Auth · Caching · Cookies · Raw · JSON · XML HTTP/1.1 200 OK Connection: keep-alive Content-Length: 2093944 Etag: "vGY5Lv7RQvYE1KlrvneMUpvUPG8jpYvtuYzgrWLwc1dnsz0eBhCKkRYSweHs116O1zuFa2uKguq-9cYLwocNBsUSrQ" Fastly-Stats: otfp=1 Server: otfp X-Fastly-Otfp-Info: ss=176.000 sl=8.000 vl=857.783 rs=960x540 Via: 1.1 varnish, 1.1 varnish, 1.1 varnish Access-Control-Allow-Credentials: true Access-Control-Expose-Headers: X-CDN X-CDN: Fastly Content-Type: video/MP2T Accept-Ranges: bytes Date: Mon, 16 Aug 2021 06:48:50 GMT Age: 0 X-Served-By: cache-sjc10051-SJC, cache-mdw17335-MDW, cache-mrs10543-MRS X-Cache: MISS, HIT, MISS X-Cache-Hits: 0, 1, 0 X-Timer: S1629096530.218272,VS0,VE375 Access-Control-Allow-Origin: https://www.gamespot.com X-Shield: MediaShield-Region: Central, Region-Status: primary Find... (press Ctrl+Enter to highlight all) · View in Notepad *Source: Packet capture by Fiddler tool*

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

Pat. 7,848,328	Gamespot.com ("Accused Instrumentality")
the encapsulating comprises encapsulating the packet streams according to one or more lower layer protocols without encapsulating the packet streams according to the second communication protocol.	The accused standard discloses encapsulating comprises encapsulating the packet streams (e.g., data packets in m3u8 file) according to one or more lower layer protocols without encapsulating the packet streams (e.g., data packets in m3u8) according to the second communication protocol (e.g. HTTP Protocol). Further as explained below, the packet streams are encapsulated according to one or more lower layer protocols (e.g., network layer/MAC layer/physical layer) of the device transmitting the packet streams. Since, the packet streams are obtained by TCP encapsulation of data streams and the HTTP protocol doesn't reside beneath the TCP layer, the further encapsulation doesn't comprise encapsulation using HTTP protocol (once TCP encapsulation has been executed). In any communication system, when a sender prepares data for sending from its physical interface (e.g., wired/wireless interface of the server/machine), the process of entire "data formulation" or "data construction" has multiple steps, all steps (if they are present) are associated with one layer of OSI model (it's a model which every communication system follows, some specification communication schemes may have lower number of layers (because multiple layers of OSI can be combined into one for those cases). Two lower level layers—data link layer and physical layers are invariably present in any communication system. They are the lowest two layers. They reside beneath the TCP layer. Data link layer ensure error free communication whereas the physical layer processes the data so that it can be sent using the actual medium of communication (e.g., modulation and formatting in wireless/wired communication system)

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

Pat. 7,848,328	Gamespot.com ("Accused Instrumentality")
	Does HLS use TCP or UDP as its transport protocol? TCP and UDP are transport protocols, meaning they are responsible for delivering content over the Internet. TCP tends to deliver data more reliably than UDP, but the latter is much faster, even though some data may be lost in transit. Because UDP is faster, some streaming protocols use UDP instead of TCP. HLS, however, uses TCP. This is for several reasons: 1. HLS is over HTTP, and the HTTP protocol is built for use with TCP (with some exceptions). 2. The modern Internet is more reliable and more efficient than it was when streaming was first developed. In many parts of the world today, user connectivity has vastly improved, especially for mobile connections. As a result, users have enough bandwidth to support the delivery of every video frame. 3. Adaptive bitrate streaming helps compensate for the potentially slower data delivery of TCP. https://www.cloudflare.com/learning/video/what-is-http-live-streaming/

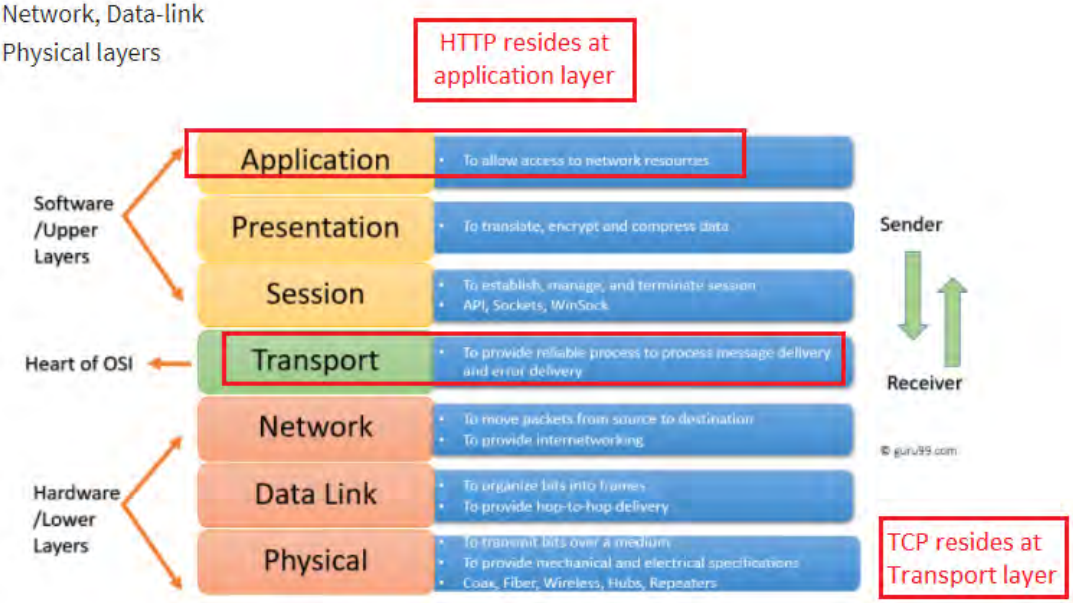
NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

Pat. 7,848,328	Gamespot.com ("Accused Instrumentality")
	HyperText Transfer Protocol (*HTTP*) The HyperText Transfer Protocol, or *HTTP*, must be the most widely used Application layer protocol in the world today. It forms the basis of what most people understand the Internet to be—the World Wide Web. Its purpose is to provide a lightweight protocol for the retrieval of HyperText Markup Language (*HTML*) and other documents from Web sites throughout the Internet. Each time you open a Web browser to surf the Internet, you are using *HTTP* over *TCP/IP*. *HTTP* was first ratified in the early 1990s and has been through three main iterations: • **HTTP/0.9:** A simplistic first implementation of the protocol that only supported the option to get a Web page. • **HTTP/1.0:** Ratified by the *IETF* as RFC 1945 in 1996. This version added many supplemental data fields, known as *headers* to the specification. This allowed for other information passing between the client and server, alongside the request and consequent page. • **HTTP/1.1:** Defined in RFC 2068 by the *IETF*, version 1.1 implemented a number of improvements over and above the 1.0 specification. One of the main improvements of 1.1 over 1.0 was the implementation of techniques such as persistent *TCP* connections, pipelining, and cache control to improve performance within *HTTP*-based applications. https://www.informit.com/articles/article.aspx?p=169578

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

Pat. 7,848,328	Gamespot.com ("Accused Instrumentality")
	Upper and Lower layers further divide network architecture into seven different layers as below • Application • Presentation • Session • Transport • Network, Data-link • Physical layers  Network Layers Diagram https://www.guru99.com/layers-of-osi-model.html https://www.cloudflare.com/learning/ddos/glossary/open-systems-interconnection-model-osi/

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

NIMITZ TECHNOLOGIES LLC, **Plaintiff,** **v.** **BUZZFEED, INC.,** **Defendant.**	**Case No.** **Jury Trial Demanded**

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Nimitz Technologies LLC, by and through the undersigned counsel, files this Complaint for patent infringement against Defendant BuzzFeed, Inc., and in support states, all upon information and belief:

PARTIES

1. Plaintiff Nimitz Technologies LLC is a limited liability company organized and existing under the laws of the State of Texas and having its office address at 3333 Preston Road STE 300, #1047, Frisco, TX 75034 ("Nimitz" or "Plaintiff").

2. Defendant BuzzFeed, Inc. is a Delaware corporation with its headquarters at 111 E. 18th Street, 13th Floor, New York, NY 10003 and with its registered office located at Corporation Service Company, 251 Little Falls Drive, Wilmington, DE 19808 ("BuzzFeed" or "Defendant").

JURISDICTION AND VENUE

3. This is an action for patent infringement arising under the patent laws of the United States, 35 U.S.C. § 1 *et seq*., including 35 U.S.C. §§ 271. This Court has subject matter jurisdiction under 28 U.S.C. §§ 1331 and 1338(a).

4. This Court has personal jurisdiction over Defendant at least because Defendant is a corporation organized under the laws of the State of Delaware.

5. Venue is proper in this Judicial District under 28 U.S.C. §§ 1391 and 1400(b) because Defendant is deemed to be a resident of this District.

PATENT 7,848,328

6. U.S. Patent No. 7,848,328, entitled "Broadcast Content Encapsulation" (the "'328 Patent") was duly and legally issued on December 7, 2010. A true and correct copy of the '328 Patent is attached as Exhibit 1.

7. The Patent disclosed and exemplified a unique and valuable system and method for delivering multiple versions of content which are mapped to streams carrying data for those multiple versions. The data streams are encapsulated into User Datagram Protocol (UDP) packets; the UDP destination port fields of the packets are given component-identifying values. A user equipment (UE) receiving the transmitted service identifies desired components based on the UDP destination port field values. The UE further encapsulates desired component UDP packets into Internet Protocol (IP) packets, and may assign component-identifying values to fields of the IP packets (e.g., the IP source address and/or IP destination address).

8. Plaintiff is the named assignee of, owns all right, title and interest in, and has standing to sue and recover all past damages for infringement of the '328 Patent.

9. The method claims of the '328 Patent were allowed by the United States Patent and Trademark Office based on the Office's determination that the method claims included mapping that

> comprises assigning a specific value to each component for a predefined field of a packet according to a second communication protocol, the specific value distinguishing the component from other components, and the encapsulating comprises encapsulating the packet streams according to one or more lower layer protocols without encapsulating the packet streams according to the second communication protocol.

(Notice of Allowability).

10. All the claims differed from the closest prior art, Arad et al. US Pat. 7,590,991, Balakrishnan et al. US Pat. 7,227,899, Poli et al. US Pat Appln. 2005/0122976, Anschutz et al. US Pat. Appln. 2004/0230695 and Rakib, Selim Shlomo US Pat. 6,970, 127, all of which disclosed conventional communication systems, either singularly or in combination, and, thus, failed to anticipate or render the above features obvious. (Notice of Allowability).

11. The method claims are patent eligible under 35 U.S.C. § 101. The claims are not abstract. As reflected in the Notice of Allowance, the claims are directed to a novel improvement that, unlike conventional art, comprises assigning a specific value to each component for a predefined field of a packet according to a second communication protocol, with the specific value distinguishing the component from other components, and the encapsulating comprises encapsulating the packet streams according to one or more lower layer protocols without encapsulating the packet streams according to the second communication protocol.

12. Thus, the '328 Patent claims focus on specific improvements in computer capabilities as opposed to an invention that simply uses computers as a tool. The focus of the claimed advance is on a solution to a technological problem arising in computer operations and

provides a specific improvement in computer capabilities or functionality, rather than only claiming a desirable result or function.

13. Further, Claim 1 and its dependent claims, individually and as an ordered combination, recite an inventive concept, which is manifestly more than the application of an abstract idea using well-understood, routine, and conventional activities previously known to the industry. As stated by the Examiner, prior to the present invention, there was no prior art disclosing a system and method for encapsulating data streams, and particularly where the data streams related to a specific content that is mapped to components of a transmission service that delivers multiple versions of that specific content. Such content may include audio data, video data and/or other types of data, some or all of which may be any combination of real-time and non-real-time data. For example, versions of the content may vary based on a CODEC used to encode media for the content, based on transmission parameters (e.g., bit rate) for a data stream providing such media, based on a language for subtitles or other text associated with the specific content, based on other types of data associated with the content, etc. The data stream for each component is encapsulated into packets according to a communication protocol such as, e.g., User Datagram Protocol (UDP). A common field of each packet header, which in some embodiments is the UDP destination port field, is given a value identifying the corresponding component. A user equipment (UE) receiving a transmission of the service identifies desired components based on the common field value.

COUNT I – INFRINGEMENT OF THE ’328 PATENT

14. Plaintiff restates and incorporates by reference the foregoing allegations.

15. In violation of 35 U.S.C. § 271(a), BuzzFeed has practiced and continues to practice the method of at least Claim 1 of the '328 Patent by streaming the content found in https://www.buzzfeed.com/ ("Accused Instrumentality").

16. Attached hereto as Exhibit 2, and incorporated herein by reference, is a claim chart detailing why the Accused Instrumentality infringes at least method Claim 1.

17. As a result of Defendant's infringement of the '328 Patent, Plaintiff has suffered damages.

18. Nimitz is entitled to a money judgment in an amount adequate to compensate for Defendant's infringement, but in no event less than a reasonable royalty for the use made of the invention by Defendant, together with interest and costs as fixed by the Court.

19. Only method claims of the '328 Patent are being asserted, and, thus, patent marking is not an issue. In any event, Nimitz has not commercialized any products under the '328 Patent and has no information that any prior owners of the Patent have not complied with patent marking requirements.

JURY DEMAND

Plaintiff demands a trial by jury on all issues so triable.

PRAYER FOR RELIEF

Plaintiff Nimitz Technologies LLC respectfully requests that the Court find in its favor and against Defendant BuzzFeed, Inc., and that the Court grant Plaintiff the following relief:

A. an adjudication that Defendant had infringed the '328 Patent;

B. an award of damages to be paid by Defendant adequate to compensate Plaintiff for Defendant's past infringement of the '328 Patent, including pre-judgment and post-judgment interest, costs, expenses, and an accounting of all infringing acts; and

C. any and all such further relief at law or in equity that the Court may deem just and proper, including but not limited to attorneys' fees.

Dated: September 27, 2021

Respectfully submitted by:

/s/ George Pazuniak
George Pazuniak (#478)
O'Kelly & O'Rourke, LLC
824 N. Market Street
Suite 1001A
Wilmington, DE 19801
Direct: 207-359-8576
gp@del-iplaw.com

Attorney for Plaintiff Nimitz Technologies LLC

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

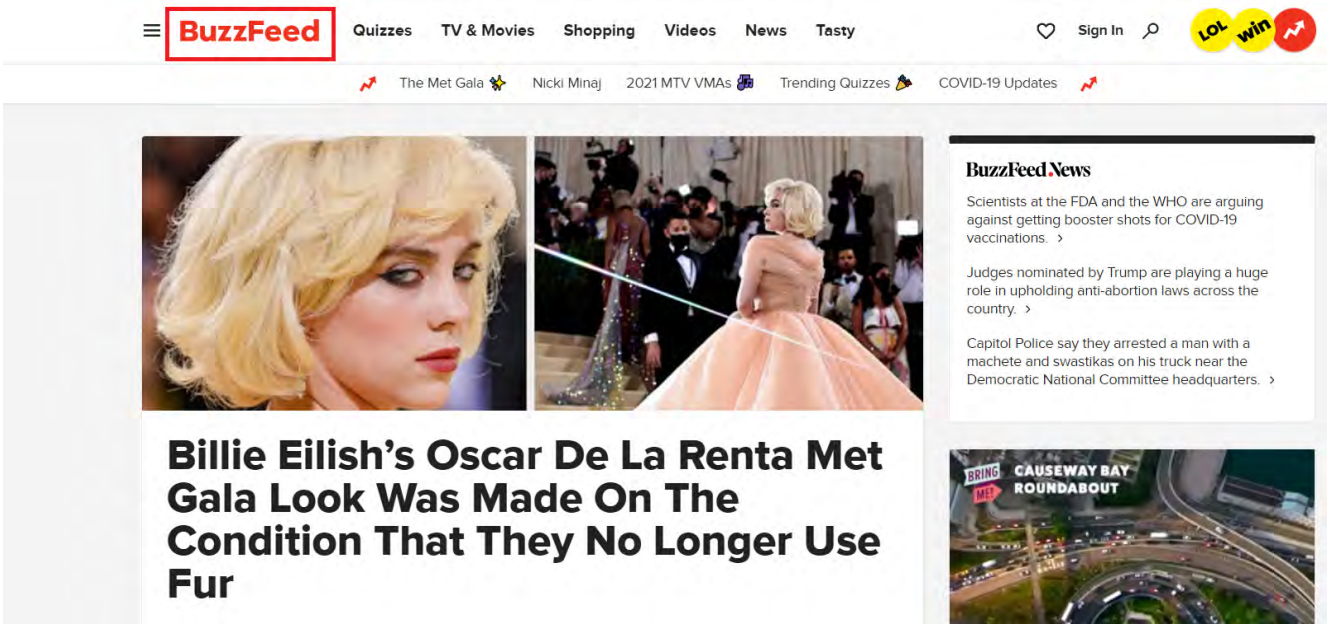
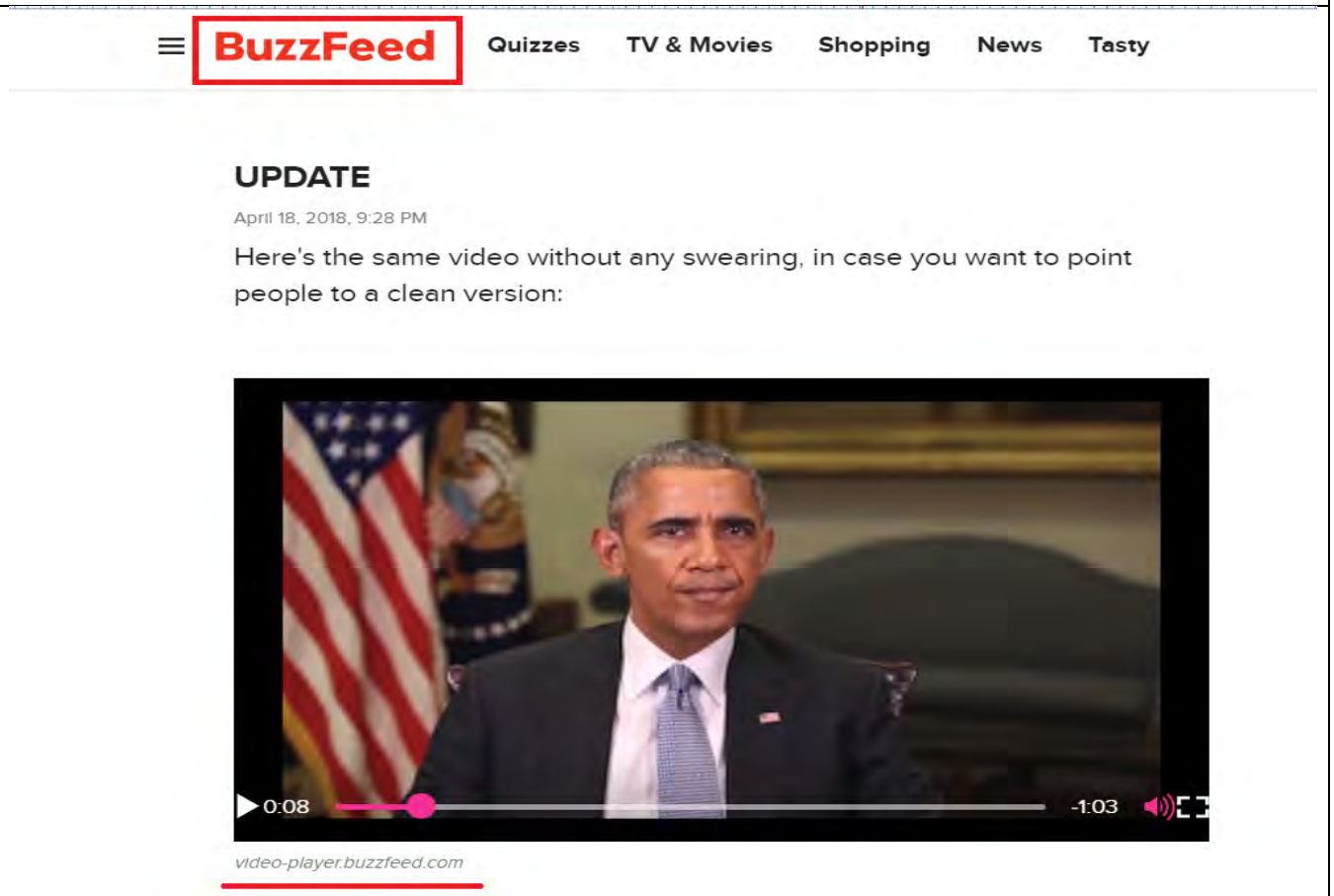
7,848,328	Buzzfeed.com ("The Accused Instrumentality")
1. A method comprising: mapping, with at least one processor, each of a plurality of data streams related to a specific content to a different component of a service delivering multiple versions of the specific content;	The defendant streams videos making use of HTTP live streaming (HLS) standard (hereinafter referred to as the standard).  https://www.buzzfeed.com/?country=us

EXHIBIT 2

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

7,848,328	Buzzfeed.com ("The Accused Instrumentality")
	 https://www.buzzfeed.com/craigsilverman/obama-jordan-peele-deepfake-video-debunk-buzzfeed The standard discloses a method which comprises mapping, with at least one processor (e.g., processor/transcoder of a server of an HLS service provider), each of a plurality of data streams (e.g., media

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Preliminary charts based on best available information

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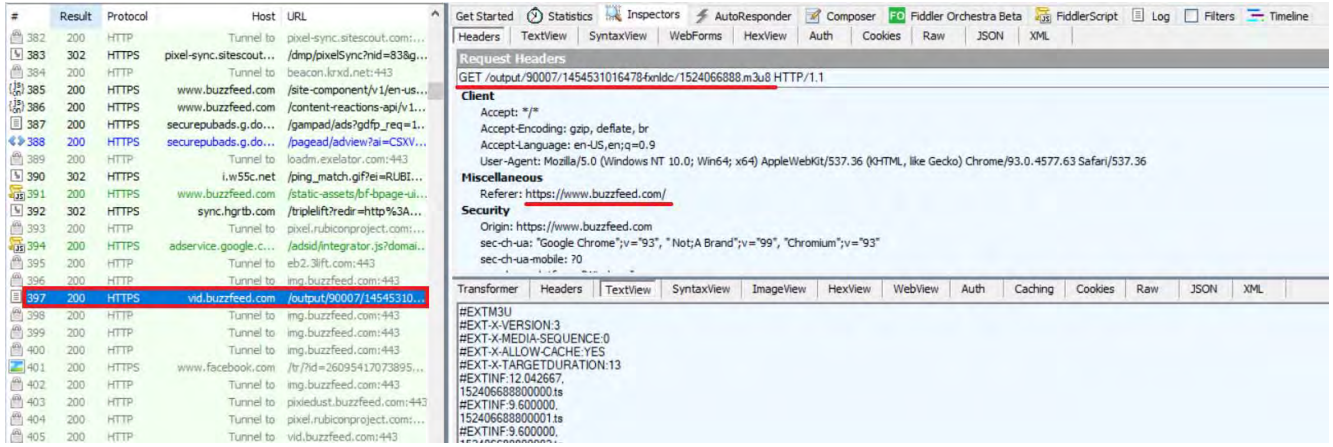
	streams such as audio, video, captions, etc.) related to a specific content (e.g., streaming content such as web streaming, on-demand entertainment news) to a different component (e.g., Index file m3u8) of a service (e.g., web streaming, on-demand entertainment news etc.) delivering multiple versions (e.g., M3U8 Manifest File comprises multiple versions of a data stream) of the specific content (e.g., streaming content such as web streaming, on-demand entertainment news etc.). As shown below, a server of an HLS service provider converts plurality of data streams such as audio, video, etc. of a streaming content (e.g., specific content) in multiple streams at different bitrates and resolutions in different media segments of a M3U8 Manifest File. For example a media segment may consist of representation of videos and audios. Similarly, different media segments contain many different representations. 

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

7,848,328	Buzzfeed.com ("The Accused Instrumentality")

Get Started | Statistics | Inspectors | AutoResponder | Composer | Fiddler Orchestra Beta | FiddlerScript | Log | Filters | Timeline

Headers | TextView | SyntaxView | WebForms | HexView | Auth | Cookies | Raw | JSON | XML

Request Headers [Raw] [Header Definitions]

GET /v1/data?video_id=54375 HTTP/1.1

Client

Accept: */*

Accept-Encoding: gzip, deflate, br

Accept-Language: en-US,en;q=0.9

User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/93.0.4577.63 Safari/537.36

Miscellaneous

Referer: https://www.buzzfeed.com/

Security

Origin: https://www.buzzfeed.com

sec-ch-ua: "Google Chrome";v="93", " Not;A Brand";v="99", "Chromium";v="93"

sec-ch-ua-mobile: ?0

Transformer | Headers | TextView | SyntaxView | ImageView | HexView | WebView | Auth | Caching | Cookies | Raw | JSON | XML

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Source: Packet capture by Fiddler tool

As shown below, a server of an HLS streaming service provider converts plurality of data streams such as audio, video, etc. of a streaming content (e.g., specific content) such as a TV program in multiple versions in different adaptation sets of a M3U8 Manifest File. For example an adaption set may consists of representation of different resolutions 640x360 video, 416x234 video, etc.

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

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	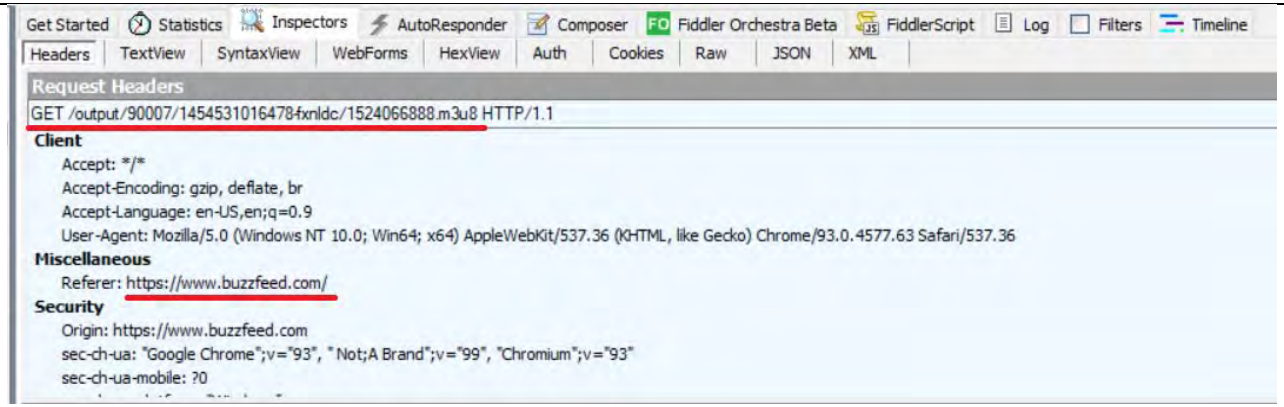 Get Started Statistics Inspectors AutoResponder Composer Fiddler Orchestra Beta FiddlerScript Log Filters Timeline Headers TextView SyntaxView WebForms HexView Auth Cookies Raw JSON XML Request Headers GET /output/90007/1454531016478-fxnldc/1524066888.m3u8 HTTP/1.1 **Client** Accept: */* Accept-Encoding: gzip, deflate, br Accept-Language: en-US,en;q=0.9 User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/93.0.4577.63 Safari/537.36 **Miscellaneous** Referer: https://www.buzzfeed.com/ **Security** Origin: https://www.buzzfeed.com sec-ch-ua: "Google Chrome";v="93", " Not;A Brand";v="99", "Chromium";v="93" sec-ch-ua-mobile: ?0 *Source: Packet capture by Fiddler tool*

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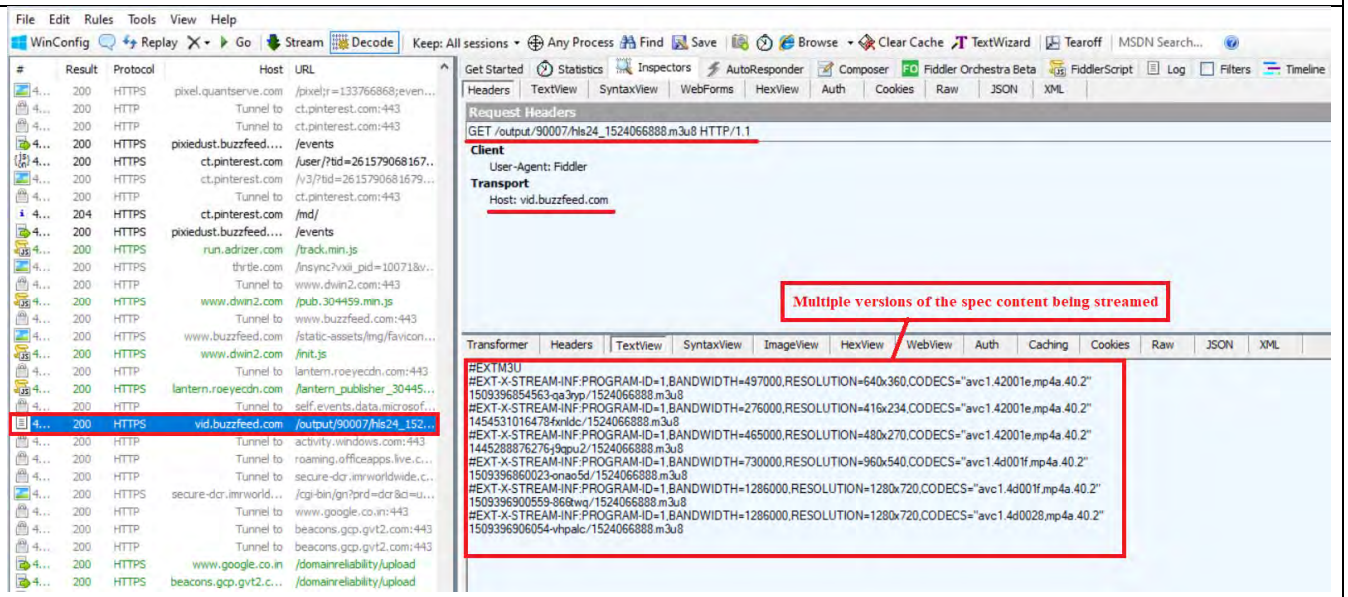
Preliminary charts based on best available information

7,848,328	Buzzfeed.com ("The Accused Instrumentality")
	 *Source: Packet capture by Fiddler tool*

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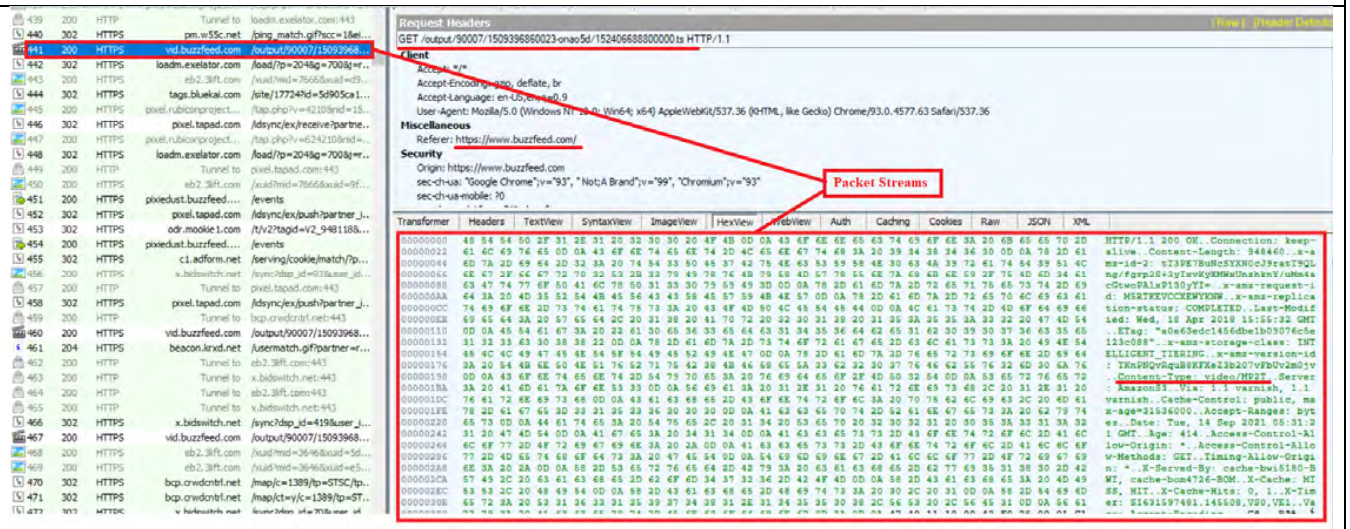
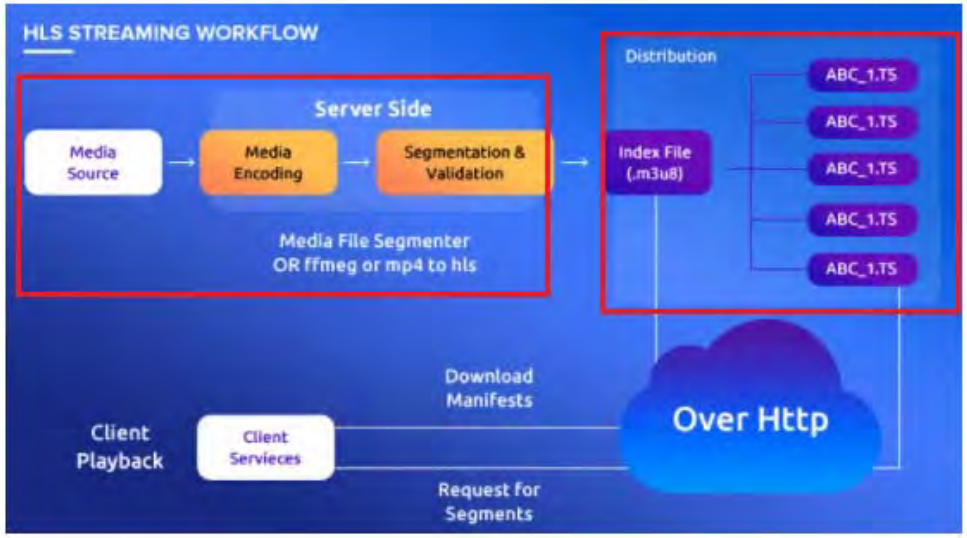
7,848,328	Buzzfeed.com ("The Accused Instrumentality")
	 *Source: Packet capture by Fiddler tool*

Appx121

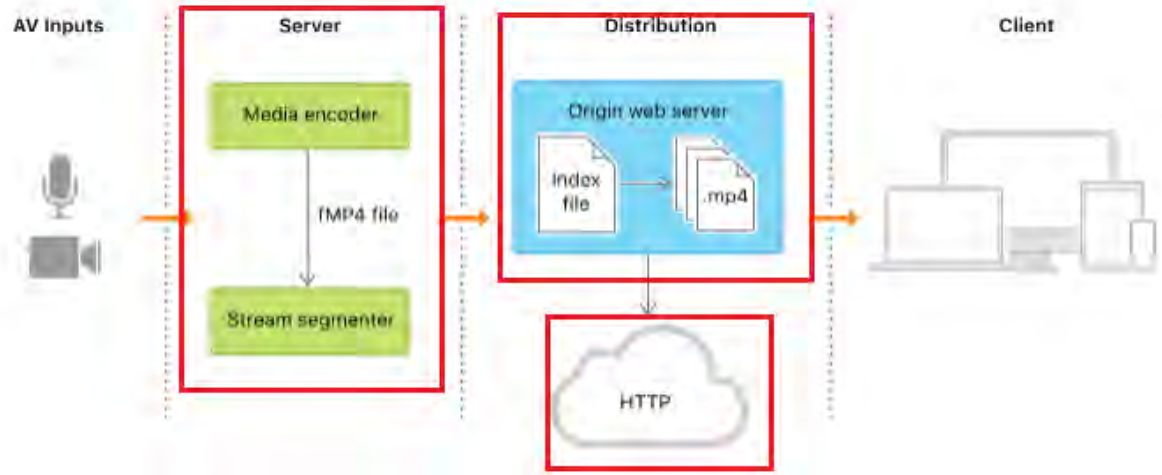
NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

7,848,328	Buzzfeed.com ("The Accused Instrumentality")
	 https://martech.zone/http-live-streaming-player-features/

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

7,848,328	Buzzfeed.com ("The Accused Instrumentality")
	HLS supports the following: • Live broadcasts and prerecorded content (video on demand, or *VOD*) • Multiple alternate streams at different bit rates • Intelligent switching of streams in response to network bandwidth changes • Media encryption and user authentication The following figure shows the components of an HTTP Live Stream.  https://developer.apple.com/documentation/http_live_streaming

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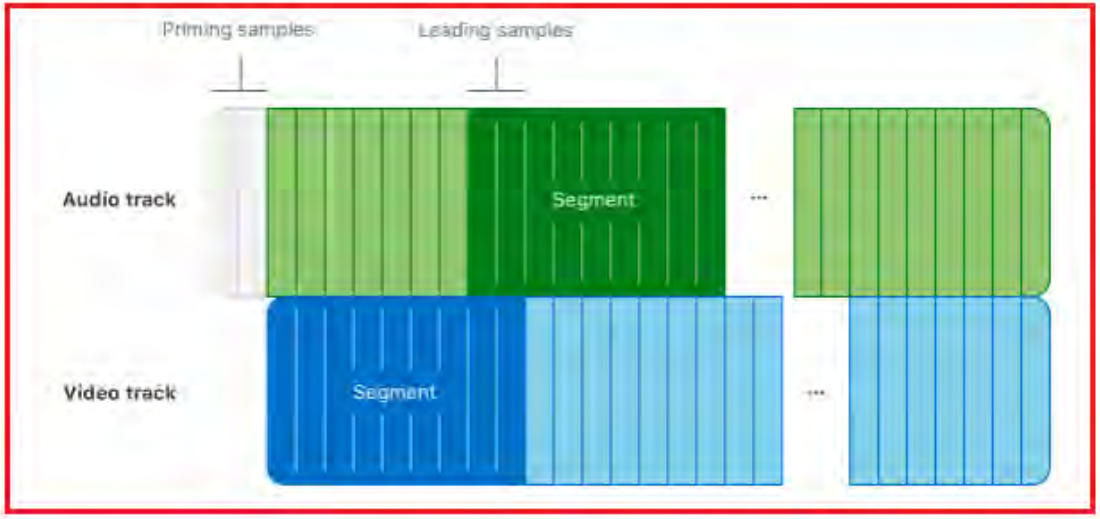
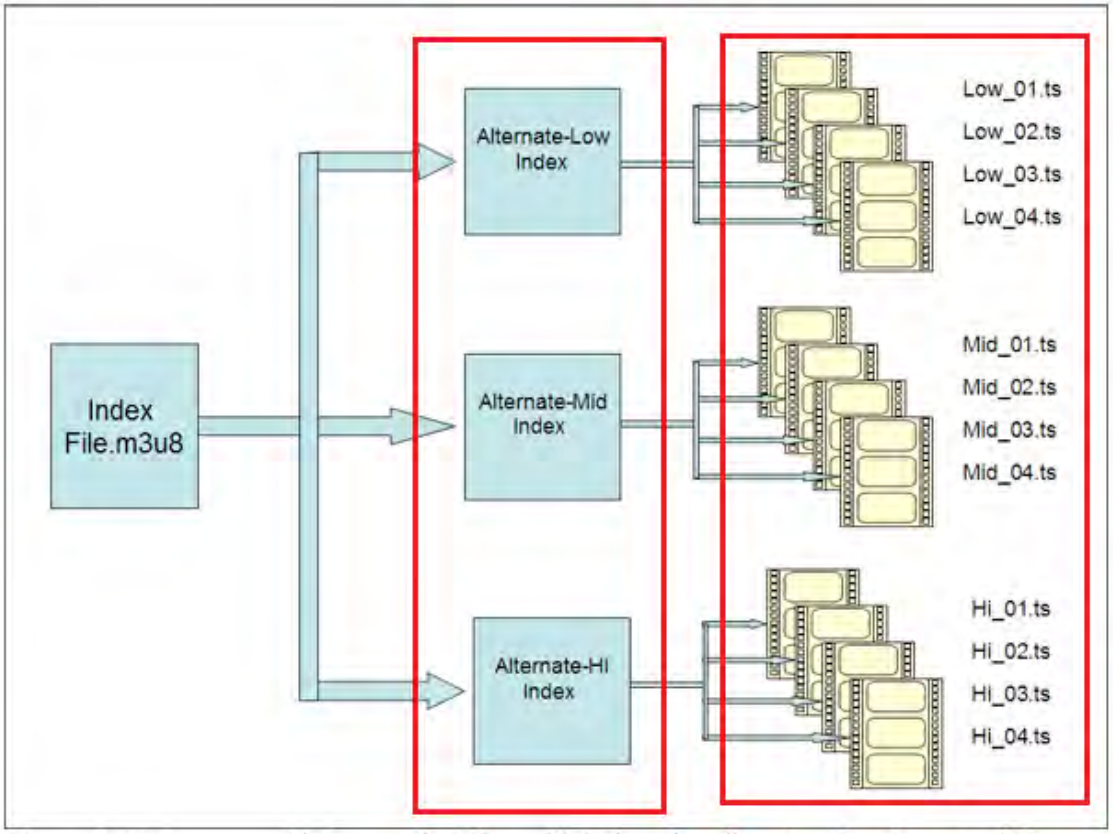
7,848,328	Buzzfeed.com ("The Accused Instrumentality")
	AAC audio processing requires a small amount of leading "throw-away" audio to prime the encoder and initialize internal tables. This small amount of audio results from *encoder delay* which happens during encoding to produce properly formed, encoded audio packets, and its duration is commonly referred to as the *priming duration*. This audio needs to occur before the first frame of video; otherwise, there will be no audio for the first few frames of video.  The audio sample rates are normally 44.1 kHz or 48 kHz. For more information, see the HTTP Live Streaming Specification and the HLS Authoring Specification for Apple Devices. https://developer.apple.com/documentation/http_live_streaming/preparing_audio_for_http_live_streaming

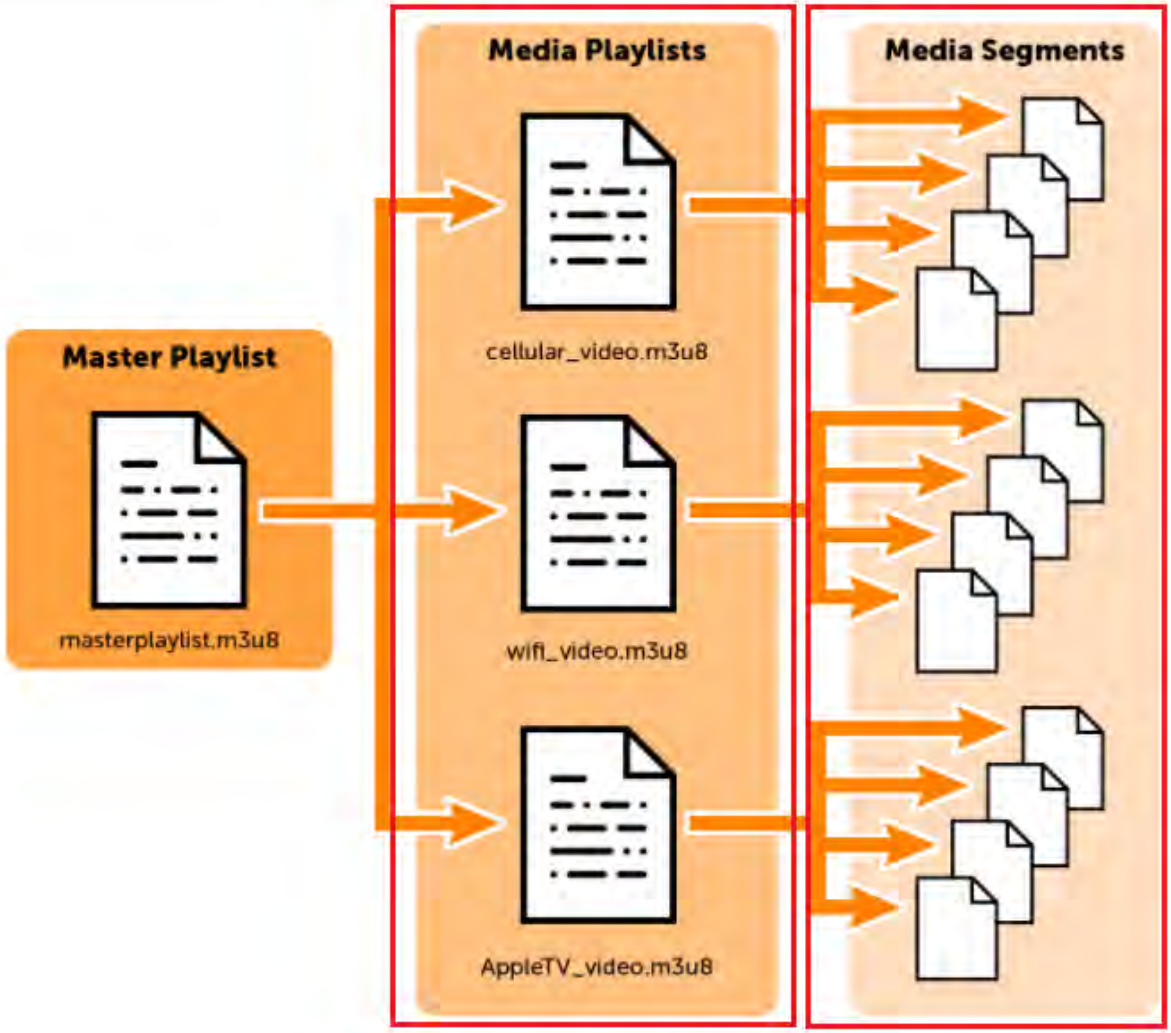
NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

7,848,328	Buzzfeed.com ("The Accused Instrumentality")
	 https://www.streamingmedia.com/Articles/Editorial/What-Is-.../What-Is-HLS-(HTTP-Live-Streaming)-78221.aspx?utm_source=related_articles&utm_medium=gutenberg&utm_campaign=editors_selection

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

7,848,328	Buzzfeed.com ("The Accused Instrumentality")
	 https://www.wowza.com/blog/hls-streaming-protocol - 12 - 1. Introduction to HTTP Live Streaming HTTP Live Streaming provides a reliable, cost-effective means of

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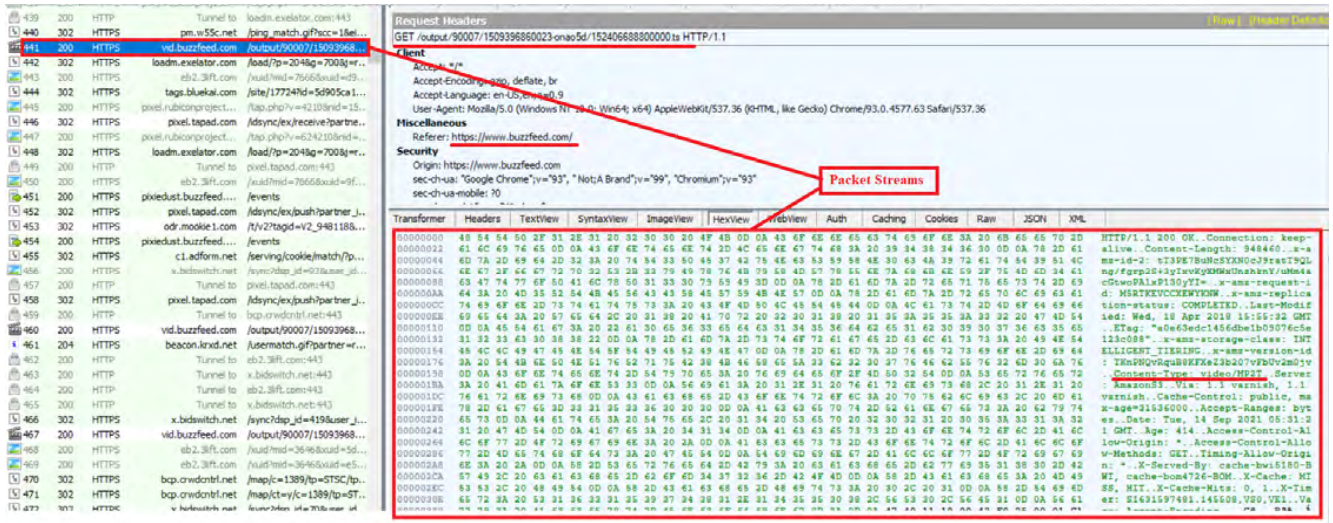
Preliminary charts based on best available information

7,848,328	Buzzfeed.com ("The Accused Instrumentality")
encapsulating each data stream of the plurality into a stream of packets according to a first communication protocol,	The standard discloses encapsulating each data stream (e.g., media streams such as audio, video, captions, etc.) of the plurality into a stream of packets (e.g., index file m3u8 data packets) according to a first communication protocol (e.g., Transmission control protocol). As shown below, For HLS, MPEG-2 transport stream is used to encapsulate the data stream (e.g., media streams such as audio, video, captions, etc.) using first communication protocol (e.g. TCP).  *Source: Packet capture by Fiddler tool*

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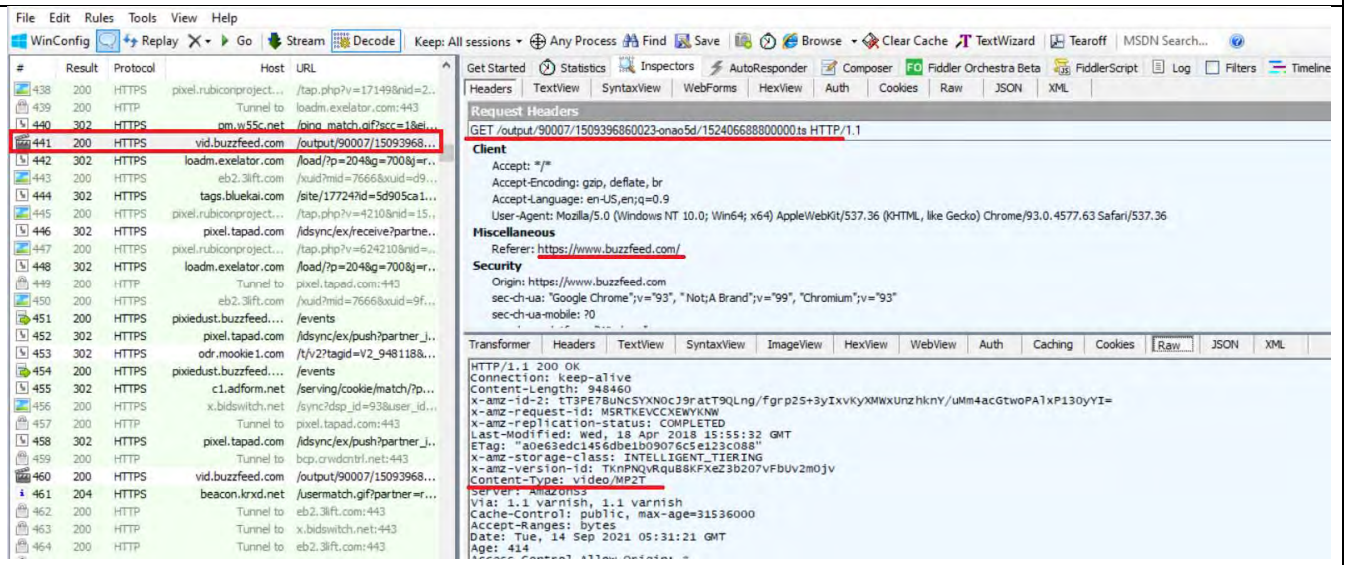
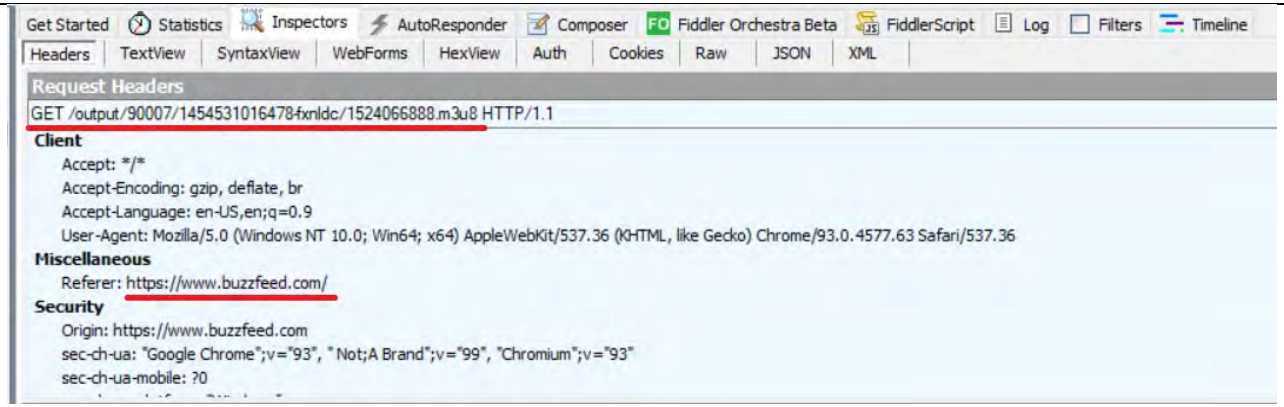
Preliminary charts based on best available information

7,848,328	Buzzfeed.com ("The Accused Instrumentality")
	 *Source: Packet capture by Fiddler tool*

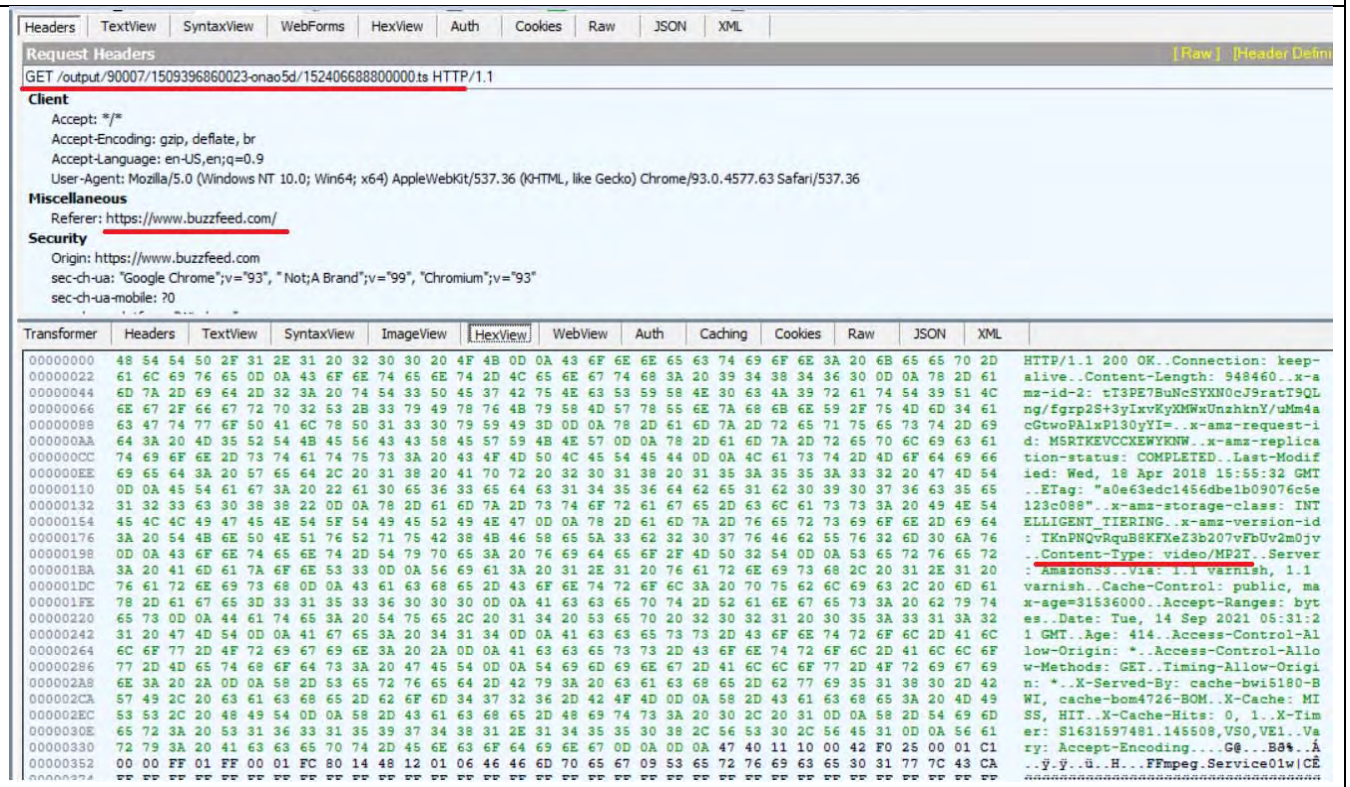
NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

7,848,328	Buzzfeed.com ("The Accused Instrumentality")
	 Get Started Statistics Inspectors AutoResponder Composer Fiddler Orchestra Beta FiddlerScript Log Filters Timeline Headers TextView SyntaxView WebForms HexView Auth Cookies Raw JSON XML Request Headers GET /output/90007/1454531016478-fxnldc/1524066888.m3u8 HTTP/1.1 **Client** Accept: */* Accept-Encoding: gzip, deflate, br Accept-Language: en-US,en;q=0.9 User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/93.0.4577.63 Safari/537.36 **Miscellaneous** Referer: https://www.buzzfeed.com/ **Security** Origin: https://www.buzzfeed.com sec-ch-ua: "Google Chrome";v="93", " Not;A Brand";v="99", "Chromium";v="93" sec-ch-ua-mobile: ?0 *Source: Packet capture by Fiddler tool*

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

7,848,328	Buzzfeed.com ("The Accused Instrumentality")
	 *Source: Packet capture by Fiddler tool*

Headers | TextView | SyntaxView | WebForms | HexView | Auth | Cookies | Raw | JSON | XML

Request Headers [Raw] [Header Defini

GET /output/90007/1509396860023-onao5d/152406688800000.ts HTTP/1.1

Client

Accept: */*
Accept-Encoding: gzip, deflate, br
Accept-Language: en-US,en;q=0.9
User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/93.0.4577.63 Safari/537.36

Miscellaneous

Referer: https://www.buzzfeed.com/

Security

Origin: https://www.buzzfeed.com
sec-ch-ua: "Google Chrome";v="93", " Not;A Brand";v="99", "Chromium";v="93"
sec-ch-ua-mobile: ?0

Transformer | Headers | TextView | SyntaxView | ImageView | HexView | WebView | Auth | Caching | Cookies | Raw | JSON | XML

```
00000000  48 54 54 50 2F 31 2E 31 20 32 30 30 20 4F 4B 0D 0A 43 6F 6E 6E 65 63 74 69 6F 6E 3A 20 6B 65 65 70 2D  HTTP/1.1 200 OK..Connection: keep-
00000022  61 6C 69 76 65 0D 0A 43 6F 6E 74 65 6E 74 2D 4C 65 6E 67 74 68 3A 20 39 34 38 34 36 30 0D 0A 78 2D 61  alive..Content-Length: 948460..x-a
00000044  6D 7A 2D 69 64 2D 32 3A 20 74 54 33 50 45 37 42 75 4E 63 53 59 58 4E 30 63 4A 39 72 61 74 54 39 51 4C  mz-id-2: tT3PE7BuNcSYXN0cJ9ratT9QL
00000066  6E 67 2F 66 67 72 70 32 53 2B 33 79 49 78 76 4B 79 58 4D 57 78 55 6E 7A 68 6B 6E 59 2F 75 4D 6D 34 61  ng/fgrp2S+3yIxvKyXMWxUnzhknY/uMm4a
00000088  63 47 74 77 6F 50 41 6C 78 50 31 33 30 79 59 49 3D 0D 0A 78 2D 61 6D 7A 2D 72 65 71 75 65 73 74 2D 69  cGtwoPAlxP130yYI=..x-amz-request-i
000000AA  64 3A 20 4D 35 52 54 4B 45 56 43 43 58 45 57 59 4B 4E 57 0D 0A 78 2D 61 6D 7A 2D 72 65 70 6C 69 63 61  d: M5RTKEVCCXEWYKNW..x-amz-replica
000000CC  74 69 6F 6E 2D 73 74 61 74 75 73 3A 20 43 4F 4D 50 4C 45 54 45 44 0D 0A 4C 61 73 74 2D 4D 6F 64 69 66  tion-status: COMPLETED..Last-Modif
000000EE  69 65 64 3A 20 57 65 64 2C 20 31 38 20 41 70 72 20 32 30 31 38 20 31 35 3A 35 35 3A 33 32 20 47 4D 54  ied: Wed, 18 Apr 2018 15:55:32 GMT
00000110  0D 0A 45 54 61 67 3A 20 22 61 30 65 36 33 65 64 63 31 34 35 36 64 62 65 31 62 30 39 30 37 36 63 35 65  ..ETag: "a0e63edc1456dbe1b09076c5e
00000132  31 32 33 63 30 38 38 22 0D 0A 78 2D 61 6D 7A 2D 73 74 6F 72 61 67 65 2D 63 6C 61 73 73 3A 20 49 4E 54  123c088"..x-amz-storage-class: INT
00000154  45 4C 4C 49 47 45 4E 54 5F 54 49 45 52 49 4E 47 0D 0A 78 2D 61 6D 7A 2D 76 65 72 73 69 6F 6E 2D 69 64  ELLIGENT_TIERING..x-amz-version-id
00000176  3A 20 54 4B 6E 50 4E 51 76 52 71 75 42 38 4B 46 58 65 5A 33 62 32 30 37 76 46 62 55 76 32 6D 30 6A 76  : TKnPNQvRquB8KFXeZ3b207vFbUv2m0jv
00000198  0D 0A 43 6F 6E 74 65 6E 74 2D 54 79 70 65 3A 20 76 69 64 65 6F 2F 4D 50 32 54 0D 0A 53 65 72 76 65 72  ..Content-Type: video/MP2T..Server
000001BA  3A 20 41 6D 61 7A 6F 6E 53 33 0D 0A 56 69 61 3A 20 31 2E 31 20 76 61 72 6E 69 73 68 2C 20 31 2E 31 20  : AmazonS3..Via: 1.1 varnish, 1.1
000001DC  76 61 72 6E 69 73 68 0D 0A 43 61 63 68 65 2D 43 6F 6E 74 72 6F 6C 3A 20 70 75 62 6C 69 63 2C 20 6D 61  varnish..Cache-Control: public, ma
000001FE  78 2D 61 67 65 3D 33 31 35 33 36 30 30 0D 0A 41 63 63 65 70 74 2D 52 61 6E 67 65 73 3A 20 62 79 74  x-age=31536000..Accept-Ranges: byt
00000220  65 73 0D 0A 44 61 74 65 3A 20 54 75 65 2C 20 31 34 20 53 65 70 20 32 30 32 31 20 30 35 3A 33 31 3A 32  es..Date: Tue, 14 Sep 2021 05:31:2
00000242  31 20 47 4D 54 0D 0A 41 67 65 3A 20 34 31 34 0D 0A 41 63 63 65 73 73 2D 43 6F 6E 74 72 6F 6C 2D 41 6C  1 GMT..Age: 414..Access-Control-Al
00000264  6C 6F 77 2D 4F 72 69 67 69 6E 3A 20 2A 0D 0A 41 63 63 65 73 73 2D 43 6F 6E 74 72 6F 6C 2D 41 6C 6C 6F  low-Origin: *..Access-Control-Allo
00000286  77 2D 4D 65 74 68 6F 64 73 3A 20 47 45 54 0D 0A 54 69 6D 69 6E 67 2D 41 6C 6C 6F 77 2D 4F 72 69 67 69  w-Methods: GET..Timing-Allow-Origi
000002A8  6E 3A 20 2A 0D 0A 58 2D 53 65 72 76 65 64 2D 42 79 3A 20 63 61 63 68 65 2D 62 77 69 35 31 38 30 2D 42  n: *..X-Served-By: cache-bwi5180-B
000002CA  57 49 2C 20 63 61 63 68 65 2D 62 6F 6D 34 37 32 36 2D 42 4F 4D 0D 0A 58 2D 43 61 63 68 65 3A 20 4D 49  WI, cache-bom4726-BOM..X-Cache: MI
000002EC  53 53 2C 20 48 49 54 0D 0A 58 2D 43 61 63 68 65 2D 48 69 74 73 3A 20 30 2C 20 31 0D 0A 58 2D 54 69 6D  SS, HIT..X-Cache-Hits: 0, 1..X-Tim
0000030E  65 72 3A 20 53 31 36 33 31 35 39 37 34 38 31 2E 31 34 35 35 30 38 2C 56 53 30 2C 56 45 31 0D 0A 56 61  er: S1631597481.145508,VS0,VE1..Va
00000330  72 79 3A 20 41 63 63 65 70 74 2D 45 6E 63 6F 64 69 6E 67 0D 0A 0D 0A 47 40 11 10 00 42 F0 25 00 01 C1  ry: Accept-Encoding....G@...Bð%..Á
00000352  00 00 FF 01 FF 00 01 FC 80 14 48 12 01 06 46 46 6D 70 65 67 09 53 65 72 76 69 63 65 30 31 77 7C 43 CA  ..ÿ.ÿ..ü..H...FFmpeg.Service01w|CÊ
```

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

7,848,328	Buzzfeed.com ("The Accused Instrumentality")
	Encode MPEG-2 Transport Stream Segments MPEG-2 transport streams create an arbitrary timestamp when encoding media, using an 33-bit clock that rolls over every 26 hours. For example, if your video starts at the two-hour mark, your audio starts at two hours plus the time for the leading audio. Therefore, a segment of audio that's paired with a segment of video starting at the two-hour mark needs audio that starts at the two-hour mark minus the priming duration. This additional segment ensures the first frame of video plays synchronously with the audio. **Encode Fragmented MPEG-4 Segments** The MPEG-4 file format (ISO BMFF) carries the presumption that all track timelines begin with time zero, regardless of whether the timeline is divided into fragments. However, you can set the initial decode time of any fragment to an arbitrary value by means of the Track Fragment Base Media Decode Time Box (`tfdt`). Use this box to permit the alignment of the audio timeline with the video timeline that places the priming audio prior to the first video frame. Alternatively, starting with iOS 13.1 it's possible to utilize an Edit List Box (`elst`) within the Track Box (`trak`) in order to place the duration of the priming audio prior to time 0. This permits a natural alignment of other tracks with audio at time 0. The edit list needs to have a single entry in which the value of `media_start` is equivalent to the audio priming duration and the value of `segment_duration` is 0. This is the recommended approach for time alignment for the Common Media Application Format (CMAF).

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Preliminary charts based on best available information

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	https://developer.apple.com/documentation/http_live_streaming/preparing_audio_for_http_live_streaming **Does HLS use TCP or UDP as its transport protocol?** TCP and UDP are transport protocols, meaning they are responsible for delivering content over the Internet. TCP tends to deliver data more reliably than UDP, but the latter is much faster, even though some data may be lost in transit. Because UDP is faster, some streaming protocols use UDP instead of TCP. HLS, however, uses TCP. This is for several reasons: 1. HLS is over HTTP, and the HTTP protocol is built for use with TCP (with some exceptions). 2. The modern Internet is more reliable and more efficient than it was when streaming was first developed. In many parts of the world today, user connectivity has vastly improved, especially for mobile connections. As a result, users have enough bandwidth to support the delivery of every video frame. 3. Adaptive bitrate streaming helps compensate for the potentially slower data delivery of TCP. https://www.cloudflare.com/learning/video/what-is-http-live-streaming/

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Preliminary charts based on best available information

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	A URI in a Playlist, whether it is a URI line or part of a tag, MAY be relative. Any relative URI is considered to be relative to the URI of the Playlist that contains it. The duration of a Media Playlist is the sum of the durations of the Media Segments within it. The segment bit rate of a Media Segment is the size of the Media Segment divided by its EXTINF duration (Section 4.3.2.1). Note that this includes container overhead but does not include overhead imposed by the delivery system, such as HTTP, TCP, or IP headers. The peak segment bit rate of a Media Playlist is the largest bit rate of any contiguous set of segments whose total duration is between 0.5 and 1.5 times the target duration. The bit rate of a set is calculated by dividing the sum of the segment sizes by the sum of the segment durations. https://datatracker.ietf.org/doc/html/rfc8216#section-1
wherein, as to each of the packet streams, the packets have a value in a common field identifying the component mapped to the data stream	The standard discloses wherein, as to each of the packet streams (e.g., m3u8 data packet stream), the packets have a value (e.g., audio/video type, group id, etc.) in a common field identifying the component mapped to the data stream (e.g., media streams such as audio, video, captions, etc.) encapsulated by the packet stream (e.g., m3u8 data packet stream). As shown below, the common field shows "type: video"

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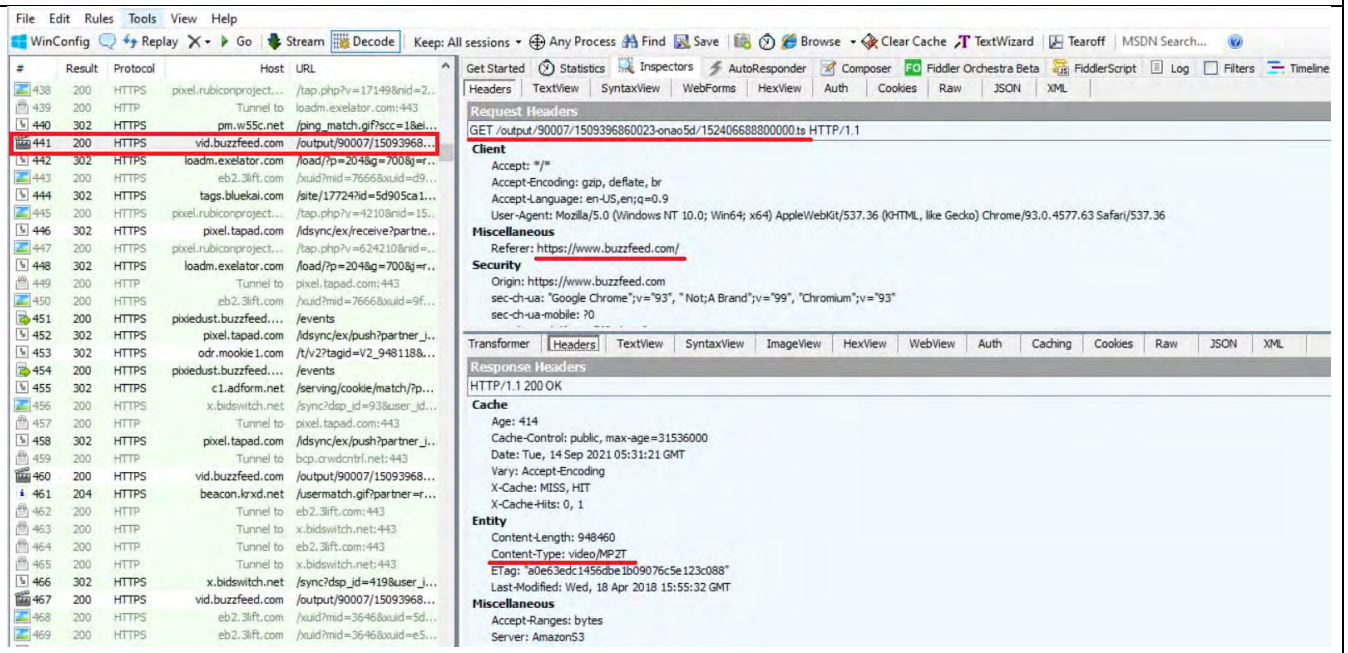
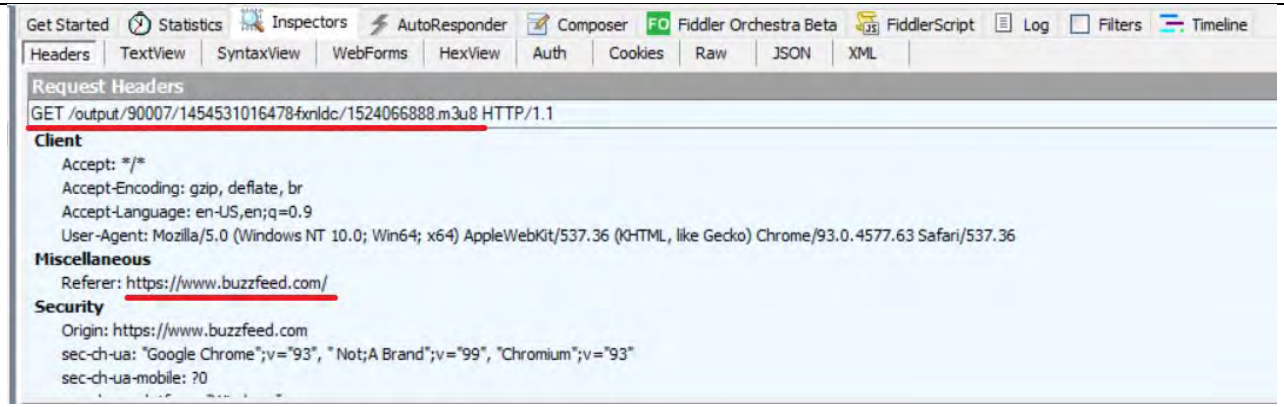
Preliminary charts based on best available information

7,848,328	Buzzfeed.com ("The Accused Instrumentality")
encapsulated by the packet stream;	 *Source: Packet capture by Fiddler tool*

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

7,848,328	Buzzfeed.com ("The Accused Instrumentality")
	 Get Started Statistics Inspectors AutoResponder Composer Fiddler Orchestra Beta FiddlerScript Log Filters Timeline Headers TextView SyntaxView WebForms HexView Auth Cookies Raw JSON XML Request Headers GET /output/90007/1454531016478-fxnldc/1524066888.m3u8 HTTP/1.1 **Client** Accept: */* Accept-Encoding: gzip, deflate, br Accept-Language: en-US,en;q=0.9 User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/93.0.4577.63 Safari/537.36 **Miscellaneous** Referer: https://www.buzzfeed.com/ **Security** Origin: https://www.buzzfeed.com sec-ch-ua: "Google Chrome";v="93", " Not;A Brand";v="99", "Chromium";v="93" sec-ch-ua-mobile: ?0 *Source: Packet capture by Fiddler tool*

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Preliminary charts based on best available information

7,848,328	Buzzfeed.com ("The Accused Instrumentality")
	Headers | TextView | SyntaxView | WebForms | HexView | Auth | Cookies | Raw | JSON | XML **Request Headers** [Raw] [Header Defini GET /output/90007/1509396860023-onao5d/152406688800000.ts HTTP/1.1 **Client** Accept: */* Accept-Encoding: gzip, deflate, br Accept-Language: en-US,en;q=0.9 User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/93.0.4577.63 Safari/537.36 **Miscellaneous** Referer: https://www.buzzfeed.com/ **Security** Origin: https://www.buzzfeed.com sec-ch-ua: "Google Chrome";v="93", " Not;A Brand";v="99", "Chromium";v="93" sec-ch-ua-mobile: ?0 Transformer | Headers | TextView | SyntaxView | ImageView | HexView | WebView | Auth | Caching | Cookies | Raw | JSON | XML 00000000 48 54 54 50 2F 31 2E 31 20 32 30 30 20 4F 4B 0D 0A 43 6F 6E 6E 65 63 74 69 6F 6E 3A 20 6B 65 65 70 2D HTTP/1.1 200 OK..Connection: keep- 00000022 61 6C 69 76 65 0D 0A 43 6F 6E 74 65 6E 74 2D 4C 65 6E 67 74 68 3A 20 39 34 38 34 36 30 0D 0A 78 2D 61 alive..Content-Length: 948460..x-a 00000044 6D 7A 2D 69 64 2D 32 3A 20 74 54 33 50 45 37 42 75 4E 63 53 59 58 4E 30 63 4A 39 72 61 74 54 39 51 4C mz-id-2: tT3PE7BuNcSYXN0cJ9ratT9QL 00000066 6E 67 2F 66 67 72 70 32 53 2B 33 79 49 78 76 4B 79 58 4D 57 78 55 6E 7A 68 6B 6E 59 2F 75 4D 6D 34 61 ng/fgrp2S+3yIxvKyXMWxUnzhknY/uMm4a 00000088 63 47 74 77 6F 50 41 6C 78 50 31 33 30 79 59 49 3D 0D 0A 78 2D 61 6D 7A 2D 72 65 71 75 65 73 74 2D 69 cGtwoPAlxP130yYI=..x-amz-request-i 000000AA 64 3A 20 4D 35 52 54 4B 45 56 43 43 58 45 57 59 4B 4E 57 0D 0A 78 2D 61 6D 7A 2D 72 65 70 6C 69 63 61 d: M5RTKEVCCXEWYKNW..x-amz-replica 000000CC 74 69 6F 6E 2D 73 74 61 74 75 73 3A 20 43 4F 4D 50 4C 45 54 45 44 0D 0A 4C 61 73 74 2D 4D 6F 64 69 66 tion-status: COMPLETED..Last-Modif 000000EE 69 65 64 3A 20 57 65 64 2C 20 31 38 20 41 70 72 20 32 30 31 38 20 31 35 3A 35 35 3A 33 32 20 47 4D 54 ied: Wed, 18 Apr 2018 15:55:32 GMT 00000110 0D 0A 45 54 61 67 3A 20 22 61 30 65 36 33 65 64 63 31 34 35 36 64 62 65 31 62 30 39 30 37 36 63 35 65 ..ETag: "a0e63edc1456dbe1b09076c5e 00000132 31 32 33 63 30 38 38 22 0D 0A 78 2D 61 6D 7A 2D 73 74 6F 72 61 67 65 2D 63 6C 61 73 73 3A 20 49 4E 54 123c088"..x-amz-storage-class: INT 00000154 45 4C 4C 49 47 45 4E 54 5F 54 49 45 52 49 4E 47 0D 0A 78 2D 61 6D 7A 2D 76 65 72 73 69 6F 6E 2D 69 64 ELLIGENT_TIERING..x-amz-version-id 00000176 3A 20 54 4B 6E 50 4E 51 76 52 71 75 42 38 4B 46 58 65 5A 33 62 32 30 37 76 46 62 55 76 32 6D 30 6A 76 : TKnPNQvRquB8KFXeZ3b207vFbUv2m0jv 00000198 0D 0A 43 6F 6E 74 65 6E 74 2D 54 79 70 65 3A 20 76 69 64 65 6F 2F 4D 50 32 54 0D 0A 53 65 72 76 65 72 ..Content-Type: video/MP2T..Server 000001BA 3A 20 41 6D 61 7A 6F 6E 53 33 0D 0A 56 69 61 3A 20 31 2E 31 20 76 61 72 6E 69 73 68 2C 20 31 2E 31 20 : AmazonS3..Via: 1.1 varnish, 1.1 000001DC 76 61 72 6E 69 73 68 0D 0A 43 61 63 68 65 2D 43 6F 6E 74 72 6F 6C 3A 20 70 75 62 6C 69 63 2C 20 6D 61 varnish..Cache-Control: public, ma 000001FE 78 2D 61 67 65 3D 33 31 35 33 36 30 30 0D 0A 41 63 63 65 70 74 2D 52 61 6E 67 65 73 3A 20 62 79 74 x-age=31536000..Accept-Ranges: byt 00000220 65 73 0D 0A 44 61 74 65 3A 20 54 75 65 2C 20 31 34 20 53 65 70 20 32 30 32 31 20 30 35 3A 33 31 3A 32 es..Date: Tue, 14 Sep 2021 05:31:2 00000242 31 20 47 4D 54 0D 0A 41 67 65 3A 20 34 31 34 0D 0A 41 63 63 65 73 73 2D 43 6F 6E 74 72 6F 6C 2D 41 6C 1 GMT..Age: 414..Access-Control-Al 00000264 6C 6F 77 2D 4F 72 69 67 69 6E 3A 20 2A 0D 0A 41 63 63 65 73 73 2D 43 6F 6E 74 72 6F 6C 2D 41 6C 6C 6F low-Origin: *..Access-Control-Allo 00000286 77 2D 4D 65 74 68 6F 64 73 3A 20 47 45 54 0D 0A 54 69 6D 69 6E 67 2D 41 6C 6C 6F 77 2D 4F 72 69 67 69 w-Methods: GET..Timing-Allow-Origi 000002A8 6E 3A 20 2A 0D 0A 58 2D 53 65 72 76 65 64 2D 42 79 3A 20 63 61 63 68 65 2D 62 77 69 35 31 38 30 2D 42 n: *..X-Served-By: cache-bwi5180-B 000002CA 57 49 2C 20 63 61 63 68 65 2D 62 6F 6D 34 37 32 36 2D 42 4F 4D 0D 0A 58 2D 43 61 63 68 65 3A 20 4D 49 WI, cache-bom4726-BOM..X-Cache: MI 000002EC 53 53 2C 20 48 49 54 0D 0A 58 2D 43 61 63 68 65 2D 48 69 74 73 3A 20 30 2C 20 31 0D 0A 58 2D 54 69 6D SS, HIT..X-Cache-Hits: 0, 1..X-Tim 0000030E 65 72 3A 20 53 31 36 33 31 35 39 37 34 38 31 2E 31 34 35 35 30 38 2C 56 53 30 2C 56 45 31 0D 0A 56 61 er: S1631597481.145508,VS0,VE1..Va 00000330 72 79 3A 20 41 63 63 65 70 74 2D 45 6E 63 6F 64 69 6E 67 0D 0A 0D 0A 47 40 11 10 00 42 F0 25 00 01 C1 ry: Accept-Encoding....G@...Bð%..Á 00000352 00 00 FF 01 FF 00 01 FC 80 14 48 12 01 06 46 46 6D 70 65 67 09 53 65 72 76 69 63 65 30 31 77 7C 43 CA ..ÿ.ÿ..ü..H...FFmpeg.Service01w|CÊ *Source: Packet capture by Fiddler tool*

Appx136

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Preliminary charts based on best available information

7,848,328	Buzzfeed.com ("The Accused Instrumentality")
	#EXT-X-MEDIA:<attribute-list> The following attributes are defined: TYPE The value is an enumerated-string; valid strings are AUDIO, VIDEO, SUBTITLES, and CLOSED-CAPTIONS. This attribute is REQUIRED. Typically, closed-caption [CEA608] media is carried in the video stream. Therefore, an EXT-X-MEDIA tag with TYPE of CLOSED-CAPTIONS does not specify a Rendition; the closed-caption media is present in the Media Segments of every video Rendition. URI The value is a quoted-string containing a URI that identifies the Media Playlist file. This attribute is OPTIONAL; see Section 4.3.4.2.1. If the TYPE is CLOSED-CAPTIONS, the URI attribute MUST NOT be present. Pantos & May Informational [Page 25] RFC 8216 HTTP Live Streaming August 2017 GROUP-ID The value is a quoted-string that specifies the group to which the Rendition belongs. See Section 4.3.4.1.1. This attribute is REQUIRED. https://datatracker.ietf.org/doc/html/rfc8216

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

7,848,328	Buzzfeed.com ("The Accused Instrumentality")
	Encode MPEG-2 Transport Stream Segments MPEG-2 transport streams create an arbitrary timestamp when encoding media, using an 33-bit clock that rolls over every 26 hours. For example, if your video starts at the two-hour mark, your audio starts at two hours plus the time for the leading audio. Therefore, a segment of audio that's paired with a segment of video starting at the two-hour mark needs audio that starts at the two-hour mark minus the priming duration. This additional segment ensures the first frame of video plays synchronously with the audio. **Encode Fragmented MPEG-4 Segments** The MPEG-4 file format (ISO BMFF) carries the presumption that all track timelines begin with time zero, regardless of whether the timeline is divided into fragments. However, you can set the initial decode time of any fragment to an arbitrary value by means of the Track Fragment Base Media Decode Time Box (`tfdt`). Use this box to permit the alignment of the audio timeline with the video timeline that places the priming audio prior to the first video frame. Alternatively, starting with iOS 13.1 it's possible to utilize an Edit List Box (`elst`) within the Track Box (`trak`) in order to place the duration of the priming audio prior to time 0. This permits a natural alignment of other tracks with audio at time 0. The edit list needs to have a single entry in which the value of `media_start` is equivalent to the audio priming duration and the value of `segment_duration` is 0. This is the recommended approach for time alignment for the Common Media Application Format (CMAF).

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Preliminary charts based on best available information

7,848,328	Buzzfeed.com ("The Accused Instrumentality")
	https://developer.apple.com/documentation/http_live_streaming/preparing_audio_for_http_live_streaming

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

7,848,328	Buzzfeed.com ("The Accused Instrumentality")
	4.3.4. Master Playlist Tags Master Playlist tags define the Variant Streams, Renditions, and other global parameters of the presentation. Master Playlist tags MUST NOT appear in a Media Playlist; clients MUST fail to parse any Playlist that contains both a Master Playlist tag and either a Media Playlist tag or a Media Segment tag. **4.3.4.1. EXT-X-MEDIA** The EXT-X-MEDIA tag is used to relate Media Playlists that contain alternative Renditions (Section 4.3.4.2.1) of the same content. For example, three EXT-X-MEDIA tags can be used to identify audio-only Media Playlists that contain English, French, and Spanish Renditions of the same presentation. Or, two EXT-X-MEDIA tags can be used to identify video-only Media Playlists that show two different camera angles. Its format is: #EXT-X-MEDIA:<attribute-list> The following attributes are defined: TYPE The value is an enumerated-string; valid strings are AUDIO, VIDEO, SUBTITLES, and CLOSED-CAPTIONS. This attribute is REQUIRED. https://datatracker.ietf.org/doc/html/rfc8216 **3.2. MPEG-2 Transport Streams** MPEG-2 Transport Streams are specified by [ISO 13818].

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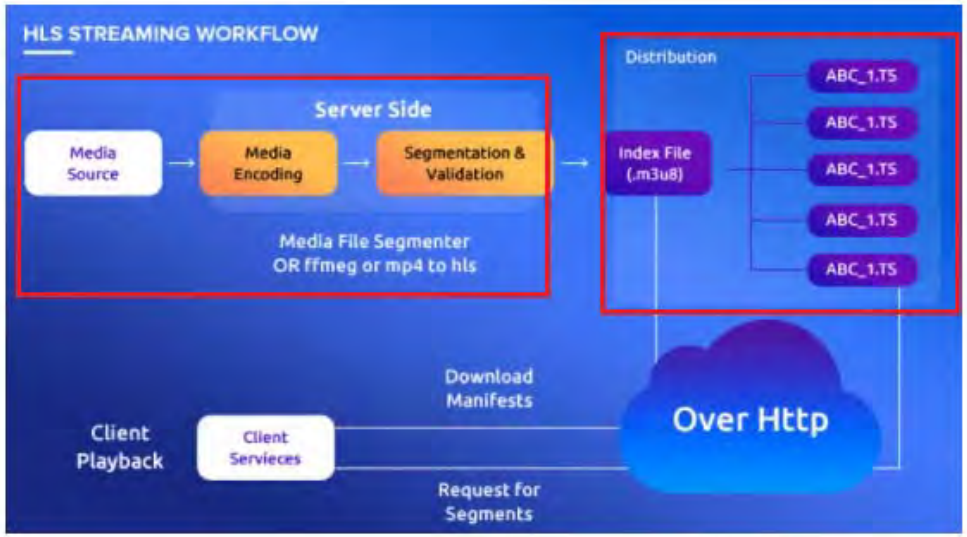
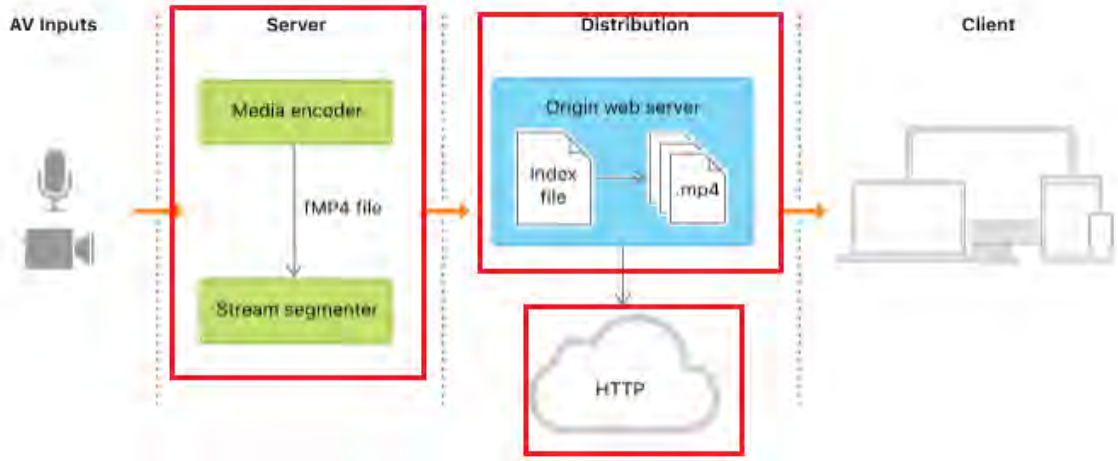
Preliminary charts based on best available information

7,848,328	Buzzfeed.com ("The Accused Instrumentality")
and forwarding the packet streams for transmission in a transmission channel,	The standard discloses forwarding the packet streams (e.g., m3u8 data packet stream) for transmission in a transmission channel (e.g., wired/wireless transmission).  https://martech.zone/http-live-streaming-player-features/

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

7,848,328	Buzzfeed.com ("The Accused Instrumentality")
	HLS supports the following: • Live broadcasts and prerecorded content (video on demand, or *VOD*) • Multiple alternate streams at different bit rates • Intelligent switching of streams in response to network bandwidth changes • Media encryption and user authentication The following figure shows the components of an HTTP Live Stream.  https://developer.apple.com/documentation/http_live_streaming
and wherein the mapping further	The standard discloses wherein the mapping further comprises assigning a specific value (e.g., value corresponding to different media stream) to each component for a predefined field of a packet (e.g., segment

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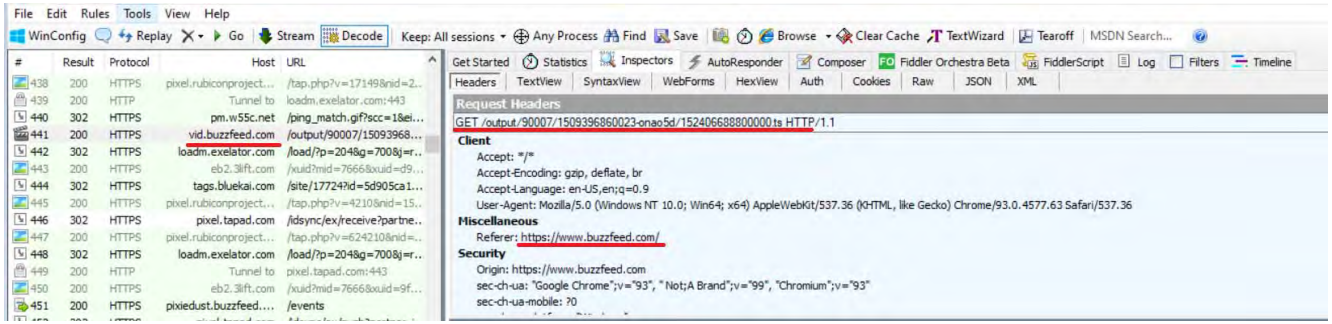
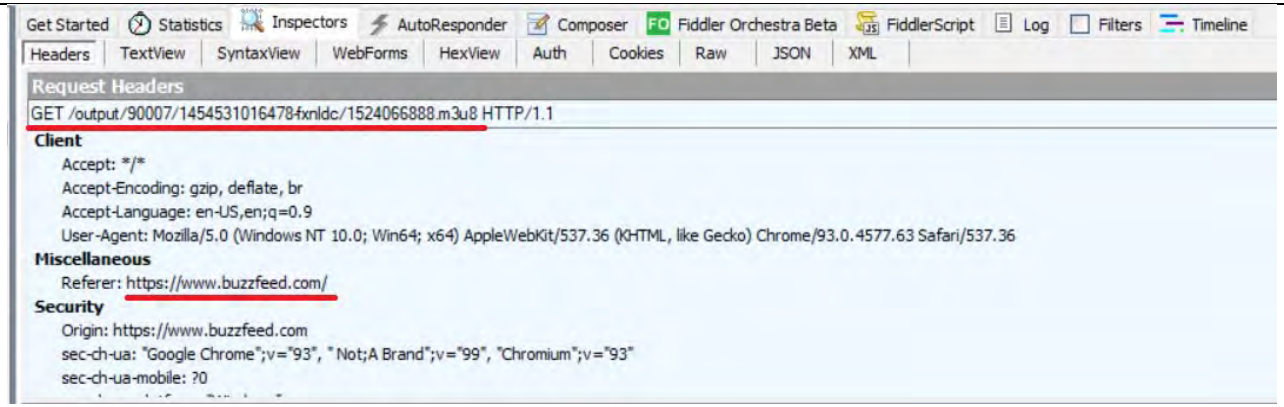
Preliminary charts based on best available information

7,848,328	Buzzfeed.com ("The Accused Instrumentality")
comprises assigning a specific value to each component for a predefined field of a packet according to a second communication protocol, the specific value distinguishing the component from other components, and	info) according to a second communication protocol (e.g., HTTP/Hypertext transfer protocol), the specific value (e.g., value corresponding to different media stream) distinguishing the component from other components. As shown below, the standard provides m3u8 index file with multiple media playlists. Each media playlist has many representations, wherein every representation has many segments, these segments contains media information of each conversion corresponding to that media playlist. The standard provides each segment having information related to a particular HTTP based uniform resource locator for getting a media stream from that particular address. For the video segment shown below, the base URL is https://vid.buzzfeed.com/ and the specific value is "output/90007/1509396860023-onao5d/152406688800000.ts" (http based).  *Source: Packet capture by Fiddler tool*

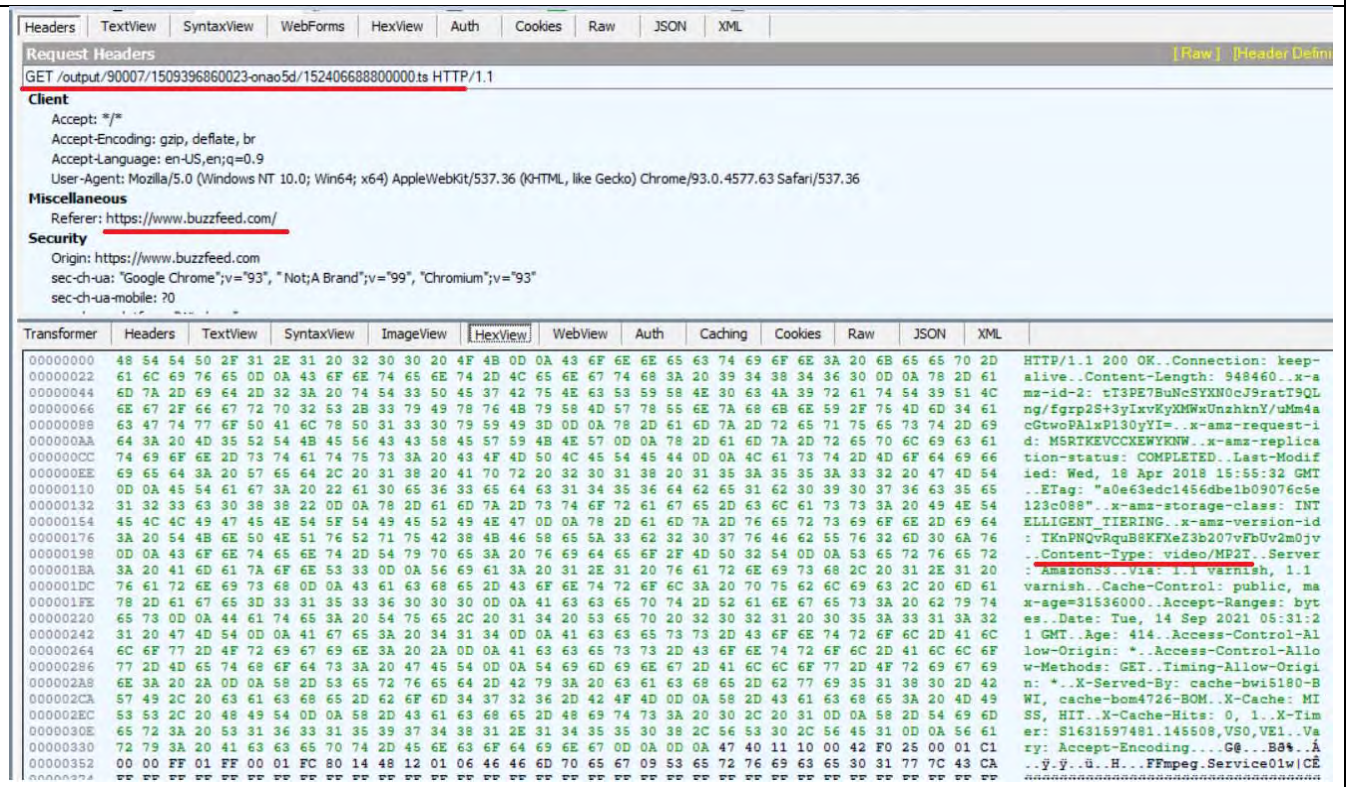
NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

7,848,328	Buzzfeed.com ("The Accused Instrumentality")
	 Get Started Statistics Inspectors AutoResponder Composer Fiddler Orchestra Beta FiddlerScript Log Filters Timeline Headers TextView SyntaxView WebForms HexView Auth Cookies Raw JSON XML Request Headers GET /output/90007/1454531016478-fxnldc/1524066888.m3u8 HTTP/1.1 **Client** Accept: */* Accept-Encoding: gzip, deflate, br Accept-Language: en-US,en;q=0.9 User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/93.0.4577.63 Safari/537.36 **Miscellaneous** Referer: https://www.buzzfeed.com/ **Security** Origin: https://www.buzzfeed.com sec-ch-ua: "Google Chrome";v="93", " Not;A Brand";v="99", "Chromium";v="93" sec-ch-ua-mobile: ?0 *Source: Packet capture by Fiddler tool*

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

7,848,328	Buzzfeed.com ("The Accused Instrumentality")
	 *Source: Packet capture by Fiddler tool*

Headers | TextView | SyntaxView | WebForms | HexView | Auth | Cookies | Raw | JSON | XML

Request Headers [Raw] [Header Defini

GET /output/90007/1509396860023-onao5d/152406688800000.ts HTTP/1.1

Client
Accept: */*
Accept-Encoding: gzip, deflate, br
Accept-Language: en-US,en;q=0.9
User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/93.0.4577.63 Safari/537.36

Miscellaneous
Referer: https://www.buzzfeed.com/

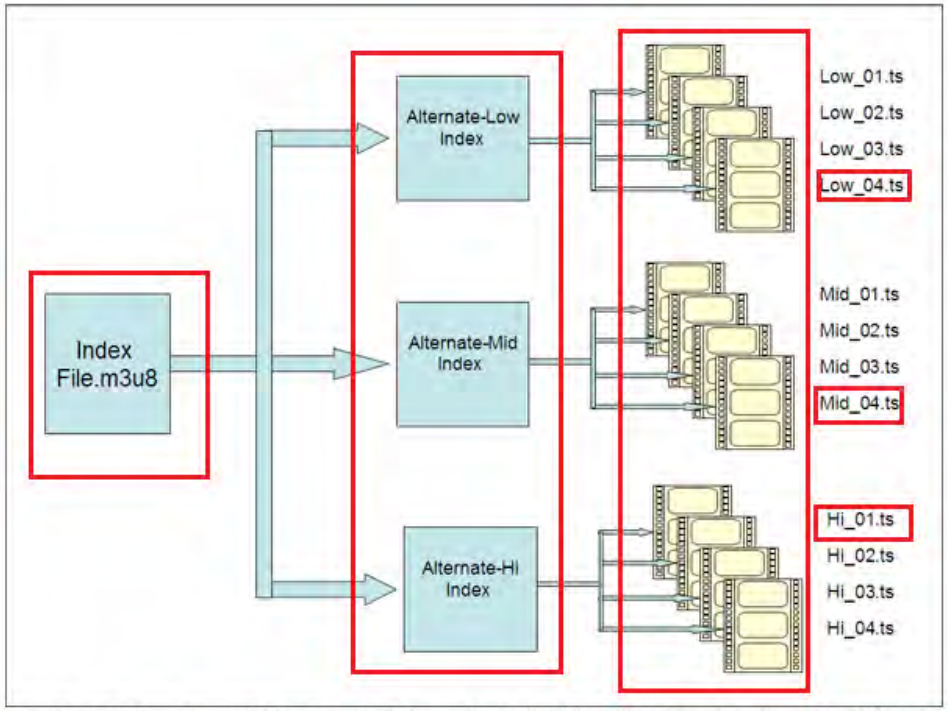
Security
Origin: https://www.buzzfeed.com
sec-ch-ua: "Google Chrome";v="93", " Not;A Brand";v="99", "Chromium";v="93"
sec-ch-ua-mobile: ?0

Transformer | Headers | TextView | SyntaxView | ImageView | HexView | WebView | Auth | Caching | Cookies | Raw | JSON | XML

```
00000000  48 54 54 50 2F 31 2E 31 20 32 30 30 20 4F 4B 0D 0A 43 6F 6E 6E 65 63 74 69 6F 6E 3A 20 6B 65 65 70 2D   HTTP/1.1 200 OK..Connection: keep-
00000022  61 6C 69 76 65 0D 0A 43 6F 6E 74 65 6E 74 2D 4C 65 6E 67 74 68 3A 20 39 34 38 34 36 30 0D 0A 78 2D 61   alive..Content-Length: 948460..x-a
00000044  6D 7A 2D 69 64 2D 32 3A 20 74 54 33 50 45 37 42 75 4E 63 53 59 58 4E 30 63 4A 39 72 61 74 54 39 51 4C   mz-id-2: tT3PE7BuNcSYXN0cJ9ratT9QL
00000066  6E 67 2F 66 67 72 70 32 53 2B 33 79 49 78 76 4B 79 58 4D 57 78 55 6E 7A 68 6B 6E 59 2F 75 4D 6D 34 61   ng/fgrp2S+3yIxvKyXMWxUnzhknY/uMm4a
00000088  63 47 74 77 6F 50 41 6C 78 50 31 33 30 79 59 49 3D 0D 0A 78 2D 61 6D 7A 2D 72 65 71 75 65 73 74 2D 69   cGtwoPAlxP130yYI=..x-amz-request-i
000000AA  64 3A 20 4D 35 52 54 4B 45 56 43 43 58 45 57 59 4B 4E 57 0D 0A 78 2D 61 6D 7A 2D 72 65 70 6C 69 63 61   d: M5RTKEVCCXEWYKNW..x-amz-replica
000000CC  74 69 6F 6E 2D 73 74 61 74 75 73 3A 20 43 4F 4D 50 4C 45 54 45 44 0D 0A 4C 61 73 74 2D 4D 6F 64 69 66   tion-status: COMPLETED..Last-Modif
000000EE  69 65 64 3A 20 57 65 64 2C 20 31 38 20 41 70 72 20 32 30 31 38 20 31 35 3A 35 35 3A 33 32 20 47 4D 54   ied: Wed, 18 Apr 2018 15:55:32 GMT
00000110  0D 0A 45 54 61 67 3A 20 22 61 30 65 36 33 65 64 63 31 34 35 36 64 62 65 31 62 30 39 30 37 36 63 35 65   ..ETag: "a0e63edc1456dbe1b09076c5e
00000132  31 32 33 63 30 38 38 22 0D 0A 78 2D 61 6D 7A 2D 73 74 6F 72 61 67 65 2D 63 6C 61 73 73 3A 20 49 4E 54   123c088"..x-amz-storage-class: INT
00000154  45 4C 4C 49 47 45 4E 54 5F 54 49 45 52 49 4E 47 0D 0A 78 2D 61 6D 7A 2D 76 65 72 73 69 6F 6E 2D 69 64   ELLIGENT_TIERING..x-amz-version-id
00000176  3A 20 54 4B 6E 50 4E 51 76 52 71 75 42 38 4B 46 58 65 5A 33 62 32 30 37 76 46 62 55 76 32 6D 30 6A 76   : TKnPNQvRquB8KFXeZ3b207vFbUv2m0jv
00000198  0D 0A 43 6F 6E 74 65 6E 74 2D 54 79 70 65 3A 20 76 69 64 65 6F 2F 4D 50 32 54 0D 0A 53 65 72 76 65 72   ..Content-Type: video/MP2T..Server
000001BA  3A 20 41 6D 61 7A 6F 6E 53 33 0D 0A 56 69 61 3A 20 31 2E 31 20 76 61 72 6E 69 73 68 2C 20 31 2E 31 20   : AmazonS3..Via: 1.1 varnish, 1.1
000001DC  76 61 72 6E 69 73 68 0D 0A 43 61 63 68 65 2D 43 6F 6E 74 72 6F 6C 3A 20 70 75 62 6C 69 63 2C 20 6D 61   varnish..Cache-Control: public, ma
000001FE  78 2D 61 67 65 3D 33 31 35 33 36 30 30 0D 0A 41 63 63 65 70 74 2D 52 61 6E 67 65 73 3A 20 62 79 74   x-age=31536000..Accept-Ranges: byt
00000220  65 73 0D 0A 44 61 74 65 3A 20 54 75 65 2C 20 31 34 20 53 65 70 20 32 30 32 31 20 30 35 3A 33 31 3A 32   es..Date: Tue, 14 Sep 2021 05:31:2
00000242  31 20 47 4D 54 0D 0A 41 67 65 3A 20 34 31 34 0D 0A 41 63 63 65 73 73 2D 43 6F 6E 74 72 6F 6C 2D 41 6C   1 GMT..Age: 414..Access-Control-Al
00000264  6C 6F 77 2D 4F 72 69 67 69 6E 3A 20 2A 0D 0A 41 63 63 65 73 73 2D 43 6F 6E 74 72 6F 6C 2D 41 6C 6C 6F   low-Origin: *..Access-Control-Allo
00000286  77 2D 4D 65 74 68 6F 64 73 3A 20 47 45 54 0D 0A 54 69 6D 69 6E 67 2D 41 6C 6C 6F 77 2D 4F 72 69 67 69   w-Methods: GET..Timing-Allow-Origi
000002A8  6E 3A 20 2A 0D 0A 58 2D 53 65 72 76 65 64 2D 42 79 3A 20 63 61 63 68 65 2D 62 77 69 35 31 38 30 2D 42   n: *..X-Served-By: cache-bwi5180-B
000002CA  57 49 2C 20 63 61 63 68 65 2D 62 6F 6D 34 37 32 36 2D 42 4F 4D 0D 0A 58 2D 43 61 63 68 65 3A 20 4D 49   WI, cache-bom4726-BOM..X-Cache: MI
000002EC  53 53 2C 20 48 49 54 0D 0A 58 2D 43 61 63 68 65 2D 48 69 74 73 3A 20 30 2C 20 31 0D 0A 58 2D 54 69 6D   SS, HIT..X-Cache-Hits: 0, 1..X-Tim
0000030E  65 72 3A 20 53 31 36 33 31 35 39 37 34 38 31 2E 31 34 35 35 30 38 2C 56 53 30 2C 56 45 31 0D 0A 56 61   er: S1631597481.145508,VS0,VE1..Va
00000330  72 79 3A 20 41 63 63 65 70 74 2D 45 6E 63 6F 64 69 6E 67 0D 0A 0D 0A 47 40 11 10 00 42 F0 25 00 01 C1   ry: Accept-Encoding....G@...Bð%..Á
00000352  00 00 FF 01 FF 00 01 FC 80 14 48 12 01 06 46 46 6D 70 65 67 09 53 65 72 76 69 63 65 30 31 77 7C 43 CA   ..ÿ.ÿ..ü..H...FFmpeg.Service01w|CÊ
```

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

7,848,328	Buzzfeed.com ("The Accused Instrumentality")
	 *Figure 1. HLS uses multiple encoded files with index files directing the player to different streams and chunks of audio/video data within those streams.* https://www.streamingmedia.com/Articles/Editorial/What-Is-.../What-Is-HLS-(HTTP-Live-Streaming)-78221.aspx?utm_source=related_articles&utm_medium=gutenberg&utm_campaign=editors_selection

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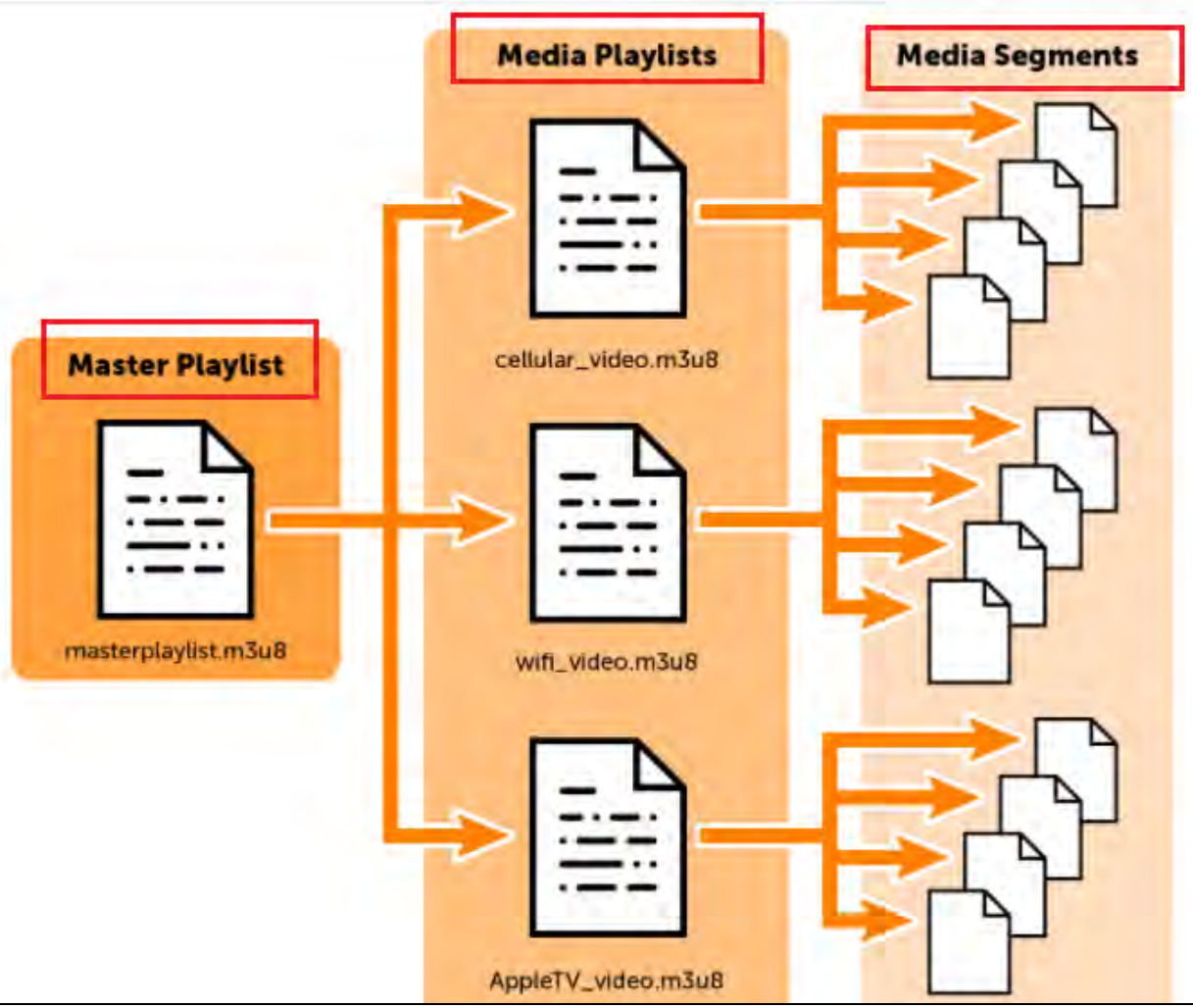
Preliminary charts based on best available information

7,848,328	Buzzfeed.com ("The Accused Instrumentality")
	

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Preliminary charts based on best available information

7,848,328	Buzzfeed.com ("The Accused Instrumentality")
	https://www.wowza.com/blog/hls-streaming-protocol

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7,848,328	Buzzfeed.com ("The Accused Instrumentality")
	8.3. Playlist with Encrypted Media Segments #EXTM3U #EXT-X-VERSION:3 #EXT-X-MEDIA-SEQUENCE:7794 #EXT-X-TARGETDURATION:15 #EXT-X-KEY:METHOD=AES-128,URI="https://priv.example.com/key.php?r=52" #EXTINF:2.833, http://media.example.com/fileSequence52-A.ts #EXTINF:15.0, http://media.example.com/fileSequence52-B.ts #EXTINF:13.333, http://media.example.com/fileSequence52-C.ts #EXT-X-KEY:METHOD=AES-128,URI="https://priv.example.com/key.php?r=53" #EXTINF:15.0, http://media.example.com/fileSequence53-A.ts **8.4. Master Playlist** #EXTM3U #EXT-X-STREAM-INF:BANDWIDTH=1280000,AVERAGE-BANDWIDTH=1000000 http://example.com/low.m3u8 #EXT-X-STREAM-INF:BANDWIDTH=2560000,AVERAGE-BANDWIDTH=2000000 http://example.com/mid.m3u8 #EXT-X-STREAM-INF:BANDWIDTH=7680000,AVERAGE-BANDWIDTH=6000000 http://example.com/hi.m3u8 #EXT-X-STREAM-INF:BANDWIDTH=65000,CODECS="mp4a.40.5" http://example.com/audio-only.m3u8

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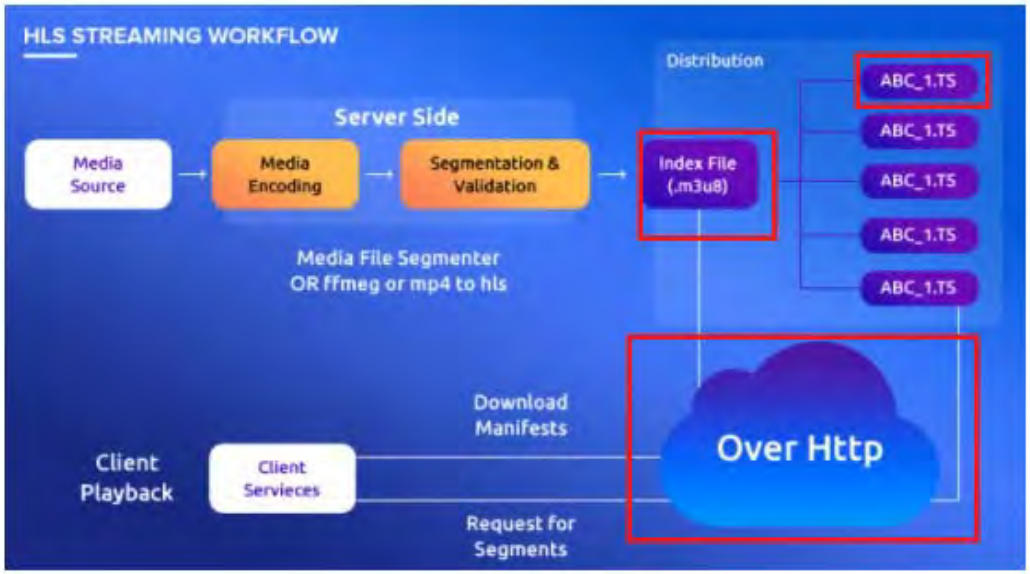
Preliminary charts based on best available information

7,848,328	Buzzfeed.com ("The Accused Instrumentality")
	https://datatracker.ietf.org/doc/html/rfc8216  https://martech.zone/http-live-streaming-player-features/
the encapsulating comprises encapsulating the packet streams according to one or more lower layer protocols	The standard discloses encapsulating comprises encapsulating the packet streams (e.g., data packets in m3u8 file) according to one or more lower layer protocols without encapsulating the packet streams (e.g., data packets in m3u8) according to the second communication protocol (e.g. HTTP Protocol). Further as explained below, the packet streams are encapsulated according to one or more lower layer protocols (e.g., network layer/MAC layer/physical layer) of the device transmitting the packet streams. Since, the packet streams are obtained by TCP encapsulation of data streams and the HTTP protocol doesn't reside beneath the TCP layer, the further encapsulation doesn't comprise encapsulation using HTTP protocol (once TCP

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without encapsulating the packet streams according to the second communication protocol.	encapsulation has been executed). In any communication system, when a sender prepares data for sending from its physical interface (e.g., wired/wireless interface of the server/machine), the process of entire "data formulation" or "data construction" has multiple steps, all steps (if they are present) are associated with one layer of OSI model (it's a model which every communication system follows, some specification communication schemes may have lower number of layers (because multiple layers of OSI can be combined into one for those cases). Two lower level layers—data link layer and physical layers are invariably present in any communication system. They are the lowest two layers. They reside beneath the TCP layer. Data link layer ensure error free communication whereas the physical layer processes the data so that it can be sent using the actual medium of communication (e.g., modulation and formatting in wireless/wired communication system)

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Preliminary charts based on best available information

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	Does HLS use TCP or UDP as its transport protocol? TCP and UDP are transport protocols, meaning they are responsible for delivering content over the Internet. TCP tends to deliver data more reliably than UDP, but the latter is much faster, even though some data may be lost in transit. Because UDP is faster, some streaming protocols use UDP instead of TCP. HLS, however, uses TCP. This is for several reasons: 1. HLS is over HTTP, and the HTTP protocol is built for use with TCP (with some exceptions). 2. The modern Internet is more reliable and more efficient than it was when streaming was first developed. In many parts of the world today, user connectivity has vastly improved, especially for mobile connections. As a result, users have enough bandwidth to support the delivery of every video frame. 3. Adaptive bitrate streaming helps compensate for the potentially slower data delivery of TCP. https://www.cloudflare.com/learning/video/what-is-http-live-streaming/

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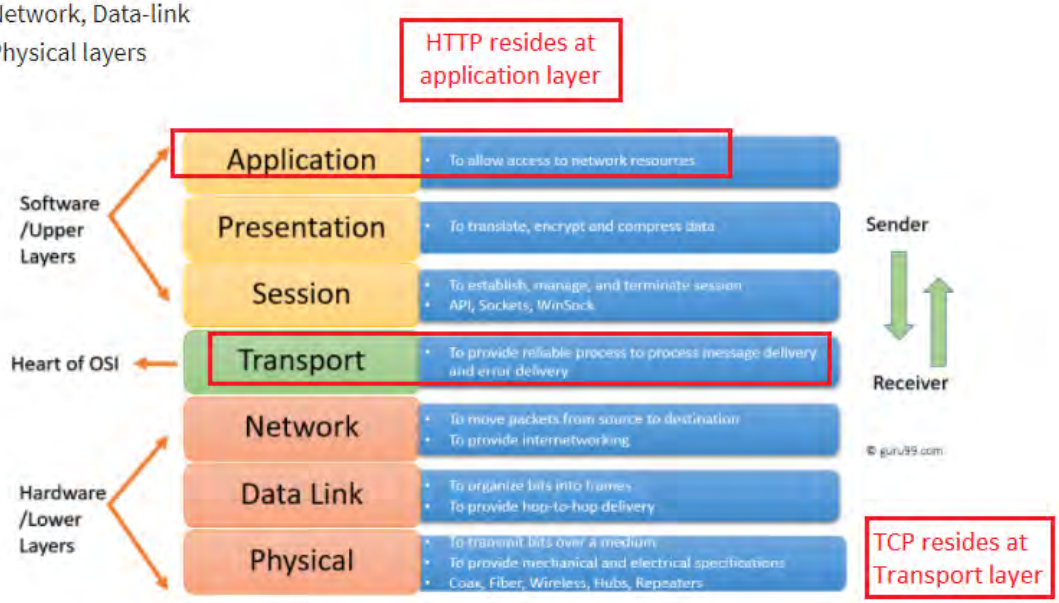
Preliminary charts based on best available information

7,848,328	Buzzfeed.com ("The Accused Instrumentality")
	HyperText Transfer Protocol (*HTTP*) The HyperText Transfer Protocol, or *HTTP*, must be the most widely used Application layer protocol in the world today. It forms the basis of what most people understand the Internet to be—the World Wide Web. Its purpose is to provide a lightweight protocol for the retrieval of HyperText Markup Language (*HTML*) and other documents from Web sites throughout the Internet. Each time you open a Web browser to surf the Internet, you are using *HTTP* over *TCP/IP*. *HTTP* was first ratified in the early 1990s and has been through three main iterations: • **HTTP/0.9:** A simplistic first implementation of the protocol that only supported the option to get a Web page. • **HTTP/1.0:** Ratified by the *IETF* as RFC 1945 in 1996. This version added many supplemental data fields, known as *headers* to the specification. This allowed for other information passing between the client and server, alongside the request and consequent page. • **HTTP/1.1:** Defined in RFC 2068 by the *IETF*, version 1.1 implemented a number of improvements over and above the 1.0 specification. One of the main improvements of 1.1 over 1.0 was the implementation of techniques such as persistent *TCP* connections, pipelining, and cache control to improve performance within *HTTP*-based applications. https://www.informit.com/articles/article.aspx?p=169578

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

7,848,328	Buzzfeed.com ("The Accused Instrumentality")
	Upper and Lower layers further divide network architecture into seven different layers as below • Application • Presentation • Session • Transport • Network, Data-link • Physical layers  Network Layers Diagram https://www.guru99.com/layers-of-osi-model.html https://www.cloudflare.com/learning/ddos/glossary/open-systems-interconnection-model-osi/

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

NIMITZ TECHNOLOGIES LLC, **Plaintiff,** **v.** **IMAGINE LEARNING, INC.** **Defendant.**	**Case No.** **Jury Trial Demanded**

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Nimitz Technologies LLC, by and through the undersigned counsel, files this Complaint for patent infringement against Defendant Imagine Learning, Inc., and in support states, all upon information and belief:

PARTIES

1. Plaintiff Nimitz Technologies LLC is a limited liability company organized and existing under the laws of the State of Texas and having its office address at 3333 Preston Road STE 300, #1047, Frisco, TX 75034 ("Nimitz" or "Plaintiff").

2. Defendant Imagine Learning, Inc. is a Delaware corporation with its registered office located at maintains its registered office at Corporation Service Company, 251 Little Falls Drive, Wilmington, DE 19808 ("Imagine Learning" or "Defendant").

JURISDICTION AND VENUE

3. This is an action for patent infringement arising under the patent laws of the United States, 35 U.S.C. § 1 *et seq*., including 35 U.S.C. §§ 271. This Court has subject matter jurisdiction under 28 U.S.C. §§ 1331 and 1338(a).

4. This Court has personal jurisdiction over Defendant at least because Defendant is a corporation organized under the laws of the State of Delaware.

5. Venue is proper in this Judicial District under 28 U.S.C. §§ 1391 and 1400(b) because Defendant is deemed to be a resident of this District.

PATENT 7,848,328

6. U.S. Patent No. 7,848,328, entitled "Broadcast Content Encapsulation" (the "'328 Patent") was duly and legally issued on December 7, 2010. A true and correct copy of the '328 Patent is attached as Exhibit 1.

7. Plaintiff is the named assignee of, owns all right, title and interest in, and has standing to sue and recover all past damages for infringement of the '328 Patent.

8. Claim 1 of the'328 Patent is directed to a specific implementation of a highly technical method for delivering to consumers multiple versions of a specific content.

9. The claimed method begins with "components." Upon receiving the audio and/or visual elements of a specific content, the provider processes and compresses the information into a series of files that are packaged into a series of "components" which are specific containers storing the resulting video/audio files. The Patent illustrates one embodiment of "components" in Figure 2:

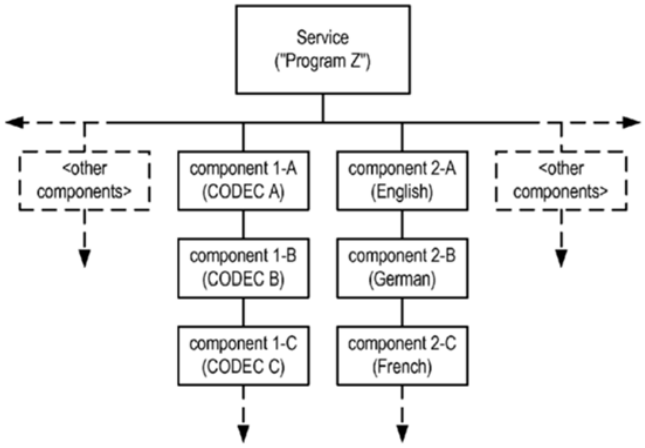


FIG. 2

10. The "components" are versatile and the provider may design "components" in a form that is most suitable for the needs of the particular provider. For example, the Patent teaches that the "components" may be specific to one or more of bit rates to accommodate a hierarchical content coding scheme, language, specific protocols and codecs, resolutions, subtitles, rich media, graphics and separate video and audio components as possible available

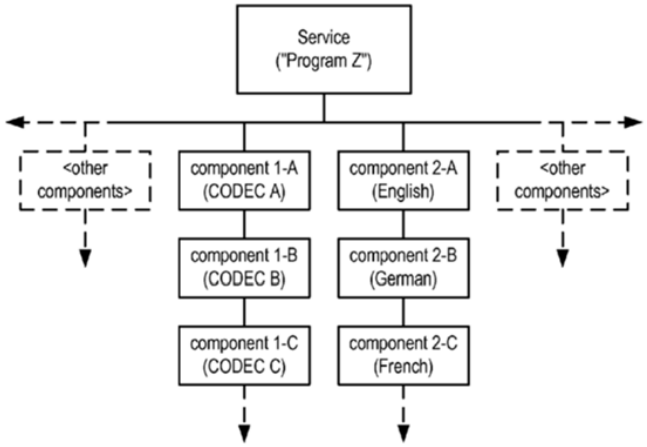


FIG. 2

"component" structures. ('328 Patent at 3:13-45).

11. Claim 1 then requires the specific content to be delivered in different versions via multiple data streams with each stream corresponding to a "component." The claims refer to this as the "mapping" of the data streams to the "components," and this is depicted in Figure 4:

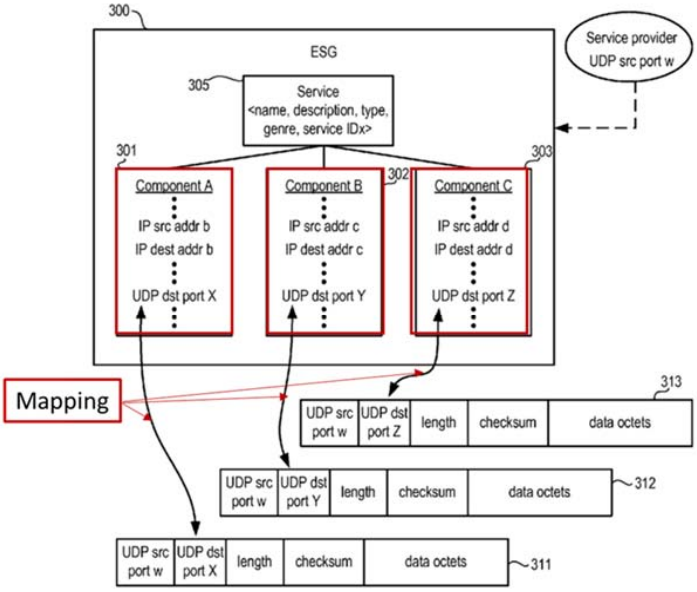


FIG. 4

12. Claim 1 next requires "encapsulating each data stream of the plurality into a stream of packets according to a first communication protocol" and that "as to each of the packet streams, the packets have a value in a common field identifying the component mapped to the data stream encapsulated by the packet stream." This limitation is again illustrated in Figure 4 as follows:

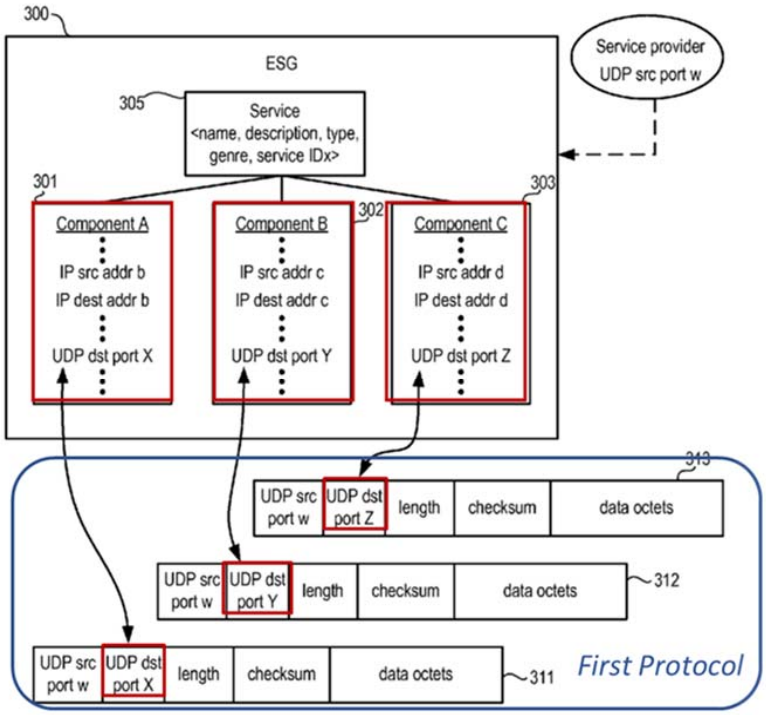


FIG. 4

13. Claim 1 also requires that "the mapping further comprises assigning a specific value to each component for a predefined field of a packet according to a second communication protocol, the specific value distinguishing the component from other components, and the encapsulating comprises encapsulating the packet streams according to one or more lower layer protocols without encapsulating the packet streams according to the second communication protocol." This particular step of the claimed method requires that a streaming provider deliver packet streams to consumers who require a different second protocol without encapsulating the data streams in that particular second protocol by assigning a specific value in a predefined field of a packet to "components" directed to the second communication protocol where the specific value distinguishing the component from other components and encapsulating the packet streams according to one or more lower layer protocols.

14. Finally, claim 1 requires "forwarding the packet streams for transmission in a transmission channel," which is the delivery of content to the consumer.

15. The above claim limitations for delivering content to consumers are not abstract, but concrete and definitive steps in organizing "components" and "data streams," and populating frames in the data stream, in language that is so specific as to resemble instructions in a user manual.

16. The United States Patent and Trademark Office specifically identified in the Notice of Allowance the limitations that were entirely missing in the prior art:

> assigning a specific value to each component for a predefined field of a packet according to a second communication protocol, the specific value distinguishing the component from other components, and the encapsulating comprises encapsulating the packet streams according to one or more lower layer protocols without encapsulating the packet streams according to the second communication protocol..

(Notice of Allowability).

17. All the claims differed from the closest prior art, Arad et al. US Pat. 7,590,991, Balakrishnan et al. US Pat. 7,227,899, Poli et al. US Pat Appln. 2005/0122976, Anschutz et al. US Pat. Appln. 2004/0230695 and Rakib, Selim Shlomo US Pat. 6,970, 127, all of which disclosed conventional communication systems, either singularly or in combination, and, thus, failed to anticipate or render the above features obvious. (Notice of Allowability).

18. The method claims are patent eligible under 35 U.S.C. § 101. The claims are not abstract. As reflected in the Notice of Allowance, the claims are directed to a novel improvement that, unlike conventional art, comprises assigning a specific value to each component for a predefined field of a packet according to a second communication protocol, with the specific value distinguishing the component from other components, and the encapsulating comprises encapsulating the packet streams according to one or more lower layer

protocols without encapsulating the packet streams according to the second communication protocol.

19. Thus, the '328 Patent claims focus on specific improvements in computer capabilities as opposed to an invention that simply uses computers as a tool. The focus of the claimed advance is on a solution to a technological problem arising in computer operations and provides a specific improvement in computer capabilities or functionality, rather than only claiming a desirable result or function.

20. Further, Claim 1 and its dependent claims, individually and as an ordered combination, recite an inventive concept, which is manifestly more than the application of an abstract idea using well-understood, routine, and conventional activities previously known to the industry. As stated by the Examiner, prior to the present invention, there was no prior art disclosing a system and method for encapsulating data streams, and particularly where the data streams related to a specific content that is mapped to components of a transmission service that delivers multiple versions of that specific content. Such content may include audio data, video data and/or other types of data, some or all of which may be any combination of real-time and non-real-time data. For example, versions of the content may vary based on a CODEC used to encode media for the content, based on transmission parameters (e.g., bit rate) for a data stream providing such media, based on a language for subtitles or other text associated with the specific content, based on other types of data associated with the content, etc. The data stream for each component is encapsulated into packets according to a communication protocol such as, e.g., User Datagram Protocol (UDP). A common field of each packet header, which in some embodiments is the UDP destination port field, is given a value identifying the corresponding

component. A user equipment (UE) receiving a transmission of the service identifies desired components based on the common field value.

COUNT I – INFRINGEMENT OF THE '328 PATENT

21. Plaintiff restates and incorporates by reference the foregoing allegations.

22. In violation of 35 U.S.C. § 271(a), Imagine Learning has practiced and continues to practice the method of at least Claim 1 of the '328 Patent by streaming the content found in https://www.imaginelearning.com ("Accused Instrumentality").

23. Attached hereto as Exhibit 2, and incorporated herein by reference, is a claim chart detailing why the Accused Instrumentality infringes at least method Claim 1.

24. As a result of Defendant's infringement of the '328 Patent, Plaintiff has suffered damages.

25. Nimitz is entitled to a money judgment in an amount adequate to compensate for Defendant's infringement, but in no event less than a reasonable royalty for the use made of the invention by Defendant, together with interest and costs as fixed by the Court.

26. Only method claims of the '328 Patent are being asserted, and, thus, patent marking is not an issue. In any event, Nimitz has not commercialized any products under the '328 Patent and has no information that any prior owners of the Patent have not complied with patent marking requirements.

JURY DEMAND

Plaintiff demands a trial by jury on all issues so triable.

PRAYER FOR RELIEF

Plaintiff Nimitz Technologies LLC respectfully requests that the Court find in its favor and against Defendant Imagine Learning, Inc., and that the Court grant Plaintiff the following relief:

A. an adjudication that Defendant had infringed the ’328 Patent;

B. an award of damages to be paid by Defendant adequate to compensate Plaintiff for Defendant’s past infringement of the ’328 Patent, including pre-judgment and post-judgment interest, costs, expenses, and an accounting of all infringing acts; and

C. any and all such further relief at law or in equity that the Court may deem just and proper, including but not limited to attorneys’ fees.

Dated: December 31, 2021

Respectfully submitted by:

/s/ George Pazuniak
George Pazuniak (#478)
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Attorney for Plaintiff Nimitz Technologies LLC

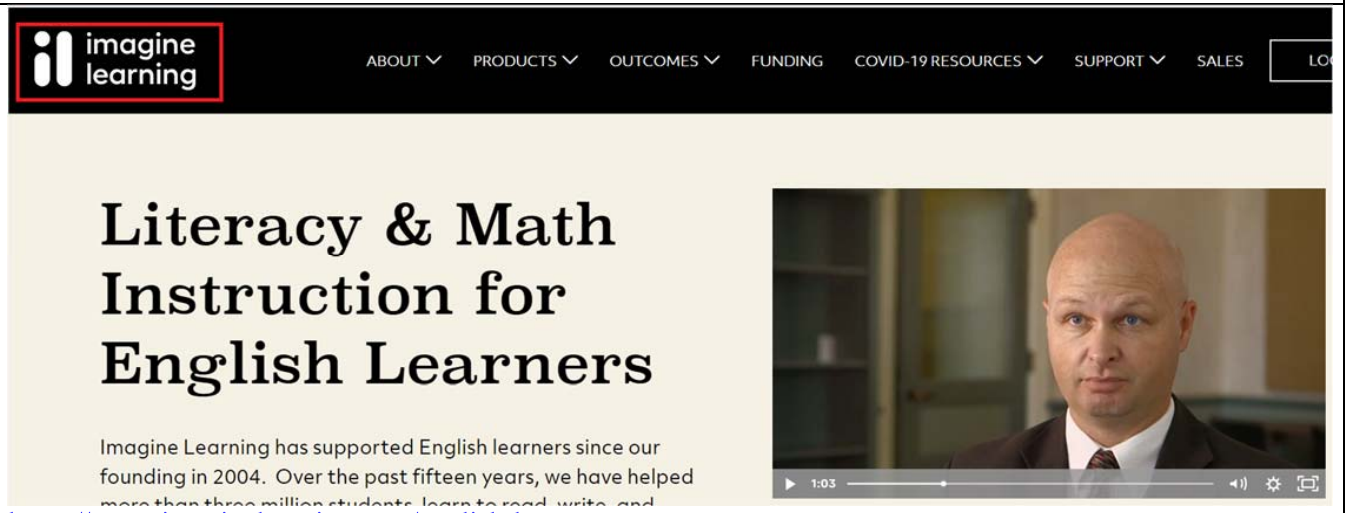
NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

7,848,328	Imagine Learning ("Accused Instrumentality")
1. A method comprising: mapping, with at least one processor, each of a plurality of data streams related to a specific content to a different component of a service delivering multiple versions of the specific content;	The defendant streams videos making use of HTTP live streaming (HLS) standard (hereinafter referred to as the standard). https://www.imaginelearning.com/

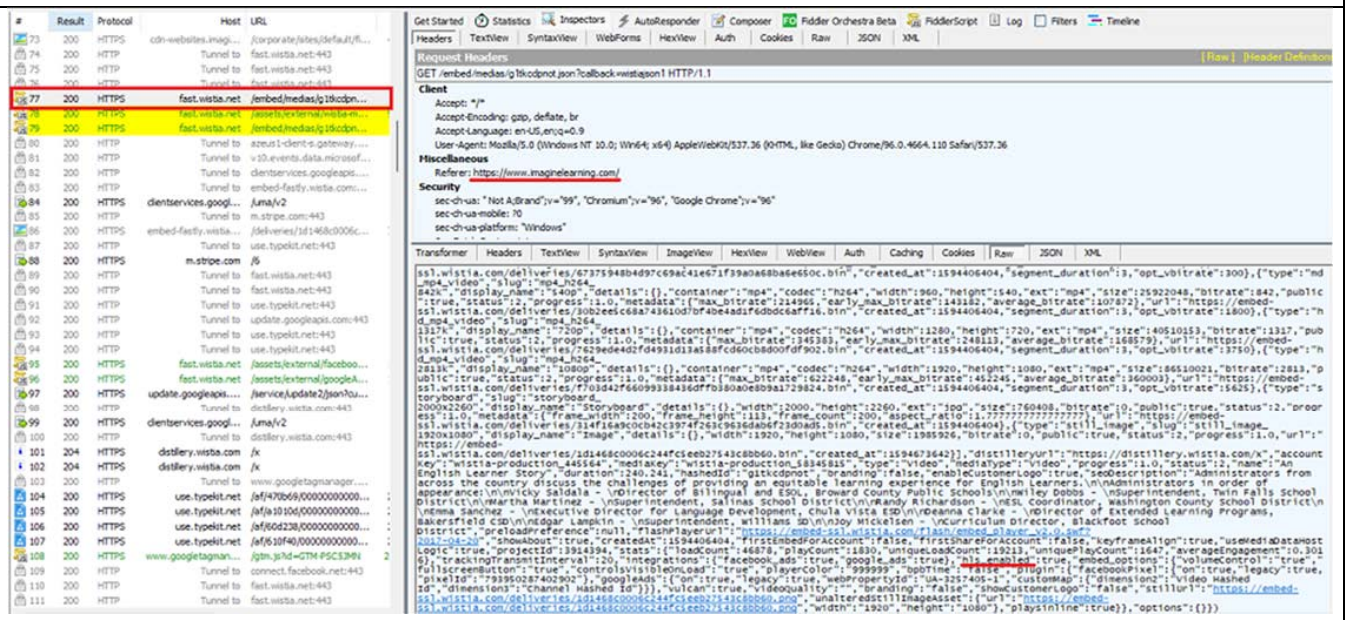
NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

7,848,328	**Imagine Learning ("Accused Instrumentality")**
	 https://www.imaginelearning.com/english-learners The accused standard discloses a method which comprises mapping, with at least one processor (e.g., processor/transcoder of a server of an HLS service provider), each of a plurality of data streams (e.g., media streams such as audio, video, captions, etc.) related to a specific content (e.g., streaming content such as web streaming, on-demand news) to a different component (e.g., Index file m3u8) of a service (e.g., web streaming, on-demand news etc.) delivering multiple versions (e.g., M3U8 Manifest File comprises multiple versions of a data stream) of the specific content (e.g., streaming content such as web streaming, on-demand news etc.). As shown below, a server of an HLS service provider converts plurality of data streams such as audio, video, etc. of a streaming content (e.g., specific content) in multiple streams at different bitrates and resolutions in different media segments of a M3U8 Manifest File. For example a media segment may consist of representation of videos and audios. Similarly, different media segments contain many different representations.

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

7,848,328	Imagine Learning ("Accused Instrumentality")
	 *Source: Packet capture by Fiddler tool* As shown below, a server of an HLS streaming service provider converts plurality of data streams such as audio, video, etc. of a streaming content (e.g., specific content) such as an entertainment news in multiple versions in different adaptation sets of a M3U8 Manifest File. For example, an adaption set may consist of representation of different resolutions 640x360 video, 400x224 video, etc.

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

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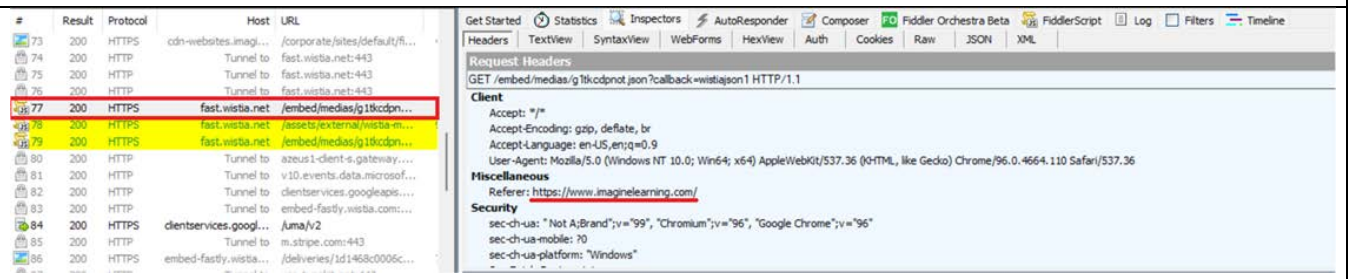
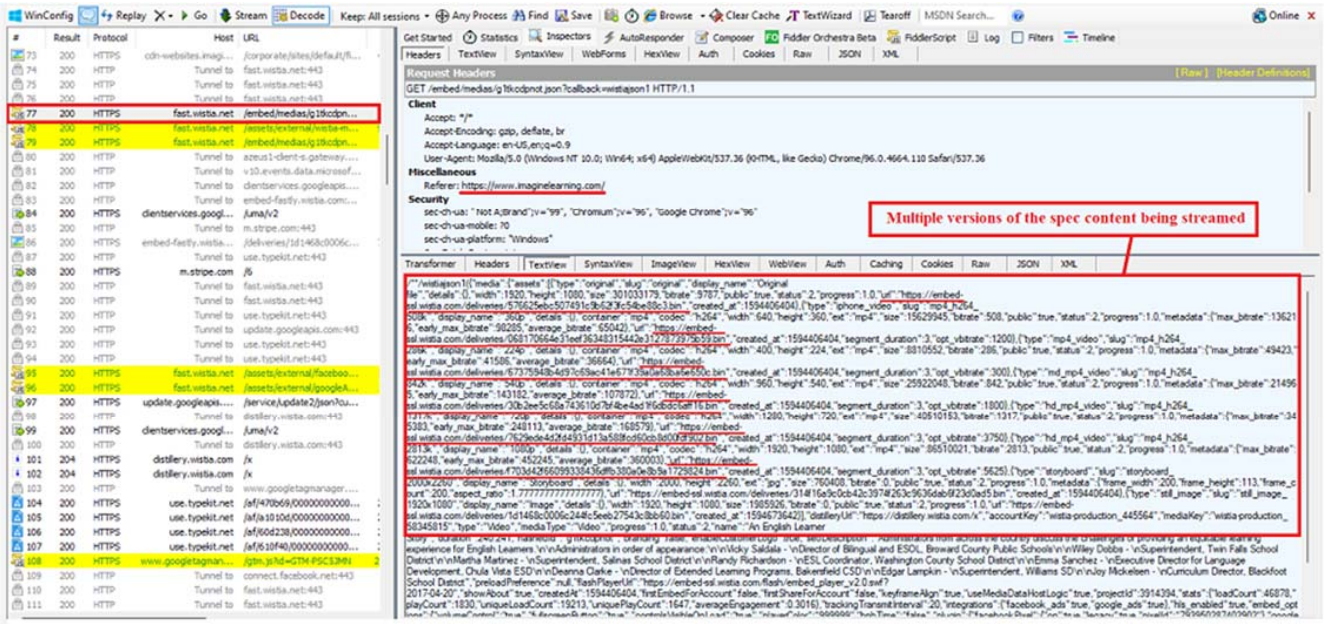
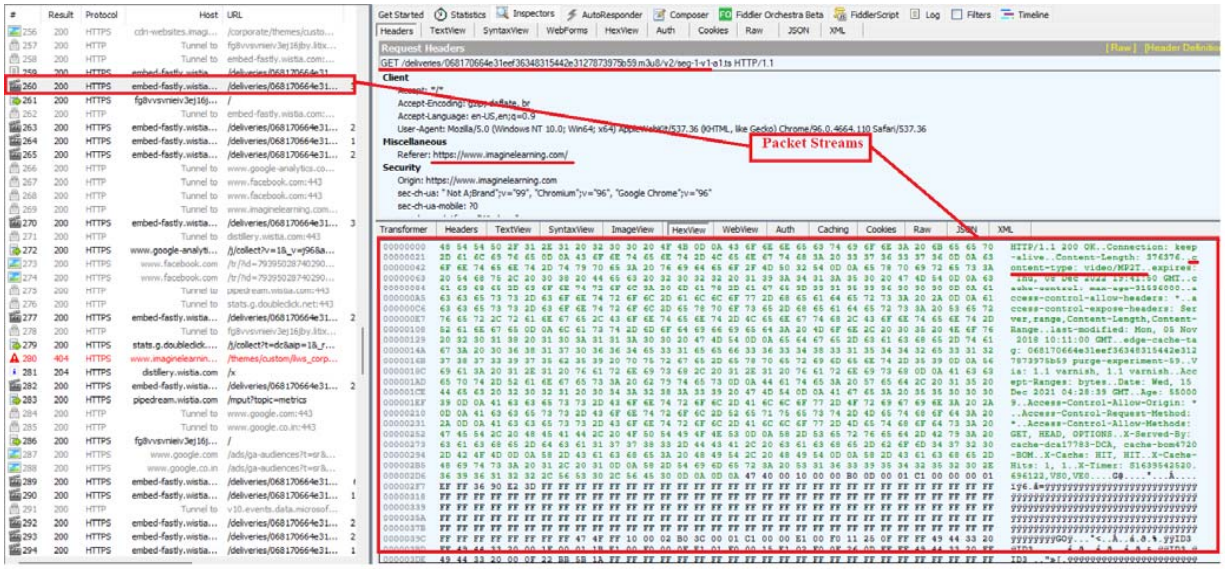
7,848,328	Imagine Learning ("Accused Instrumentality")
	 *Source: Packet capture by Fiddler tool* 

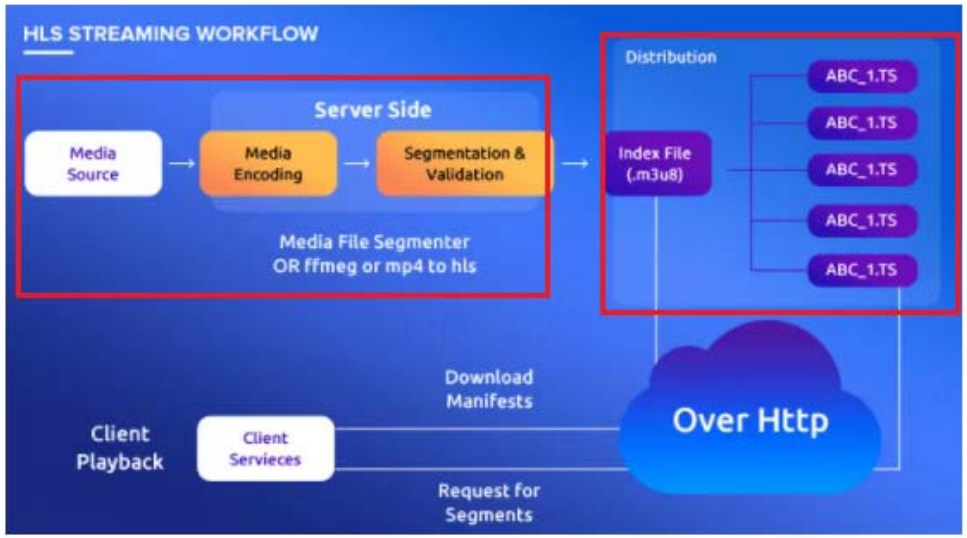
NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

7,848,328	Imagine Learning ("Accused Instrumentality")
	Source: Packet capture by Fidler tool  *Source: Packet capture by Fidler tool*

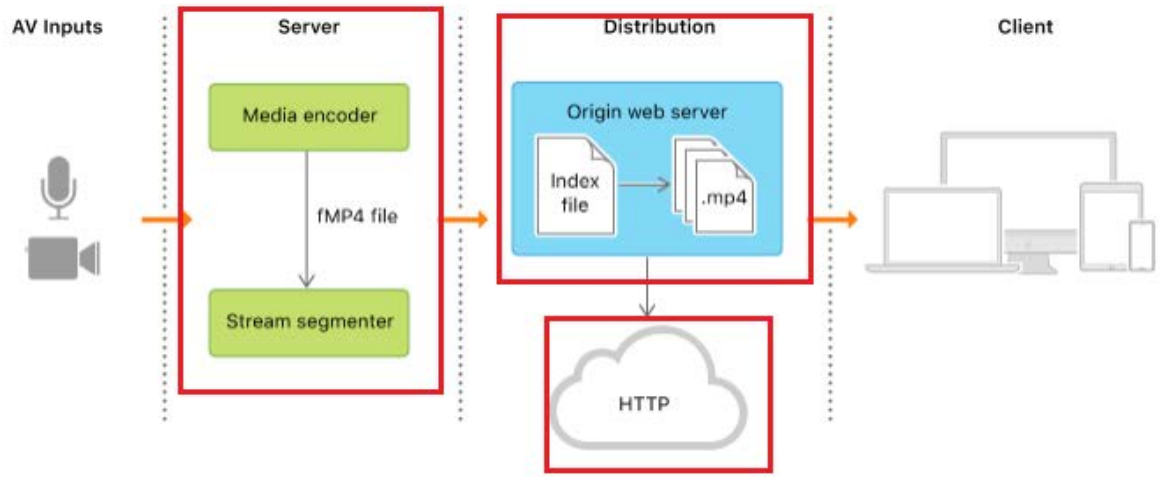
NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

7,848,328	Imagine Learning ("Accused Instrumentality")
	 https://martech.zone/http-live-streaming-player-features/

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

7,848,328	Imagine Learning ("Accused Instrumentality")
	HLS supports the following: • Live broadcasts and prerecorded content (video on demand, or *VOD*) • Multiple alternate streams at different bit rates • Intelligent switching of streams in response to network bandwidth changes • Media encryption and user authentication The following figure shows the components of an HTTP Live Stream.  https://developer.apple.com/documentation/http_live_streaming

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

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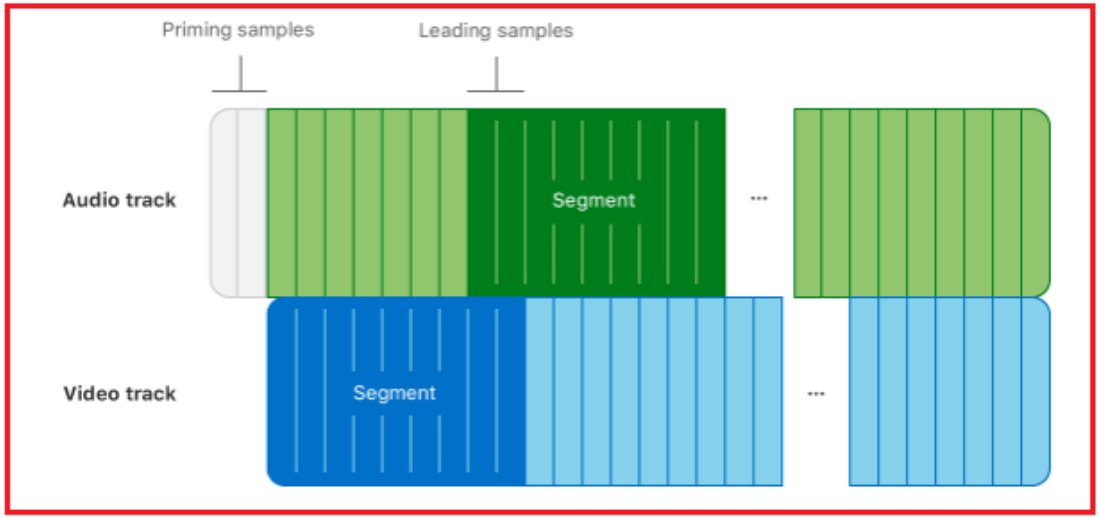
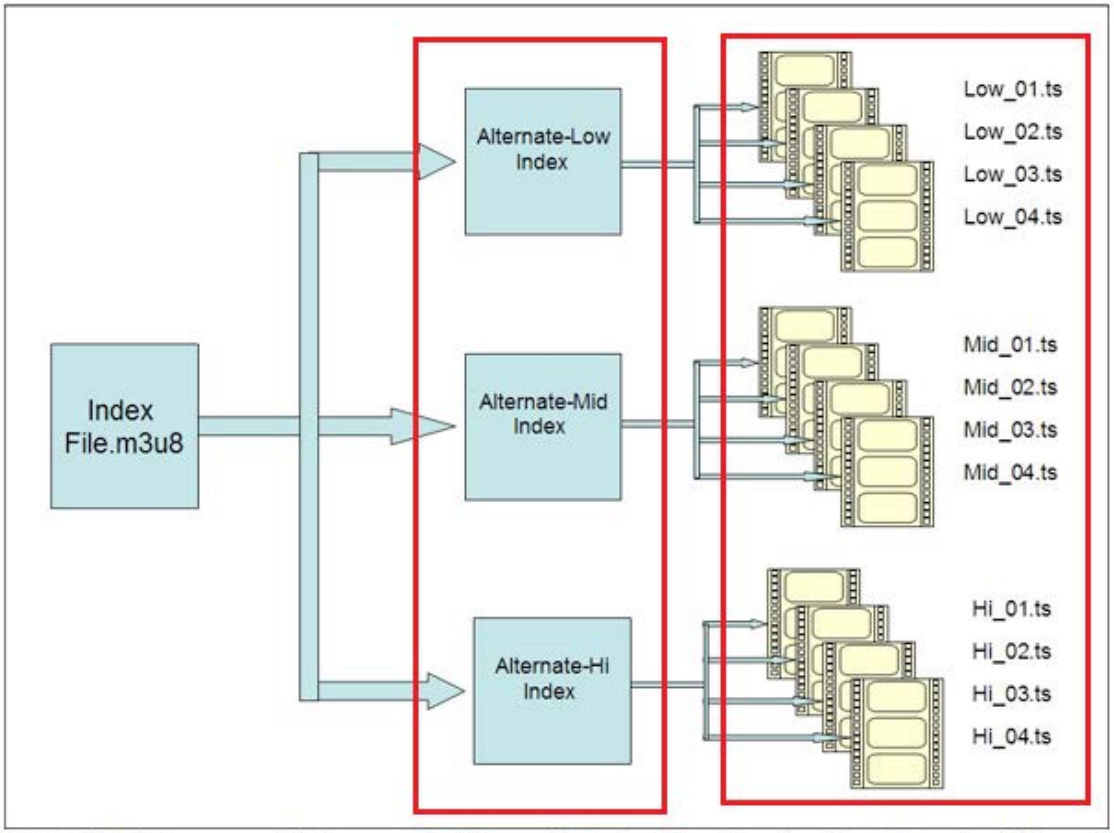
7,848,328	Imagine Learning ("Accused Instrumentality")
	AAC audio processing requires a small amount of leading "throw-away" audio to prime the encoder and initialize internal tables. This small amount of audio results from *encoder delay* which happens during encoding to produce properly formed, encoded audio packets, and its duration is commonly referred to as the *priming duration*. This audio needs to occur before the first frame of video; otherwise, there will be no audio for the first few frames of video.  The audio sample rates are normally 44.1 kHz or 48 kHz. For more information, see the HTTP Live Streaming Specification and the HLS Authoring Specification for Apple Devices. https://developer.apple.com/documentation/http_live_streaming/preparing_audio_for_http_live_streaming

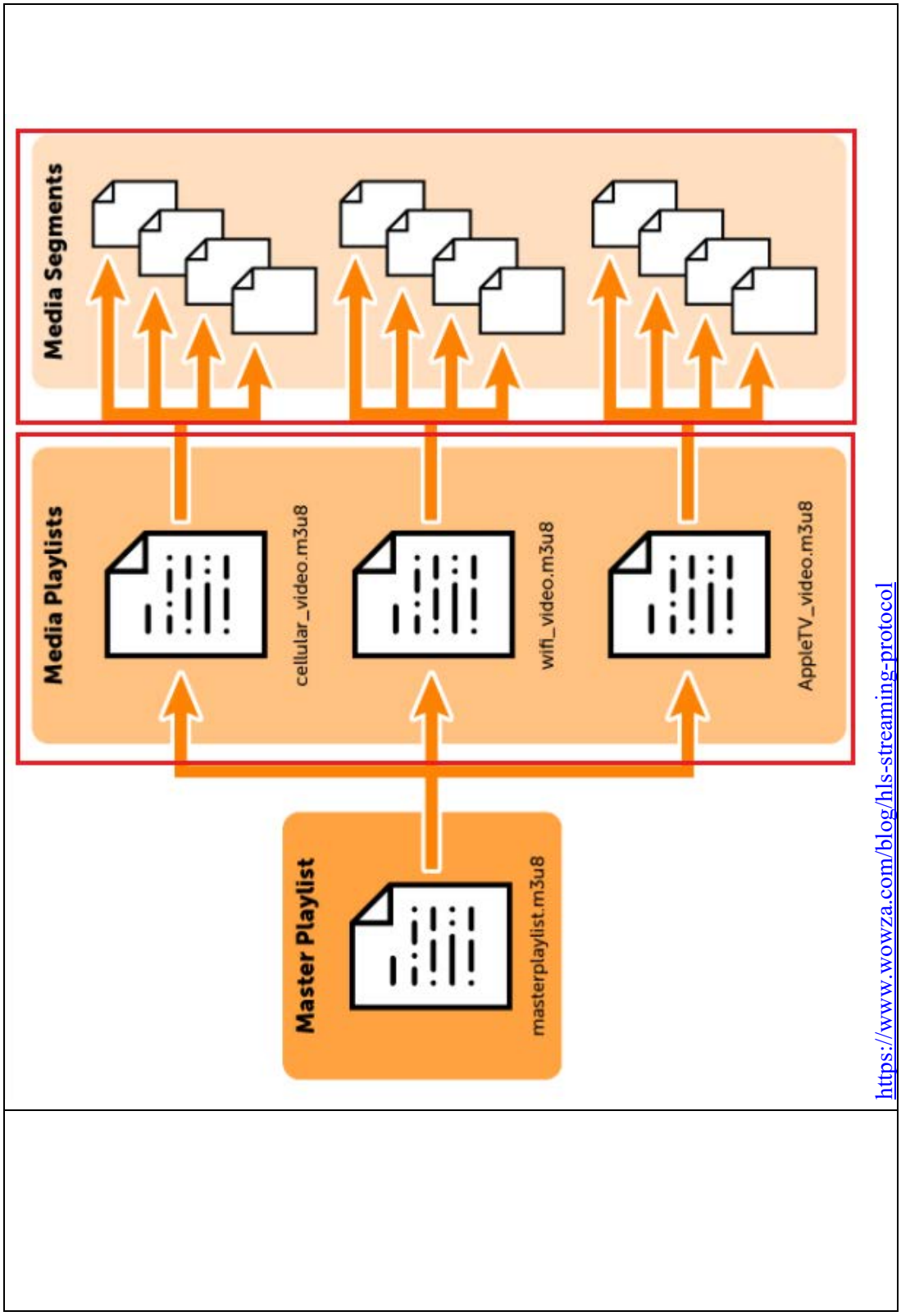
NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

7,848,328	Imagine Learning ("Accused Instrumentality")
	 https://www.streamingmedia.com/Articles/Editorial/What-Is-.../What-Is-HLS-(HTTP-Live-Streaming)-78221.aspx?utm_source=related_articles&utm_medium=gutenberg&utm_campaign=editors_selection

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information



https://www.wowza.com/blog/hls-streaming-protocol

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

7,848,328	Imagine Learning ("Accused Instrumentality")
	1. Introduction to HTTP Live Streaming HTTP Live Streaming provides a reliable, cost-effective means of delivering continuous and long-form video over the Internet. It allows a receiver to adapt the bit rate of the media to the current network conditions in order to maintain uninterrupted playback at the best possible quality. It supports interstitial content boundaries. It provides a flexible framework for media encryption. It can efficiently offer multiple renditions of the same content, such as audio translations. It offers compatibility with large-scale HTTP caching infrastructure to support delivery to large audiences. https://datatracker.ietf.org/doc/html/rfc8216#section-1 **2. Overview** A multimedia presentation is specified by a Uniform Resource Identifier (URI) [RFC3986] to a Playlist. A Playlist is either a Media Playlist or a Master Playlist. Both are UTF-8 text files containing URIs and descriptive tags. A Media Playlist contains a list of Media Segments, which, when played sequentially, will play the multimedia presentation. https://datatracker.ietf.org/doc/html/rfc8216

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	`#EXTM3U`
	`#EXT-X-TARGETDURATION:10`
	
	`#EXTINF:9.009,`
	`http://media.example.com/first.ts`
	`#EXTINF:9.009,`
	`http://media.example.com/second.ts`
	`#EXTINF:3.003,`
	`http://media.example.com/third.ts`
	
	The first line is the format identifier tag #EXTM3U. The line containing #EXT-X-TARGETDURATION says that all Media Segments will be 10 seconds long or less. Then, three Media Segments are declared. The first and second are 9.009 seconds long; the third is 3.003 seconds.
	
	https://datatracker.ietf.org/doc/html/rfc8216

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7,848,328	Imagine Learning ("Accused Instrumentality")
	A more complex presentation can be described by a Master Playlist. A Master Playlist provides a set of Variant Streams, each of which describes a different version of the same content. A Variant Stream includes a Media Playlist that specifies media encoded at a particular bit rate, in a particular format, and at a particular resolution for media containing video. A Variant Stream can also specify a set of Renditions. Renditions are alternate versions of the content, such as audio produced in different languages or video recorded from different camera angles. Clients should switch between different Variant Streams to adapt to network conditions. Clients should choose Renditions based on user preferences. https://datatracker.ietf.org/doc/html/rfc8216

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

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7,848,328	Imagine Learning ("Accused Instrumentality")
	Media Segments A Media Playlist contains a series of Media Segments that make up the overall presentation. A Media Segment is specified by a URI and optionally a byte range. The duration of each Media Segment is indicated in the Media Playlist by its EXTINF tag (Section 4.3.2.1). Each segment in a Media Playlist has a unique integer Media Sequence Number. The Media Sequence Number of the first segment in the Media Playlist is either 0 or declared in the Playlist (Section 4.3.3.2). The Media Sequence Number of every other segment is equal to the Media Sequence Number of the segment that precedes it plus one. Each Media Segment MUST carry the continuation of the encoded bitstream from the end of the segment with the previous Media Sequence Number, where values in a series such as timestamps and Continuity Counters MUST continue uninterrupted. The only exceptions are the first Media Segment ever to appear in a Media Playlist and Media Segments that are explicitly signaled as discontinuities (Section 4.3.2.3). Unmarked media discontinuities can trigger playback errors. https://datatracker.ietf.org/doc/html/rfc8216

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

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7,848,328	Imagine Learning ("Accused Instrumentality")
	3.2. MPEG-2 Transport Streams MPEG-2 Transport Streams are specified by [ISO_13818]. The Media Initialization Section of an MPEG-2 Transport Stream Segment is a Program Association Table (PAT) followed by a Program Map Table (PMT). Transport Stream Segments MUST contain a single MPEG-2 Program; playback of Multi-Program Transport Streams is not defined. Each Transport Stream Segment MUST contain a PAT and a PMT, or have an EXT-X-MAP tag (Section 4.3.2.5) applied to it. The first two Transport Stream packets in a Segment without an EXT-X-MAP tag SHOULD be a PAT and a PMT. https://datatracker.ietf.org/doc/html/rfc8216

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

7,848,328	Imagine Learning ("Accused Instrumentality")
	3.4. Packed Audio A Packed Audio Segment contains encoded audio samples and ID3 tags that are simply packed together with minimal framing and no per-sample timestamps. Supported Packed Audio formats are Advanced Audio Coding (AAC) with Audio Data Transport Stream (ADTS) framing [ISO_13818_7], MP3 [ISO_13818_3], AC-3 [AC_3], and Enhanced AC-3 [AC_3]. A Packed Audio Segment has no Media Initialization Section. Each Packed Audio Segment MUST signal the timestamp of its first sample with an ID3 Private frame (PRIV) tag [ID3] at the beginning of the segment. The ID3 PRIV owner identifier MUST be "com.apple.streaming.transportStreamTimestamp". The ID3 payload MUST be a 33-bit MPEG-2 Program Elementary Stream timestamp expressed as a big-endian eight-octet number, with the upper 31 bits set to zero. Clients SHOULD NOT play Packed Audio Segments without this ID3 tag. https://datatracker.ietf.org/doc/html/rfc8216

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

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7,848,328	Imagine Learning ("Accused Instrumentality")
	3.5. WebVTT A WebVTT Segment is a section of a WebVTT [WebVTT] file. WebVTT Segments carry subtitles. The Media Initialization Section of a WebVTT Segment is the WebVTT header. Each WebVTT Segment MUST contain all subtitle cues that are intended to be displayed during the period indicated by the segment EXTINF duration. The start time offset and end time offset of each cue MUST indicate the total display time for that cue, even if part of the cue time range is outside the Segment period. A WebVTT Segment MAY contain no cues; this indicates that no subtitles are to be displayed during that period. https://datatracker.ietf.org/doc/html/rfc8216

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

7,848,328	Imagine Learning ("Accused Instrumentality")
	In order to synchronize timestamps between audio/video and subtitles, an X-TIMESTAMP-MAP metadata header SHOULD be added to each WebVTT header. This header maps WebVTT cue timestamps to MPEG-2 (PES) timestamps in other Renditions of the Variant Stream. Its format is: X-TIMESTAMP-MAP=LOCAL:<cue time>,MPEGTS:<MPEG-2 time> e.g., X-TIMESTAMP-MAP=LOCAL:00:00:00.000,MPEGTS:900000 The cue timestamp in the LOCAL attribute MAY fall outside the range of time covered by the segment. If a WebVTT segment does not have the X-TIMESTAMP-MAP, the client MUST assume that the WebVTT cue time of 0 maps to an MPEG-2 timestamp of 0. When synchronizing WebVTT with PES timestamps, clients SHOULD account for cases where the 33-bit PES timestamps have wrapped and the WebVTT cue times have not. https://datatracker.ietf.org/doc/html/rfc8216

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

7,848,328	Imagine Learning ("Accused Instrumentality")
	4.3.2. Media Segment Tags Each Media Segment is specified by a series of Media Segment tags followed by a URI. Some Media Segment tags apply to just the next segment; others apply to all subsequent segments until another instance of the same tag. A Media Segment tag MUST NOT appear in a Master Playlist. Clients MUST fail to parse Playlists that contain both Media Segment tags and Master Playlist tags (Section 4.3.4). **4.3.2.1. EXTINF** The EXTINF tag specifies the duration of a Media Segment. It applies only to the next Media Segment. This tag is REQUIRED for each Media Segment. Its format is: #EXTINF:<duration>,[<title>] https://datatracker.ietf.org/doc/html/rfc8216

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

7,848,328	Imagine Learning ("Accused Instrumentality")
	4.3.2.7. EXT-X-DATERANGE The EXT-X-DATERANGE tag associates a Date Range (i.e., a range of time defined by a starting and ending date) with a set of attribute/value pairs. Its format is: #EXT-X-DATERANGE:<attribute-list> where the defined attributes are: ID A quoted-string that uniquely identifies a Date Range in the Playlist. This attribute is REQUIRED. CLASS A client-defined quoted-string that specifies some set of attributes and their associated value semantics. All Date Ranges with the same CLASS attribute value MUST adhere to these semantics. This attribute is OPTIONAL. START-DATE A quoted-string containing the ISO-8601 date at which the Date Range begins. This attribute is REQUIRED. https://datatracker.ietf.org/doc/html/rfc8216

Preliminary charts based on best available information

	4.3.4. Master Playlist Tags Master Playlist tags define the Variant Streams, Renditions, and other global parameters of the presentation. Master Playlist tags MUST NOT appear in a Media Playlist; clients MUST fail to parse any Playlist that contains both a Master Playlist tag and either a Media Playlist tag or a Media Segment tag. **4.3.4.1. EXT-X-MEDIA** The EXT-X-MEDIA tag is used to relate Media Playlists that contain alternative Renditions (Section 4.3.4.2.1) of the same content. For example, three EXT-X-MEDIA tags can be used to identify audio-only Media Playlists that contain English, French, and Spanish Renditions of the same presentation. Or, two EXT-X-MEDIA tags can be used to identify video-only Media Playlists that show two different camera angles. Its format is: #EXT-X-MEDIA:<attribute-list> The following attributes are defined: TYPE The value is an enumerated-string; valid strings are AUDIO, VIDEO, SUBTITLES, and CLOSED-CAPTIONS. This attribute is REQUIRED. https://datatracker.ietf.org/doc/html/rfc8216

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

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	AUDIO The value is a quoted-string. It MUST match the value of the GROUP-ID attribute of an EXT-X-MEDIA tag elsewhere in the Master Playlist whose TYPE attribute is AUDIO. It indicates the set of audio Renditions that SHOULD be used when playing the presentation. See Section 4.3.4.2.1. The AUDIO attribute is OPTIONAL. VIDEO The value is a quoted-string. It MUST match the value of the GROUP-ID attribute of an EXT-X-MEDIA tag elsewhere in the Master Playlist whose TYPE attribute is VIDEO. It indicates the set of video Renditions that SHOULD be used when playing the presentation. See Section 4.3.4.2.1. The VIDEO attribute is OPTIONAL. s & May Informational [Page 31] 216 HTTP Live Streaming August 2017 SUBTITLES The value is a quoted-string. It MUST match the value of the GROUP-ID attribute of an EXT-X-MEDIA tag elsewhere in the Master Playlist whose TYPE attribute is SUBTITLES. It indicates the set of subtitle Renditions that can be used when playing the presentation. See Section 4.3.4.2.1. The SUBTITLES attribute is OPTIONAL.

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	https://datatracker.ietf.org/doc/html/rfc8216

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	4.3.5. Media or Master Playlist Tags The tags in this section can appear in either Master Playlists or Media Playlists. If one of these tags appears in a Master Playlist, it SHOULD NOT appear in any Media Playlist referenced by that Master Playlist. A tag that appears in both MUST have the same value; otherwise, clients SHOULD ignore the value in the Media Playlist(s). These tags MUST NOT appear more than once in a Playlist. If a tag appears more than once, clients MUST fail to parse the Playlist. **4.3.5.1. EXT-X-INDEPENDENT-SEGMENTS** The EXT-X-INDEPENDENT-SEGMENTS tag indicates that all media samples in a Media Segment can be decoded without information from other segments. It applies to every Media Segment in the Playlist. Its format is: #EXT-X-INDEPENDENT-SEGMENTS Pantos & May Informational [Page 35] RFC 8216 HTTP Live Streaming August 2017 If the EXT-X-INDEPENDENT-SEGMENTS tag appears in a Master Playlist, it applies to every Media Segment in every Media Playlist in the Master Playlist. https://datatracker.ietf.org/doc/html/rfc8216

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	6.2.1. General Server Responsibilities The production of the source media is outside the scope of this document, which simply presumes a source of continuous encoded media containing the presentation. The server MUST divide the source media into individual Media Segments whose duration is less than or equal to a constant target duration. Segments that are longer than the planned target duration can trigger playback stalls and other errors. Pantos & May Informational [Page 37] RFC 8216 HTTP Live Streaming August 2017 The server SHOULD attempt to divide the source media at points that support effective decode of individual Media Segments, e.g., on packet and key frame boundaries. The server MUST create a URI for every Media Segment that enables its clients to obtain the segment data. If a server supports partial loading of resources (e.g., via HTTP Range requests), it MAY specify segments as sub-ranges of larger resources using the EXT-X-BYTERANGE tag. https://datatracker.ietf.org/doc/html/rfc8216

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	6.2.4. Providing Variant Streams A server MAY offer multiple Media Playlist files to provide different encodings of the same presentation. If it does so, it SHOULD provide a Master Playlist file that lists each Variant Stream to allow clients to switch between encodings dynamically. Master Playlists describe regular Variant Streams with EXT-X-STREAM-INF tags and I-frame Variant Streams with EXT-X-I-FRAME-STREAM-INF tags. If an EXT-X-STREAM-INF tag or EXT-X-I-FRAME-STREAM-INF tag contains the CODECS attribute, the attribute value MUST include every media format [RFC6381] present in any Media Segment in any of the Renditions specified by the Variant Stream. https://datatracker.ietf.org/doc/html/rfc8216

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	The server MUST meet the following constraints when producing Variant Streams in order to allow clients to switch between them seamlessly: o Each Variant Stream MUST present the same content. o Matching content in Variant Streams MUST have matching timestamps. This allows clients to synchronize the media. o Matching content in Variant Streams MUST have matching Discontinuity Sequence Numbers (see Section 4.3.3.3). o Each Media Playlist in each Variant Stream MUST have the same target duration. The only exceptions are SUBTITLES Renditions and Media Playlists containing an EXT-X-I-FRAMES-ONLY tag, which MAY have different target durations if they have an EXT-X-PLAYLIST-TYPE of VOD. https://datatracker.ietf.org/doc/html/rfc8216 **8.7. Master Playlist with Alternative Video** This example shows three different video Renditions (Main, Centerfield, and Dugout) and three different Variant Streams (low, mid, and high). In this example, clients that did not support the EXT-X-MEDIA tag and the VIDEO attribute of the EXT-X-STREAM-INF tag would only be able to play the video Rendition "Main". Since the EXT-X-STREAM-INF tag has no AUDIO attribute, all video Renditions would be required to contain the audio. https://datatracker.ietf.org/doc/html/rfc8216

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```
In this example, the CODECS attributes have been condensed for space
A '\' is used to indicate that the tag continues on the following
line with whitespace removed:

#EXTM3U
#EXT-X-MEDIA:TYPE=VIDEO,GROUP-ID="low",NAME="Main", \
   DEFAULT=YES,URI="low/main/audio-video.m3u8"
#EXT-X-MEDIA:TYPE=VIDEO,GROUP-ID="low",NAME="Centerfield", \
   DEFAULT=NO,URI="low/centerfield/audio-video.m3u8"
#EXT-X-MEDIA:TYPE=VIDEO,GROUP-ID="low",NAME="Dugout", \
   DEFAULT=NO,URI="low/dugout/audio-video.m3u8"

#EXT-X-STREAM-INF:BANDWIDTH=1280000,CODECS="...",VIDEO="low"
low/main/audio-video.m3u8

#EXT-X-MEDIA:TYPE=VIDEO,GROUP-ID="mid",NAME="Main", \
   DEFAULT=YES,URI="mid/main/audio-video.m3u8"
#EXT-X-MEDIA:TYPE=VIDEO,GROUP-ID="mid",NAME="Centerfield", \
   DEFAULT=NO,URI="mid/centerfield/audio-video.m3u8"
#EXT-X-MEDIA:TYPE=VIDEO,GROUP-ID="mid",NAME="Dugout", \
   DEFAULT=NO,URI="mid/dugout/audio-video.m3u8"

#EXT-X-STREAM-INF:BANDWIDTH=2560000,CODECS="...",VIDEO="mid"
mid/main/audio-video.m3u8

#EXT-X-MEDIA:TYPE=VIDEO,GROUP-ID="hi",NAME="Main", \
   DEFAULT=YES,URI="hi/main/audio-video.m3u8"
#EXT-X-MEDIA:TYPE=VIDEO,GROUP-ID="hi",NAME="Centerfield", \
   DEFAULT=NO,URI="hi/centerfield/audio-video.m3u8"
#EXT-X-MEDIA:TYPE=VIDEO,GROUP-ID="hi",NAME="Dugout", \
   DEFAULT=NO,URI="hi/dugout/audio-video.m3u8"

#EXT-X-STREAM-INF:BANDWIDTH=7680000,CODECS="...",VIDEO="hi"
hi/main/audio-video.m3u8
```

https://datatracker.ietf.org/doc/html/rfc8216

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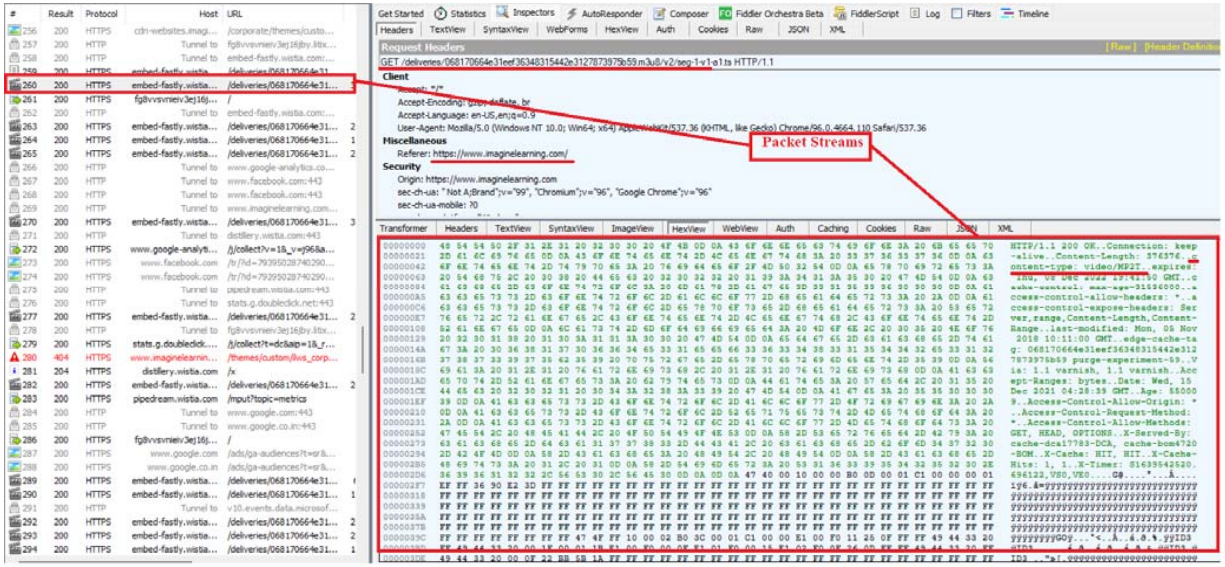
encapsulating each data stream of the plurality into a stream of packets according to a first communication protocol,	The accused standard discloses encapsulating each data stream (e.g., media streams such as audio, video, captions, etc.) of the plurality into a stream of packets (e.g., index file m3u8 data packets) according to a first communication protocol (e.g., Transmission control protocol). As shown below, For HLS, MPEG-2 transport stream is used to encapsulate the data stream (e.g., media streams such as audio, video, captions, etc.) using first communication protocol (e.g. TCP).  *Source: Packet capture by Fiddler tool*

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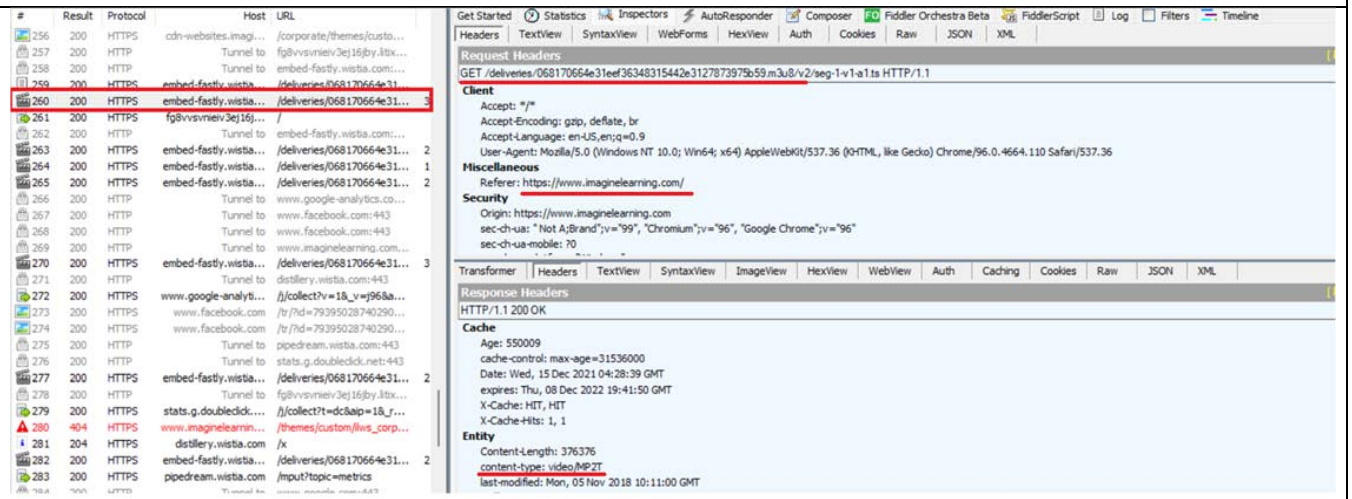
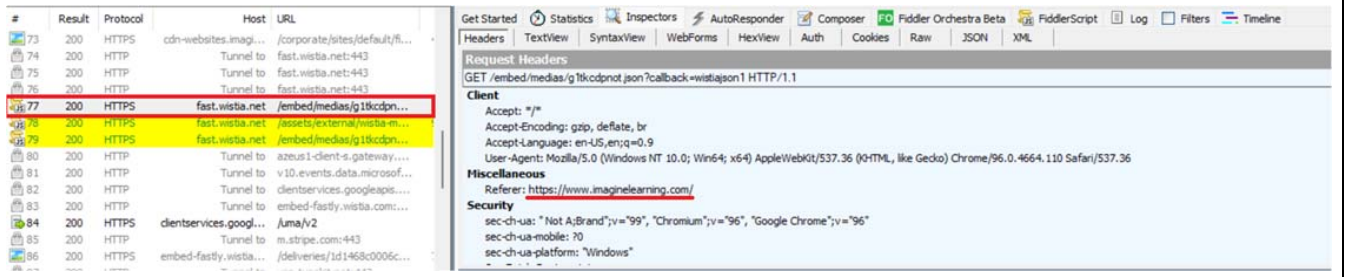
	 *Source: Packet capture by Fiddler tool*  *Source: Packet capture by Fiddler tool*

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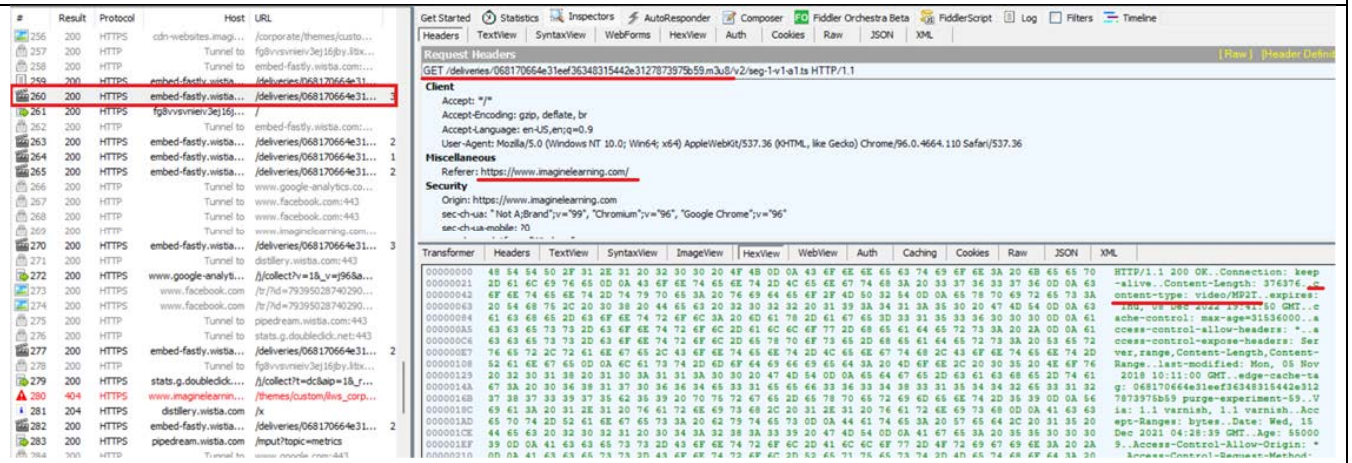
7,848,328	Imagine Learning ("Accused Instrumentality")
	 *Source: Packet capture by Fiddler tool*

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	Encode MPEG-2 Transport Stream Segments MPEG-2 transport streams create an arbitrary timestamp when encoding media, using an 33-bit clock that rolls over every 26 hours. For example, if your video starts at the two-hour mark, your audio starts at two hours plus the time for the leading audio. Therefore, a segment of audio that's paired with a segment of video starting at the two-hour mark needs audio that starts at the two-hour mark minus the priming duration. This additional segment ensures the first frame of video plays synchronously with the audio. **Encode Fragmented MPEG-4 Segments** The MPEG-4 file format (ISO BMFF) carries the presumption that all track timelines begin with time zero, regardless of whether the timeline is divided into fragments. However, you can set the initial decode time of any fragment to an arbitrary value by means of the Track Fragment Base Media Decode Time Box (`tfdt`). Use this box to permit the alignment of the audio timeline with the video timeline that places the priming audio prior to the first video frame. Alternatively, starting with iOS 13.1 it's possible to utilize an Edit List Box (`elst`) within the Track Box (`trak`) in order to place the duration of the priming audio prior to time 0. This permits a natural alignment of other tracks with audio at time 0. The edit list needs to have a single entry in which the value of `media_start` is equivalent to the audio priming duration and the value of `segment_duration` is 0. This is the recommended approach for time alignment for the Common Media Application Format (CMAF).

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	https://developer.apple.com/documentation/http_live_streaming/preparing_audio_for_http_live_streaming **Does HLS use TCP or UDP as its transport protocol?** TCP and UDP are transport protocols, meaning they are responsible for delivering content over the Internet. TCP tends to deliver data more reliably than UDP, but the latter is much faster, even though some data may be lost in transit. Because UDP is faster, some streaming protocols use UDP instead of TCP. HLS, however, uses TCP. This is for several reasons: 1. HLS is over HTTP, and the HTTP protocol is built for use with TCP (with some exceptions). 2. The modern Internet is more reliable and more efficient than it was when streaming was first developed. In many parts of the world today, user connectivity has vastly improved, especially for mobile connections. As a result, users have enough bandwidth to support the delivery of every video frame. 3. Adaptive bitrate streaming helps compensate for the potentially slower data delivery of TCP. https://www.cloudflare.com/learning/video/what-is-http-live-streaming/

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	A URI in a Playlist, whether it is a URI line or part of a tag, MAY be relative. Any relative URI is considered to be relative to the URI of the Playlist that contains it. The duration of a Media Playlist is the sum of the durations of the Media Segments within it. The segment bit rate of a Media Segment is the size of the Media Segment divided by its EXTINF duration (Section 4.3.2.1). Note that this includes container overhead but does not include overhead imposed by the delivery system, such as HTTP, TCP, or IP headers. The peak segment bit rate of a Media Playlist is the largest bit rate of any contiguous set of segments whose total duration is between 0.5 and 1.5 times the target duration. The bit rate of a set is calculated by dividing the sum of the segment sizes by the sum of the segment durations. https://datatracker.ietf.org/doc/html/rfc8216#section-1
wherein, as to each of the packet streams, the packets have a value in a common field identifying the component mapped to the data	The accused standard discloses wherein, as to each of the packet streams (e.g., m3u8 data packet stream), the packets have a value (e.g., audio/video type, group id, etc.) in a common field identifying the component mapped to the data stream (e.g., media streams such as audio, video, captions, etc.) encapsulated by the packet stream (e.g., m3u8 data packet stream). As shown below, the common field shows "type: video"

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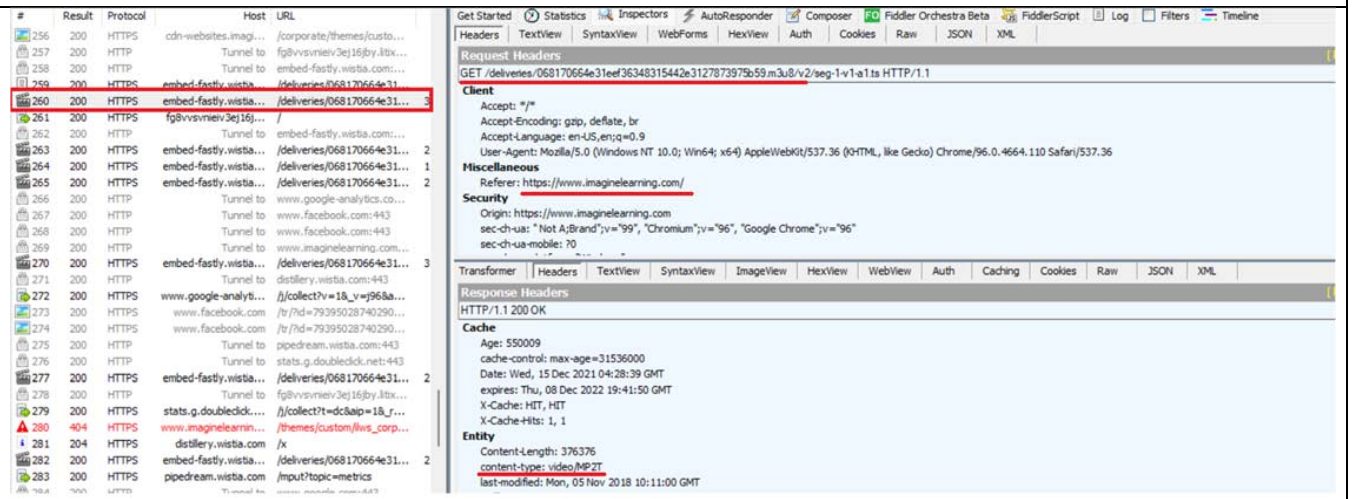
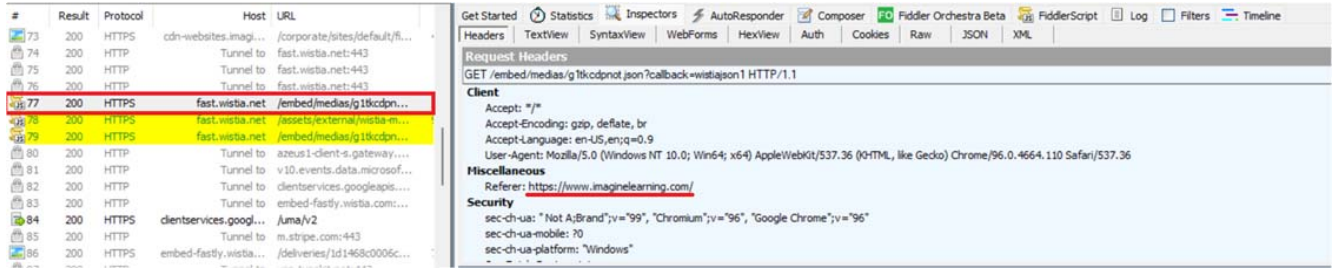
stream encapsulated by the packet stream;	 *Source: Packet capture by Fiddler tool*  *Source: Packet capture by Fiddler tool*

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	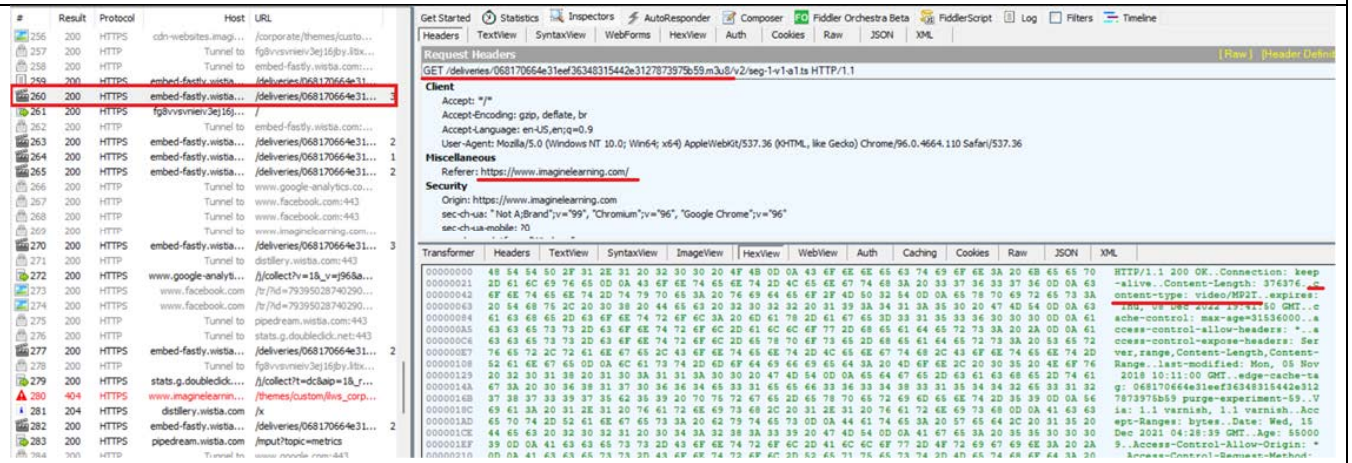 *Source: Packet capture by Fiddler tool*

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	#EXT-X-MEDIA:<attribute-list> The following attributes are defined: TYPE The value is an enumerated-string; valid strings are AUDIO, VIDEO, SUBTITLES, and CLOSED-CAPTIONS. This attribute is REQUIRED. Typically, closed-caption [CEA608] media is carried in the video stream. Therefore, an EXT-X-MEDIA tag with TYPE of CLOSED-CAPTIONS does not specify a Rendition; the closed-caption media is present in the Media Segments of every video Rendition. URI The value is a quoted-string containing a URI that identifies the Media Playlist file. This attribute is OPTIONAL; see Section 4.3.4.2.1. If the TYPE is CLOSED-CAPTIONS, the URI attribute MUST NOT be present. Pantos & May Informational [Page 25] RFC 8216 HTTP Live Streaming August 2017 GROUP-ID The value is a quoted-string that specifies the group to which the Rendition belongs. See Section 4.3.4.1.1. This attribute is REQUIRED. https://datatracker.ietf.org/doc/html/rfc8216

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	Encode MPEG-2 Transport Stream Segments MPEG-2 transport streams create an arbitrary timestamp when encoding media, using an 33-bit clock that rolls over every 26 hours. For example, if your video starts at the two-hour mark, your audio starts at two hours plus the time for the leading audio. Therefore, a segment of audio that's paired with a segment of video starting at the two-hour mark needs audio that starts at the two-hour mark minus the priming duration. This additional segment ensures the first frame of video plays synchronously with the audio. **Encode Fragmented MPEG-4 Segments** The MPEG-4 file format (ISO BMFF) carries the presumption that all track timelines begin with time zero, regardless of whether the timeline is divided into fragments. However, you can set the initial decode time of any fragment to an arbitrary value by means of the Track Fragment Base Media Decode Time Box (`tfdt`). Use this box to permit the alignment of the audio timeline with the video timeline that places the priming audio prior to the first video frame. Alternatively, starting with iOS 13.1 it's possible to utilize an Edit List Box (`elst`) within the Track Box (`trak`) in order to place the duration of the priming audio prior to time 0. This permits a natural alignment of other tracks with audio at time 0. The edit list needs to have a single entry in which the value of `media_start` is equivalent to the audio priming duration and the value of `segment_duration` is 0. This is the recommended approach for time alignment for the Common Media Application Format (CMAF).

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	https://developer.apple.com/documentation/http_live_streaming/preparing_audio_for_http_live_streaming

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	4.3.4. Master Playlist Tags Master Playlist tags define the Variant Streams, Renditions, and other global parameters of the presentation. Master Playlist tags MUST NOT appear in a Media Playlist; clients MUST fail to parse any Playlist that contains both a Master Playlist tag and either a Media Playlist tag or a Media Segment tag. **4.3.4.1. EXT-X-MEDIA** The EXT-X-MEDIA tag is used to relate Media Playlists that contain alternative Renditions (Section 4.3.4.2.1) of the same content. For example, three EXT-X-MEDIA tags can be used to identify audio-only Media Playlists that contain English, French, and Spanish Renditions of the same presentation. Or, two EXT-X-MEDIA tags can be used to identify video-only Media Playlists that show two different camera angles. Its format is: #EXT-X-MEDIA:<attribute-list> The following attributes are defined: TYPE The value is an enumerated-string; valid strings are AUDIO, VIDEO, SUBTITLES, and CLOSED-CAPTIONS. This attribute is REQUIRED. https://datatracker.ietf.org/doc/html/rfc8216

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	3.2. MPEG-2 Transport Streams MPEG-2 Transport Streams are specified by [ISO_13818]. The Media Initialization Section of an MPEG-2 Transport Stream Segment is a Program Association Table (PAT) followed by a Program Map Table (PMT). Transport Stream Segments MUST contain a single MPEG-2 Program; playback of Multi-Program Transport Streams is not defined. Each Transport Stream Segment MUST contain a PAT and a PMT, or have an EXT-X-MAP tag (Section 4.3.2.5) applied to it. The first two Transport Stream packets in a Segment without an EXT-X-MAP tag SHOULD be a PAT and a PMT. https://datatracker.ietf.org/doc/html/rfc8216

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	3.3. Fragmented MPEG-4 MPEG-4 Fragments are specified by the ISO Base Media File Format [ISOBMFF]. Unlike regular MPEG-4 files that have a Movie Box ('moov') that contains sample tables and a Media Data Box ('mdat') containing the corresponding samples, an MPEG-4 Fragment consists of a Movie Fragment Box ('moof') containing a subset of the sample table and a Media Data Box containing those samples. Use of MPEG-4 Fragments does require a Movie Box for initialization, but that Movie Box contains only non-sample-specific information such as track and sample descriptions. https://datatracker.ietf.org/doc/html/rfc8216

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	URI The value is a quoted-string containing a URI that identifies the Media Playlist file. This attribute is OPTIONAL; see Section 4.3.4.2.1. If the TYPE is CLOSED-CAPTIONS, the URI attribute MUST NOT be present. :os & May Informational [Page 25] 8216 HTTP Live Streaming August 2017 GROUP-ID The value is a quoted-string that specifies the group to which the Rendition belongs. See Section 4.3.4.1.1. This attribute is REQUIRED. LANGUAGE The value is a quoted-string containing one of the standard Tags for Identifying Languages [RFC5646], which identifies the primary language used in the Rendition. This attribute is OPTIONAL. ASSOC-LANGUAGE The value is a quoted-string containing a language tag [RFC5646] that identifies a language that is associated with the Rendition. An associated language is often used in a different role than the language specified by the LANGUAGE attribute (e.g., written versus

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	AUDIO The value is a quoted-string. It MUST match the value of the GROUP-ID attribute of an EXT-X-MEDIA tag elsewhere in the Master Playlist whose TYPE attribute is AUDIO. It indicates the set of audio Renditions that SHOULD be used when playing the presentation. See Section 4.3.4.2.1. The AUDIO attribute is OPTIONAL. VIDEO The value is a quoted-string. It MUST match the value of the GROUP-ID attribute of an EXT-X-MEDIA tag elsewhere in the Master Playlist whose TYPE attribute is VIDEO. It indicates the set of video Renditions that SHOULD be used when playing the presentation. See Section 4.3.4.2.1. The VIDEO attribute is OPTIONAL. s & May Informational [Page 31] 216 HTTP Live Streaming August 2017 SUBTITLES The value is a quoted-string. It MUST match the value of the GROUP-ID attribute of an EXT-X-MEDIA tag elsewhere in the Master Playlist whose TYPE attribute is SUBTITLES. It indicates the set of subtitle Renditions that can be used when playing the presentation. See Section 4.3.4.2.1. The SUBTITLES attribute is OPTIONAL.

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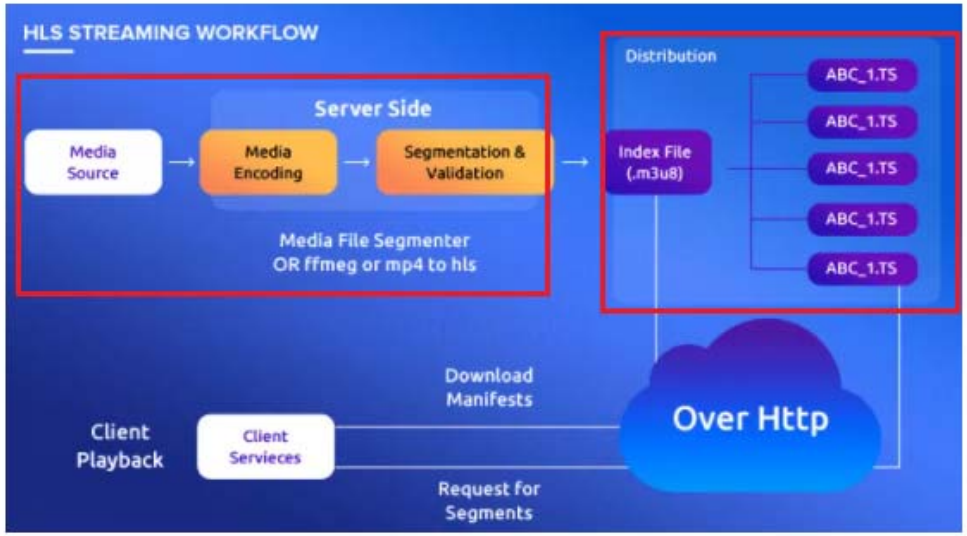
	https://datatracker.ietf.org/doc/html/rfc8216
and forwarding the packet streams for transmission in a transmission channel,	The accused standard discloses forwarding the packet streams (e.g., m3u8 data packet stream) for transmission in a transmission channel (e.g., wired/wireless transmission).  https://martech.zone/http-live-streaming-player-features/

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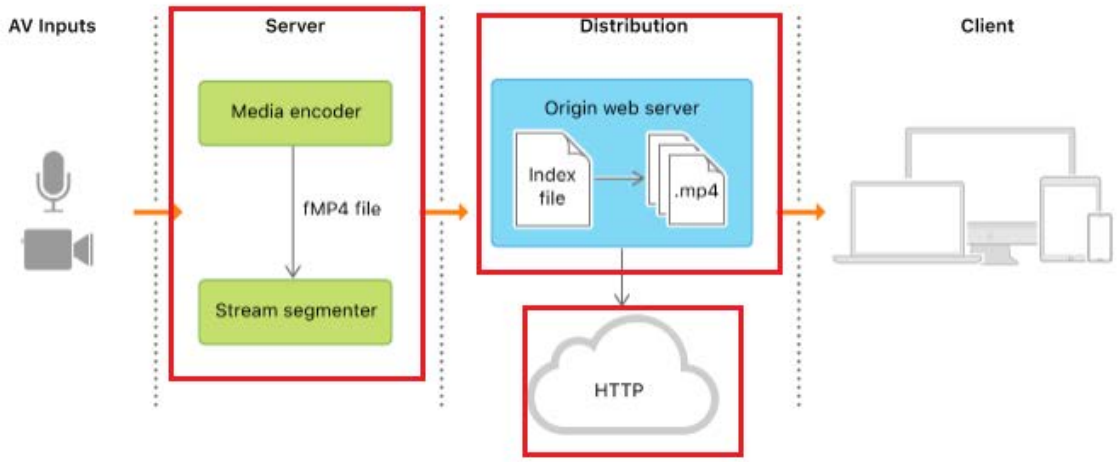
	HLS supports the following: • Live broadcasts and prerecorded content (video on demand, or *VOD*) • Multiple alternate streams at different bit rates • Intelligent switching of streams in response to network bandwidth changes • Media encryption and user authentication The following figure shows the components of an HTTP Live Stream.  https://developer.apple.com/documentation/http_live_streaming
and wherein the mapping further	The accused standard discloses wherein the mapping further comprises assigning a specific value (e.g., value corresponding to different media stream) to each component for a predefined field of a packet (e.g., segment info)

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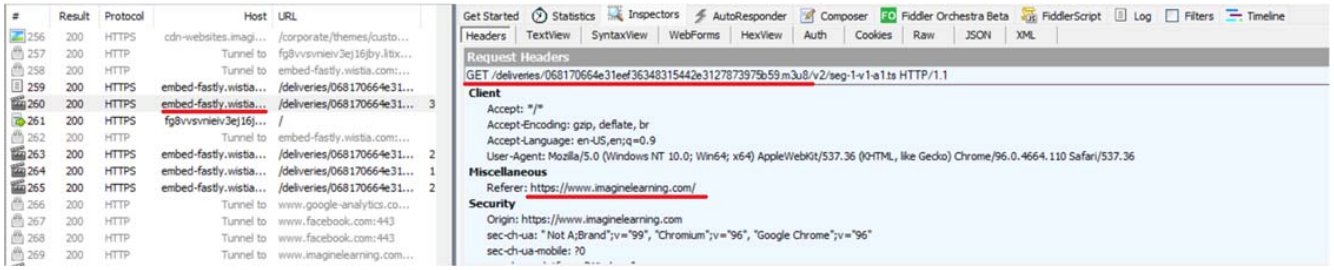
comprises assigning a specific value to each component for a predefined field of a packet according to a second communication protocol, the specific value distinguishing the component from other components, and	according to a second communication protocol (e.g., HTTP/Hypertext transfer protocol), the specific value (e.g., value corresponding to different media stream) distinguishing the component from other components. As shown below, the accused standard provides m3u8 index file with multiple media playlists. Each media playlist has many representations, wherein every representation has many segments, these segments contains media information of each conversion corresponding to that media playlist. The accused standard provides each segment having information related to a particular HTTP based uniform resource locator for getting a media stream from that particular address. For the video segment shown below, the base URL is https://embed-fastly.wistia.com/ and the specific value is "deliveries/068170664e31eef36348315442e3127873975b59.m3u8/v2/seg-1-v1-a1.ts" (http based).  *Source: Packet capture by Fiddler tool*

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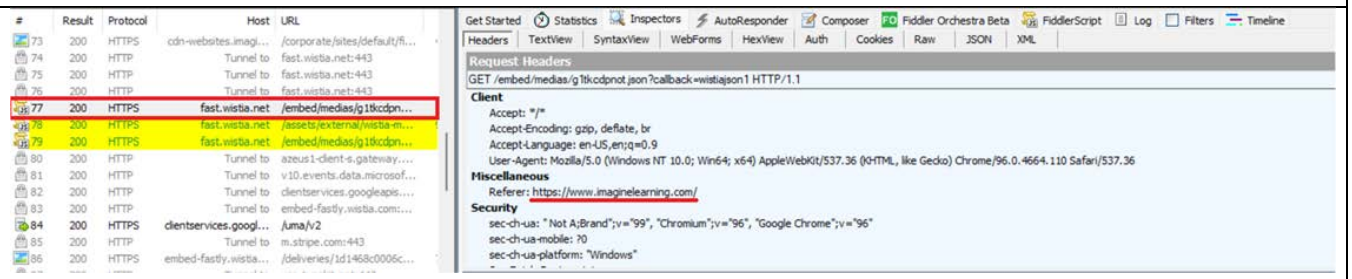
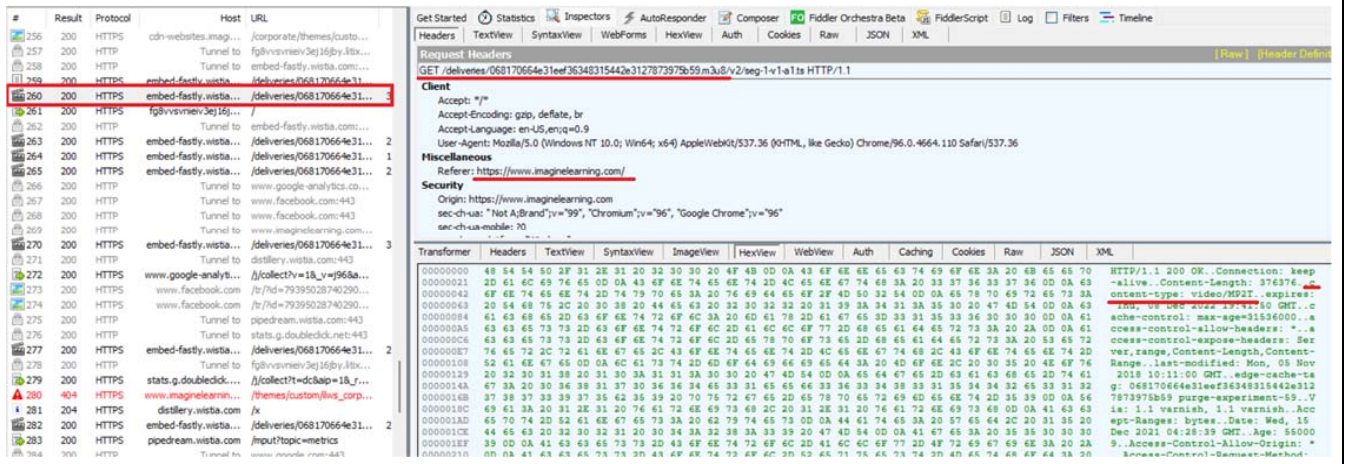
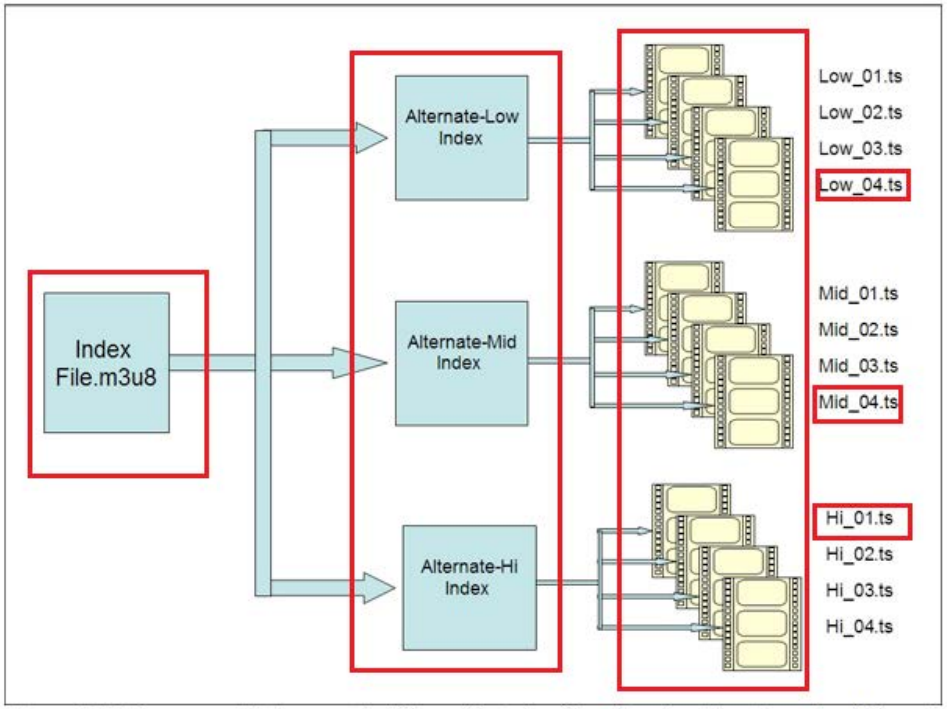
Preliminary charts based on best available information

7,848,328	Imagine Learning ("Accused Instrumentality")
	 *Source: Packet capture by Fiddler tool*  *Source: Packet capture by Fiddler tool*

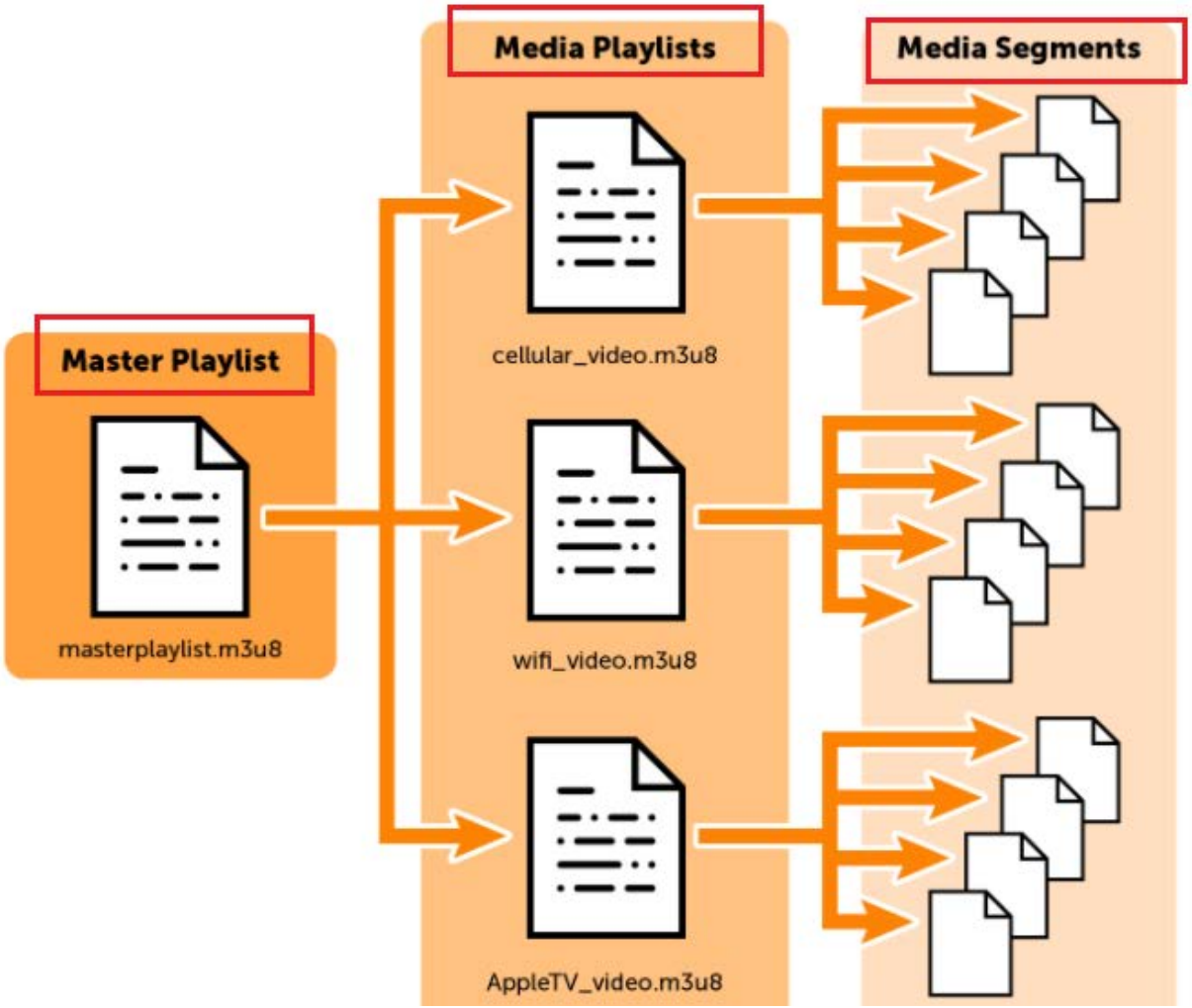
NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

7,848,328	Imagine Learning ("Accused Instrumentality")
	 *Figure 1. HLS uses multiple encoded files with index files directing the player to different streams and chunks of audio/video data within those streams.* https://www.streamingmedia.com/Articles/Editorial/What-Is-.../What-Is-HLS-(HTTP-Live-Streaming)-78221.aspx?utm_source=related_articles&utm_medium=gutenberg&utm_campaign=editors_selection

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information



https://www.wowza.com/blog/hls-streaming-protocol

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

7,848,328	Imagine Learning ("Accused Instrumentality")

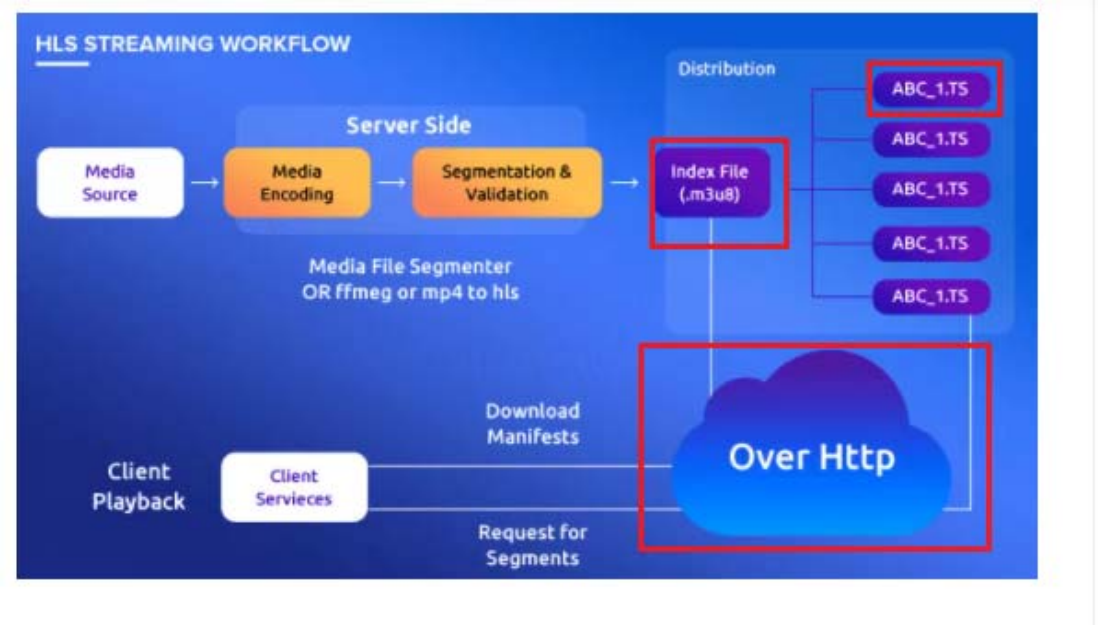
NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

7,848,328	Imagine Learning ("Accused Instrumentality")
	8.3. Playlist with Encrypted Media Segments #EXTM3U #EXT-X-VERSION:3 #EXT-X-MEDIA-SEQUENCE:7794 #EXT-X-TARGETDURATION:15 #EXT-X-KEY:METHOD=AES-128,URI="https://priv.example.com/key.php?r=52" #EXTINF:2.833, http://media.example.com/fileSequence52-A.ts #EXTINF:15.0, http://media.example.com/fileSequence52-B.ts #EXTINF:13.333, http://media.example.com/fileSequence52-C.ts #EXT-X-KEY:METHOD=AES-128,URI="https://priv.example.com/key.php?r=53" #EXTINF:15.0, http://media.example.com/fileSequence53-A.ts **8.4. Master Playlist** #EXTM3U #EXT-X-STREAM-INF:BANDWIDTH=1280000,AVERAGE-BANDWIDTH=1000000 http://example.com/low.m3u8 #EXT-X-STREAM-INF:BANDWIDTH=2560000,AVERAGE-BANDWIDTH=2000000 http://example.com/mid.m3u8 #EXT-X-STREAM-INF:BANDWIDTH=7680000,AVERAGE-BANDWIDTH=6000000 http://example.com/hi.m3u8 #EXT-X-STREAM-INF:BANDWIDTH=65000,CODECS="mp4a.40.5" http://example.com/audio-only.m3u8

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

7,848,328	Imagine Learning ("Accused Instrumentality")
	https://datatracker.ietf.org/doc/html/rfc8216  https://martech.zone/http-live-streaming-player-features/
the encapsulating comprises encapsulating the packet streams according to one or more	The accused standard discloses encapsulating comprises encapsulating the packet streams (e.g., data packets in m3u8 file) according to one or more lower layer protocols without encapsulating the packet streams (e.g., data packets in m3u8) according to the second communication protocol (e.g. HTTP Protocol). Further as explained below, the packet streams are encapsulated according to one or more lower layer protocols (e.g., network layer/MAC layer/physical layer) of the device transmitting the packet streams. Since, the packet streams are obtained by TCP encapsulation of data streams and the HTTP protocol doesn't reside beneath the

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

7,848,328	Imagine Learning ("Accused Instrumentality")
lower layer protocols without encapsulating the packet streams according to the second communication protocol.	TCP layer, the further encapsulation doesn't comprise encapsulation using HTTP protocol (once TCP encapsulation has been executed). In any communication system, when a sender prepares data for sending from its physical interface (e.g., wired/wireless interface of the server/machine), the process of entire "data formulation" or "data construction" has multiple steps, all steps (if they are present) are associated with one layer of OSI model (it's a model which every communication system follows, some specification communication schemes may have lower number of layers (because multiple layers of OSI can be combined into one for those cases). Two lower level layers—data link layer and physical layers are invariably present in any communication system. They are the lowest two layers. They reside beneath the TCP layer. Data link layer ensure error free communication whereas the physical layer processes the data so that it can be sent using the actual medium of communication (e.g., modulation and formatting in wireless/wired communication system)

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

7,848,328	Imagine Learning ("Accused Instrumentality")
	Does HLS use TCP or UDP as its transport protocol? TCP and UDP are transport protocols, meaning they are responsible for delivering content over the Internet. TCP tends to deliver data more reliably than UDP, but the latter is much faster, even though some data may be lost in transit. Because UDP is faster, some streaming protocols use UDP instead of TCP. HLS, however, uses TCP. This is for several reasons: 1. HLS is over HTTP, and the HTTP protocol is built for use with TCP (with some exceptions). 2. The modern Internet is more reliable and more efficient than it was when streaming was first developed. In many parts of the world today, user connectivity has vastly improved, especially for mobile connections. As a result, users have enough bandwidth to support the delivery of every video frame. 3. Adaptive bitrate streaming helps compensate for the potentially slower data delivery of TCP. https://www.cloudflare.com/learning/video/what-is-http-live-streaming/

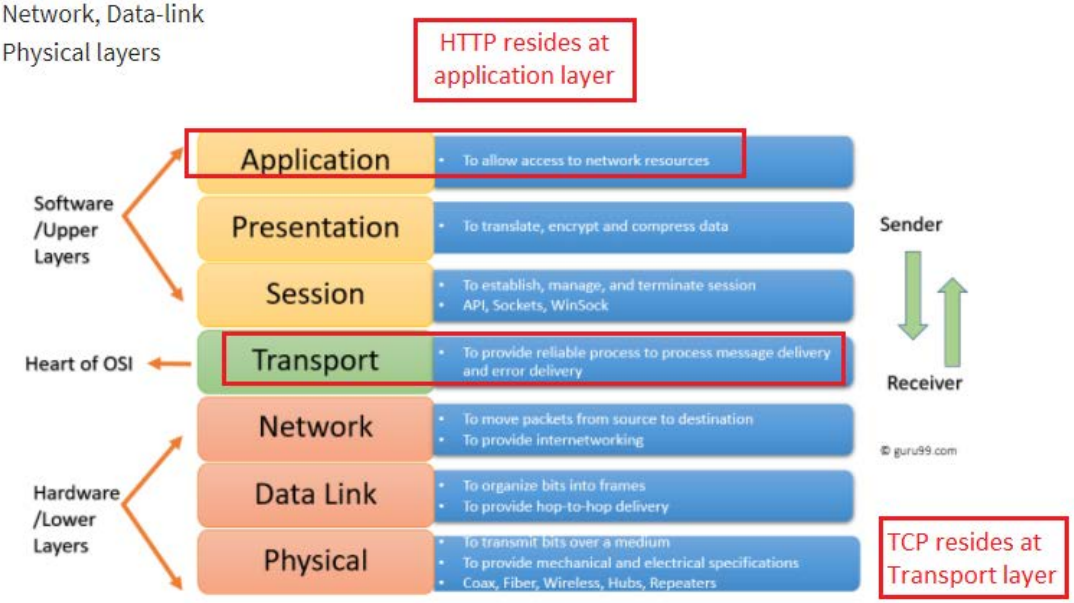
NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

7,848,328	Imagine Learning ("Accused Instrumentality")
	HyperText Transfer Protocol (*HTTP*) The HyperText Transfer Protocol, or *HTTP*, must be the most widely used Application layer protocol in the world today. It forms the basis of what most people understand the Internet to be—the World Wide Web. Its purpose is to provide a lightweight protocol for the retrieval of HyperText Markup Language (*HTML*) and other documents from Web sites throughout the Internet. Each time you open a Web browser to surf the Internet, you are using *HTTP* over *TCP/IP*. *HTTP* was first ratified in the early 1990s and has been through three main iterations: • **HTTP/0.9:** A simplistic first implementation of the protocol that only supported the option to get a Web page. • **HTTP/1.0:** Ratified by the *IETF* as RFC 1945 in 1996. This version added many supplemental data fields, known as *headers* to the specification. This allowed for other information passing between the client and server, alongside the request and consequent page. • **HTTP/1.1:** Defined in RFC 2068 by the *IETF*, version 1.1 implemented a number of improvements over and above the 1.0 specification. One of the main improvements of 1.1 over 1.0 was the implementation of techniques such as persistent *TCP* connections, pipelining, and cache control to improve performance within *HTTP*-based applications. https://www.informit.com/articles/article.aspx?p=169578

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

7,848,328	Imagine Learning ("Accused Instrumentality")
	Upper and Lower layers further divide network architecture into seven different layers as below • Application • Presentation • Session • Transport • Network, Data-link • Physical layers  Network Layers Diagram https://www.guru99.com/layers-of-osi-model.html https://www.cloudflare.com/learning/ddos/glossary/open-systems-interconnection-model-osi/

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

NIMITZ TECHNOLOGIES LLC, **Plaintiff,** **v.** **BLOOMBERG L.P.,** **Defendant.**	**Case No.** **Jury Trial Demanded**

COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff Nimitz Technologies LLC, by and through the undersigned counsel, files this Complaint for patent infringement against Defendant Bloomberg L.P., and in support states, all upon information and belief:

PARTIES

1. Plaintiff Nimitz Technologies LLC is a limited liability company organized and existing under the laws of the State of Texas and having its office address at 3333 Preston Road STE 300, #1047, Frisco, TX 75034 ("Nimitz" or "Plaintiff").

2. Defendant Bloomberg L.P. is a Delaware limited partnership, and is registered to do business in this State with its registered office located at Corporation Service Company, 251 Little Falls Drive, Wilmington, DE 19808 ("Bloomberg" or "Defendant").

JURISDICTION AND VENUE

3. This is an action for patent infringement arising under the patent laws of the United States, 35 U.S.C. § 1 *et seq*., including 35 U.S.C. §§ 271. This Court has subject matter jurisdiction under 28 U.S.C. §§ 1331 and 1338(a).

4. This Court has personal jurisdiction over Defendant at least because Defendant is an entity organized under the laws of the State of Delaware.

5. Venue is proper in this Judicial District under 28 U.S.C. §§ 1391 and 1400(b) because Defendant is deemed to be a resident of this District.

PATENT 7,848,328

6. U.S. Patent No. 7,848,328, entitled "Broadcast Content Encapsulation" (the "'328 Patent") was duly and legally issued on December 7, 2010. A true and correct copy of the '328 Patent is attached as Exhibit 1.

7. Plaintiff is the named assignee of, owns all right, title and interest in, and has standing to sue and recover all past damages for infringement of the '328 Patent.

8. Claim 1 of the'328 Patent is directed to a specific implementation of a highly technical method for delivering to consumers multiple versions of a specific content.

9. The claimed method begins with "components." Upon receiving the audio and/or visual elements of a specific content, the provider processes and compresses the information into a series of files that are packaged into a series of "components" which are specific containers storing the resulting video/audio files. The Patent illustrates one embodiment of "components" in Figure 2:

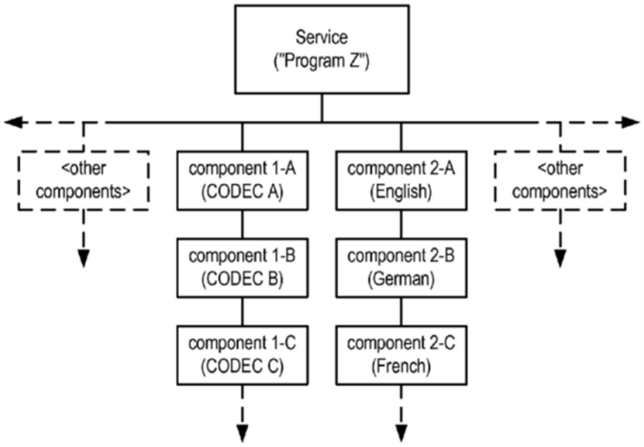


FIG. 2

10. The "components" are versatile and the provider may design "components" in a form that is most suitable for the needs of the particular provider. For example, the Patent teaches that the "components" may be specific to one or more of bit rates to accommodate a hierarchical content coding scheme, language, specific protocols and codecs, resolutions, subtitles, rich media, graphics and separate video and audio components as possible available

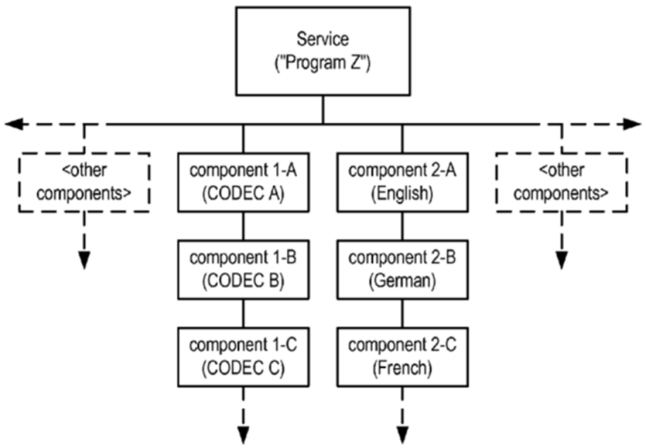


FIG. 2

"component" structures. ('328 Patent at 3:13-45).

11. Claim 1 then requires the specific content to be delivered in different versions via multiple data streams with each stream corresponding to a "component." The claims refer to this as the "mapping" of the data streams to the "components," and this is depicted in Figure 4:

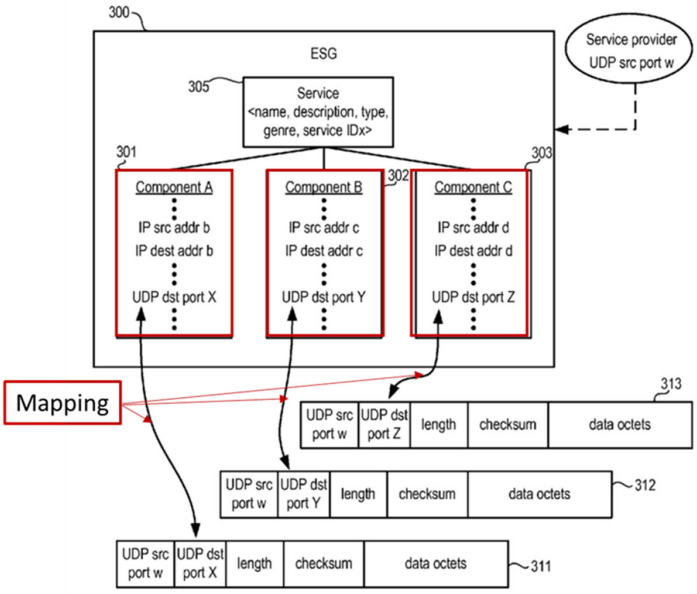


FIG. 4

12. Claim 1 next requires "encapsulating each data stream of the plurality into a stream of packets according to a first communication protocol" and that "as to each of the packet streams, the packets have a value in a common field identifying the component mapped to the data stream encapsulated by the packet stream." This limitation is again illustrated in Figure 4 as follows:

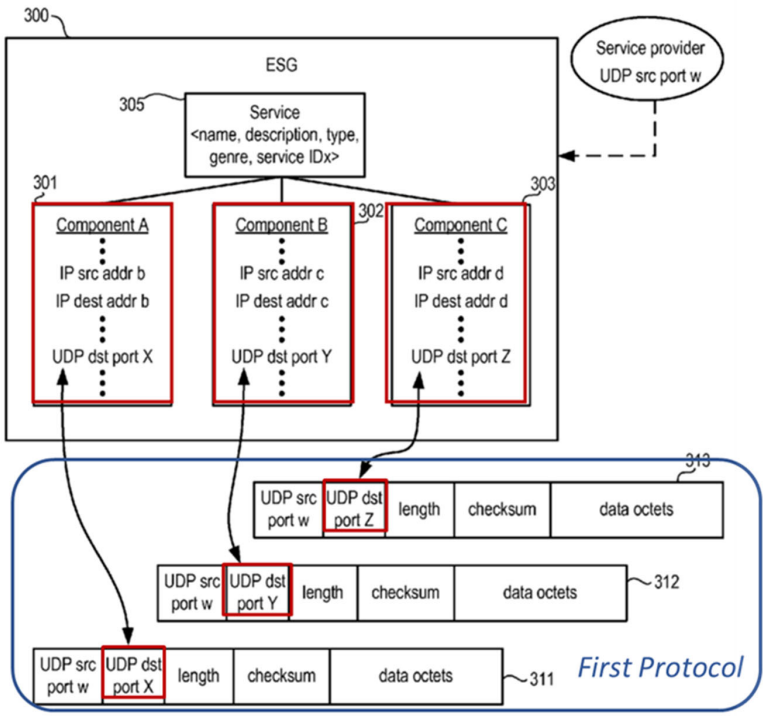


FIG. 4

13. Claim 1 also requires that "the mapping further comprises assigning a specific value to each component for a predefined field of a packet according to a second communication protocol, the specific value distinguishing the component from other components, and the encapsulating comprises encapsulating the packet streams according to one or more lower layer protocols without encapsulating the packet streams according to the second communication protocol." This particular step of the claimed method requires that a streaming provider deliver packet streams to consumers who require a different second protocol without encapsulating the data streams in that particular second protocol by assigning a specific value in a predefined field of a packet to "components" directed to the second communication protocol where the specific value distinguishing the component from other components and encapsulating the packet streams according to one or more lower layer protocols.

14. Finally, claim 1 requires "forwarding the packet streams for transmission in a transmission channel," which is the delivery of content to the consumer.

15. The above claim limitations for delivering content to consumers are not abstract, but concrete and definitive steps in organizing "components" and "data streams," and populating frames in the data stream, in language that is so specific as to resemble instructions in a user manual.

16. The United States Patent and Trademark Office specifically identified in the Notice of Allowance the limitations that were entirely missing in the prior art:

> assigning a specific value to each component for a predefined field of a packet according to a second communication protocol, the specific value distinguishing the component from other components, and the encapsulating comprises encapsulating the packet streams according to one or more lower layer protocols without encapsulating the packet streams according to the second communication protocol..

(Notice of Allowability).

17. All the claims differed from the closest prior art, Arad et al. US Pat. 7,590,991, Balakrishnan et al. US Pat. 7,227,899, Poli et al. US Pat Appln. 2005/0122976, Anschutz et al. US Pat. Appln. 2004/0230695 and Rakib, Selim Shlomo US Pat. 6,970, 127, all of which disclosed conventional communication systems, either singularly or in combination, and, thus, failed to anticipate or render the above features obvious. (Notice of Allowability).

18. The method claims are patent eligible under 35 U.S.C. § 101. The claims are not abstract. As reflected in the Notice of Allowance, the claims are directed to a novel improvement that, unlike conventional art, comprises assigning a specific value to each component for a predefined field of a packet according to a second communication protocol, with the specific value distinguishing the component from other components, and the encapsulating comprises encapsulating the packet streams according to one or more lower layer

protocols without encapsulating the packet streams according to the second communication protocol.

19. Thus, the '328 Patent claims focus on specific improvements in computer capabilities as opposed to an invention that simply uses computers as a tool. The focus of the claimed advance is on a solution to a technological problem arising in computer operations and provides a specific improvement in computer capabilities or functionality, rather than only claiming a desirable result or function.

20. Further, Claim 1 and its dependent claims, individually and as an ordered combination, recite an inventive concept, which is manifestly more than the application of an abstract idea using well-understood, routine, and conventional activities previously known to the industry. As stated by the Examiner, prior to the present invention, there was no prior art disclosing a system and method for encapsulating data streams, and particularly where the data streams related to a specific content that is mapped to components of a transmission service that delivers multiple versions of that specific content. Such content may include audio data, video data and/or other types of data, some or all of which may be any combination of real-time and non-real-time data. For example, versions of the content may vary based on a CODEC used to encode media for the content, based on transmission parameters (e.g., bit rate) for a data stream providing such media, based on a language for subtitles or other text associated with the specific content, based on other types of data associated with the content, etc. The data stream for each component is encapsulated into packets according to a communication protocol such as, e.g., User Datagram Protocol (UDP). A common field of each packet header, which in some embodiments is the UDP destination port field, is given a value identifying the corresponding

component. A user equipment (UE) receiving a transmission of the service identifies desired components based on the common field value.

COUNT I – INFRINGEMENT OF THE '328 PATENT

21. Plaintiff restates and incorporates by reference the foregoing allegations.

22. In violation of 35 U.S.C. § 271(a), Bloomberg has practiced and continues to practice the method of at least Claim 1 of the '328 Patent by streaming the content found in https://www.bloomberg.com ("Accused Instrumentality").

23. Attached hereto as Exhibit 2, and incorporated herein by reference, is a claim chart detailing why the Accused Instrumentality infringes at least method Claim 1.

24. As a result of Defendant's infringement of the '328 Patent, Plaintiff has suffered damages.

25. Nimitz is entitled to a money judgment in an amount adequate to compensate for Defendant's infringement, but in no event less than a reasonable royalty for the use made of the invention by Defendant, together with interest and costs as fixed by the Court.

26. Only method claims of the '328 Patent are being asserted, and, thus, patent marking is not an issue. In any event, Nimitz has not commercialized any products under the '328 Patent and has no information that any prior owners of the Patent have not complied with patent marking requirements.

JURY DEMAND

Plaintiff demands a trial by jury on all issues so triable.

PRAYER FOR RELIEF

Plaintiff Nimitz Technologies LLC respectfully requests that the Court find in its favor and against Defendant Bloomberg L.P., and that the Court grant Plaintiff the following relief:

A. an adjudication that Defendant had infringed the '328 Patent;

B. an award of damages to be paid by Defendant adequate to compensate Plaintiff for Defendant's past infringement of the '328 Patent, including pre-judgment and post-judgment interest, costs, expenses, and an accounting of all infringing acts; and

C. any and all such further relief at law or in equity that the Court may deem just and proper, including but not limited to attorneys' fees.

Dated: March 30, 2022

Respectfully submitted by:

/s/ George Pazuniak
George Pazuniak (#478)
O'Kelly & O'Rourke, LLC
824 N. Market Street
Suite 1001A
Wilmington, DE 19801
D: 207-359-8576
gp@del-iplaw.com

Attorney for Plaintiff Nimitz Technologies LLC

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

US7848328	Bloomberg ("Accused Instrumentality")
1. A method comprising: mapping, with at least one processor, each of a plurality of data streams related to a specific content to a different component of a service delivering multiple versions of the specific content;	The defendant streams videos making use of HTTP live streaming (HLS) standard (hereinafter referred to as the standard). https://www.bloomberg.com/

EXHIBIT 2

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

US7848328	Bloomberg ("Accused Instrumentality")
	 https://www.bloomberg.com/news/videos/2022-03-14/-bloomberg-surveillance-simulcast-full-show-3-14-2022-video The accused standard discloses a method which comprises mapping, with at least one processor (e.g., processor/transcoder of a server of an HLS service provider), each of a plurality of data streams (e.g., media streams such as audio, video, captions, etc.) related to a specific content (e.g., streaming content such as web streaming, on-demand news) to a different component (e.g., Index file m3u8) of a service (e.g., web streaming, on-demand news etc.) delivering multiple versions (e.g., M3U8 Manifest File comprises multiple versions of a data stream) of the specific content (e.g., streaming content such as web streaming, on-demand news etc.).

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

US7848328	Bloomberg ("Accused Instrumentality")
	As shown below, a server of an HLS service provider converts plurality of data streams such as audio, video, etc. of a streaming content (e.g., specific content) in multiple streams at different bitrates and resolutions in different media segments of a M3U8 Manifest File. For example a media segment may consist of representation of videos and audios. Similarly, different media segments contain many different representations.

Client

Accept: */*

Accept-Encoding: gzip, deflate, br

Accept-Language: en-US,en;q=0.9

User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/99.0.4844.51 Safari/537.36

Miscellaneous

Referer: https://www.bloomberg.com/news/videos/2022-03-14/-bloomberg-surveillance-simulcast-full-show-3-14-2022-video

Security

Origin: https://www.bloomberg.com

Transformer | Headers | TextView | SyntaxView | ImageView | HexView | WebView | Auth | Caching | Cookies

Raw | JSON | XML


```
mpegURL"},{"url":"https://www.bloomberg.com/media-manifest/streams/qt.m3u8?
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mpegURL"}]}]},"TICTOC":{"id":"LIVE_TICTOC","title":"LIVE_TICTOC","live":1,"form_type":"Live
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7qkw/v0/-1x-1.jpg","player_type":"standard","cedexisAppID":"127","cdns":[{"weight":1,"name":"bv
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manifest/streams/tictoc.m3u8","type":"application/x-
mpegURL"},{"url":"https://www.bloomberg.com/media-manifest/streams/tictoc.m3u8?
group=backup","type":"application/x-
mpegURL"}]}]}},"projector_defaults":{"techOrder":["html5","Chromecast"],"hlsjs":{"hlsConfig":{"
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oadingRetryDelay":100,"levelLoadingMaxRetry":4,"levelLoadingRetryDelay":100,"manifestLoadingMax
Retry":1,"manifestLoadingRetryDelay":100,"autoStartLoad":false,"liveSyncDurationCount":2,"maxBu
fferLength":30,"maxMaxBufferLength":60,"maxBufferSize":12000000,"enableWebVTT":false,"capLevelT
```
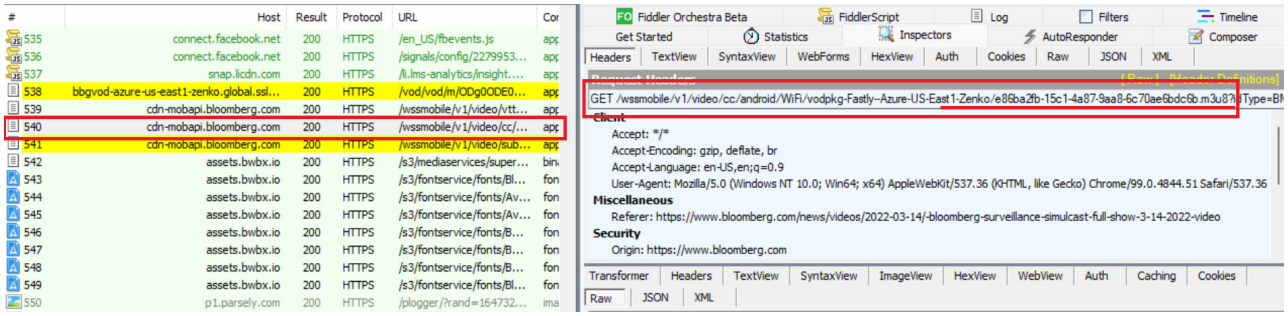


Source: Packet capture by Fiddler tool

As shown below, a server of an HLS streaming service provider converts plurality of data streams such as audio, video, etc. of a streaming content (e.g., specific content) such as an entertainment news in multiple versions in

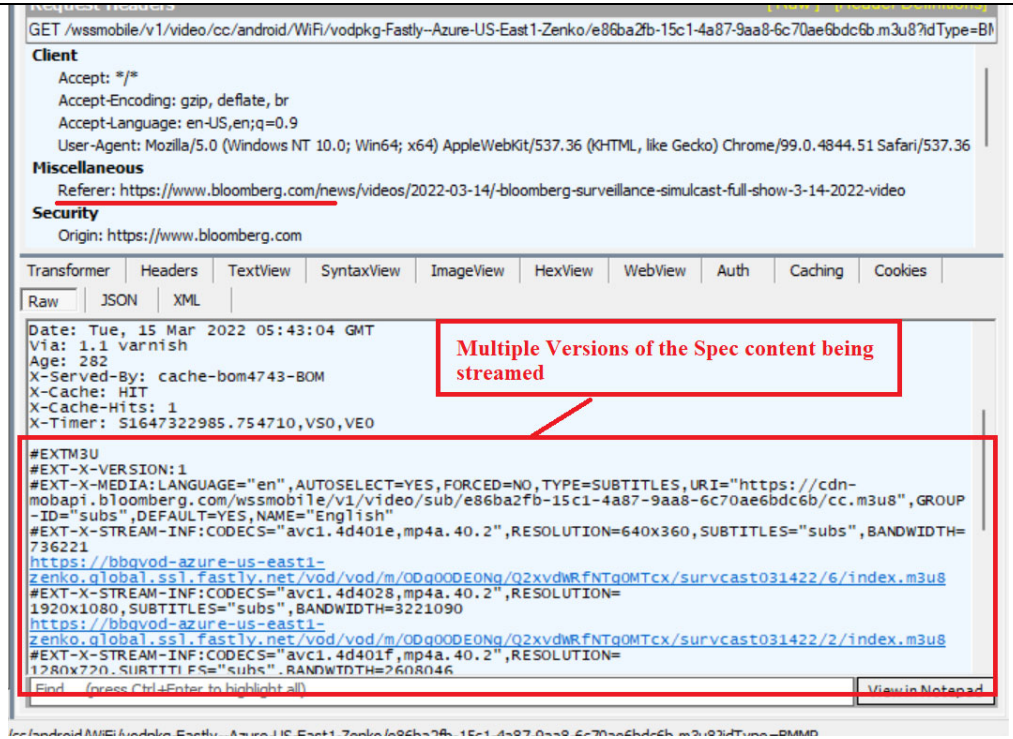
NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

US7848328	Bloomberg ("Accused Instrumentality")
	different adaptation sets of a M3U8 Manifest File. For example, an adaption set may consist of representation of different resolutions 640x360 video, 854x480 video, etc.  *Source: Packet capture by Fiddler tool*

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

US7848328	Bloomberg ("Accused Instrumentality")
	 *Source: Packet capture by Fiddler tool*

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

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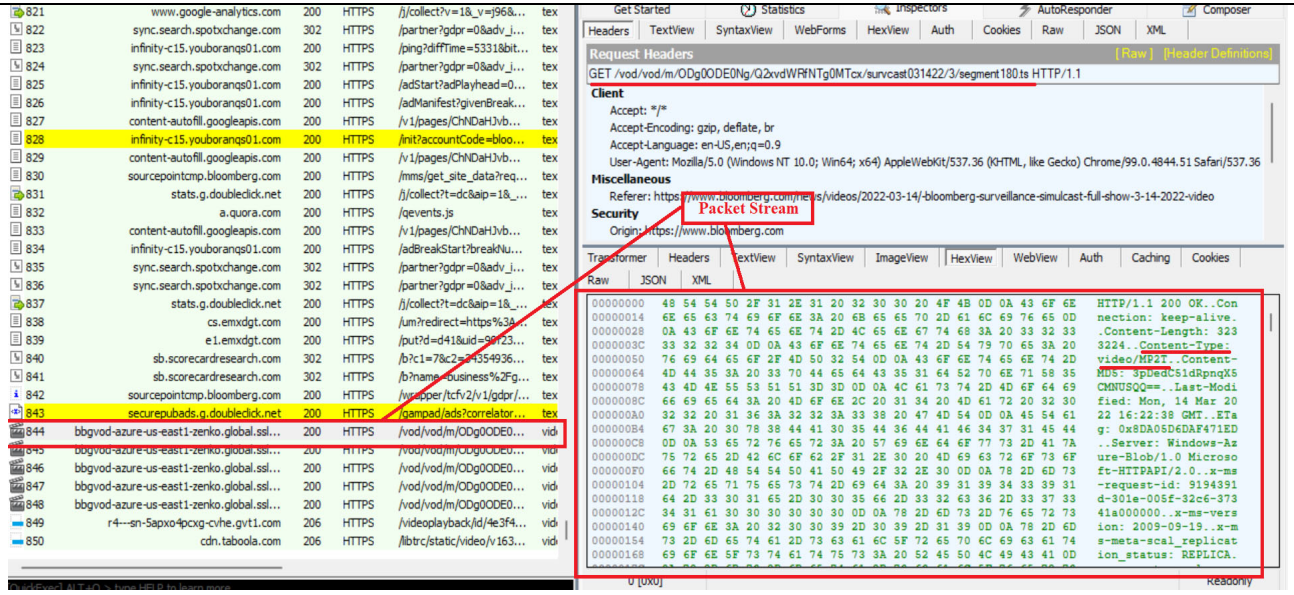
US7848328	Bloomberg ("Accused Instrumentality")
	

Source: Packet capture by Fiddler tool

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

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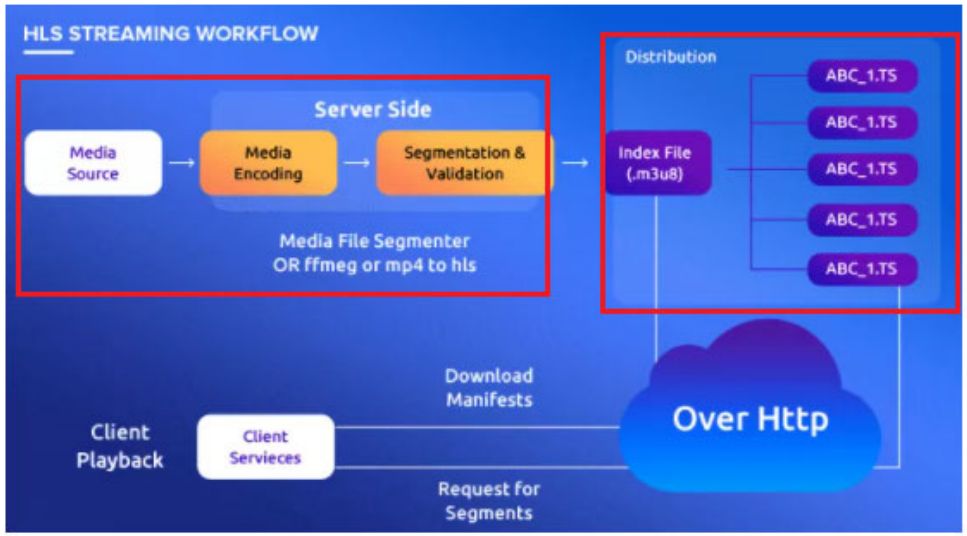
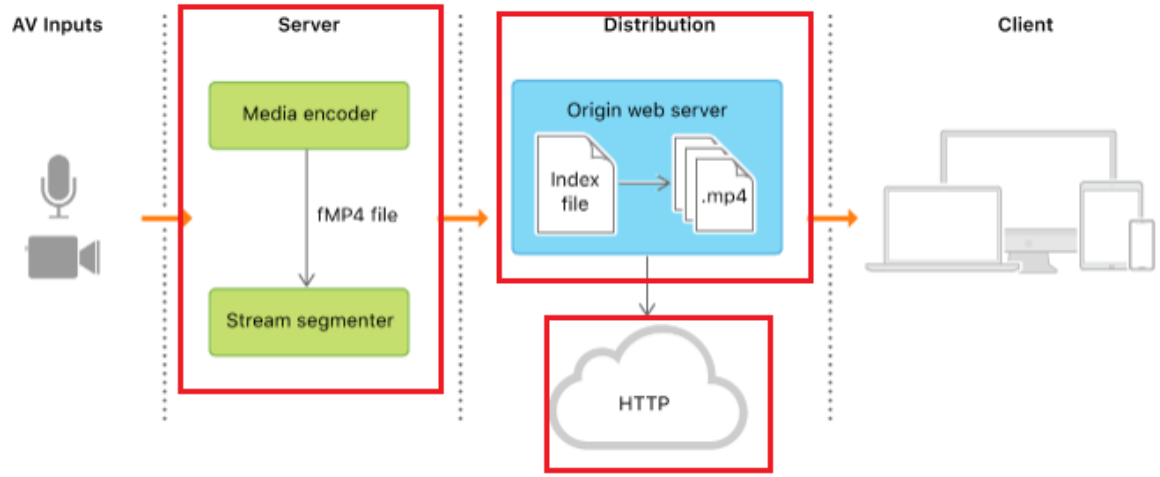
US7848328	Bloomberg ("Accused Instrumentality")
	 https://martech.zone/http-live-streaming-player-features/

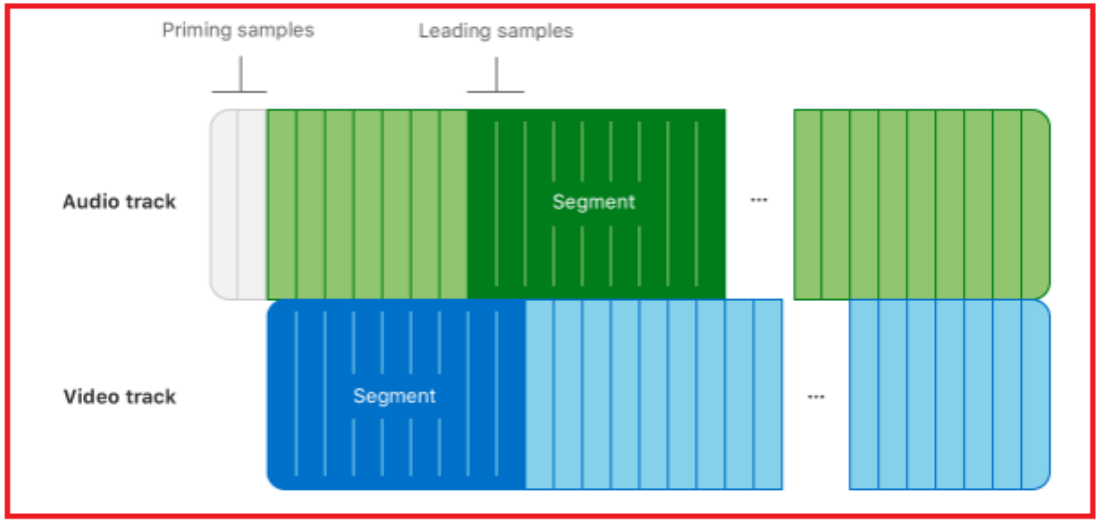
NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

US7848328	Bloomberg ("Accused Instrumentality")
	HLS supports the following: • Live broadcasts and prerecorded content (video on demand, or *VOD*) • Multiple alternate streams at different bit rates • Intelligent switching of streams in response to network bandwidth changes • Media encryption and user authentication The following figure shows the components of an HTTP Live Stream.  https://developer.apple.com/documentation/http_live_streaming

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

US7848328	Bloomberg ("Accused Instrumentality")
	AAC audio processing requires a small amount of leading "throw-away" audio to prime the encoder and initialize internal tables. This small amount of audio results from *encoder delay* which happens during encoding to produce properly formed, encoded audio packets, and its duration is commonly referred to as the *priming duration*. This audio needs to occur before the first frame of video; otherwise, there will be no audio for the first few frames of video.  The audio sample rates are normally 44.1 kHz or 48 kHz. For more information, see the HTTP Live Streaming Specification and the HLS Authoring Specification for Apple Devices. https://developer.apple.com/documentation/http_live_streaming/preparing_audio_for_http_live_streaming

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	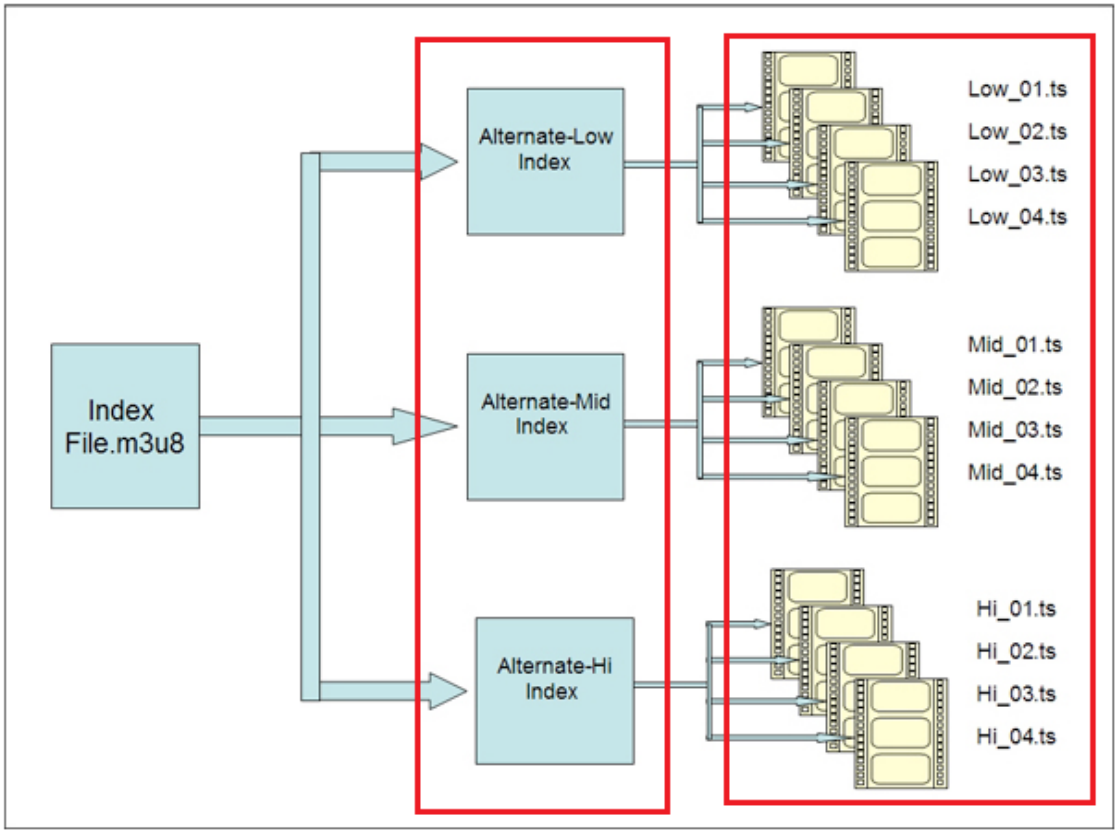 https://www.streamingmedia.com/Articles/Editorial/What-Is-.../What-Is-HLS-(HTTP-Live-Streaming)-78221.aspx?utm_source=related_articles&utm_medium=gutenberg&utm_campaign=editors_selection

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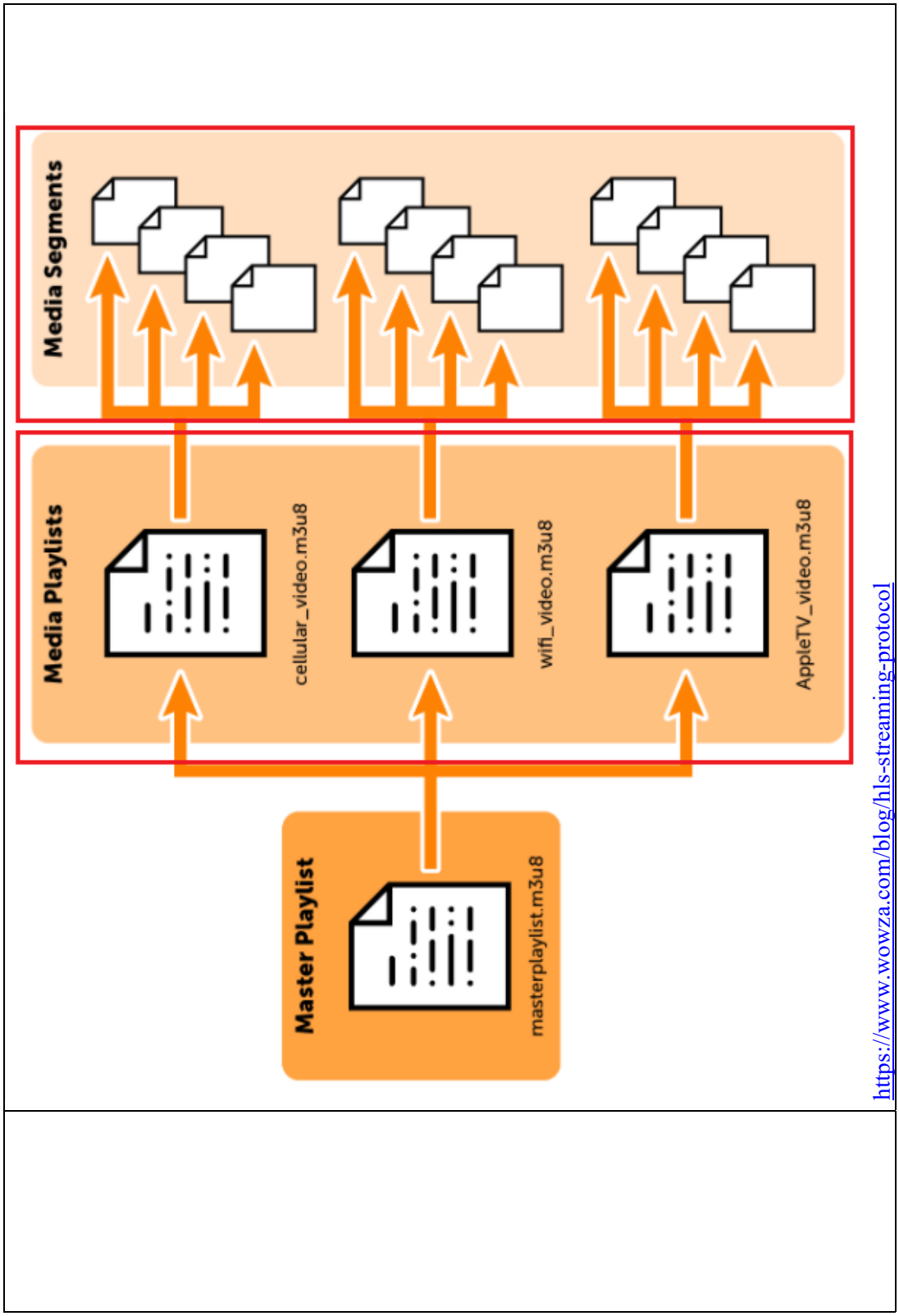

https://www.wowza.com/blog/hls-streaming-protocol

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	1. Introduction to HTTP Live Streaming HTTP Live Streaming provides a reliable, cost-effective means of delivering continuous and long-form video over the Internet. It allows a receiver to adapt the bit rate of the media to the current network conditions in order to maintain uninterrupted playback at the best possible quality. It supports interstitial content boundaries. It provides a flexible framework for media encryption. It can efficiently offer multiple renditions of the same content, such as audio translations. It offers compatibility with large-scale HTTP caching infrastructure to support delivery to large audiences. https://datatracker.ietf.org/doc/html/rfc8216#section-1 **2. Overview** A multimedia presentation is specified by a Uniform Resource Identifier (URI) [RFC3986] to a Playlist. A Playlist is either a Media Playlist or a Master Playlist. Both are UTF-8 text files containing URIs and descriptive tags. A Media Playlist contains a list of Media Segments, which, when played sequentially, will play the multimedia presentation. https://datatracker.ietf.org/doc/html/rfc8216

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	`#EXTM3U`
	`#EXT-X-TARGETDURATION:10`
	
	`#EXTINF:9.009,`
	`http://media.example.com/first.ts`
	`#EXTINF:9.009,`
	`http://media.example.com/second.ts`
	`#EXTINF:3.003,`
	`http://media.example.com/third.ts`
	
	The first line is the format identifier tag #EXTM3U. The line containing #EXT-X-TARGETDURATION says that all Media Segments will be 10 seconds long or less. Then, three Media Segments are declared. The first and second are 9.009 seconds long; the third is 3.003 seconds.
	
	https://datatracker.ietf.org/doc/html/rfc8216

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	A more complex presentation can be described by a Master Playlist. A Master Playlist provides a set of Variant Streams, each of which describes a different version of the same content. A Variant Stream includes a Media Playlist that specifies media encoded at a particular bit rate, in a particular format, and at a particular resolution for media containing video. A Variant Stream can also specify a set of Renditions. Renditions are alternate versions of the content, such as audio produced in different languages or video recorded from different camera angles. Clients should switch between different Variant Streams to adapt to network conditions. Clients should choose Renditions based on user preferences. https://datatracker.ietf.org/doc/html/rfc8216

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	Media Segments A Media Playlist contains a series of Media Segments that make up the overall presentation. A Media Segment is specified by a URI and optionally a byte range. The duration of each Media Segment is indicated in the Media Playlist by its EXTINF tag (Section 4.3.2.1). Each segment in a Media Playlist has a unique integer Media Sequence Number. The Media Sequence Number of the first segment in the Media Playlist is either 0 or declared in the Playlist (Section 4.3.3.2). The Media Sequence Number of every other segment is equal to the Media Sequence Number of the segment that precedes it plus one. Each Media Segment MUST carry the continuation of the encoded bitstream from the end of the segment with the previous Media Sequence Number, where values in a series such as timestamps and Continuity Counters MUST continue uninterrupted. The only exceptions are the first Media Segment ever to appear in a Media Playlist and Media Segments that are explicitly signaled as discontinuities (Section 4.3.2.3). Unmarked media discontinuities can trigger playback errors. https://datatracker.ietf.org/doc/html/rfc8216

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	3.2. MPEG-2 Transport Streams MPEG-2 Transport Streams are specified by [ISO_13818]. The Media Initialization Section of an MPEG-2 Transport Stream Segment is a Program Association Table (PAT) followed by a Program Map Table (PMT). Transport Stream Segments MUST contain a single MPEG-2 Program; playback of Multi-Program Transport Streams is not defined. Each Transport Stream Segment MUST contain a PAT and a PMT, or have an EXT-X-MAP tag (Section 4.3.2.5) applied to it. The first two Transport Stream packets in a Segment without an EXT-X-MAP tag SHOULD be a PAT and a PMT. https://datatracker.ietf.org/doc/html/rfc8216

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	3.4. Packed Audio A Packed Audio Segment contains encoded audio samples and ID3 tags that are simply packed together with minimal framing and no per-sample timestamps. Supported Packed Audio formats are Advanced Audio Coding (AAC) with Audio Data Transport Stream (ADTS) framing [ISO_13818_7], MP3 [ISO_13818_3], AC-3 [AC_3], and Enhanced AC-3 [AC_3]. A Packed Audio Segment has no Media Initialization Section. Each Packed Audio Segment MUST signal the timestamp of its first sample with an ID3 Private frame (PRIV) tag [ID3] at the beginning of the segment. The ID3 PRIV owner identifier MUST be "com.apple.streaming.transportStreamTimestamp". The ID3 payload MUST be a 33-bit MPEG-2 Program Elementary Stream timestamp expressed as a big-endian eight-octet number, with the upper 31 bits set to zero. Clients SHOULD NOT play Packed Audio Segments without this ID3 tag. https://datatracker.ietf.org/doc/html/rfc8216

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	3.5. WebVTT A WebVTT Segment is a section of a WebVTT [WebVTT] file. WebVTT Segments carry subtitles. The Media Initialization Section of a WebVTT Segment is the WebVTT header. Each WebVTT Segment MUST contain all subtitle cues that are intended to be displayed during the period indicated by the segment EXTINF duration. The start time offset and end time offset of each cue MUST indicate the total display time for that cue, even if part of the cue time range is outside the Segment period. A WebVTT Segment MAY contain no cues; this indicates that no subtitles are to be displayed during that period. https://datatracker.ietf.org/doc/html/rfc8216

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	In order to synchronize timestamps between audio/video and subtitles, an X-TIMESTAMP-MAP metadata header SHOULD be added to each WebVTT header. This header maps WebVTT cue timestamps to MPEG-2 (PES) timestamps in other Renditions of the Variant Stream. Its format is: X-TIMESTAMP-MAP=LOCAL:<cue time>,MPEGTS:<MPEG-2 time> e.g., X-TIMESTAMP-MAP=LOCAL:00:00:00.000,MPEGTS:900000 The cue timestamp in the LOCAL attribute MAY fall outside the range of time covered by the segment. If a WebVTT segment does not have the X-TIMESTAMP-MAP, the client MUST assume that the WebVTT cue time of 0 maps to an MPEG-2 timestamp of 0. When synchronizing WebVTT with PES timestamps, clients SHOULD account for cases where the 33-bit PES timestamps have wrapped and the WebVTT cue times have not. https://datatracker.ietf.org/doc/html/rfc8216

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	4.3.2. Media Segment Tags Each Media Segment is specified by a series of Media Segment tags followed by a URI. Some Media Segment tags apply to just the next segment; others apply to all subsequent segments until another instance of the same tag. A Media Segment tag MUST NOT appear in a Master Playlist. Clients MUST fail to parse Playlists that contain both Media Segment tags and Master Playlist tags (Section 4.3.4). **4.3.2.1. EXTINF** The EXTINF tag specifies the duration of a Media Segment. It applies only to the next Media Segment. This tag is REQUIRED for each Media Segment. Its format is: #EXTINF:<duration>,[<title>] https://datatracker.ietf.org/doc/html/rfc8216

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	4.3.2.7. EXT-X-DATERANGE The EXT-X-DATERANGE tag associates a Date Range (i.e., a range of time defined by a starting and ending date) with a set of attribute/value pairs. Its format is: #EXT-X-DATERANGE:<attribute-list> where the defined attributes are: ID A quoted-string that uniquely identifies a Date Range in the Playlist. This attribute is REQUIRED. CLASS A client-defined quoted-string that specifies some set of attributes and their associated value semantics. All Date Ranges with the same CLASS attribute value MUST adhere to these semantics. This attribute is OPTIONAL. START-DATE A quoted-string containing the ISO-8601 date at which the Date Range begins. This attribute is REQUIRED. https://datatracker.ietf.org/doc/html/rfc8216

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	4.3.4. Master Playlist Tags Master Playlist tags define the Variant Streams, Renditions, and other global parameters of the presentation. Master Playlist tags MUST NOT appear in a Media Playlist; clients MUST fail to parse any Playlist that contains both a Master Playlist tag and either a Media Playlist tag or a Media Segment tag. **4.3.4.1. EXT-X-MEDIA** The EXT-X-MEDIA tag is used to relate Media Playlists that contain alternative Renditions (Section 4.3.4.2.1) of the same content. For example, three EXT-X-MEDIA tags can be used to identify audio-only Media Playlists that contain English, French, and Spanish Renditions of the same presentation. Or, two EXT-X-MEDIA tags can be used to identify video-only Media Playlists that show two different camera angles. Its format is: #EXT-X-MEDIA:<attribute-list> The following attributes are defined: TYPE The value is an enumerated-string; valid strings are AUDIO, VIDEO, SUBTITLES, and CLOSED-CAPTIONS. This attribute is REQUIRED. https://datatracker.ietf.org/doc/html/rfc8216

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	AUDIO The value is a quoted-string. It MUST match the value of the GROUP-ID attribute of an EXT-X-MEDIA tag elsewhere in the Master Playlist whose TYPE attribute is AUDIO. It indicates the set of audio Renditions that SHOULD be used when playing the presentation. See Section 4.3.4.2.1. The AUDIO attribute is OPTIONAL. VIDEO The value is a quoted-string. It MUST match the value of the GROUP-ID attribute of an EXT-X-MEDIA tag elsewhere in the Master Playlist whose TYPE attribute is VIDEO. It indicates the set of video Renditions that SHOULD be used when playing the presentation. See Section 4.3.4.2.1. The VIDEO attribute is OPTIONAL. s & May Informational [Page 31] 216 HTTP Live Streaming August 2017 SUBTITLES The value is a quoted-string. It MUST match the value of the GROUP-ID attribute of an EXT-X-MEDIA tag elsewhere in the Master Playlist whose TYPE attribute is SUBTITLES. It indicates the set of subtitle Renditions that can be used when playing the presentation. See Section 4.3.4.2.1. The SUBTITLES attribute is OPTIONAL.

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	4.3.5. Media or Master Playlist Tags The tags in this section can appear in either Master Playlists or Media Playlists. If one of these tags appears in a Master Playlist, it SHOULD NOT appear in any Media Playlist referenced by that Master Playlist. A tag that appears in both MUST have the same value; otherwise, clients SHOULD ignore the value in the Media Playlist(s). These tags MUST NOT appear more than once in a Playlist. If a tag appears more than once, clients MUST fail to parse the Playlist. **4.3.5.1. EXT-X-INDEPENDENT-SEGMENTS** The EXT-X-INDEPENDENT-SEGMENTS tag indicates that all media samples in a Media Segment can be decoded without information from other segments. It applies to every Media Segment in the Playlist. Its format is: #EXT-X-INDEPENDENT-SEGMENTS Pantos & May Informational [Page 35] RFC 8216 HTTP Live Streaming August 2017 If the EXT-X-INDEPENDENT-SEGMENTS tag appears in a Master Playlist, it applies to every Media Segment in every Media Playlist in the Master Playlist. https://datatracker.ietf.org/doc/html/rfc8216

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	6.2.1. General Server Responsibilities The production of the source media is outside the scope of this document, which simply presumes a source of continuous encoded media containing the presentation. The server MUST divide the source media into individual Media Segments whose duration is less than or equal to a constant target duration. Segments that are longer than the planned target duration can trigger playback stalls and other errors. Pantos & May Informational [Page 37] RFC 8216 HTTP Live Streaming August 2017 The server SHOULD attempt to divide the source media at points that support effective decode of individual Media Segments, e.g., on packet and key frame boundaries. The server MUST create a URI for every Media Segment that enables its clients to obtain the segment data. If a server supports partial loading of resources (e.g., via HTTP Range requests), it MAY specify segments as sub-ranges of larger resources using the EXT-X-BYTERANGE tag. https://datatracker.ietf.org/doc/html/rfc8216

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	6.2.4. Providing Variant Streams A server MAY offer multiple Media Playlist files to provide different encodings of the same presentation. If it does so, it SHOULD provide a Master Playlist file that lists each Variant Stream to allow clients to switch between encodings dynamically. Master Playlists describe regular Variant Streams with EXT-X-STREAM-INF tags and I-frame Variant Streams with EXT-X-I-FRAME-STREAM-INF tags. If an EXT-X-STREAM-INF tag or EXT-X-I-FRAME-STREAM-INF tag contains the CODECS attribute, the attribute value MUST include every media format [RFC6381] present in any Media Segment in any of the Renditions specified by the Variant Stream. https://datatracker.ietf.org/doc/html/rfc8216

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	The server MUST meet the following constraints when producing Variant Streams in order to allow clients to switch between them seamlessly: o Each Variant Stream MUST present the same content. o Matching content in Variant Streams MUST have matching timestamps. This allows clients to synchronize the media. o Matching content in Variant Streams MUST have matching Discontinuity Sequence Numbers (see Section 4.3.3.3). o Each Media Playlist in each Variant Stream MUST have the same target duration. The only exceptions are SUBTITLES Renditions and Media Playlists containing an EXT-X-I-FRAMES-ONLY tag, which MAY have different target durations if they have an EXT-X-PLAYLIST-TYPE of VOD. https://datatracker.ietf.org/doc/html/rfc8216 **8.7. Master Playlist with Alternative Video** This example shows three different video Renditions (Main, Centerfield, and Dugout) and three different Variant Streams (low, mid, and high). In this example, clients that did not support the EXT-X-MEDIA tag and the VIDEO attribute of the EXT-X-STREAM-INF tag would only be able to play the video Rendition "Main". Since the EXT-X-STREAM-INF tag has no AUDIO attribute, all video Renditions would be required to contain the audio. https://datatracker.ietf.org/doc/html/rfc8216

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```
In this example, the CODECS attributes have been condensed for space
A '\' is used to indicate that the tag continues on the following
line with whitespace removed:

#EXTM3U
#EXT-X-MEDIA:TYPE=VIDEO,GROUP-ID="low",NAME="Main", \
   DEFAULT=YES,URI="low/main/audio-video.m3u8"
#EXT-X-MEDIA:TYPE=VIDEO,GROUP-ID="low",NAME="Centerfield", \
   DEFAULT=NO,URI="low/centerfield/audio-video.m3u8"
#EXT-X-MEDIA:TYPE=VIDEO,GROUP-ID="low",NAME="Dugout", \
   DEFAULT=NO,URI="low/dugout/audio-video.m3u8"

#EXT-X-STREAM-INF:BANDWIDTH=1280000,CODECS="...",VIDEO="low"
low/main/audio-video.m3u8

#EXT-X-MEDIA:TYPE=VIDEO,GROUP-ID="mid",NAME="Main", \
   DEFAULT=YES,URI="mid/main/audio-video.m3u8"
#EXT-X-MEDIA:TYPE=VIDEO,GROUP-ID="mid",NAME="Centerfield", \
   DEFAULT=NO,URI="mid/centerfield/audio-video.m3u8"
#EXT-X-MEDIA:TYPE=VIDEO,GROUP-ID="mid",NAME="Dugout", \
   DEFAULT=NO,URI="mid/dugout/audio-video.m3u8"

#EXT-X-STREAM-INF:BANDWIDTH=2560000,CODECS="...",VIDEO="mid"
mid/main/audio-video.m3u8

#EXT-X-MEDIA:TYPE=VIDEO,GROUP-ID="hi",NAME="Main", \
   DEFAULT=YES,URI="hi/main/audio-video.m3u8"
#EXT-X-MEDIA:TYPE=VIDEO,GROUP-ID="hi",NAME="Centerfield", \
   DEFAULT=NO,URI="hi/centerfield/audio-video.m3u8"
#EXT-X-MEDIA:TYPE=VIDEO,GROUP-ID="hi",NAME="Dugout", \
   DEFAULT=NO,URI="hi/dugout/audio-video.m3u8"

#EXT-X-STREAM-INF:BANDWIDTH=7680000,CODECS="...",VIDEO="hi"
hi/main/audio-video.m3u8
```

https://datatracker.ietf.org/doc/html/rfc8216

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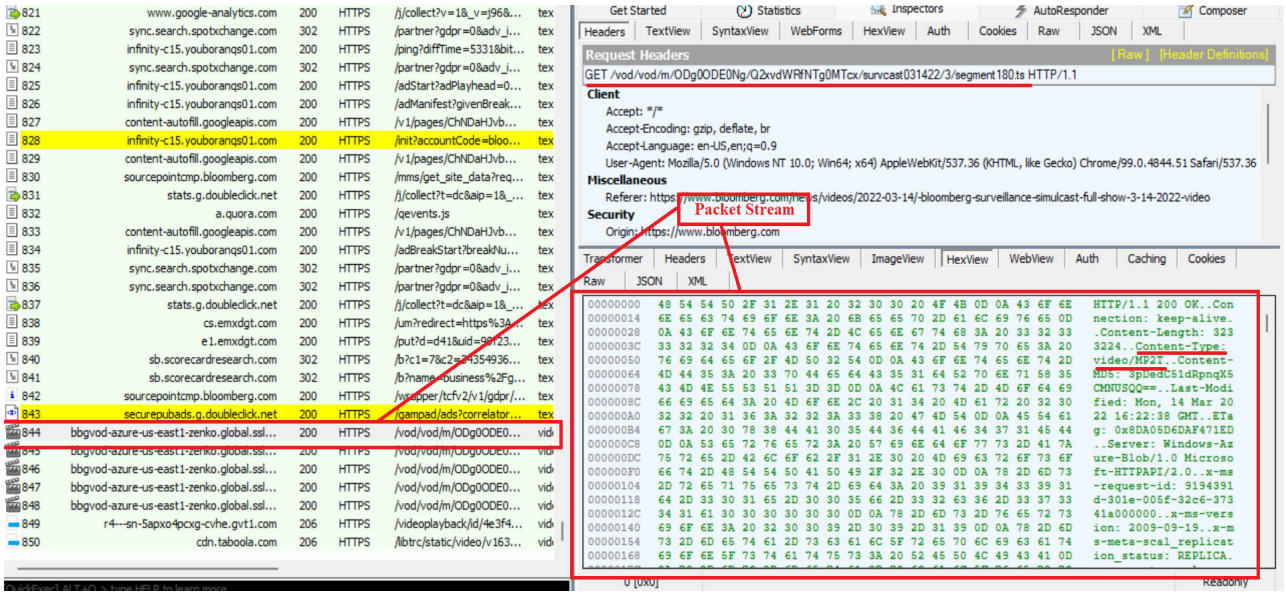
encapsulating each data stream of the plurality into a stream of packets according to a first communication protocol,	The accused standard discloses encapsulating each data stream (e.g., media streams such as audio, video, captions, etc.) of the plurality into a stream of packets (e.g., index file m3u8 data packets) according to a first communication protocol (e.g., Transmission control protocol). As shown below, For HLS, MPEG-2 transport stream is used to encapsulate the data stream (e.g., media streams such as audio, video, captions, etc.) using first communication protocol (e.g. TCP).  *Source: Packet capture by Fiddler tool*

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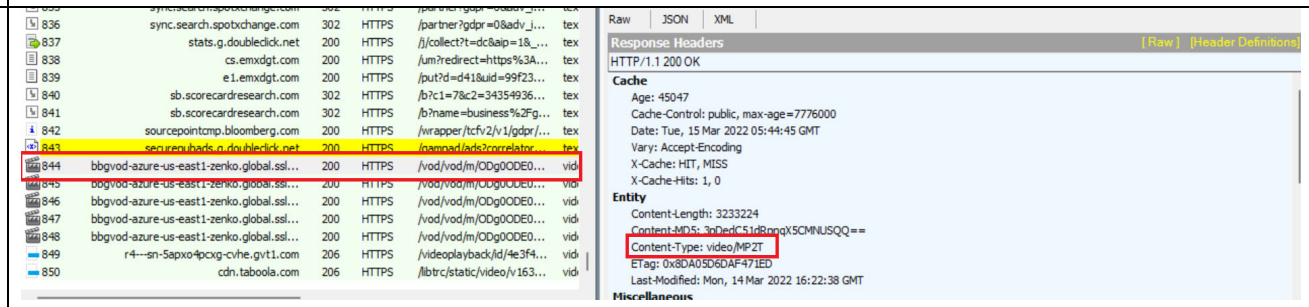
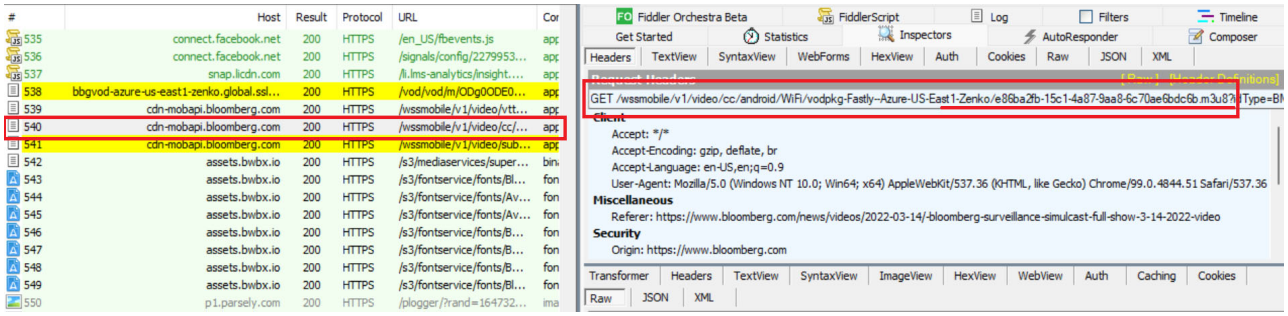
	 *Source: Packet capture by Fiddler tool*  *Source: Packet capture by Fiddler tool*

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	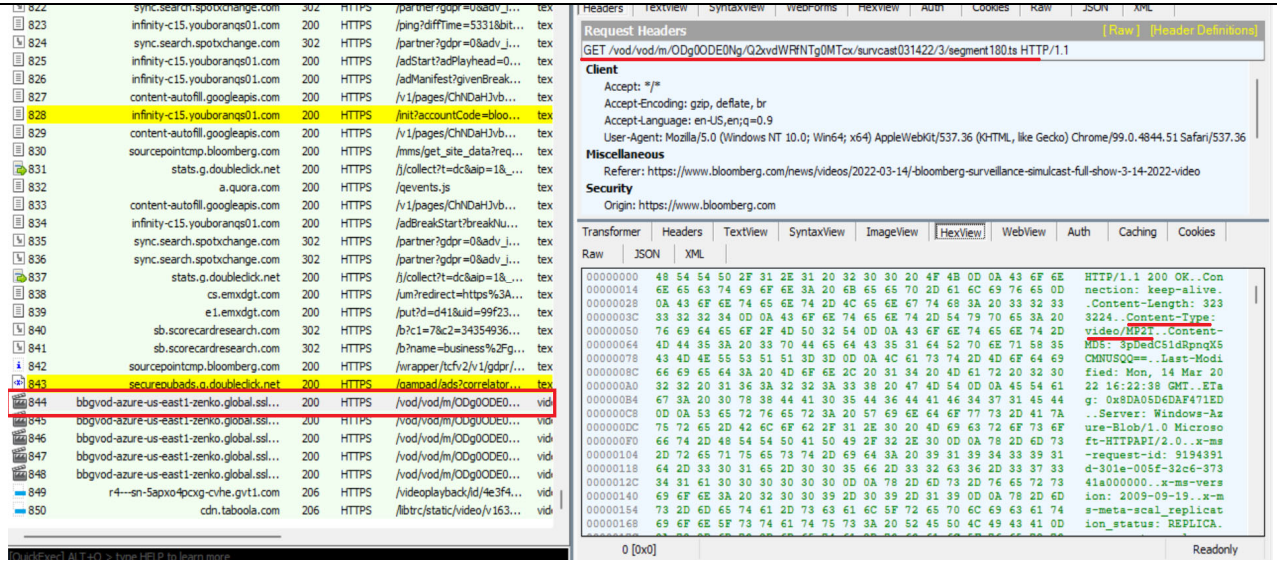 *Source: Packet capture by Fiddler tool*

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	Encode MPEG-2 Transport Stream Segments MPEG-2 transport streams create an arbitrary timestamp when encoding media, using an 33-bit clock that rolls over every 26 hours. For example, if your video starts at the two-hour mark, your audio starts at two hours plus the time for the leading audio. Therefore, a segment of audio that's paired with a segment of video starting at the two-hour mark needs audio that starts at the two-hour mark minus the priming duration. This additional segment ensures the first frame of video plays synchronously with the audio. **Encode Fragmented MPEG-4 Segments** The MPEG-4 file format (ISO BMFF) carries the presumption that all track timelines begin with time zero, regardless of whether the timeline is divided into fragments. However, you can set the initial decode time of any fragment to an arbitrary value by means of the Track Fragment Base Media Decode Time Box (`tfdt`). Use this box to permit the alignment of the audio timeline with the video timeline that places the priming audio prior to the first video frame. Alternatively, starting with iOS 13.1 it's possible to utilize an Edit List Box (`elst`) within the Track Box (`trak`) in order to place the duration of the priming audio prior to time 0. This permits a natural alignment of other tracks with audio at time 0. The edit list needs to have a single entry in which the value of `media_start` is equivalent to the audio priming duration and the value of `segment_duration` is 0. This is the recommended approach for time alignment for the Common Media Application Format (CMAF).

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	https://developer.apple.com/documentation/http_live_streaming/preparing_audio_for_http_live_streaming **Does HLS use TCP or UDP as its transport protocol?** TCP and UDP are transport protocols, meaning they are responsible for delivering content over the Internet. TCP tends to deliver data more reliably than UDP, but the latter is much faster, even though some data may be lost in transit. Because UDP is faster, some streaming protocols use UDP instead of TCP. HLS, however, uses TCP. This is for several reasons: 1. HLS is over HTTP, and the HTTP protocol is built for use with TCP (with some exceptions). 2. The modern Internet is more reliable and more efficient than it was when streaming was first developed. In many parts of the world today, user connectivity has vastly improved, especially for mobile connections. As a result, users have enough bandwidth to support the delivery of every video frame. 3. Adaptive bitrate streaming helps compensate for the potentially slower data delivery of TCP. https://www.cloudflare.com/learning/video/what-is-http-live-streaming/

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	A URI in a Playlist, whether it is a URI line or part of a tag, MAY be relative. Any relative URI is considered to be relative to the URI of the Playlist that contains it. The duration of a Media Playlist is the sum of the durations of the Media Segments within it. The segment bit rate of a Media Segment is the size of the Media Segment divided by its EXTINF duration (Section 4.3.2.1). Note that this includes container overhead but does not include overhead imposed by the delivery system, such as HTTP, TCP, or IP headers. The peak segment bit rate of a Media Playlist is the largest bit rate of any contiguous set of segments whose total duration is between 0.5 and 1.5 times the target duration. The bit rate of a set is calculated by dividing the sum of the segment sizes by the sum of the segment durations. https://datatracker.ietf.org/doc/html/rfc8216#section-1
wherein, as to each of the packet streams, the packets have a value in a common field identifying the component mapped to the data	The accused standard discloses wherein, as to each of the packet streams (e.g., m3u8 data packet stream), the packets have a value (e.g., audio/video type, group id, etc.) in a common field identifying the component mapped to the data stream (e.g., media streams such as audio, video, captions, etc.) encapsulated by the packet stream (e.g., m3u8 data packet stream). As shown below, the common field shows "type: video"

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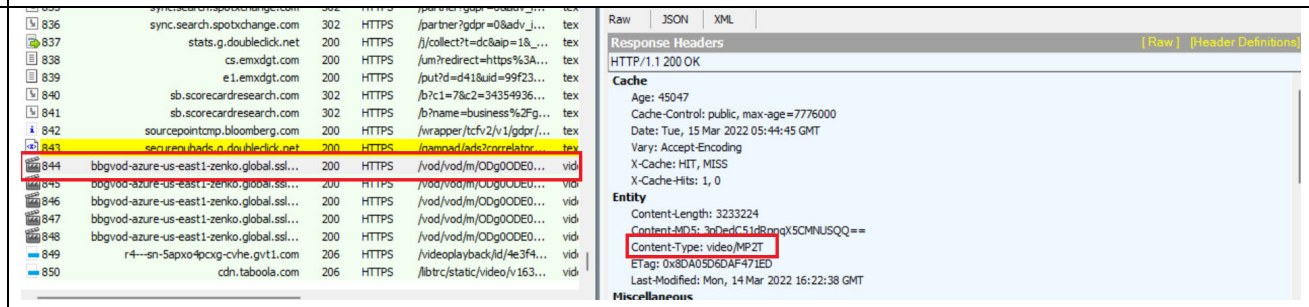
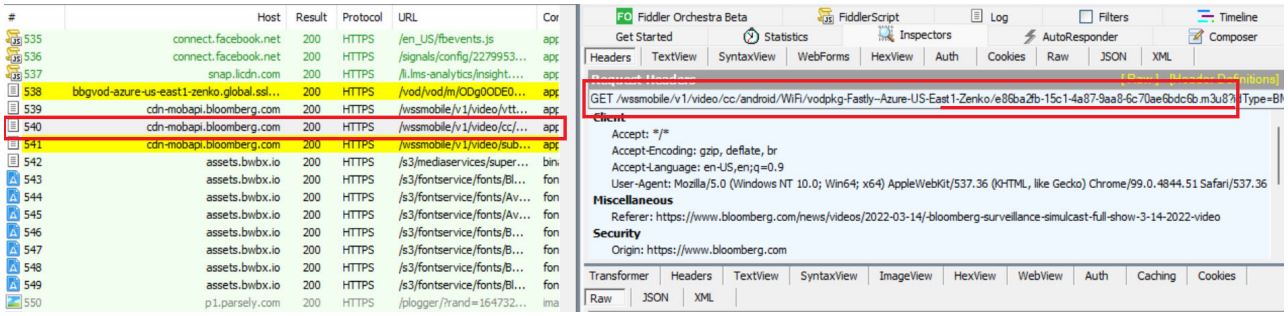
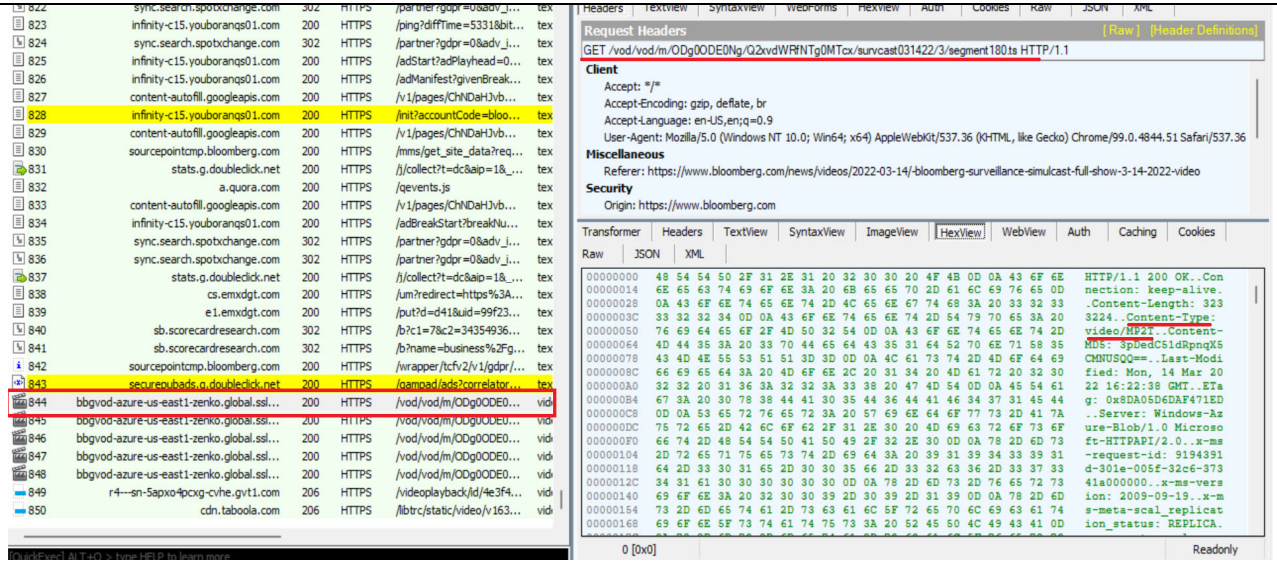
Preliminary charts based on best available information

US7848328	Bloomberg ("Accused Instrumentality")
stream encapsulated by the packet stream;	 *Source: Packet capture by Fiddler tool*  *Source: Packet capture by Fiddler tool*

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

US7848328	Bloomberg ("Accused Instrumentality")
	 *Source: Packet capture by Fiddler tool*

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

US7848328	Bloomberg ("Accused Instrumentality")
	#EXT-X-MEDIA:<attribute-list> The following attributes are defined: TYPE The value is an enumerated-string; valid strings are AUDIO, VIDEO, SUBTITLES, and CLOSED-CAPTIONS. This attribute is REQUIRED. Typically, closed-caption [CEA608] media is carried in the video stream. Therefore, an EXT-X-MEDIA tag with TYPE of CLOSED-CAPTIONS does not specify a Rendition; the closed-caption media is present in the Media Segments of every video Rendition. URI The value is a quoted-string containing a URI that identifies the Media Playlist file. This attribute is OPTIONAL; see Section 4.3.4.2.1. If the TYPE is CLOSED-CAPTIONS, the URI attribute MUST NOT be present. Pantos & May Informational [Page 25] RFC 8216 HTTP Live Streaming August 2017 GROUP-ID The value is a quoted-string that specifies the group to which the Rendition belongs. See Section 4.3.4.1.1. This attribute is REQUIRED. https://datatracker.ietf.org/doc/html/rfc8216

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

US7848328	Bloomberg ("Accused Instrumentality")

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

US7848328	Bloomberg ("Accused Instrumentality")
	Encode MPEG-2 Transport Stream Segments MPEG-2 transport streams create an arbitrary timestamp when encoding media, using an 33-bit clock that rolls over every 26 hours. For example, if your video starts at the two-hour mark, your audio starts at two hours plus the time for the leading audio. Therefore, a segment of audio that's paired with a segment of video starting at the two-hour mark needs audio that starts at the two-hour mark minus the priming duration. This additional segment ensures the first frame of video plays synchronously with the audio. **Encode Fragmented MPEG-4 Segments** The MPEG-4 file format (ISO BMFF) carries the presumption that all track timelines begin with time zero, regardless of whether the timeline is divided into fragments. However, you can set the initial decode time of any fragment to an arbitrary value by means of the Track Fragment Base Media Decode Time Box (`tfdt`). Use this box to permit the alignment of the audio timeline with the video timeline that places the priming audio prior to the first video frame. Alternatively, starting with iOS 13.1 it's possible to utilize an Edit List Box (`elst`) within the Track Box (`trak`) in order to place the duration of the priming audio prior to time 0. This permits a natural alignment of other tracks with audio at time 0. The edit list needs to have a single entry in which the value of `media_start` is equivalent to the audio priming duration and the value of `segment_duration` is 0. This is the recommended approach for time alignment for the Common Media Application Format (CMAF).

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

US7848328	Bloomberg ("Accused Instrumentality")
	https://developer.apple.com/documentation/http_live_streaming/preparing_audio_for_http_live_streaming

Preliminary charts based on best available information

	4.3.4. Master Playlist Tags Master Playlist tags define the Variant Streams, Renditions, and other global parameters of the presentation. Master Playlist tags MUST NOT appear in a Media Playlist; clients MUST fail to parse any Playlist that contains both a Master Playlist tag and either a Media Playlist tag or a Media Segment tag. **4.3.4.1. EXT-X-MEDIA** The EXT-X-MEDIA tag is used to relate Media Playlists that contain alternative Renditions (Section 4.3.4.2.1) of the same content. For example, three EXT-X-MEDIA tags can be used to identify audio-only Media Playlists that contain English, French, and Spanish Renditions of the same presentation. Or, two EXT-X-MEDIA tags can be used to identify video-only Media Playlists that show two different camera angles. Its format is: #EXT-X-MEDIA:<attribute-list> The following attributes are defined: TYPE The value is an enumerated-string; valid strings are AUDIO, VIDEO, SUBTITLES, and CLOSED-CAPTIONS. This attribute is REQUIRED. https://datatracker.ietf.org/doc/html/rfc8216

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

US7848328	Bloomberg ("Accused Instrumentality")
	3.2. MPEG-2 Transport Streams MPEG-2 Transport Streams are specified by [ISO_13818]. The Media Initialization Section of an MPEG-2 Transport Stream Segment is a Program Association Table (PAT) followed by a Program Map Table (PMT). Transport Stream Segments MUST contain a single MPEG-2 Program; playback of Multi-Program Transport Streams is not defined. Each Transport Stream Segment MUST contain a PAT and a PMT, or have an EXT-X-MAP tag (Section 4.3.2.5) applied to it. The first two Transport Stream packets in a Segment without an EXT-X-MAP tag SHOULD be a PAT and a PMT. https://datatracker.ietf.org/doc/html/rfc8216

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

US7848328	Bloomberg ("Accused Instrumentality")
	3.3. Fragmented MPEG-4 MPEG-4 Fragments are specified by the ISO Base Media File Format [ISOBMFF]. Unlike regular MPEG-4 files that have a Movie Box ('moov') that contains sample tables and a Media Data Box ('mdat') containing the corresponding samples, an MPEG-4 Fragment consists of a Movie Fragment Box ('moof') containing a subset of the sample table and a Media Data Box containing those samples. Use of MPEG-4 Fragments does require a Movie Box for initialization, but that Movie Box contains only non-sample-specific information such as track and sample descriptions. https://datatracker.ietf.org/doc/html/rfc8216

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Preliminary charts based on best available information

US7848328	Bloomberg ("Accused Instrumentality")
	URI The value is a quoted-string containing a URI that identifies the Media Playlist file. This attribute is OPTIONAL; see Section 4.3.4.2.1. If the TYPE is CLOSED-CAPTIONS, the URI attribute MUST NOT be present. :os & May Informational [Page 25] 8216 HTTP Live Streaming August 2017 GROUP-ID The value is a quoted-string that specifies the group to which the Rendition belongs. See Section 4.3.4.1.1. This attribute is REQUIRED. LANGUAGE The value is a quoted-string containing one of the standard Tags for Identifying Languages [RFC5646], which identifies the primary language used in the Rendition. This attribute is OPTIONAL. ASSOC-LANGUAGE The value is a quoted-string containing a language tag [RFC5646] that identifies a language that is associated with the Rendition. An associated language is often used in a different role than the language specified by the LANGUAGE attribute (e.g., written versus

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

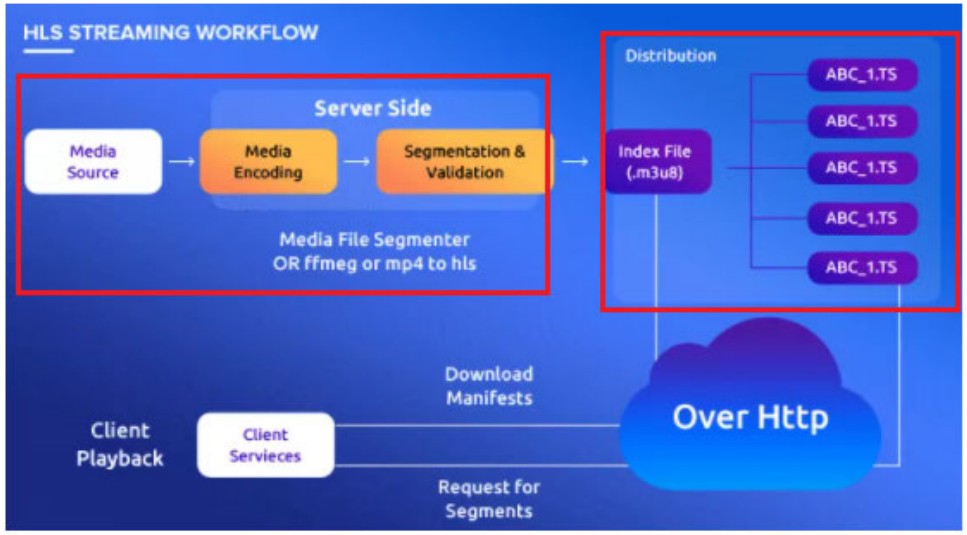
US7848328	Bloomberg ("Accused Instrumentality")
	https://datatracker.ietf.org/doc/html/rfc8216

Preliminary charts based on best available information

	AUDIO The value is a quoted-string. It MUST match the value of the GROUP-ID attribute of an EXT-X-MEDIA tag elsewhere in the Master Playlist whose TYPE attribute is AUDIO. It indicates the set of audio Renditions that SHOULD be used when playing the presentation. See Section 4.3.4.2.1. The AUDIO attribute is OPTIONAL. VIDEO The value is a quoted-string. It MUST match the value of the GROUP-ID attribute of an EXT-X-MEDIA tag elsewhere in the Master Playlist whose TYPE attribute is VIDEO. It indicates the set of video Renditions that SHOULD be used when playing the presentation. See Section 4.3.4.2.1. The VIDEO attribute is OPTIONAL. s & May Informational [Page 31] 216 HTTP Live Streaming August 2017 SUBTITLES The value is a quoted-string. It MUST match the value of the GROUP-ID attribute of an EXT-X-MEDIA tag elsewhere in the Master Playlist whose TYPE attribute is SUBTITLES. It indicates the set of subtitle Renditions that can be used when playing the presentation. See Section 4.3.4.2.1. The SUBTITLES attribute is OPTIONAL.

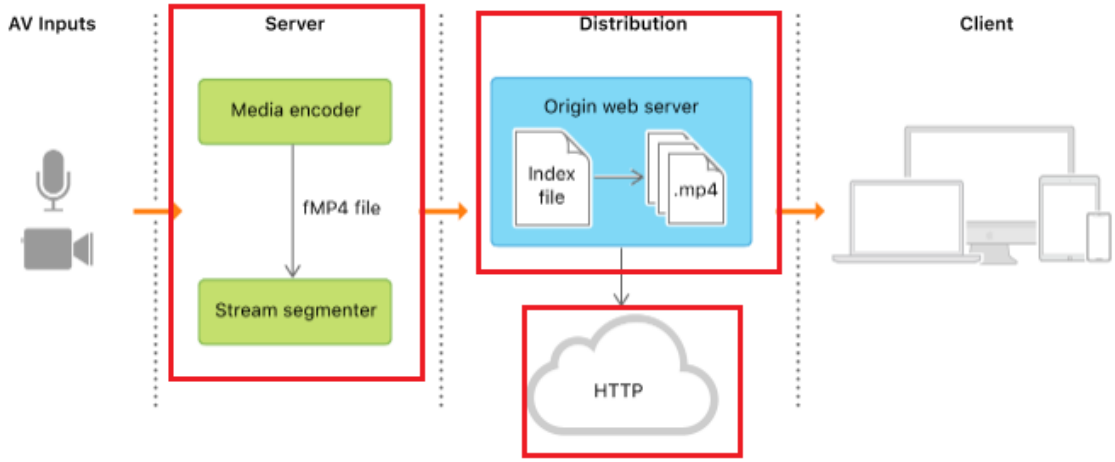
NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

US7848328	Bloomberg ("Accused Instrumentality")
	https://datatracker.ietf.org/doc/html/rfc8216
and forwarding the packet streams for transmission in a transmission channel,	The accused standard discloses forwarding the packet streams (e.g., m3u8 data packet stream) for transmission in a transmission channel (e.g., wired/wireless transmission).  https://martech.zone/http-live-streaming-player-features/

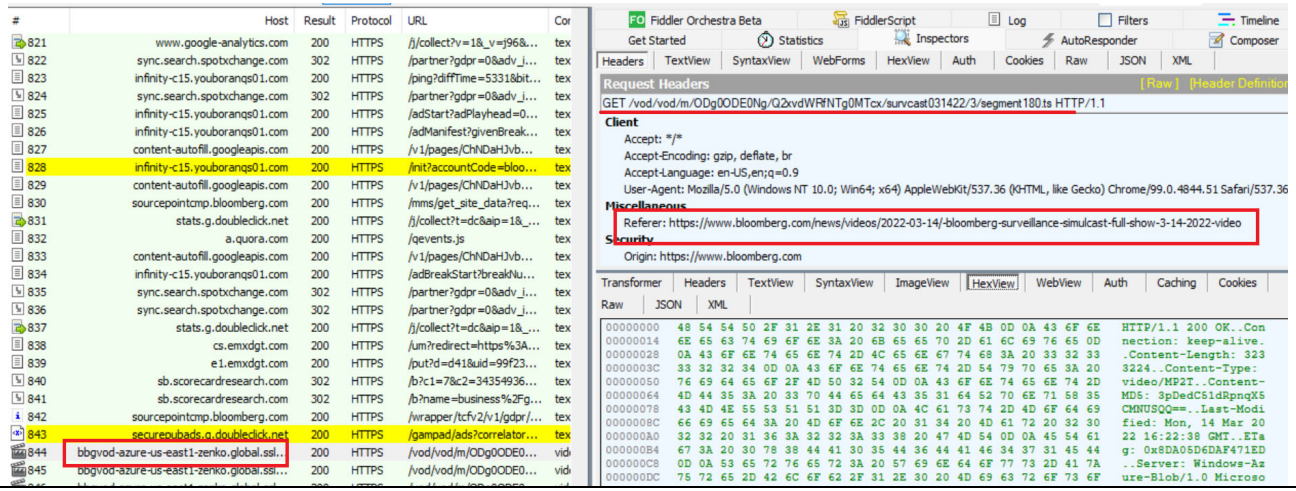
NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

US7848328	Bloomberg ("Accused Instrumentality")
	HLS supports the following: • Live broadcasts and prerecorded content (video on demand, or *VOD*) • Multiple alternate streams at different bit rates • Intelligent switching of streams in response to network bandwidth changes • Media encryption and user authentication The following figure shows the components of an HTTP Live Stream.  https://developer.apple.com/documentation/http_live_streaming

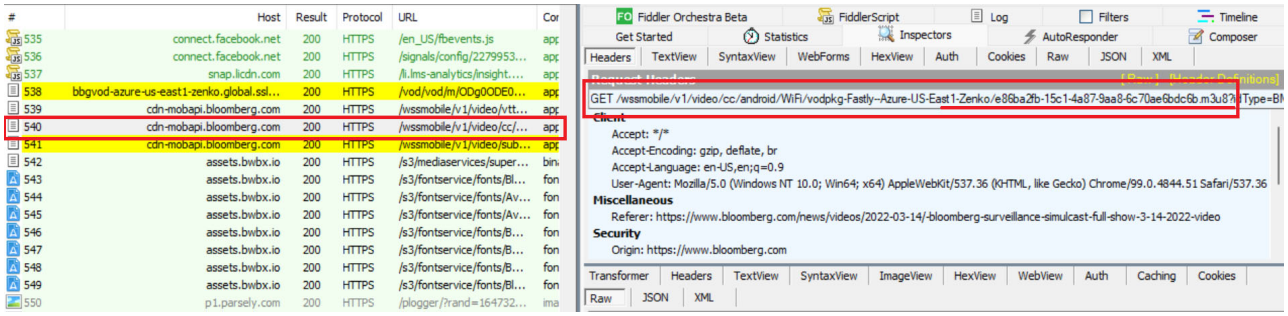
NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

US7848328	Bloomberg ("Accused Instrumentality")
and wherein the mapping further comprises assigning a specific value to each component for a predefined field of a packet according to a second communication protocol, the specific value distinguishing the component from other components, and	The accused standard discloses wherein the mapping further comprises assigning a specific value (e.g., value corresponding to different media stream) to each component for a predefined field of a packet (e.g., segment info) according to a second communication protocol (e.g., HTTP/Hypertext transfer protocol), the specific value (e.g., value corresponding to different media stream) distinguishing the component from other components. As shown below, the accused standard provides m3u8 index file with multiple media playlists. Each media playlist has many representations, wherein every representation has many segments, these segments contains media information of each conversion corresponding to that media playlist. The accused standard provides each segment having information related to a particular HTTP based uniform resource locator for getting a media stream from that particular address. For the video segment shown below, the base URL is https://bbgvod-azure-us-east1-zenko.global.ssl.fastly.net and the specific value is "vod/vod/m/ODg0ODE0Ng/Q2xvdWRfNTg0MTcx/survcast031422/3/segment180.ts " (http based). 

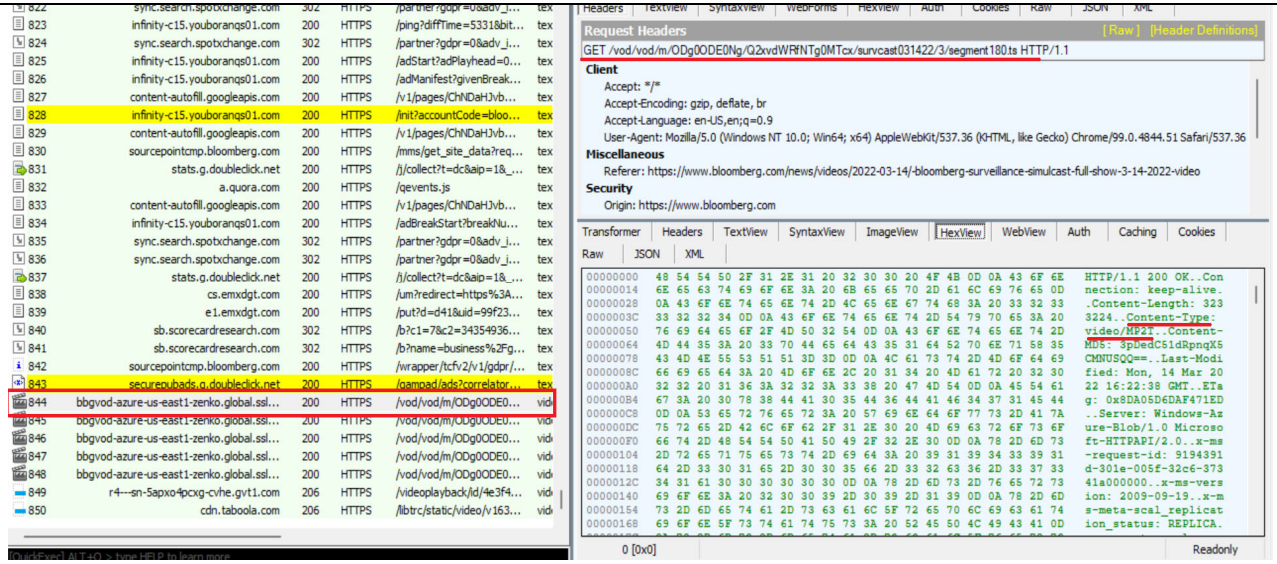
NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

US7848328	Bloomberg ("Accused Instrumentality")
	Source: Packet capture by Fiddler tool  *Source: Packet capture by Fiddler tool*

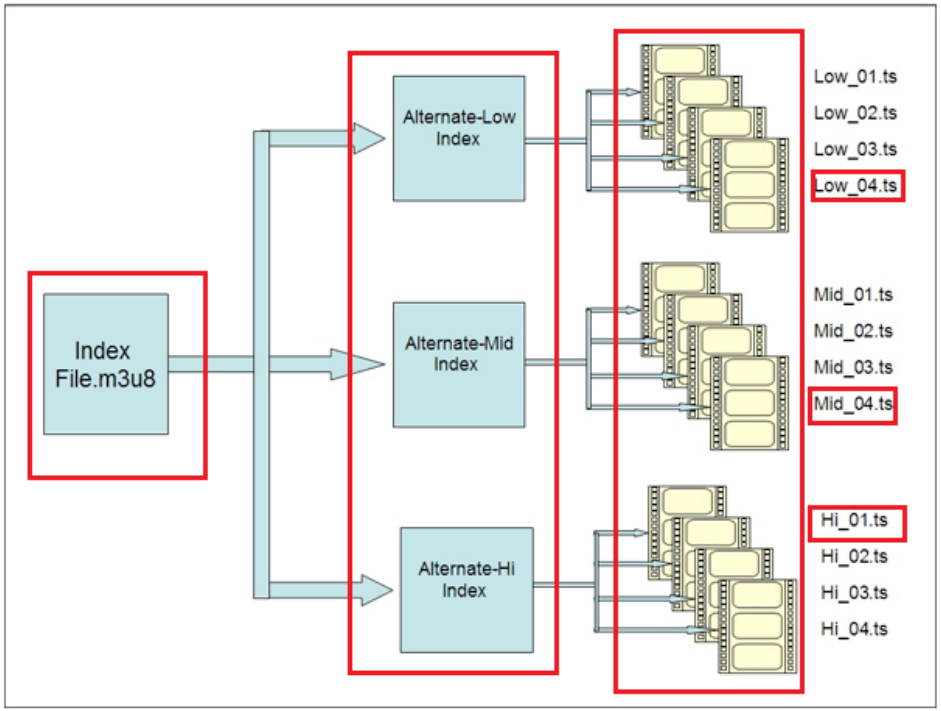
NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

US7848328	Bloomberg ("Accused Instrumentality")
	 *Source: Packet capture by Fiddler tool*

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

US7848328	Bloomberg ("Accused Instrumentality")
	 *Figure 1. HLS uses multiple encoded files with index files directing the player to different streams and chunks of audio/video data within those streams.* https://www.streamingmedia.com/Articles/Editorial/What-Is-.../What-Is-HLS-(HTTP-Live-Streaming)-78221.aspx?utm_source=related_articles&utm_medium=gutenberg&utm_campaign=editors_selection

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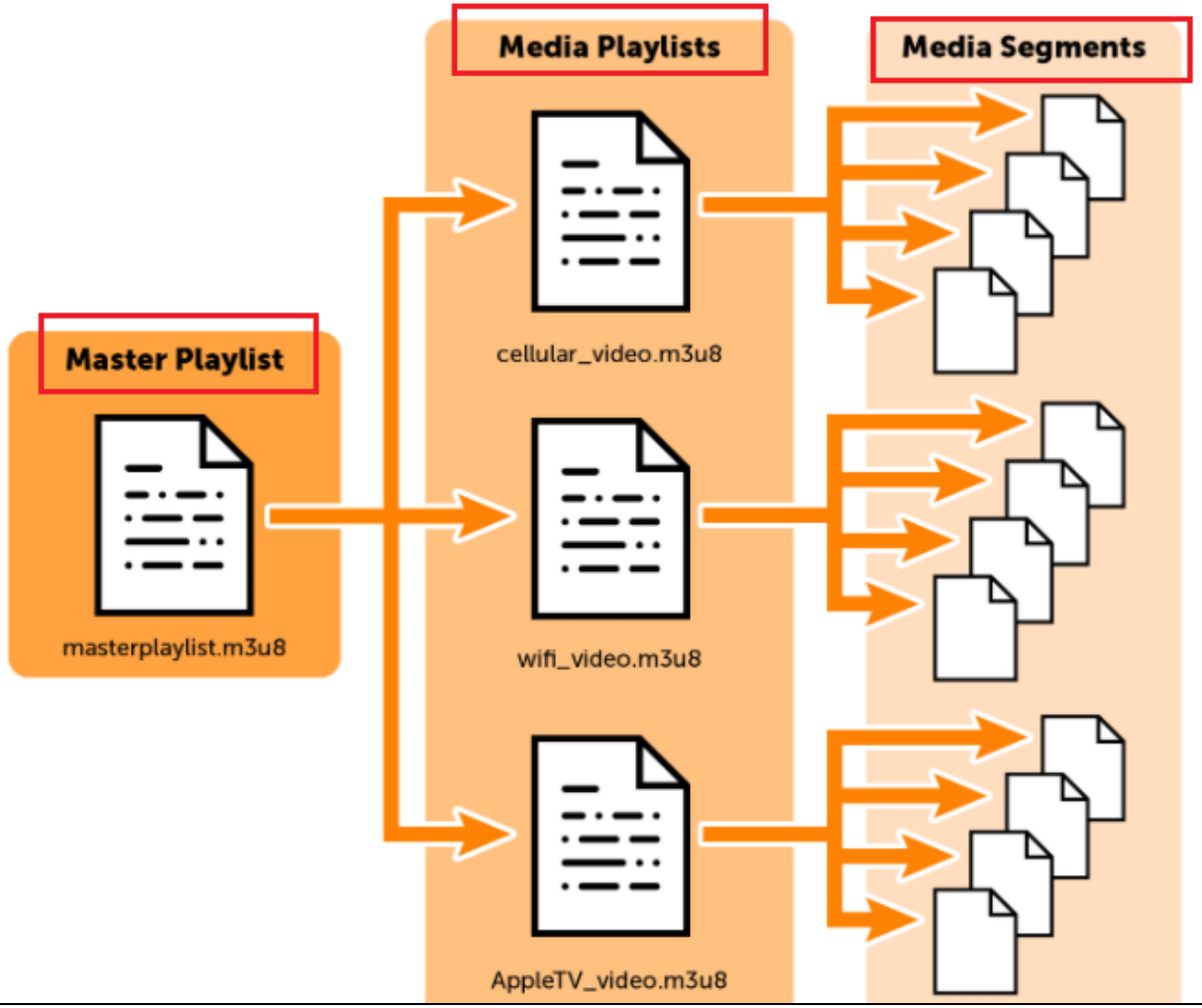
Preliminary charts based on best available information

US7848328	Bloomberg ("Accused Instrumentality")
	

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Preliminary charts based on best available information

US7848328	Bloomberg ("Accused Instrumentality")
	https://www.wowza.com/blog/hls-streaming-protocol

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US7848328	Bloomberg ("Accused Instrumentality")
	8.3. Playlist with Encrypted Media Segments #EXTM3U #EXT-X-VERSION:3 #EXT-X-MEDIA-SEQUENCE:7794 #EXT-X-TARGETDURATION:15 #EXT-X-KEY:METHOD=AES-128,URI="https://priv.example.com/key.php?r=52" #EXTINF:2.833, http://media.example.com/fileSequence52-A.ts #EXTINF:15.0, http://media.example.com/fileSequence52-B.ts #EXTINF:13.333, http://media.example.com/fileSequence52-C.ts #EXT-X-KEY:METHOD=AES-128,URI="https://priv.example.com/key.php?r=53" #EXTINF:15.0, http://media.example.com/fileSequence53-A.ts **8.4. Master Playlist** #EXTM3U #EXT-X-STREAM-INF:BANDWIDTH=1280000,AVERAGE-BANDWIDTH=1000000 http://example.com/low.m3u8 #EXT-X-STREAM-INF:BANDWIDTH=2560000,AVERAGE-BANDWIDTH=2000000 http://example.com/mid.m3u8 #EXT-X-STREAM-INF:BANDWIDTH=7680000,AVERAGE-BANDWIDTH=6000000 http://example.com/hi.m3u8 #EXT-X-STREAM-INF:BANDWIDTH=65000,CODECS="mp4a.40.5" http://example.com/audio-only.m3u8

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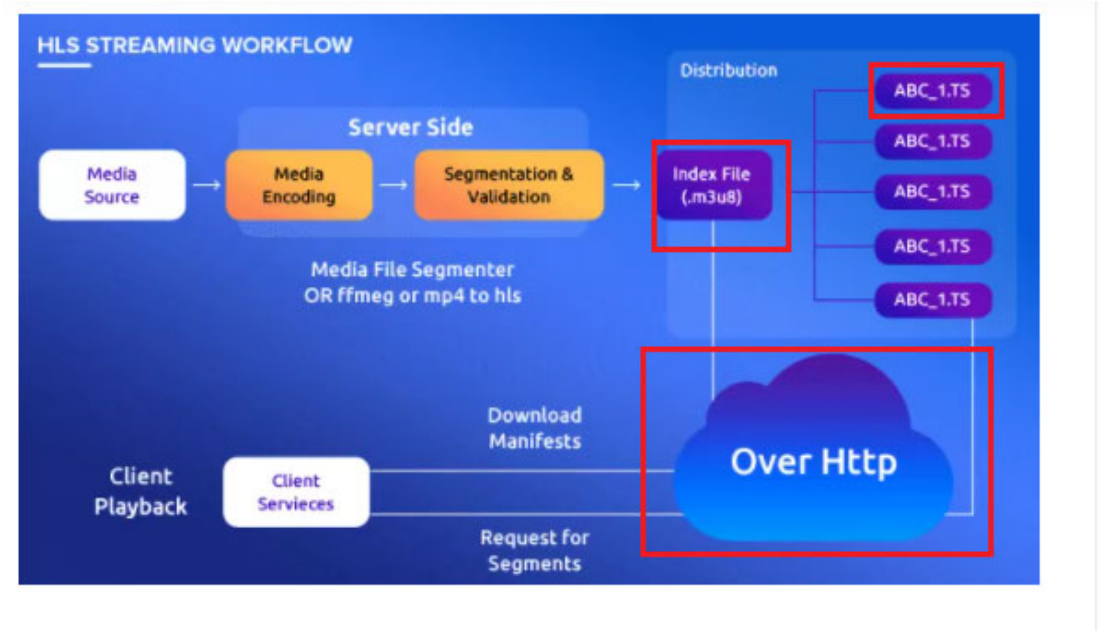
Preliminary charts based on best available information

US7848328	Bloomberg ("Accused Instrumentality")
	https://datatracker.ietf.org/doc/html/rfc8216  https://martech.zone/http-live-streaming-player-features/
the encapsulating comprises encapsulating the packet streams according to one or more	The accused standard discloses encapsulating comprises encapsulating the packet streams (e.g., data packets in m3u8 file) according to one or more lower layer protocols without encapsulating the packet streams (e.g., data packets in m3u8) according to the second communication protocol (e.g. HTTP Protocol). Further as explained below, the packet streams are encapsulated according to one or more lower layer protocols (e.g., network layer/MAC layer/physical layer) of the device transmitting the packet streams. Since, the packet streams are obtained by TCP encapsulation of data streams and the HTTP protocol doesn't reside beneath the

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

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US7848328	Bloomberg ("Accused Instrumentality")
lower layer protocols without encapsulating the packet streams according to the second communication protocol.	TCP layer, the further encapsulation doesn't comprise encapsulation using HTTP protocol (once TCP encapsulation has been executed). In any communication system, when a sender prepares data for sending from its physical interface (e.g., wired/wireless interface of the server/machine), the process of entire "data formulation" or "data construction" has multiple steps, all steps (if they are present) are associated with one layer of OSI model (it's a model which every communication system follows, some specification communication schemes may have lower number of layers (because multiple layers of OSI can be combined into one for those cases). Two lower level layers—data link layer and physical layers are invariably present in any communication system. They are the lowest two layers. They reside beneath the TCP layer. Data link layer ensure error free communication whereas the physical layer processes the data so that it can be sent using the actual medium of communication (e.g., modulation and formatting in wireless/wired communication system)

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

US7848328	Bloomberg ("Accused Instrumentality")
	Does HLS use TCP or UDP as its transport protocol? TCP and UDP are transport protocols, meaning they are responsible for delivering content over the Internet. TCP tends to deliver data more reliably than UDP, but the latter is much faster, even though some data may be lost in transit. Because UDP is faster, some streaming protocols use UDP instead of TCP. HLS, however, uses TCP. This is for several reasons: 1. HLS is over HTTP, and the HTTP protocol is built for use with TCP (with some exceptions). 2. The modern Internet is more reliable and more efficient than it was when streaming was first developed. In many parts of the world today, user connectivity has vastly improved, especially for mobile connections. As a result, users have enough bandwidth to support the delivery of every video frame. 3. Adaptive bitrate streaming helps compensate for the potentially slower data delivery of TCP. https://www.cloudflare.com/learning/video/what-is-http-live-streaming/

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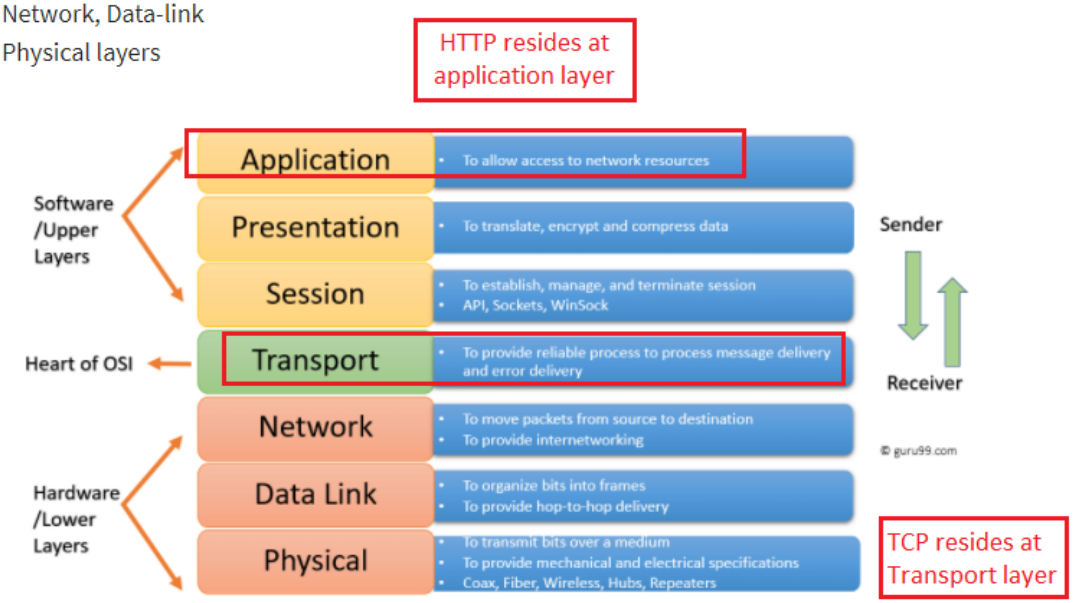
Preliminary charts based on best available information

US7848328	Bloomberg ("Accused Instrumentality")
	HyperText Transfer Protocol (*HTTP*) The HyperText Transfer Protocol, or *HTTP*, must be the most widely used Application layer protocol in the world today. It forms the basis of what most people understand the Internet to be—the World Wide Web. Its purpose is to provide a lightweight protocol for the retrieval of HyperText Markup Language (*HTML*) and other documents from Web sites throughout the Internet. Each time you open a Web browser to surf the Internet, you are using *HTTP* over *TCP/IP*. *HTTP* was first ratified in the early 1990s and has been through three main iterations: • **HTTP/0.9:** A simplistic first implementation of the protocol that only supported the option to get a Web page. • **HTTP/1.0:** Ratified by the *IETF* as RFC 1945 in 1996. This version added many supplemental data fields, known as *headers* to the specification. This allowed for other information passing between the client and server, alongside the request and consequent page. • **HTTP/1.1:** Defined in RFC 2068 by the *IETF*, version 1.1 implemented a number of improvements over and above the 1.0 specification. One of the main improvements of 1.1 over 1.0 was the implementation of techniques such as persistent *TCP* connections, pipelining, and cache control to improve performance within *HTTP*-based applications. https://www.informit.com/articles/article.aspx?p=169578

NIMITZ TECHNOLOGIES LLC CLAIM CHARTS RE PAT. 7,848,328

Preliminary charts based on best available information

US7848328	Bloomberg ("Accused Instrumentality")
	Upper and Lower layers further divide network architecture into seven different layers as below • Application • Presentation • Session • Transport • Network, Data-link • Physical layers  Network Layers Diagram https://www.guru99.com/layers-of-osi-model.html https://www.cloudflare.com/learning/ddos/glossary/open-systems-interconnection-model-osi/

IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF DELAWARE

STANDING ORDER REGARDING DISCLOSURE STATEMENTS
REQUIRED BY FEDERAL RULE OF CIVIL PROCEDURE 7.1

At Wilmington on this Eighteenth day of April in 2022, it is HEREBY ORDERED in all cases assigned to Judge Connolly where a party is a nongovernmental joint venture, limited liability corporation, partnership, or limited liability partnership, that the party must include in its disclosure statement filed pursuant to Federal Rule of Civil Procedure 7.1 the name of every owner, member, and partner of the party, proceeding up the chain of ownership until the name of every individual and corporation with a direct or indirect interest in the party has been identified.

John F. Connolly
Chief Judge

IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF DELAWARE

STANDING ORDER REGARDING
THIRD-PARTY LITIGATION FUNDING ARRANGEMENTS

At Wilmington on this Eighteenth day of April in 2022, it is HEREBY ORDERED in all cases assigned to Chief Judge Connolly where a party has made arrangements to receive from a person or entity that is not a party (a "Third-Party Funder") funding for some or all of the party's attorney fees and/or expenses to litigate this action on a non-recourse basis in exchange for (1) a financial interest that is contingent upon the results of the litigation or (2) a non-monetary result that is not in the nature of a personal loan, bank loan, or insurance:

1. Within the later of 45 days of this Order or 30 days of the filing of an initial pleading or transfer of the matter to this District, including the removal of a state action, the party receiving such funding shall file a statement (separate from any pleading) containing the following information:

a. The identity, address, and, if a legal entity, place of formation of the Third-Party Funder(s);

b. Whether any Third-Party Funder's approval is necessary for litigation or settlement decisions in the action, and if the answer is in the

affirmative, the nature of the terms and conditions relating to that approval; and

c. A brief description of the nature of the financial interest of the Third-Party Funder(s).

2. Parties may seek additional discovery of the terms of a party's arrangement with any Third-Party Funder upon a showing that the Third-Party Funder has authority to make material litigation decisions or settlement decisions, the interests of any funded parties or the class (if applicable) are not being promoted or protected by the arrangement, conflicts of interest exist as a result of the arrangement, or other such good cause exists.

3. Nothing herein precludes the Court from ordering such other relief as may be appropriate.

Chief Judge

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

NIMITZ TECHNOLOGIES LLC, **Plaintiff,** **v.** **CNET MEDIA, INC.,** **Defendant.**	**Case No. 1:21-cv-01247-CFC**

AMENDED RULE 7.1 CORPORATE DISCLOSURE STATEMENT

Plaintiff Nimitz Technologies LLC, by and through the undersigned counsel, states that it is a private entity and that no public entity holds any percentage of interest in the Plaintiff.

The sole owner and member of Nimitz Technologies LLC is Mark Hall, an individual.

To avoid any misunderstanding, Plaintiff understands that the Court's Standing Order Regarding Disclosure Statements Required By Federal Rule of Civil Procedure 7.1 requires parties to identify direct or indirect ownership interest, and does not require disclosure of entities who may have a financial interest in the outcome of the litigation (such as for example counsel contingency arrangements).

Dated: May 24, 2022 Respectfully submitted by:

/s/ George Pazuniak
George Pazuniak (#478)
O'Kelly & O'Rourke, LLC
824 N. Market Street
Suite 1001A
Wilmington, DE 19801
(302) 478-4230
gp@del-iplaw.com

Attorney for Plaintiff Nimitz Technologies LLC

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

NIMITZ TECHNOLOGIES LLC, **Plaintiff,** **v.** **CNET MEDIA, INC.,** **Defendant.**	**Case No. 1:21-cv-01247-CFC**

STATEMENT IN RESPONSE TO THE COURT'S STANDING ORDER REGARDING THIRD-PARTY LITIGATION FUNDING ARRANGEMENTS

Plaintiff Nimitz Technologies LLC states that Plaintiff has not entered into any arrangement with a Third-Party Funder, as defined in the Court's Standing Order Regarding Third-Party Litigation Funding Arrangements.

Dated: May 25, 2022

Respectfully submitted by:

/s/ George Pazuniak
George Pazuniak (#478)
O'Kelly & O'Rourke, LLC
824 N. Market Street
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Wilmington, DE 19801
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Attorney for Plaintiff Nimitz Technologies LLC

IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF DELAWARE

NIMITZ TECHNOLOGIES LLC, Plaintiff, v. CNET MEDIA, INC., Defendant.	)))))))))	Civ. No. 21-1247-CFC
NIMITZ TECHNOLOGIES LLC, Plaintiff, v. BUZZFEED, INC., Defendant.	)))))))))	Civ. No. 21-1362-CFC
NIMITZ TECHNOLOGIES LLC, Plaintiff, v. IMAGINE LEARNING, INC., Defendant.	)))))))))	Civ. No. 21-1855-CFC

NIMITZ TECHNOLOGIES LLC,	)	
	)	
Plaintiff,	)	
	)	
v.	)	Civ. No. 22-413-CFC
	)	
BLOOMBERG L.P.,	)	
	)	
Defendant.	)	

MEMORANDUM ORDER

Whereas the amended corporate disclosure forms Plaintiff filed in the above-captioned cases identify Mark Hall as Plaintiff's owner; and

Whereas the Court has concerns about whether Plaintiff has complied with the Court's standing order regarding third-party litigation funding;

NOW THEREFORE, at Wilmington this Thirteenth day of September in 2022, it is HEREBY ORDERED that:

1. The Court will hold on November 4, 2022 at 10:00 a.m. an evidentiary hearing to determine whether Plaintiff has complied with the Court's standing order regarding third-party litigation funding;
2. Mark Hall shall attend the hearing in person.

CHIEF JUDGE

IN THE UNITED STATES DISTRICT COURT

FOR THE DISTRICT OF DELAWARE

LAMPLIGHT LICENSING, LLC,
Plaintiff,
v.
ABB, Inc.,
Defendant.
C.A. No. 22-418-CFC

LAMPLIGHT LICENSING, LLC,
Plaintiff,
v.
INGRAM MICRO, Inc.,
Defendant.
C.A. No. 22-1017-CFC

NIMITZ TECHNOLOGIES LLC,
Plaintiff,
v.
CNET MEDIA, INC.,
Defendant.
C.A. No. 21-1247-CFC

NIMITZ TECHNOLOGIES LLC,
Plaintiff,
v.
BUZZFEED, INC.,
Defendant.
C.A. No. 21-1362-CFC

NIMITZ TECHNOLOGIES LLC,
Plaintiff,
v.
IMAGINE LEARNING LLC,
Defendant.
C.A. No. 21-1855-CFC

MELLACONIC IP, LLC,
Plaintiff,
v.
TIMECLOCK PLUS, LLC,
Defendant.
C.A. No. 22-244-CFC

MELLACONIC IP, LLC,
Plaintiff,
v.
DEPUTY, INC.,
Defendant.
C.A. No. 22-541-CFC

Friday, November 4, 2022
10:05 a.m.
Evidentiary Hearing

844 King Street
Wilmington, Delaware

BEFORE: THE HONORABLE COLM F. CONNOLLY
United States District Court Judge

APPEARANCES:

CHONG LAW FIRM PA
BY: JIMMY CHONG, ESQ.
Counsel for the Plaintiff Lamplight Licensing, LLC annd Mellaconic IP, LLC

O'KELLY & O'ROURKE, LLC
BY: GEORGE PAZUNIAK, ESQ.
BY: GERARD M. O'ROURKE, ESQ.
Counsel for the Plaintiff Nimitz Technologies

SAND, SEBOLT & WERNOW CO., LPA
BY: HOWARD WERNOW, ESQ.
Counsel for the Plaintiff Mellaconic IP, LLC

FISH & RICHARDSON, P.C.
BY: JEREMY ANDERSON, ESQ.
BY: LANCE WYATT, ESQ.
Counsel for the Defendant CNET, Buzzfeed and Imagine Learning

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P R O C E E D I N G S

(Proceedings commenced in the courtroom beginning at 10:05 a.m.)

THE COURT: All right. Please be seated.

All right. Good morning. We have a number of cases at issue here today. Let's begin with Lamplight Licensing.

Let's talk about that case, Mr. Chong.

MR. CHONG: Good morning, Your Honor.

THE COURT: Good morning.

Let me just get my papers together.

So the issue that prompted my order convening this hearing in this case had to do with concerns about whether there had been compliance with the third-party litigation disclosure.

And I think it's -- you can have a seat, Mr. Chong. It's going to take a little time to walk through the record because, unfortunately, I think we have to, because I set this hearing date at the request of you on behalf of Sally Pugal.

Is she here today?

MR. CHONG: She is not, Your Honor.

THE COURT: Okay. Now, she's the owner, the

exclusive owner, of the plaintiff, right?

MR. CHONG: That's correct, Your Honor.

THE COURT: All right. Why don't you just come forward. What I need, then, is to get some background to understand some things about Lamplight and why we are where we are and why Ms. Pugal is not here.

MR. CHONG: Yes, Your Honor. Just to start why she's not here, I had filed a letter earlier this week and yesterday. So I was eventually able to speak with Ms. Pugal last night. And she had sent me over some of the medical records that she was referring to in her declaration, and I have brought them.

And on October 19, she had gone in for a CT of her abdomen and she had discovered a lesion, which -- I'm not a doctor. It states that she needs to get an MRI because of malignancy, and she feels that she has stomach cancer. And she is terrified of her mortality.

And she essentially cut herself off from the world. She didn't go to work. We actually had done investigations, sent people to her job, and she hadn't been to work. And she wasn't answering her door when we went to her house because we wanted -- after October 21 -- she first informed us on October 21 that she had --

THE COURT: Well, when you say she -- here's what you said in your letter of October 31st. And

actually -- but let's step back.

MR. CHONG: Okay.

THE COURT: So on October 12th, you wrote that she's employed as an office manager at a surgery center. This is DI-17. At that point, we had set a November 10 hearing, and you advised in the letter that because of employment issue, that required her to be present at the surgery center on November 10.

You respectfully request that the date be moved to another date, and specifically, November 4. So we did that. Now, that's on October 12. Fair enough.

So now you're saying on October 17, you've got a medical record for that date which reflects some kind of testing?

MR. CHONG: October 19, yes, Your Honor.

THE COURT: October 19.

MR. CHONG: So we --

THE COURT: And then -- sorry, just to finish. So then you write on October 31. You say, "On October 21, 2022, I was first advised by Ms. Pugal's representative."

Who was her representative?

MR. CHONG: Okay. So let's start. So Ms. Pugal is -- representative is a company called Mavexar, who handles -- who I have been working with, that handles a lot of, you know, is -- basically, speaks on her

behalf as her representative.

THE COURT: So, I'm sorry. How do you spell the name of that entity?

MR. CHONG: Oh. M-A-V-E-X-A-R, I believe. Mavexar.

THE COURT: Okay. So what is Mavexar?

MR. CHONG: My understanding, Mavexar is the -- M-A-V-E-X-A-R -- is the consulting company that Ms. Pugal has retained in regards to Lamplight.

THE COURT: Okay. Now, your understanding is that Ms. Pugal retained this consulting company. How do you have that understanding?

MR. CHONG: I've been working with Mavexar in -- with the Lamplight patents. So when I contact Lamplight, I contact Mavexar who --

THE COURT: Who do you speak with at Mavexar?

MR. CHONG: So typically, it's going to be a Papuol Chaudhari.

THE COURT: How do you spell that name?

MR. CHONG: P-A-P-O-O-L, C-H-A-U-D-R-H-I -- D-R-I.

THE COURT: Okay. So typically, that's the person you deal -- do you deal with anybody else from Mavexar?

MR. CHONG: Yes. I also speak with a

Brandon LaPray.

THE COURT: Brandon who?

MR. CHONG: LaPray.

THE COURT: How do you spell that name?

MR. CHONG: L-A-P-R-A-Y.

THE COURT: Is that person related to Lori LaPray?

MR. CHONG: Yes, I believe so.

THE COURT: Do you know how they're related?

MR. CHONG: I believe that they're married. Yes.

THE COURT: Okay. But the two people you deal with from Mavexar are Papuol Chaudhari? Is he of the Chaudhari Law Firm?

MR. CHONG: I work with him through Mavexar. He may have had that law firm. He may -- but I deal with him through Mavexar. But I believe he does have his own law firm. Chaudhari Law Firm, yes.

THE COURT: But you deal with him through Mavexar.

MR. CHONG: That is correct.

THE COURT: And what is Mavexar exactly? You said it's a consulting firm. What do you mean by -- I mean, that's a very broad, you know, term.

What do you mean it's a consulting firm? What

does it do?

MR. CHONG: So my understanding is that they help Lamplight, advise them on, you know, handling patents. But I -- you know --

THE COURT: Now, Lamplight, again, is exclusively owned by Ms. Pugal, correct?

MR. CHONG: That is correct.

THE COURT: Okay.

All right. So let's just back up. So how did you come -- you represent Lamplight, correct?

MR. CHONG: That is correct.

THE COURT: And you're the only counsel of record for Lamplight in these two actions that we're talking about, correct?

MR. CHONG: That is correct.

THE COURT: All right. How did you come to be the lawyer representing Lamplight? How did you first hear about Lamplight? Who talked to you from Lamplight because -- for instance, when did you first speak with Ms. Pugal?

MR. CHONG: When I first speak with Ms. Pugal, I don't have that in my -- off the top of my head.

THE COURT: Have you ever spoken with Ms. Pugal?

MR. CHONG: Yes.

THE COURT: Have you ever met her in person?

MR. CHONG: No.

THE COURT: Had you ever spoken with her before you filed these cases?

MR. CHONG: I did not speak with her before I filed these cases. Mavexar had reached out to me on her behalf. And we had communicated through Mavexar, and had our fee agreement, and so forth, signed as Mavexar was acting as a representative of Ms. Pugal.

THE COURT: So you are representing an entity that's exclusively owned by somebody, and you signed a retention letter with whom? With Lamplight?

MR. CHONG: Yes.

THE COURT: And you had never met the owner of Lamplight when you signed the retention letter, is what you're telling me?

MR. CHONG: That is correct.

THE COURT: And, in fact, it sounds like you never had any discussions with the owner of Lamplight when you signed the retention letter with Lamplight.

MR. CHONG: I did not speak with her directly. I spoke with the representatives.

THE COURT: Her representative who's not an employee of Lamplight. This is a consulting firm, a separate entity; is that right?

MR. CHONG: That is correct.

THE COURT: Okay. It's Mavexar.

MR. CHONG: That is correct.

THE COURT: All right. Do you know what the rules of ethics are about having a relationship with a client that is initiated by a third party?

I'm trying to think of any other context, so help me out. I'm just trying to think what rules would be applicable. I'm not judging. I'm asking questions here.

But I'm trying to understand how you end up in an attorney-client relationship with an LLC that is exclusively owned by an individual that you have never met and you've had no conversations with an employee of the LLC, and yet you end up in an attorney-client relationship with the LLC.

Do you know what rules would be implicated by that?

MR. CHONG: So Your Honor, I have to stop and think.

THE COURT: How did you run conflicts? I mean, I'm just trying to think how you would run conflicts when you're dealing with a third party that's negotiating with you to set up an attorney-client relationship with somebody else, another entity.

I'm trying to figure out how you run conflicts.

Did you run conflicts?

MR. CHONG: Yes, Your Honor.

THE COURT: And it's all based on representations from a third party, not from the client, correct?

MR. CHONG: That is correct, Your Honor.

THE COURT: All right.

So when did you enter the relationship with Lamplight? Ballpark.

MR. CHONG: I would have to find my fee agreement.

THE COURT: Where is Lamplight located?

MR. CHONG: In Texas.

THE COURT: Where?

MR. CHONG: In -- let me -- just so I don't -- Austin, Texas.

THE COURT: So the complaint that was filed -- give me one second here.

The complaint that was filed in the 1017 action -- you familiar with that, right? That's one of the actions we've got here.

MR. CHONG: Yes.

THE COURT: So it states, in Paragraph 1, that "Plaintiff Lamplight Licensing, LLC, is a limited liability company with its principle place of business at

3571 Far West Boulevard, Number 3144, Austin, Texas."

Now, as far as my chambers can tell, just from quick research, that's a Post Office or FedEx drop. There's no Lamplight Licensing, LLC, located at their address.

Do you know anything about that?

MR. CHONG: No. That is the address that was provided in the paperwork that was provided to me with the -- when I did -- looked at the Certificate of Formation LLC through the Secretary of State of Texas, that was the address that was listed.

And I'm just going through, just to confirm, that that's -- in all the paperwork that was provided to me, that is the address.

THE COURT: When you say "all the paperwork," who provided you the paperwork, then?

MR. CHONG: Lamplight.

THE COURT: When you say "Lamplight," it doesn't -- you've never had any contact with Lamplight when you initiated this action, I thought you said.

MR. CHONG: Well, Lamplight -- the representative of Lamplight. So I was -- you know, if you go through -- this right here, I'm looking at, is from the Secretary of State, a public document that has 37 -- I mean, 3571 Far West Boulevard, 3144 Austin, Texas, as the

address.

And then, again, on this Office of Secretary of State filing Lamplight, LLC. It showed the document, you know, with the address of 3571 Far West Boulevard, 3144 --

THE COURT: Do you have any reason to believe that that's anything other than a post office or a carrier address, like a FedEx or other organization?

MR. CHONG: No. I mean, with all my clients, when they provide me an address, that is the address that is given. You know, I have many clients that provide me their address. And, I mean, it's confirmed through these documents, it's their address.

THE COURT: Right. Now, you -- this complaint you filed in this case, is dated July 31 of 2022.

Now, you filed, actually, a case in Texas for Lamplight on May 31, 2022; is that right? Lamplight against Ametek, Inc.?

MR. CHONG: That is correct.

THE COURT: And in Paragraph 1 of the complaint you filed in that case, you wrote that "Plaintiff Lamplight, LLC, is a corporation organized and existing under the law of Texas that maintains its principle place of business" -- not its postal address -- "at 9901 Brodie Lane, Suite 160, PMB 925, in Austin, Texas."

Now, that address, there's no suite there,

right? That's actually a mailbox at the Mail & More on Brodie business, right?

MR. CHONG: I don't have that document in front of me, but I trust your reading. Yes.

THE COURT: So did you have any reason to believe somebody notified you that the principle place of business of Lamplight had changed between May and July of 2022?

MR. CHONG: I do not have that file with me. I would have to double-check. Just to -- and you're emphasizing that the P.O. Box -- or the suite number, is that of issue?

THE COURT: Well, if you're signing a pleading in my court and you're saying that, first of all, something had a principle place of business --

MR. CHONG: Yes.

THE COURT: -- that's certainly, I think, to be a truthful statement, would have to be disclosing the identity of a physical location or activity of the business as being conducted, not a post office box.

MR. CHONG: Understood.

THE COURT: And if you were representing in a pleading in my court that a P.O. Box was a suite, that would have some questions to be addressed --

MR. CHONG: I understand. Okay.

THE COURT: -- because that's misleading. I prosecuted fraud cases as a prosecutor against folks that engaged in fraudulent schemes, you know, telemarketing schemes, in part, by using suite numbers for what were really P.O. Boxes.

MR. CHONG: I am not involved with any of those fraud cases, that's why I questioned it. I did not know that's where you were going. I have not been involved with any fraud cases.

So this is, for me, I -- you know, this is P.O. -- to me, this represented as a -- as -- like my office is, you know, 2961 Centerville Road, you know, Suite 350 --

THE COURT: You probably have people there. It probably is a suite.

MR. CHONG: Yes, yes.

THE COURT: Right.

MR. CHONG: And that's -- that was my understanding, yes.

THE COURT: Right. So on your understanding, when you filed the complaint in Texas on May 31st, was that Lamplight had a suite at 9901 Brodie Lane, is that what you're saying?

MR. CHONG: Yes.

THE COURT: And then when you filed the

complaint in my case, the 1017 case two months later, you thought they had a principle place of business. That's a physical place, right? You thought it was at 3571 Far West Boulevard, Number 3144; is that right?

MR. CHONG: That is correct, yes.

THE COURT: And that's all based on representations made to you by whom?

MR. CHONG: By Mavexar, and through the state of Texas filings. There's filings with the state of Texas.

THE COURT: And you signed a retention letter. Let's start for this case, the 1017. Who signed it on behalf of Lamplight?

MR. CHONG: Ms. Pugal.

THE COURT: Okay.

MR. CHONG: And if I may, just -- we first started with why Ms. Pugal was not present -- is not present today. And if you wanted to explore that any further, I was presented medical records last night that I wanted to show the Court to -- you know, she does have some major medical issues going on, and I wanted to let the Court see those records.

THE COURT: Sure. You can hand them up. Go ahead. And since they're medical records, I don't plan on -- well, disclosing them, I guess. Actually, I don't

know what to say. You know, we've got to account for why this person decides to write a letter to the Court. And let's actually explore it. Right.

You couldn't get in touch with her?

MR. CHONG: I could not for -- from the August -- I'm sorry, October 24 until last night. And I, you know, inquired why. I was very upset.

And she had let me know that she has these medical issues and that she fears -- you know, she has something that is -- she's not -- you know, no offense to the Court, but this is not on her mind as of now. She wasn't in work last week. So I do believe she has a lot on her mind.

So I wanted to present these medical records to the Court, which all show that -- not all -- but, you know, represent that she had these findings shortly prior to October 21st.

THE COURT: Sure. Go ahead. Please hand them up. Hand them up.

MR. CHONG: And if you're looking at those records, Your Honor, I did highlight portions for you just so it's easy for you to see the date and see what is of concern for her.

THE COURT: Do you have your retention letter?

MR. CHONG: Yes, I do, Your Honor.

THE COURT: Do you want to hand that up?

So it's dated March 28 of this year.

MR. CHONG: That's correct, Your Honor.

THE COURT: It's signed by you and somebody who claims to be Sally Pugal.

MR. CHONG: That is correct, Your Honor.

THE COURT: All right. And had you met Ms. Pugal as of March 28, 2022?

MR. CHONG: I had not. I have not met with her personally, Your Honor. I spoke with her representatives.

THE COURT: Okay.

MR. CHONG: Well, in person. I've never met with her in person.

THE COURT: Right. And have you spoken with her prior to March 28, 2022?

MR. CHONG: I have not. I did not. Not at that time, no, Your Honor.

THE COURT: Had you exchanged e-mails with her as of March 28, 2022?

MR. CHONG: I did not, Your Honor.

THE COURT: How did you get this physical document, this attorney retainer agreement that's dated March 28, 2022?

MR. CHONG: With communications through Mavexar.

THE COURT: And in Paragraph 24 of this agreement, it says -- and it's in caps, capital letters, quote, "Client acknowledges that it was advised to retain independent legal counsel to represent client in connection with the negotiation and execution of this agreement, and with respect to the arbitration clause above. Client further acknowledges that it was advised that firm has a conflict of interest that prevents it from representing client in any way with respect to the negotiation and execution of this agreement and firm has not done so," unquote.

Do you see that language?

MR. CHONG: I do.

THE COURT: Since you never spoke with her, how did you advise Lamplight Licensing, which is the client, the only member of which is Ms. Pugal?

How did you actually advise Lamplight, LLC, to retain independent legal counsel to represent it in connection with the negotiation and execution of your retainer agreement?

MR. CHONG: That was advised through its representatives. So Mavexar was speaking on behalf of Ms. Pugal and handled the discussions. So I had discussed -- I had everything -- every discussion I've had was with Mavexar as if it was Lamplight.

THE COURT: Mavexar is not a law firm, correct?

MR. CHONG: That is correct.

THE COURT: Where is Mavexar located, if you know?

MR. CHONG: In Texas, Your Honor.

THE COURT: And so you're the only law firm that has represented Lamplight in connection with the 1017 case, correct?

MR. CHONG: That is correct, Your Honor, for the cases here in Delaware.

THE COURT: Okay. So the only patent that's alleged -- or that's asserted, I should say, in the 1017 case is the '393 patent, correct?

MR. CHONG: That is correct, Your Honor.

THE COURT: Tell me what the -- what does the '393 patent cover?

MR. CHONG: I haven't looked at it in quite some time, but it is -- it deals with conserving the battery life on phones. So if -- what it does is, it just gives a longer-lasting battery. So it deals with, just, battery backup. Just giving it, you know, more power to it.

So I don't have -- I haven't looked at that, actually, in quite some time. But that was the patent. The general patent is to -- that was the design of the

'393 patent. And if you want, I could --

THE COURT: Did you read it before you filed the complaint in this case?

MR. CHONG: Yes.

THE COURT: What is NWM in this agreement? Who does that refer to?

MR. CHONG: Where?

THE COURT: I'm seeing it on the bottom of Page 4. Because it's the first time I've seen the document, I'm trying to understand who NWM is.

Okay. Whosever phone went off, please put the sound off.

MR. CHONG: I'm sorry. What page was that on?

THE COURT: Page 4, Paragraph 10, at the bottom. "NWM will obtain written pre-approval from the client for any litigation expense expected to exceed $500."

MR. CHONG: NWM. I would have to -- because I remember negotiating this specific sentence. I don't know why NWM -- what I wanted -- because in this specific sentence, I wanted to make sure that I wasn't going to be burned on any costs that was over 500 -- $500. So I wanted to be sure that if it was over 500, the client would have to either pay upfront.

And then we got into the whole negotiation of,

you know, what's going to be reasonable costs and so forth. And I just can't recall what -- how NWM was -- I just remember, this was a sticking point for me, is that I didn't want to get caught with a 500-dollar -- any costs. You know, to pay it upfront and then all of the sudden, the client just disappears on me.

THE COURT: Right. But I guess what I'm trying to figure out is, so who's NWM?

Here's why, especially -- it causes me to ask you about it. The beginning of Paragraph 10, it says the following: "Client" -- now client is Lamplight, right?

MR. CHONG: Correct.

THE COURT: So it says, "Client agrees to pay within ten business days, all expenses reasonably incurred in connection with the enforcement of the client patents."

Do you see that?

MR. CHONG: Yes.

THE COURT: Now, those are -- it's supposed to pay -- the client is supposed to pay within ten business days all expenses to whom?

MR. CHONG: To my firm.

THE COURT: To your firm. Okay.

MR. CHONG: Yes.

THE COURT: Then it says, quote, "Firm" -- that would be you, correct?

MR. CHONG: Correct.

THE COURT: All right. And then it says, quote, "Firm or client will be reimbursed for all litigation expenses prior to distribution of the net cash sum regardless of whether the litigation expenses were incurred for the defendants corresponding to the gross cash sum," unquote.

Do you see that?

MR. CHONG: Yes.

THE COURT: So I'm trying to understand why this agreement is providing for reimbursement of litigation expenses to the client.

MR. CHONG: Well, if there is a cost that I found was too -- that I didn't want to take the risk on. So it goes to the -- back to the 500. If there was some -- like a huge cost.

Say, we go to trial and there's a cost that we -- I don't know how -- I just -- if there was a significant cost, I wanted the client to have to pay that. And then at -- if the case does resolve with the benefit, then the cost would go back -- you know, we account for that in the accounting.

But I -- this is where I just didn't want to get caught with these costs.

THE COURT: All right.

MR. CHONG: So I just --

THE COURT: But you don't know who NWM is? That makes sense to me, I think. But --

MR. CHONG: So there's --

THE COURT: So who's NWM? Who's deciding this? Who is deciding, in other words, how you're going to, or whether, really, you're going to have certain litigation expenses paid for?

MR. CHONG: You know what, I have to go back and look at my notes. Because that's something where we would determine together. We would have that discussion. I mean, I just know there's a lot of back and forth with this --

THE COURT: Well, let me ask you this: Is there any chance that NWM is Mavexar or some other third-party entity?

MR. CHONG: No. I would not have let them made that decision. That was -- I know I was going back and forth with them. And it was discussed --

THE COURT: And "them." Now, we're not talking Lamplight. The "them" here is Mavexar; is that right?

MR. CHONG: That is correct. They're speaking on behalf of Lamplight. So when I say "them" --

THE COURT: And they're not a lawyer. This is some consultant you're speaking with, on behalf of

Lamplight, correct?

MR. CHONG: That is correct. So Lamplight had retained them to speak on its behalf. So when I say "them," I refer to as Lamplight, because Mavexar is speaking on behalf of Lamplight.

And I would never -- this -- so we went through a lot of redlining on this and a lot of back and forth. And I need to figure out what we were thinking at that time.

THE COURT: Was Mavexar represented by a lawyer during the negotiations?

MR. CHONG: Mavexar?

THE COURT: Yes.

MR. CHONG: No. Mavexar did not have an attorney. Mavexar, I believe, had -- you know, some of them are attorneys. Like -- but Papuol is an attorney, however. But in speaking with them, they did not have an attorney representing them. They spoke on behalf of Mavexar as Mavexar, not as an attorney of Mavexar, if that makes sense.

THE COURT: And I just want to make sure, Mavexar, at no point, represented to you that it was employed by or was an owner in Lamplight.

MR. CHONG: They made it very clear that they were not an owner.

THE COURT: They were an independent entity?

MR. CHONG: That is correct. They were very clear that they were retained by Lamplight to -- for consultant services.

THE COURT: All right. So you execute this agreement with Ms. Pugal on or about March 28 of 2002. And at this point, you've never had any communications with her, correct?

MR. CHONG: That is correct.

THE COURT: All right.

All right. Then you file complaints in this case. And at the time that you filed the complaints in these cases, have you ever had communications with Ms. Pugal?

MR. CHONG: No, Your Honor.

THE COURT: Now...

MR. CHONG: Just to make clear, Your Honor, it was made clear to me, through, you know, this agreement, that Mavexar was the representative of Lamplight. That's my understanding, you know, the time. So --

THE COURT: Well, when you say "representative," let's be clear, they're -- you just told me they're not a law firm. They're an --

MR. CHONG: Correct.

THE COURT: They are an independent consulting

firm, correct?

MR. CHONG: Correct. That's -- so --

THE COURT: So you're having negotiations with them to ultimately consummate an attorney-client relationship with Lamplight, correct?

MR. CHONG: That is correct.

It's not like when I deal with my -- I'm trying to think of a -- so, you know, when I rent space, I don't deal with the -- you know, the business owner, I deal with the representative. And I've never, ever talked to my employer once -- I mean, not employer -- my landlord once. I mean, not -- yeah, the landlord/owner.

I've never had any communications -- I don't even know anyone that is part of the corporation. I just deal with the representative that they retained to -- we negotiate the leases. We -- everything, we work out.

So it's just -- it's the same --

THE COURT: Do you have an attorney-client relationship with your landlord?

MR. CHONG: I do not.

THE COURT: Okay. I didn't think so. I just wanted to make sure I understand. Now --

MR. CHONG: But under --

THE COURT: And incidentally, your conversations with the management company that deals with

your landlord, those are not privileged conversations, right, because they are a third party?

MR. CHONG: Well, so under Rule point 18(f), it permits an attorney to be engaged by a nonclient to represent a client with the client's consent.

THE COURT: So I'm just asking, is your -- are your conversations with your management company privileged in the context of your negotiations with your landlord?

MR. CHONG: I would have to think about that. I would have to do that analysis and think about that.

THE COURT: And you do not have an attorney-client relationship with Mavexar, do you?

MR. CHONG: I do not.

THE COURT: Do you know what the financial terms of Mavexar's relationship with Lamplight are?

MR. CHONG: I don't. That's something that they have worked out themselves.

THE COURT: So you don't have any knowledge?

MR. CHONG: I wasn't involved in that.

I do have some of the documents that they have with each other; however, I haven't gone through their percentages with each other, I have not. So -- but I do have an agreement between Lamplight and Mavexar.

THE COURT: And when did you obtain that?

MR. CHONG: I've had it for several months now.

I don't know the exact date.

THE COURT: Okay. Does it relate to this litigation?

MR. CHONG: Not directly to this litigation. It -- well, it just is a general agreement between Lamplight and Mavexar.

THE COURT: You want to hand it up or is something that -- I mean, I'm not --

MR. CHONG: Well --

THE COURT: Why don't you to hand it up at this point. I'm just trying to understand.

You brought it up in response to my question about your knowledge of the financial relationship and the terms that govern the relationship financially between Lamplight and Mavexar.

MR. CHONG: I don't -- since my client is not here, I don't feel that it's something that I am -- I would like to discuss it with my client before --

THE COURT: Well, you seem to have a hard time getting in touch with your client. Your client is Ms. Pugal, right?

MR. CHONG: That is correct. And for a week and a half, I did. And I was able to, I guess, speak with her last night. And, again, it's -- she was -- has a pretty serious illness and I think that's why she shut

down. And she wasn't even at work.

So I believe that should cease, you know, unless the diagnoses get worse. I don't know. I know she's terrified right now.

THE COURT: On July 31st, you filed a corporate disclosure statement for Lamplight, in which you said, "It does not have a parent corporation. No publicly held corporation owns 10 percent or more of the stock."

Do you recall that?

MR. CHONG: Yes.

THE COURT: How did you know that, as of July 31, 2022, if you had never spoken with Ms. Pugal or anybody employed by that company?

MR. CHONG: I spoke with her representative, Mavexar.

THE COURT: Okay.

On September 2, 2022, you filed an amended corporate disclosure statement, in which you said that Lamplight Licensing, LLC, is a Texas limited liability company. And its sole owner and managing partner is Sally Pugal.

And how did you know that, as of September 2, 2022, when you filed that amended disclosure?

MR. CHONG: That was in response to your standing order, where -- 7.1, where, you know, you

required additional information. And that's when the additional information was provided to you.

So that information was known, it's just -- you know, it wasn't provided in the July disclosure. So in the September disclosure, we inserted Ms. Pugal's name in response to your standing order, Your Honor.

THE COURT: When did you know that she was the sole owner of Lamplight?

MR. CHONG: In March of 2022, Your Honor.

THE COURT: All right. It doesn't say -- just for the record, so it's clear, the retainer agreement identifies her as "Signatory, member."

MR. CHONG: And --

THE COURT: So but you're saying you knew the corporate structure of Lamplight as of March 28, 2022?

MR. CHONG: Yes, Your Honor. That was what was represented in the state of Texas LLC formation documents, Your Honor.

THE COURT: That she was the sole and exclusive owner?

MR. CHONG: Yes, Your Honor.

THE COURT: Okay.

On October 6, you filed a statement regarding third-party litigation funding arrangements, and you said that all other funding -- well, actually, let me read this

statement in its entirety.

It says, that "Pursuant to the Court's April 18, 2022, standing order regarding third-party litigation funding arrangements, Plaintiff, Lamplight, hereby states that it has made arrangements with Jimmy Chong, Plaintiff's lead counsel in this litigation, to represent plaintiff on a contingent basis."

I've read that correctly?

MR. CHONG: I don't have that in front of me now, but I trust your --

THE COURT: All right. And then this is what's -- the next sentence says, "Plaintiff further states that all other funding" -- so it suggests that now you're referring to something different than the arrangements you have on a contingent basis with the plaintiff. Right.

It says, "Plaintiff states that all other funding, including any advances for fees and/or expenses is provided on a recourse basis," unquote.

So the statement doesn't say whether your financial relationship involves any nonrecourse funding, does it?

MR. CHONG: There's only recourse funding, Your Honor. I apologize for that.

THE COURT: That's okay. I just want to make

sure. You're saying, for the record, your financial relationship involves solely recourse funding?

MR. CHONG: Yes.

THE COURT: All right.

MR. CHONG: Very much so.

THE COURT: How do you know that Lamplight does not receive any other funding on a nonrecourse basis?

MR. CHONG: In discussions with Lamplight that --

THE COURT: When you say "Lamplight," who do you mean?

MR. CHONG: Well, at this point in time, it was with Ms. Pugal --

THE COURT: It was.

MR. CHONG: -- with Mavexar, and it was very clear that there was -- very clear discussions that there were no nonrecourse funding whatsoever. And I discussed the standing order. It was -- Your Honor. We had this discussion with Ms. Pugal and with Mavexar.

THE COURT: All right. Was Mr. Ramey ever involved in any of these relationships?

MR. CHONG: Oh, no. The --

THE COURT: Yeah. Different -- different relationship, right?

MR. CHONG: Yeah, yeah, yeah, yeah.

THE COURT: Because what gave prompt -- what prompted your filing of some of these forms was that hearing that we had, that had to do with the cases that you were working with Mr. Ramey in, correct?

MR. CHONG: That is correct, Your Honor.

THE COURT: All right. Now, do you know how Ms. Pugal came to acquire or form Lamplight Licensing?

MR. CHONG: I do not, Your Honor.

THE COURT: Do you know how Lamplight came to acquire the '393 patent?

MR. CHONG: I do not, Your Honor.

I know that the patent -- you know, there's a patent assignment, you know, of record, but I don't know the exact details of it. But if you are asking, you know, the chain, I'm not quite sure that that's...

THE COURT: Are you familiar with Magnolia Licensing?

MR. CHONG: I don't know, other than that they're, you know -- I don't know anything about Magnolia Licensing, no, Your Honor.

THE COURT: The affidavit that Ms. Pugal apparently signed, that you filed on October 6, 2022, are you familiar with that?

This is what you filed in support of the amended litigation funding disclosure.

When you spoke with Ms. Pugal about -- did you speak with her about the affidavit?

MR. CHONG: Yes.

THE COURT: Okay. And when you did, was any third party involved in those discussions?

MR. CHONG: At that, that specific -- I've had conversations with her, with just Ms. Pugal, and at times with Ms. Pugal and with representatives from Mavexar. I can't recall whether or not -- I've had conservations -- I've had multiple conversations with her, so -- with and without Mavexar, Your Honor.

THE COURT: Has Mavexar provided you draft pleadings?

MR. CHONG: I don't understand.

THE COURT: Has Mavexar ever provided you any draft pleadings?

MR. CHONG: For?

THE COURT: For filing in one of our cases.

MR. CHONG: Oh, have they? No, but what I do is, I would obviously say, this is what we are going to file. And then they will -- my understanding is, will then approve or disapprove of certain facts and so forth.

THE COURT: But you don't have an attorney-client relationship with Mavexar, right? You already said that.

MR. CHONG: Yes, I do not.

THE COURT: All right. I'm not willing to just accept the conclusory assertions that have been thrown out by Ms. -- apparently by Ms. Pugal.

We need to get her in here at some point. Obviously, she needs to take care of her pressing health matters.

But I'm not able to make any more definitive judgments about the accuracy of the third-party funding statements, which is what gave rise to this hearing to amend the cases in the first instance without hearing directly from her.

How do you think we should go about, then, getting that accomplished?

MR. CHONG: I think -- I know she has to have an MRI. I know she has, you know -- I mean, I don't know, tell you the truth. I just had -- discussed with her health. I know stomach cancer. I don't want to put that for the record. There's some underlying major health issues that I believe --

THE COURT: Well, you said that, in the letter you wrote to me, that she had flight reservations and hotel accommodations.

Did you make those? Is that how come you know that?

MR. CHONG: She had let me know that she made those, yes.

THE COURT: Okay.

MR. CHONG: It was all intention for her to be here. She made -- spoke with her employer. And that's why we had moved the date.

THE COURT: And her employer -- what does she do for a living?

MR. CHONG: She is an office manager at a surgical center. And on surgery days, she is the one who makes sure the surgeries are running smoothly. And her employer required her to be on the surgical days. So today was a day where she -- there was no surgery in the office.

THE COURT: But she's an office manager, correct?

MR. CHONG: Yes. Yes.

THE COURT: All right. Just wanted to make sure.

So I think what we'll have to do is leave in abeyance resolution of the matters in these two cases, the Lamplight cases, until we can get her here for a hearing.

I'm open to suggestions about how to proceed. If you want to -- you know, do you have any ideas you want to offer?

MR. CHONG: I don't, Your Honor. This is a first, maybe. The biggest issue, we don't know where she is with her health.

THE COURT: Right. You want to maybe set a 30-day marker and do a status report?

MR. CHONG: I think that makes sense, Your Honor.

THE COURT: Let's do that.

So let's have you provide the Court with a status report within 30 days, or whatever the next business day would be after the 30th day, as to her situation.

If before then, you become aware that she's fine and can attend the hearing in person, then let us know, but no later than 30 days, file the status report about that issue, and we will address it.

MR. CHONG: Yes, Your Honor.

THE COURT: Okay? All right. Thank you.

MR. CHONG: Thank you.

THE COURT: So Mr. Pazuniak, why don't we deal with the Nimitz cases next, please.

Is Mark Hall here?

MR. PAZUNIAK: Yes, Your Honor.

THE COURT: And, Mr. Chong, is Hau, and I pardon me for the pronunciation -- Hau Bui, is he here?

MR. CHONG: Yes, Your Honor.

THE COURT: All right.

MR. CHONG: Your Honor, I know Mr. Curfman has come down with Covid. However, a parter from his firm, Attorney Howard Wernow, who is here in place of Mr. Curfman, just -- would introduce him to the Court. He has been, I believe, practiced in Delaware in the past. Not in this case specifically, but in the past, he has, Your Honor.

THE COURT: Okay.

And Mr. Bui, I think it would be good if you and Mr. Hall stepped out for right now, if you don't mind.

All right, Mr. Pazuniak.

So the Nimitz story is a little bit different than the other matters. I think, you recall -- and I see the standing orders. I'm the first one to say, you know, they're hard to keep track of in the court. So --

MR. PAZUNIAK: I'm sorry, Your Honor, I'm having trouble hearing you.

THE COURT: Well, I said the Nimitz case is a little bit differently situated than some of other the cases.

MR. PAZUNIAK: I don't know --

THE COURT: Well, I was going to -- what I meant by that was that -- so if you recall, there was --

and I think it was just perhaps, because you practice in our court and, you know, as I used to practice, sometimes it's hard to keep track of standing orders.

So there was -- but for whatever reason, I think, you know, there had not been timely compliance with the disclosure forms, but then the forms were filed, right.

And let me just pull up the forms.

So these forms, the third-party litigation forms, say that the plaintiff has not entered into any arrangement with the third-party funder as defined in the Court's standing order regarding third-party litigation.

Is there a third-party funder here?

MR. PAZUNIAK: There is no third-party funder. And, in fact, if I -- may I just try to explain some?

THE COURT: That would be great.

MR. PAZUNIAK: Okay. I listened, obviously, to Your Honor's questions to Mr. Chong. My answers to some of them may be somewhat different.

THE COURT: Okay.

MR. PAZUNIAK: And maybe I would just say some things upfront and save us a lot of trouble.

THE COURT: That would be great.

MR. PAZUNIAK: Similar to Mr. Chong, yes, I was contacted by what I understood to be an agent for Nimitz

Technologies.

THE COURT: A nonlawyer agent, right?

MR. PAZUNIAK: It's not a lawyer. It's a lady by the name of Linh Dietz, L-I-N-H D-I-T-Z.

THE COURT: Wait. I'm sorry. L-I?

MR. PAZUNIAK: L-I-N-H.

THE COURT: Okay.

MR. PAZUNIAK: And the second name, D-I-T-Z. Hopefully, I got it right.

But the -- she was representing Nimitz Technologies. And she had provided the basic information.

Thereafter, I did my own investigation, in the sense of double-checking the patent, double-checking the Nimitz Technology. For example, I did go to the Texas Secretary of State's Website to gain the information about Nimitz Technology, and that's what I put down into the complaint.

Similar, I went to the Delaware Secretary of State's office to obtain information on the defendants, and making sure that the correct entities were named, correct spellings and correct addresses.

The complaint was entirely drafted by me.

Prior to that, we, of course, had the retainer agreement. That retainer agreement, again, I drafted. And it was forwarded to Linh Dietz, to forward to

Mark Hall as the principle of Nimitz Technologies.

I knew that he was the principle because of the -- I had double-checked the Secretary of State's office before I prepared the retainer letter.

THE COURT: Okay.

MR. PAZUNIAK: And --

THE COURT: So you knew he was the principle based on the Secretary of State's disclosure --

MR. PAZUNIAK: And --

THE COURT: -- he was the principle of Nimitz?

MR. PAZUNIAK: He is -- Mr. Hall is the -- I think that -- I want to make sure I have the phrase right. He's the managing member of the entity. And it was confirmed by Ms. Dietz that he was the sole, 100 percent, owner of the entity.

THE COURT: Okay.

MR. PAZUNIAK: When Your Honor's order came out, again, I did the investigation.

With respect to the funding in this litigation, I knew pretty much what the funding was, because the only funding that had been provided had been by myself, or my firm.

THE COURT: Well, actually, can I stop you there? How did you know that? I mean, you obviously know whether you're providing funding or not.

MR. PAZUNIAK: Yeah.

THE COURT: How do you know there isn't some third party out there that's providing funding?

MR. PAZUNIAK: Well, again -- yes, I was getting to that.

THE COURT: Oh, okay. So I thought you just said that you knew that, since you were the only funder.

MR. PAZUNIAK: I should say that I knew that, what funding had been required, you know, for the filing of the -- and maintaining of the lawsuits, and that had been provided by my firm as an advance. And we, of course, have a retainer agreement that required Nimitz Technology to be responsible for all costs.

Once Your Honor's question was brought up, I did consult with Ms. Dietz. She provided, to me, the agreement between Mavexar and the Nimitz Technology, which I double-checked and confirmed that any funds advanced by Mavexar are -- would be the responsibility of Nimitz Technology. Which, of course, at that point, was kind of moot because, to my knowledge in the litigation, no other funds had been expended, other than those that I -- my firm had incurred.

THE COURT: I just -- I'm now wondering is -- so is your reading of the order, that it's limited to funds that have already been expended?

MR. PAZUNIAK: My understanding, it didn't matter. My understanding was that the Court's interest was in the litigations in which the order was granted, but the answers would not matter whether the -- a broader meaning was intended or not.

In other words, I don't have the -- Your Honor's standing order in front of me. But in my response to the Court, I specifically stated as provided in the Court's order. And I was trying -- I was looking at the Court's language, and I responded accordingly.

Now, the fact of the matter is, there are no funds that have been provided to Nimitz Technology on a nonrecourse basis, period. And this was confirmed to me by all the interested parties, and so I'm comfortable with that information.

I was just pointing out that as far as delitigation is concerned, or delitigations because there's several, all the funding that are litigation specific, those -- that information, I knew firsthand.

THE COURT: Why did you say "litigation specific"?

MR. PAZUNIAK: Well, because the Court's order were filed in the litigations and --

THE COURT: If I have a security interest in a portfolio of patents, and the patents are being litigated

in specific cases, and I have a security interest in them, it's not -- doesn't necessarily mean litigation specific. And I still have a security, a nonrecourse relationship with the portfolio, right?

MR. PAZUNIAK: Yeah. It could be a nonrecourse, but that's why I said I can -- it didn't matter to me how the order, how broadly the order extended. Because, in fact, I did go and check and there was no nonrecourse funding of any sort provided to Nimitz Technology, period.

And this was -- and, again, I'm trying to be very careful because we have attorney-client relationship issues. And --

THE COURT: Yeah. I don't know how you have attorney-client relationship issues if you're dealing with the client through a nonlawyer third party. That, right away, I mean -- and I'm willing to hear you. But that doesn't sound right to me.

Either you have that or, then, I think you have unauthorized practice of law issues that are arising perhaps in other states.

MR. PAZUNIAK: Well, Your Honor, but there is communications between me and Mr. Hall, i.e. Nimitz.

THE COURT: I hear you. I get that.

MR. PAZUNIAK: And that's why I'm trying to be

careful.

THE COURT: Okay.

MR. PAZUNIAK: When I say "confirmed," obviously, I did my due diligence in accordance with Rule 11 in making the representations. And -- so I'm trying to be careful not to inadvertently, you know, create doubt on my ability to invoke the privilege.

THE COURT: Sure. Okay. And that's fair. That's a good thing to be concerned about. Give me one minute, please.

So you wrote this in your amended disclosure statement: "The sole owner and member of Nimitz Technologies, LLC, is Mark Hall, an individual. To avoid any misunderstanding, Plaintiff understands that the Court's standing order regarding disclosure statements required by Federal Rule of Civil Procedure 7.1, requires parties to identify, direct or indirect, ownership interest, and does not require disclosure of entities who may have a financial interest in the outcome of the litigation, such as, for example, counsel contingency arrangements," unquote.

And I think the answer is, well, it depends on the nature of the financial contingency interest. And if so, if you have an individual -- I guess, even if it happened to be a lawyer, and they had a secured interest

in patents that was part of the financial relationship, that clearly would have to be disclosed by my order.

Would you agree with that?

MR. PAZUNIAK: I'm not sure. I'm trying to be very careful. There are -- no one has an interest in the patent, other than Nimitz Technologies.

So if Your Honor's referring to, you know, the kind of situation that you had addressed before, there is no one other than Nimitz Technologies.

What I was saying --

THE COURT: Right. It wouldn't be limited to the patent that's been asserted if they had a secured interest. If they have a security, a secured interest of any nature that would -- that is part of the financial relationship between that entity and the client, the financial relationship that governs, in any way, the litigation of this case, that would have to be disclosed.

MR. PAZUNIAK: I'll take Your Honor's word for it. I have not had the situation come up, so I have not researched the issue.

In this case, there are no secured interests. There is -- only Nimitz Technologies owns 100 percent by Mr. Hall. And that's the end of the story.

Now, when I said "financial interest," it's not financial interest in the patent. It's -- you know, there

are other, such as myself, who have a financial interest in the litigation, in the sense that if there is no recovery, I -- you know, I forfeited my time and efforts.

And if there is a recovery, obviously, I will get a contingency fee out of it. You know, this is just normal law.

THE COURT: Okay.

MR. PAZUNIAK: And that's all I was saying.

THE COURT: All right. I think what I'd like to do is have Mr. Hall take the stand.

MR. PAZUNIAK: I'm sorry?

THE COURT: I'd like to have Mr. Hall take the stand.

MR. PAZUNIAK: Sure. Of course.

THE COURT: And then I'd just like to ask him questions. If you want to ask him questions. We can -- but I'd like to know about how he came to come in possession of this patent and Nimitz and its financial relationships.

MR. PAZUNIAK: That's -- Your Honor, the only request I would make is that the information be provided in a closed courtroom. This is information that is private. It's business related. It's -- if we get in other situations, this kind of information would be subject to a protective order.

THE COURT: I don't know how it would be. I don't know how I can possibly preside over this case without knowing who the parties really are in front of me. That has all sorts of horrible implications. And I don't think I should be operating in a sealed star chamber to ascertain that.

The public has a right to know who the parties are in the case. There's very rare circumstances where the case law has permitted the identification of the parties to be kept under seal.

MR. PAZUNIAK: Well, obviously, I have no interest, and I'm not asking the Court to be precluded from pursuing its intended line of inquiry. I was just pointing out that this kind of detail is the kind of stuff that, over the years, I have seen repeatedly held confidential under protective orders.

And this is rather a unique situation, perhaps unprecedented. And I just want to make sure that, as we go forward, we're not waiving any rights. And therefore, I do formally request that because the questions and answers may involve matters of personal privacy and business arrangements that are not public, and have always been intended to be kept confidential, that the information be heard in a closed courtroom.

THE COURT: All right. So I think the way

we'll address that is, let's take it on a question-by-question basis.

MR. PAZUNIAK: Okay.

THE COURT: And, you know, you can make an objection or ask, if I put to the witness a certain question, you can stand up and say you think this implicates some kind of interest that would be sufficient under Third Circuit law.

Which you should make sure you've read Third Circuit law. It is very, very hard to keep something under seal in the Third Circuit, and it's the Third Circuit that governs.

MR. PAZUNIAK: Your Honor has previously warned us. I think at the last hearing we had here, Your Honor, had made that point.

THE COURT: Yeah.

MR. PAZUNIAK: That's why I was a little hesitant, but I think we need to raise the issue.

THE COURT: You should feel free to make your record, absolutely.

All right. So let's do this. Let's take a few-minute break, and then we'll come back and have Mr. Hall take the stand.

Does that work?

MR. PAZUNIAK: That's fine, Your Honor. Thank

you.

THE COURT: All right. Now, actually, just hold on. Thank you. You can sit down. But before you go, the third set of cases are the Mellaconic cases, right? And Mr. Chong's here for those?

And Mr. -- is it Bui? How do you pronounce his name?

MR. CHONG: Bui.

THE COURT: Bui.

MR. WERNOW: No, it's Bui.

THE COURT: Oh, it is Bui. I was right. It's rare I'm right on the pronunciation, so that's good.

But I still want to keep those two gentlemen sequestered.

Let me just ask: Is anyone from IP Edge here?

Is Lori LaPray here?

Is Papuol Chaudhari here?

Is Brandon LaPray here?

Is anyone from Mavexar here?

Okay. All right. So you want to do ten minutes and then we will come back?

Thank you very much.

(Whereupon, a recess was taken.)

THE COURT: Please be seated.

Mr. Pazuniak, you mentioned Linh Dietz. You've

spoken with her.

MR. PAZUNIAK: I'm sorry?

THE COURT: Linh Dietz.

Linh Dietz.

MR. PAZUNIAK: Yes.

THE COURT: You mentioned her name.

MR. PAZUNIAK: Yes.

THE COURT: You've spoken with her?

MR. PAZUNIAK: Yes, many times.

THE COURT: Many times.

Where does she work?

MR. PAZUNIAK: I'm sorry?

THE COURT: Where does she work?

MR. PAZUNIAK: Oh, yes. She's in Texas. She's associated with Mavexar.

THE COURT: Do you know how she's associated with Mavexar?

MR. PAZUNIAK: I don't fully understand the Mavexar structure, so...

THE COURT: Okay.

MR. PAZUNIAK: But this was not the first time I had dealt with her. And we had -- if I may just explain.

I had previously -- we had another case. And because it did involve some transfer or money from Korea

to a client here, we had to -- Korean law is crazy in financial. Transactions are crazy. So we had to go through quite a lot in dealing with the principle in that case and Mavexar.

And so I did come to understand that she knew what she was doing and could be trusted.

THE COURT: Okay.

MR. PAZUNIAK: A trustworthy person.

THE COURT: Great.

MR. PAZUNIAK: And, Your Honor, I was neglectful, when I first came up here, in not to point out to the Court that Jerry O'Rourke is here also.

He is not -- has not entered an appearance in the Nimitz cases, but he's with the O'Kelly & O'Rourke. He is the O'Rourke of the O'Kelly & O'Rourke firm that's representing Nimitz, Your Honor.

THE COURT: Well, he's not representing Nimitz here. He didn't file an appearance?

MR. PAZUNIAK: Yeah. He's just the representative of the firm.

MR. O'ROURKE: Of our firm, Your Honor. I'm here as a representative of our firm.

THE COURT: I apologize. The firm being Nimitz?

MR. PAZUNIAK: No, no. The firm

O'Kelly & O'Rourke.

THE COURT: That's a law firm?

MR. PAZUNIAK: The law firm here, yes. The law firm representing Nimitz.

THE COURT: I thought you were representing Nimitz.

MR. PAZUNIAK: Well, yes, but if Your Honor looks at the signature lines, it's George Pazuniak, O'Kelly --

THE COURT: Oh, he's entered an appearance?

MR. O'ROURKE: Our firm has, yes.

THE COURT: Okay.

MR. O'ROURKE: George has. George works for our firm.

THE COURT: Right. Okay. But you have not entered an appearance.

MR. O'ROURKE: Not personally, that's right. I'm here as a representative of the firm, and to show support for Mr. Pazuniak.

THE COURT: I understand. I apologize. Yes. Okay. Now I get it. Thank you.

MR. O'ROURKE: You're welcome, Your Honor.

MR. PAZUNIAK: In any event, Your Honor, Mark Hall is here.

THE COURT: Okay. Just give me one more

second.

All right. So Mr. Hall, do you want to take the stand, please.

THE WITNESS: Where would Your Honor like me to be? At the podium or sit --

THE COURT: Actually, whatever makes you more comfortable. Happy to --

THE WITNESS: Okay.

THE COURT: All right. Sir, if you just remain standing and raise your hand. Would you please state and spell your name for the record.

THE WITNESS: Mark Hall, M-A-R-K H-A-L-L.

MARK HALL, having been called as a witness, being first duly sworn under oath or affirmed, testified as follows:

BY THE COURT:

Q. Thank you. Have a seat. And there's a microphone there, sir, if you could just try to talk into that, and I'll try to do the same.

A. Are you saying this thing right here is the microphone?

Q. Yes.

A. Okay.

Q. Just give me one second.

Q. Where do you live?
A. Houston, Texas.
Q. And how long have you lived in Houston?
A. Sixteen years.
Q. What do you do for a living?
A. Sales.
MR. PAZUNIAK: Your Honor, may I sit -- I can't hear the witness. May I sit over there?
THE COURT: Yes. And let me turn up the microphone.
BY THE COURT:
Q. Okay. I'm sorry.
What do you do for a living?
A. Sales.
Q. What kind of sales?
A. Software.
Q. What kind of software?
A. Energy analytic software.
Q. What's your background? Do you have an engineering degree?
A. No. Actually, I have a biology chemistry degree.
Q. Where did you go to school?
A. Southwest Texas State.
Q. And when did you graduate?
A. '99.

Q. Okay. What did you graduate with at that point, degree-wise?
A. Biology chemistry degree.
Q. Where did you go to work, when you graduated after 1999?
A. Pharmaceutical company.
Q. What was the name of the company?
A. It's no longer around. It was iNovex, I believe.
(Court reporter clarification.)
THE WITNESS: iNovex.
THE COURT: I'm going to have to ask you to speak more into the mic, if you could, please.
BY THE COURT:
Q. So it was a company called iNovex?
A. Correct.
Q. How long did you work at iNovex?
A. I don't know, it was a while ago. Six years.
Q. And what did you do at iNovex?
A. I sold medications.
Q. What did do you work-wise after you were at iNovex?
A. I went to a different pharmaceutical company called Galderma.
Q. Where?
A. That was in Fort Worth, in Dallas.
Q. And this would have been around 2005, then; is that

right?
A. Roughly, yeah.
Q. And what did you do at Galderma?
A. Sold medications.
Q. How long were you at Galderma?
A. Well, so iNovex was a contract pharmaceutical organization. They had a contract with Galderma at the time. So you could say I was dually employed with both. It's however you want to term it.
The bottom line was, I was with Galderma for about six years. I believe iNovex for a year and a half on a separate contract.
I don't have my resume in front of me, so I can't give you exact dates.
Q. All right. So is it fair, then, for approximately the first six or seven years after college, you worked for either Galderma or iNovex in pharmaceutical sales?
A. Correct.
Q. So that would put us around 2005 or so, roughly.
What did you do next?
A. I went to work for a software company that sells ERP software.
Q. And what was the name of that company?
A. Shoptech.
Q. And what is ERP software?

A. Enterprise Resource Planning.
Q. Okay. In lay terms, what does that mean?
A. Manages costs of manufacture from bill of goods, all the way through AR and AP.
Q. And you sold that on behalf of Shoptech to what type of companies?
A. Manufacturing companies, specifically.
Q. How long were you at Shoptech?
A. About six years.
Q. What did you do after you were with Shoptech?
A. Shoptech.
Q. Oh, Shoptech. Thank you.
What did you do after you were with Shoptech?
A. I went to a boutique staffing firm called iSphere.
Q. And how do I spell that?
A. I-S-P-H-E-R-E.
Q. Where is that located?
A. Houston.
Q. And what does iSphere do?
A. They're a boutique staffing firm dealing specifically with contract employees for programming.
Q. For computer programming?
A. Correct.
Q. How long were you with iSphere?
A. About a year and a half.

Q. And what did do you after that?
A. I went to work for ADP.
Q. What did you do for ADP?
A. I sold payroll and HR software into the enterprise level space.
Q. Just so I have it. You sold payroll and HR services to the --
A. Software. Software, not services.
Q. Oh, okay. Payroll and HR software?
A. Correct.
Q. I see.
To the enterprise level space?
A. Correct.
Q. What is enterprise level? What does that mean, enterprise level?
A. 10,000 and above employees; companies with.
Q. All right. And where were you located with ADP?
A. Houston.
Q. And how long were you there?
A. About a year and a half, two years.
Q. And what did you do next?
A. I ended up where I'm at now.
Q. So where are you now?
A. I am at a company called Enverus. E-N-V-E-R-U-S.
There you go.

Q. E-E-N or E-N, sir?
A. E-N --
Q. Okay.
A. -- V-E-R-U-S.
Q. Gotcha.
Where is it located?
A. They have dual headquarters. One is in Canada and one is in Houston -- actually, one's in Austin, I forget which.
Q. What is Enverus?
A. Energy analytic software company.
Q. And what is your title?
A. Regional manager.
Q. And what are your responsibilities?
A. I deal with, specifically, midstream oil and gas companies. I'm an account manager and also sales.
Q. It's a full-time job?
A. Correct.
Q. Do you have a physical office?
A. Correct.
Q. Where is your physical office?
A. It is 10375 Richmond Avenue, Suite 1800, I believe is the address.
Q. Is it Houston? I'm sorry.
A. Correct.

Q. It's Houston? Okay.
A. Correct, it's Houston.
Q. And you've been with Enverus for about how long?
A. Seven months.
Q. Seven months.
And did you go directly from ADP to Enverus?
A. Correct.
Q. And when you were with ADP, was it a full-time job, ADP?
A. Yes.
Q. Now, it's been represented to me that you own an LLC named Nimitz Technologies?
A. Correct.
Q. Is that true?
A. Yes.
Q. How did you -- when did you form Nimitz -- or did you form Nimitz, or did you buy it? Or how did you come to become the exclusive owner of Nimitz?
A. I formed Nimitz with the state of Texas.
Q. When did you do that?
A. I don't have my documentation in front of me. Roughly, a year ago, maybe a year and a half.
Q. Did you form it with the assistance of anybody?
A. I'm not sure what you mean.
Q. Did anybody help you form it?

A. No. I signed all the documentation and went through the legal processes with the state of Texas.
Q. Was it your idea to form Nimitz?
A. Yes.
Q. Do you own any other LLCs?
A. Yes.
Q. How many?
A. Three.
Q. What are their names?
A. Endeavor Sales Consulting.
Q. How do you spell that, please?
A. Endeavor, E-N-D-E-A-V-O-R.
Q. And that was Endeavor what?
A. Sales Consulting.
Q. Okay. Are there any other members of Endeavor Sales Consulting besides you?
A. No.
Q. When was it formed?
A. About three years ago.
Q. And what does it do?
A. Not to be -- it's sales consulting.
Q. But you -- and is it still in existence?
A. Correct.
Q. It is.
In the meantime, you work directly for a company in

sales, correct?
A. Correct.
Q. And that's okay with the company, I gather, then?
A. Correct.
Q. It is. Okay.
All right. What's the name of other LLC, please?
A. Valyrian.
Q. How do you spell that?
A. V-A-L-Y-R-I-A-N.
Q. Is it a Texas LLC?
A. They're all Texas LLCs, yes.
Q. What does Valyarian do?
A. Similar to what Nimitz does.
Q. Well, what does Nimitz do?
A. Nimitz monetizes patents.
Q. What does that mean, to "monetizes patents"?
A. Make money off of existing patents.
Q. How many patents does Nimitz own?
A. I don't know offhand. I'd have to look back at the paperwork.
Q. You said more than five?
A. Sure.
Q. Is it more than 100?
A. No.
Q. More than 50?

A. Not sure.
Q. Nimitz owns the patent that's been asserted in these cases; is that right?
A. Correct.
Q. Do you know what the name of that patent is?
A. I do not.
Q. In one of the complaints filed in this case, it said plaintiffs Nimitz is -- has its office address at 3333 Preston Road, Suite 300, in Frisco, Texas.
Do you work out of an office at Frisco, Texas?
A. I do not.
Q. Is there a suite that's either owned or leased by Nimitz at 3333 Preston Road?
A. I don't understand the question. If that's what the documentation says, then yes.
Q. Well, you're the sole owner, and you don't know if you have a suite located at Preston Road in Frisco, Texas?
A. I've never been to the suite in Frisco, Texas.
Q. Do you own a suite? Is it Nimitz? You're -- again, you're the sole owner. Does it own any office space?
A. No.
Q. Does it lease any office space?
A. No.
Q. So then, I take it, it doesn't own or lease a suite at 3333 Preston Road; is that right?

A. Correct.
Q. So it wouldn't be an accurate statement to say that Nimitz has an office address at 3333 Preston Road, Suite 300, correct?
A. Oh, I didn't know who was going to talk. I'm sorry, what was your question?
Q. So it would not be accurate to state that Nimitz has an office address at 3333 Preston Road, Suite 300, correct?
A. I guess not.
MR. PAZUNIAK: Your Honor, may I address the Court on this point?
THE COURT: If you want to testify, but, you know, we're having testimony right now. Do you want to -- if you want to make a legal objection, that's fine.
MR. PAZUNIAK: Well, the objection is that the Court is asking, actually, what is a legal question of a lay witness. And --
THE COURT: That's overruled, because it's not. It's a fact question. You may have a seat on that.
MR. PAZUNIAK: Okay.
BY THE COURT:
Q. What technology is covered by the '328 patent?
A. I haven't reviewed it enough to know.
Q. How did you come to acquire the '328 patent?

A. I was presented an opportunity.
Q. By whom?
A. Mavexar.
Q. Who is Mavexar?
A. As an entity? I'm not sure what you mean.
Q. Well, you're the one who used the phrase. So what did you mean when you said you were presented an opportunity by Mavexar. I'm just following up on your question, sir.
A. Okay. Consulting agency.
Q. What did you mean by Mavexar?
I'm sorry?
A. Consulting agency.
Q. Consulting agency that does what?
A. My understanding is they look for patents.
Q. How did you first learn of Mavexar?
A. I was presented an opportunity by Mavexar and we discussed what they did, and what the opportunity would entail.
Q. Where did that presentation of the opportunity occur?
A. Over the phone.
Q. Whom did you speak with?
A. Linh Dietz.
Q. Had you ever met Linh Dietz before?
A. Yes.

Q. How long have you known Linh Dietz?
A. Eight years.
Q. What does Linh Dietz do for a living?
A. She works for Mavexar.
Q. How did you come to meet her?
A. Mutual friends.
Q. And when did she offer you the opportunity -- first offer you the opportunity to have Mavexar look for patents for you to own?
A. Rough estimate, about two years ago.
Q. When did you buy the '328 patent?
A. I couldn't tell you right offhand. I don't have the documentation in front of me.
Q. Now, did you review the patent before you bought it?
A. I reviewed it, yes.
Q. How did you pay for the patent?
A. There was an agreement between Mavexar and myself where I would assume liability.
Q. What does that mean?
A. No money exchanged hands from my end.
Q. You have to -- I'm not a financial guy, so you have to explain it to me.
So you own the patent, but no money -- you didn't exchange any money for it?
A. No.

Q. So is that what you're saying?
A. Yes.
Q. So how do you come to own something if you never paid for it with money?
A. I wouldn't be able to explain it very well. That would be a better question for Mavexar.
Q. Well, you're the owner?
A. Correct.
Q. How do you know you're the owner if you didn't pay anything for the patent?
A. Because I have the paperwork that says I'm the owner.
Q. Did you have a lawyer represent you in your negotiations to assume ownership of the patent?
A. No.
Q. And did you deal with anyone other than Linh Dietz when you took ownership of the patent?
A. No.
Q. So all of your information, then, about the patent would have come from Linh Dietz; is that fair?
A. Correct.
Q. And you didn't pay any money for the patent? Did you buy it -- well, see, I don't want to use the term "buy it," then.
Did you take ownership of it, along with any other patents?

A. Yes.
Q. So it was a portfolio of patents?
A. One at a time, but correct.
Q. Do you remember when you assumed ownership of the '328 patent, how many other patents you assumed ownership of?
A. I do not.
Q. Now, you said that you would assume liability for the patent, is that right, when you took ownership of it?
A. Correct.
Q. What does that mean?
A. Liability in case of -- any monetary liability from a case that did not proceed well.
Q. So is it your understanding, then, if, in this case, for instance, the Court assigned -- or awarded attorney fees to the other side, that you personally would have to pay for them; is that right?
A. I believe that's true, yes.
Q. Do you have the documents with you today --
A. I do not.
Q. -- that reflect your assumption of ownership of the '328 patent?
A. I do not.
THE COURT: Mr. Pazuniak, do you have them?
MR. PAZUNIAK: Yes, Your Honor.

THE COURT: Would you care to hand them up.
Thank you.
BY THE COURT:
Q. Now, the document that Mr. Pazuniak has handed me, it says -- it's titled "Patent Assignment Agreement." And it has it in Exhibit A Patent Assignment that lists the '328 patent.
In the document, it says that the -- it identifies the assignor as Hau By, H-A-U-B-Y.
Do you know him?
A. I do not.
Q. The agreement is dated August 20 of last year, 2021.
Does that refresh your recollection at all about what you knew at the time that you assumed ownership of the patent, what it covered?
A. No.
Q. Did you know -- you knew Mavexar was a consulting group; is that right?
A. Correct.
Q. And Linh Dietz, did you know what she -- what her role was there?
A. Not specifically, no.
Q. Is she a lawyer?
A. No.
Q. So the Exhibit A to the assignment says that "For

good and valuable consideration, the receipt of which is hereby acknowledged, the patent is transferred to you."

What was the good and valuable consideration you received?

A. I'm not sure what you mean there.

Q. Or I should say, rather, what is the good and valuable consideration you paid for the patent?

MR. PAZUNIAK: Objection.

BY THE COURT:

Q. Do you understand what good and valuable consideration is?

A. I believe I understand what you're asking. And the --

Q. Well, put it in your own words. What do you think that means? What does "consideration" mean?

A. I would think -- I think you mean some kind of payment.

Q. Right. And so what did you pay them that persuaded somebody to give you the patent?

A. My understanding of what it is, it's a business opportunity presented to me from Mavexar, similar to when I retained a management company for my rental properties.

I don't know the renters. I don't deal with the renters. They do. That's the agreement that we have.

If there's proceeds to be made, there's an agreement

between us as to what we split. If there's losses incurred, it's my property, I pay for the losses, similar to this.

Q. Okay. And how much, then -- well, then, is it your understanding that the revenue, the money that will be made from the patent, will be obtained through litigation of the patent; is that fair?

A. Yes.

Q. What percentage of the litigation do you recover for assuming all this liability?

A. I believe it's 10 percent.

Q. So you're the owner of the patent, but you only get one-tenth of it?

A. Correct.

Q. Well, did anyone explain to you why Mavexar wanted you to assume liability for the patent?

A. No one explained it, no.

Q. Do you have an understanding as to why you're assuming liability for the patent if you only would share -- or obtain 10 percent of the proceeds from it?

A. No. I viewed it as an investment, just like stocks.

Q. Were you involved in the litigation decisions in the cases that are filed that assert the patent?

A. No.

Q. And is it your understanding that all the litigation

decisions are made by the lawyers and Mavexar?

A. Correct.

Q. Have you dealt with anyone else from Mavexar, besides Linh Dietz?

A. No.

Q. Do you know of anyone else at Mavexar, besides Linh Dietz?

A. The name Papuol is familiar.

Q. I'm sorry. Papuol?

A. The name Papuol is familiar.

Q. Have you met that person?

A. Once, at the beginning of our relationship. I can't recall the date.

Q. How about Lillian Woung, W-O-U-N-G?

A. No.

Q. How about Sanjay Pant, P-A-N-T?

A. No.

Q. Have you ever heard of IP Edge?

A. I have.

Q. What do you know about it?

A. Not much.

Q. Have you ever had any interactions with IP Edge?

A. Other than Linh Ditz's e-mail address, no.

Q. And that's the only knowledge you have of IP Edge, is the fact that she has an IP Edge e-mail address; is that

right?

A. Correct. Correct.

Q. Have you ever had to pay any costs?

In other words, have you ever -- has your liability ever resulted in the payment of any costs?

A. No.

Q. And does that go for all the patents owned by Nimitz?

A. Yes.

Q. Do you have any reimbursement agreements with anybody to take on any costs that would be incurred as a result of liability?

A. No.

Q. And you mentioned you didn't have any involvement in the litigation decisions. So do you have prior knowledge of the filing of complaints?

A. No.

Q. Do you have any prior knowledge of any settlements reached in litigation filed --

A. No.

Q. -- to assert the patent -- let me --

A. Sorry.

Q. I'm sorry. That's all right.

Do you have any prior knowledge of settlements that are reached in litigation in which Nimitz patents are asserted?

A. No.
Q. So you're just told after the fact?
A. Correct.
Q. So from your perspective, this is purely an investment opportunity, fair?
A. Fair.
Q. And although you are in name the owner of the patent, you defer solely to Mavexar and the lawyers to make all the decisions associated with how the patent is asserted and how cases are settled, fair?
A. Correct.
Q. And that's really the motivation for you as an investor, fair?
A. Correct.
Q. Is there anything else you want to tell me?
A. No.
THE COURT: Do you have any questions?
MR. PAZUNIAK: No, Your Honor, but I did want to address the point where I raised the objection.
THE COURT: Well, we'll do that after he steps down, because he's testifying.
MR. PAZUNIAK: I'm sorry?
THE COURT: Well, let's let him step down and we'll have him --
MR. PAZUNIAK: Well, I'm hoping that if there's

any follow-up questions, the witness can answer.
THE COURT: Well, let's do this. I'm going to put some white noise on and then you can come to sidebar.
MR. PAZUNIAK: Okay. But I would like to have it on the record.
THE COURT: I don't do it off the record.
(The following discussion occurred at sidebar:
MR. PAZUNIAK: Your Honor asked the question about the complaint. It's a legal document. I wrote it. I stand by it. Even with the testimony, I think it should be explained on the record why it's a correct statement.
THE COURT: Okay. I will let you have that opportunity. I don't want him to be influenced, his testimony.
MR. PAZUNIAK: I understand that, but I was going to give the explanation.
THE COURT: You want to do it in public?
MR. PAZUNIAK: If Your Honor wants to follow up after that, that's why I thought...
THE COURT: Okay. That's fine. I will let you have the opportunity to state publicly whatever you want. So try not to talk too loudly, so he doesn't hear you. Tell me --
MR. PAZUNIAK: When I first started practicing here in Delaware in 1976, what I discovered very quickly

is that entities, such as corporation, trusts aren't the offices of probably thousands, if not hundreds of thousands of companies.
The Delaware Code requires that every Delaware LLC, corporation, whatever company, have a registered office. That office may be nothing more than a name on a list in corporation, trust, but it's still the office. Therefore, the term "office" is not under the Delaware law, and I think under the laws of every other state do not require a physical office.
And when someone says in this case, the secretary of state for Texas has documentation that says this address is the office of Nimitz Technology, that's the office, just like corporation, trust, is the office of 100,000 companies. And so when the term "office" means not a physical office.
THE COURT: So the, I will call it, objection is well noted, and I don't think the word "office" is really the problem. I think "suite" is a problem.
But, look, this is -- I will let you say whatever you want in public.
This does prompt a few questions I will have for the witness, probably not the way you think. Anyway, that's so noted. You are welcome to say whatever you want on the record in public.

MR. PAZUNIAK: On that point, the suite is the official address. I mean, if you go to the secretary of state's office, that's what's written.
THE COURT: Just to be clear, Mr. Pazuniak, I don't doubt your integrity at all on this point. I don't doubt you did exactly what you said, which is you went to the secretary of state filings. And, in fact, that is how Nimitz listed, in its formation papers, its address, and so I have no doubt about that. I'm not questioning anything you did in that regard.
I do -- I would question, and I will question, this witness about why somebody thought it was necessary to disingenuously put a suite to identify a post office box. That's nothing to do with you; that's some other people who are involved.
MR. PAZUNIAK: If I may Your Honor. If you go to a lot of -- I will give you an example.
There's a building a few blocks from here that -- probably couple thousand companies have, quote-unquote, their offices. And all of those offices are, again, nothing more than, you know, names on a list, but they all say "suite." And everyone has a different number for the suite. So again, this is even when the term "suite" is used.
All I can say is, there's an awful lot of

Delaware entities that have offices here with the word "suite" in it that are actually nothing more than that.

THE COURT: It could be.

MR. PAZUNIAK: I am not justifying. I am saying this is the practice that I can truthfully say I am very familiar with, because I have encountered this many, many times over the years.

So again, the word "suite," is just a name, just a name -- a name that's included in an address of people.

And I, up until Your Honor raised this question -- frankly, I think all of these people who have used the word "suite" as part of their address, even though it's just an address -- I don't think anyone has ever, you know, thought or perceived the implication of it.

THE COURT: So for what it's worth, we are both now speaking without evidence. Since you've done so, let me offer my perspective.

There are entities like CSC and other registered agents that are located in our state. They actually have office space. And although they serve as a maildrop for clients, they also have rooms in which those clients can fulfill their obligations under Delaware corporate law to hold meetings.

I don't think it a fair comparison to identify those types of registered agents in Delaware for which a suite address is used, as being comparable to a FedEx drop or a post office box. But for what it's worth, we don't have to resolve that right now.

All right. Thank you.

(Sidebar ends.)

BY THE COURT:

Q. Thank you for being patient. Were you able to hear anything that we were saying?

A. No. I'm not that good.

Q. I've mentioned before, we talked about the suite. You've never been to this address; is that fair?

A. Correct.

Q. You have no idea if it's an office space or a post office or a FedEx center, fair enough? You don't have any idea?

A. Correct.

Q. Has Nimitz received any money from settlements relating to its patents?

A. Yes.

Q. Approximately how much?

A. $4,000.

Q. In total?

A. (Witness nods head.)

Q. And have you received any money from settlements for these patent litigations, independent of what Nimitz receives?

A. No.

Q. No.

I mean, you're treated -- that's your investment vehicle, fair? That's how you receive your money?

A. Correct.

THE COURT: Thank you very much. You may step down.

Mr. Pazuniak, if you want to put anything on the record for the public, I will offer you that opportunity.

MR. PAZUNIAK: If it's in the Court record from the sidebar, I don't need to.

THE COURT: Okay. And we'll make that public.

And, incidentally, I will note for you, though, at least according to my clerk's research, one of the suite addresses appears to be a federal post office. And I just want to note that for the record given your comments at sidebar.

MR. PAZUNIAK: Okay.

THE COURT: Could we -- is there anything else anybody wants to address in terms of the Nimitz cases?

MR. PAZUNIAK: No. I'm prepared to answer any

questions the Court may have.

But since I -- I'm not sure what -- this is a rather unprecedented proceeding, and I'm not sure what Your Honor's interests are. It's rather hard for me to provide additional information without Your Honor asking for it.

THE COURT: Well, why don't we get to that later. Let's continue with the factual matters since we have witnesses here.

Just give me a second. Actually, maybe what we should do is take a break. No, hold on a second.

MR. PAZUNIAK: Your Honor?

THE COURT: Yes. You want a break?

MR. PAZUNIAK: Mr. Hall flew in yesterday and he --

THE COURT: Oh, he can be excused.

MR. PAZUNIAK: Okay.

THE COURT: I'm sorry. Yeah, Mr. Hall, thank you very much. You may be excused. You may stay or you may leave, it's up to you. Whatever you want to do, sir.

MR. PAZUNIAK: Thank you, Your Honor.

THE COURT: Why don't we have Mr. Bui take the stand.

MR. PAZUNIAK: Okay.

THE COURT: Mr. Bui, take the stand.

Mr. Bui, come on up here, please. Thank you.
Please raise your hand, remain standing.
Would you please state and spell your name for the record.
THE WITNESS: Hau Bui, H-A-U, B-U-I.
HAU BUI, having been called as a witness, being first duly sworn under oath or affirmed, testified as follows:
BY THE COURT:
Q. Mr. Bui, where are you from?
A. Waco, Texas.
Q. And how long have you lived there?
A. Like, 2016. So five -- six years, five years.
Q. Do you have any college degrees?
A. Associate's.
Q. Okay. And what are they in, sir?
A. It's applied sciences for X-ray.
Q. For X-rays?
A. Uh-huh.
Q. Well, what do you do for a living?
A. Right now, I'm a business owner.
Q. What kind of business do you own?
A. Restaurant.
Q. What kind of restaurant?
A. Like, a fried seafood, fried chicken.
Q. Is it a food truck?

A. It's a -- I have a food truck, yes. And then I have, like, a fried chicken joint, too, at the same time.
Q. This is in Waco, or where?
A. Waco.
Q. So you have a lot of students, I'm going to guess, as customers, Baylor?
A. Students, and then just, like, neighborhood people.
Q. Gotcha.
And how long have you been in the restaurant business?
A. Me personally, two years.
Q. All right. Now, the reason you're here is because you've been identified as the owner of Mellaconic IP.
Is that accurate? You're the owner?
A. Yes.
Q. Does anyone else own Mellaconic?
A. No.
Q. What does Mellaconic do?
A. Yeah. Mellaconic owns patents, the rights to patents.
Q. All right. How many patents?
A. I believe six.
Q. And what types of patents?
A. I haven't really looked over them.
Q. Okay. How much did you pay for the patents?

A. I didn't pay for the patents.
Q. So how do you come to own patents if you don't pay for them?
A. I was -- came up -- someone pushed me with the opportunity, selling the patents.
Q. Who was that? Mellaconic?
A. Mellaconic -- no, Mavexar. Sorry.
Q. Mavexar.
Well, how did you come in touch with Mavexar?
A. Linh.
Q. Is this Linh Dietz?
A. Linh Dietz.
Q. How do you know her?
A. She's a friend.
Q. When did she first approach you about this idea of assuming ownership of patents?
A. I believe in 2020, right when the pandemic hit.
Q. And what did she tell you?
A. She just came up to me and just told me if I would like an opportunity to deal with patents and make passive income.
(Court reporter clarification.)
THE WITNESS: Passive income.
THE COURT: There is a microphone. I'll lean forward; you lean forward. That will be good.

BY THE COURT:
Q. So it's make a passive income. What does that mean?
A. Like, income. Coming in without, you know -- I don't know how to describe it. Just like, kind of like --
Q. How about this? You don't have to do anything; is that fair?
A. Yeah, you don't have to do much, yeah.
Q. Well, what do you have to do?
A. As far as?
Q. As far as getting ownership of patents. I assume the patents are worth something, in your mind?
Do you think the patents are worth anything?
A. Yes.
Q. All right. Do you have any sense of how much they're worth?
A. I'm not an expert in patents. I wouldn't know.
Q. Well, did Ms. Dietz or anyone else, when you took ownership of the patents, give you any sense of what they thought the patents were worth?
A. No.
Q. Did you have to give up anything in order to assume ownership of the patents?
A. No, sir.
Q. Did you have to take on any responsibilities to assume ownership of the patents?

A. As far as, just like, viewing the litigations and everything that come through.
Q. Oh, so you do review the litigations?
A. Yeah.
Q. Tell me about what you do in that regard?
A. So Mavexar will send me the litigations of what's going on or the, you know, attorney engagements. And then I, essentially, if I sign -- I approve of them or disapprove of them.
Q. How do you know whether to approve or disapprove of an attorney?
A. I mean, I chose Mavexar and they're -- they're -- what is it? -- they're good. Like, you know, they haven't done me wrong.
Q. Well, so do you get a share, then, of lawsuits or settlements that are brought using these six patents?
Is that how you make money, passive income, as you call it?
A. Yeah.
Q. About how much income have you made so far?
A. Year to date?
Q. Well, when did Mellaconic buy its first -- or not buy -- when did it assume ownership of its first patent, if you remember?
A. I can't remember off the top of my head.

Q. Was it last year or the year before?
A. I know it was formed in 2020, so...
Q. What's Mellaconic mean, as a name?
A. It's just a name.
Q. I mean, whose idea was the name?
A. I don't know.
Q. You don't know?
A. I don't know.
Q. Were you, basically, just provided the paperwork to form the LLC?
A. Yes. They formed the LLC for me.
Q. And so did they come up with the name?
A. Yes, sir.
Q. Have you ever -- has Mellaconic sold any patents?
A. Sold any patents? No.
Q. Has it assigned any patents to anybody else?
A. As far as license -- licensing?
Q. Licensing? Okay.
Has it licensed patents to other people?
A. They have licensed to, like, other companies to use them.
Q. Okay. Do you get a share of those proceeds?
A. From what the settlement -- from the litigations, I do.
Q. So is it fair to say, the licensing have all occurred

in connection with litigation?
A. Yes.
Q. Okay. And you get a share of that?
A. Yes.
Q. What's your share?
A. With?
Q. Of the litigation or settlements.
What's your share? Do you get a percentage share?
A. Percentage.
Q. And what is it?
MR. WERNOW: Objection, Your Honor. Just confidential business information.
THE COURT: Go ahead.
THE WITNESS: 5 percent.
BY THE COURT:
Q. 5 percent. Okay.
Now, before a lawsuit is brought, do you read the complaint?
A. What was that?
Q. Before a lawsuit is brought -- tell me how it comes to be, the fact that a lawsuit is brought by Mellaconic? How does it work?
A. So they will meet with the documentations, and I have to review the documentations, and then I either approve it or deny it.

Q. Have you ever denied it?
A. No.
Q. Okay. And who sends you the documentation? Is it Mavexar?
A. Mavexar, yes.
Q. Have you ever had an attorney represent you in any of these litigations?
A. What's that?
Q. Have you ever had an attorney represent you, to your knowledge, in these litigations?
A. I mean, like, with the Mellaconic? Yeah.
Q. Okay. And what attorneys have represented Mellaconic?
A. Sand Sebolt, as far as I know.
Q. Anybody else?
A. I would have to go back and look.
Q. Okay. And that would be -- would that be Mr. Curfman?
A. What was the name again?
Q. Andrew Curfman; is that right?
A. Uh-huh.
Q. You to have say it.
A. Yes. Sorry.
Q. No, that's all right. No problem.
So have you ever met Mr. Curfman?

A. Yes, virtually.
Q. Virtually.
When did you first meet him?
A. Probably two months ago.
Q. So that's after lawsuits have been filed?
A. Yes.
Q. Have you ever had any communications with Mr. Curfman?
I don't need to know what they are. But have you ever had any communications with Mr. Curfman before two months ago?
A. No.
Q. So how was he retained to represent Mellaconic?
A. Through Mavexar.
Q. So you didn't have any discussions with him. Mavexar handled all the negotiations with Mr. Curfman; is that right?
A. Yeah. On my behalf, yes.
Q. All right. Did you deal with anyone else, other than Linh Dietz, at Mavexar?
A. Linh Dietz was my primary communication with Mavexar.
Q. So I want you to try to help me understand this idea that you can take ownership of a patent without paying for it.
You know, normally, when you get something of

value -- you think these patents have value, don't you?
A. Yes.
Q. All right. So normally, when you get something of value, you have to pay something for it?
A. Uh-huh.
Q. Do you agree with that?
A. Yes.
Q. So what did you have to pay to take on these patents?
A. With the previous owners?
Q. The patents that you own now. What did you have to give up in value for you to be able to assume ownership of these patents?
A. I didn't give nothing.
Q. You didn't give them anything. So were they a gift?
A. No. It's --
Q. So what's the -- then help me. I'm just trying to understand this concept.
If it's not a gift, you're not paying anything, why is someone giving you these patents?
A. You would have to ask Mavexar that.
Q. Did you take on any liability as a result of assuming ownership of the patents?
A. What do you mean by "liability"?
Q. Well, so you don't know?
A. What's that?

Q. You don't know what "liability" means?
A. I mean, I have a general idea, but...
Q. Was there any risk that you assumed when you assumed ownership of the patents?
A. Oh, there's always a risk in everything.
Q. So what's the risk?
A. I mean, if things fall through, then I would have to come out of pocket.
Q. And what kind of things would you have to come out of pocket, is your understanding?
A. So if, like, litigation goes wrong, Mavexar has the right to come after me for the costs of what was loaned.
Q. And what would happen if you couldn't afford to pay, you didn't have enough cash, if that happened? What happens to the patent?
A. I'm not sure.
Q. Did anybody suggest that Mavexar, or somebody else, could come and take the patent if you couldn't afford to pay any costs?
A. I was not informed.
Q. Of that?
A. Of that.
Q. Did you have to have your credit checked or provide any financial information to anyone in order to assume ownership of the patents?

A. No.
Q. So whoever assigned the patent to you would have no idea whether you could pay for any costs if the litigation went bad; is that fair?
A. That's fair.
Q. For all they knew, you had no money whatsoever, fair?
A. Fair.
Q. Who pays for the lawyer fees to go out and sue people using the patents owned by Mellaconic?
A. Mavexar.
Q. And what is -- do they loan you the money for that?
A. Yes. It's a recourse.
Q. What do you mean by "recourse"?
A. Like a loan.
Q. Well, how did you come up with the terms "recourse"? I'm just -- what does that mean?
A. All I know is it's like a loan.
Q. You filled out an affidavit in this case, right?
A. What was that?
Q. Did you fill out an affidavit for that case?
A. Affidavit?
Q. Yeah. A declaration?
A. Oh, yes.
Q. And who -- did you write it?
A. Did I write it?

Q. Yeah.
A. No.
Q. All right. Who provided it to you?
A. Mavexar.
Q. Was it Linh Dietz who provided it to you?
A. She gave me the -- yes, she e-mailed me.
Q. And I've got the affidavit here, and it says -- it says, "Mellaconic, therefore, has no" -- well, sorry. Hold on a second.
It says, "Mellaconic does not have arrangements to receive from a person or entity that is not a party funding for some or all of the parties attorney fees and/or expenses to litigate this on a nonrecourse basis."
What did you understand that to mean, a "nonrecourse basis"?
A. I don't know the exact definition of "nonrecourse."
Q. So you signed it, and it's under oath.
I mean, how do you feel comfortable signing that if you don't really know what it means?
Did anybody explain to you, what it means?
A. I just know that the basis of recourse basis.
Q. What's a recourse basis, to your understanding?
A. Under my understanding, it's like a loan.
Q. Okay. And so what would be a nonrecourse basis?
A. Not a loan, I guess. I'm guessing.

Q. Okay. I apologize if I asked you this because there was another witness.
Have you ever had to pay any expenses associated with any litigation for Mellaconic?
A. Have I ever paid any litigation expenses, no.
Q. Okay. And have you -- again, apologize, if I asked you.
But have you -- has Mellaconic ever made any money from any of the patents it's owned?
A. From the litigations?
Q. Yes.
A. Yes.
Q. And how much, about, is that?
A. I want to say -- I don't know top of my head. 11,000, maybe.
Q. Okay. And then you also mentioned licensing that came out of settlements. Does that include -- is that part of the 11,000, or is that different?
A. That's just with the settlement. That's what I've gotten.
Q. So the total you've gotten, is it fair to say --
A. Yes, 11,000 or so.
Q. All right. And is it all through settlements that were connected with litigation?
A. Yes.

Q. Okay. Do you know how much other people get? You know what you get, right?
Do you know how the 95 percent is broken up, who gets it?
A. I do not know the exact, who gets, you know, percentage.
Q. No?
A. Well, I know that the -- like the back-end pay to the previous patent owners.
Q. Do you recall ever assigning one of the patents owned, at least in title, by Mellaconic to Mark Hall?
A. Mark who?
Q. Let me make sure I have the name right. Yeah, Mark Hall.
A. Mark Hall. That doesn't ring a bell.
Q. No?
Do you recall ever signing documents to transfer a patent owned by Mellaconic to another entity or another person?
A. No.
Q. Is it fair to say that your involvement in all the litigation was performed through Mavexar?
A. Mavexar.
Q. Mavexar. Sorry.
A. Yes.

Q. Thank you very much.
That would be fair?
A. Yes.
Q. And, basically, is it fair to say that you do whatever they advise?
A. Yes.
Q. You don't have any other knowledge to challenge any of their advice; is that fair?
A. Yeah. They've been doing it. I don't have any knowledge to object against them.
Q. Right. Do you own any other LLCs besides Mellaconic?
A. Yes.
Q. And what are they?
A. Workshire.
Q. I'm sorry?
A. Workshire.
Q. Okay.
A. And I have to think of the other one.
Q. Is it Burley?
A. Burley, yes.
Q. Are these LLCs, were they formed by -- who were they formed by?
A. Mavexar.
Q. Mavexar, okay.
And is it fair to say, they follow the same pattern

that you pursued with Mavexar with respect to Mellaconic?
A. Yes.
Q. Did anyone ever tell you, from Mavexar, why it was important or why it was necessary to have you or your LLC be the owner of the patent?
A. No.
Q. And you mentioned you met Mr. Curfman about two months ago remotely?
A. Remotely, yeah.
Q. Yeah. I don't want to know about the conversation you had with him, the specifics, but why did you not meet him until two months ago?
What was it that prompted the meeting two months ago?
A. This hearing.
Q. Is it fair to say that you're aware that there was an order issued by the Court that required you to participate here?
A. Yes.
Q. Was that what prompted the meeting?
A. Yes.
Q. Okay. And prior to that, you had -- fair to say, you had had no discussions with Mr. Curfman; is that fair?
A. Yes.
Q. Had you had any discussions with anybody from Mr. Curfman's law firm prior to that meeting?

A. No.
Q. Anything else you want to tell me?
A. No, sir.
THE COURT: Okay. Thank you very much.
THE WITNESS: Thank you.
THE COURT: You may be excused, and good luck with your business.
THE WITNESS: Appreciate it. Thank you.
MR. WERNOW: Your Honor, can we put Mr. Bui back on the stand just to correct a statement?
THE COURT: Well, you are not of record, so the answer is -- you're not here before this Court, so the answer is no to that.
MR. CHONG: Okay. Well, Your Honor, I have a --
THE COURT: So the record reflects, you just had this discussion with the witness when he left the stand. And I want that to be the record. And now you're -- go ahead.
MR. CHONG: So Your Honor, I have a motion for a pro hac vice of Howard Wernow into this case of Mellaconic -- TimeClock and Mellaconic v Deputy, Your Honor. I'd like to submit this motion, along with verification of Mr. Wernow's -- and pursuant to local rule, Your Honor.

THE COURT: Let me look at it.
All right. I'll grant the motion.
And if you want to ask Mr. Bui questions, we'll put him back on the stand.
MR. WERNOW: Thank you, Your Honor. Howard Wernow.
THE COURT: And, Mr. Bui, you remain under oath.
THE WITNESS: Yes.
THE COURT: All right. Thank you.
MR. WERNOW: Your Honor, may I present what I've marked Exhibit 2 and Exhibit 3 to the witness and the Court?
THE COURT: Sure.
MR. WERNOW: Exhibit 2 is the Patent Assignment Agreement from the previous patent owner to Mellaconic. And Exhibit 3 is the Consulting Agreement between Mellaconic IP and Mavexar.
THE COURT: Okay. Thank you.
BY MR. WERNOW:
Q. Mr. Bui, I just wanted to clarify some things I heard when you were speaking with his Honor earlier.
If you could please look at what I've labeled Exhibit 2. It's the Patent Assignment Agreement.
Do you recognize that?

A. Yes.
Q. And is that between Mellaconic IP, LLC --
THE COURT: So actually, I'm going to object to leading questions. I mean, if you want to make attorney argument, you can bring the documents up, and you can show me and make your argument.
But one of the important reasons why I wanted to have a hearing, is to find out the reality, and find out who really is the beneficial owner, who's got the real interest in the litigation. And the best answers you get are from -- the most truthful answer you get to things like that are open-ended questions. I don't want you to walk this witness through a legal document.
MR. WERNOW: Sure.
THE COURT: All right. And I can read the legal document.
MR. WERNOW: Sure. Can we just ask --
BY MR. WERNOW:
Q. In reviewing Page 2 -- or Section 3, the considerations section of Exhibit 2, can you please tell the Court how Mellaconic has paid for these patents?
THE COURT: I don't need that. I can read the document. You want to ask him open-ended questions, go ahead. Ask him what he remembers. Ask him what he knows. Ask him his understanding. Let's not have him go read a

document.

MR. WERNOW: Sure.

BY MR. WERNOW:

Q. What do you remember about this patent purchase agreement, Mr. Bui?

A. There was 50 percent take back towards the previous.

Q. For consideration?

A. For consideration of the net proceeds.

Q. Okay. Can you please go to Exhibit 3.

What's your recollection of Exhibit 3 with respect to the recourse base repayment?

A. With Mavexar?

Q. Correct.

A. So Mavexar basically pays for the litigations of the -- fees for litigations. And then if all goes wrong, they have the right to come after me for the litigation fees.

Q. Okay. And the lawyers, what's your recollection of the attorneys' fees in this case?

A. That it's contingent basis, just depending on how far it goes along.

Q. The attorneys' fees are contingent, correct?

A. Yes.

Q. But the attorneys' expenses, were they part of this agreement with Mavexar?

A. Mavexar is going to pay the fees as a loan on a recourse basis.

Q. You said "fees," but do you mean "expenses"?

A. Expenses.

THE COURT: I mean, I don't know. What's the difference between fees and expenses, sir? Do you know?

THE WITNESS: I feel like -- I mean, I run a restaurant. I feel like fees and expenses are kind of the same, just to me, category, kind of. Something toward like a business or...

BY MR. WERNOW:

Q. And what's your recollection of the complaints that our office, or Mr. Curfman, has sent to you through Mavexar, you review those --

THE COURT: Object to leading. Ask him what he does.

BY MR. WERNOW:

Q. What do you do from Mavexar when someone sends you a complaint?

A. What was that?

Q. What do you do for Mellaconic IP, LLC, when you receive a complaint?

A. I review it and I either confirm it or deny it.

Q. And you can deny it, correct?

A. I can deny it.

MR. WERNOW: Thank you. Nothing further, Your Honor.

THE COURT: All right. Thank you very much.

And, Mr. Bui, you are excused, if you want.

All right. Mr. Anderson, you have been sitting here. Do you have any thoughts?

MR. ANDERSON: No, Your Honor. We have nothing to add to this. Thank you.

THE COURT: Anybody else want to say anything?

MR. WERNOW: Nothing further, Your Honor.

THE COURT: Well, I need to think about what I think are the issues that have been raised by the testimony we've heard today.

I think the testimony has to give pause to anybody who really is concerned about the integrity of our judicial system, the abuse of our courts, and potential abuse, lack of transparency as to who the real parties before the Court are, about who is making decisions in these types of litigation.

But it's a lot to digest, and I may ask for supplemental briefing. I'm actually considering inviting amici to come in to help. And I would be open to receiving recommendations for amici.

Anything else?

All right. If you have any recommendations for

amici, please submit them no later than a week from today. And the cases are going to remain where they are, as I consider these issues.

All right. We are adjourned.

(The proceedings concluded at 1:07 p.m.)

CERTIFICATE OF COURT REPORTER

I hereby certify that the foregoing is a true and accurate transcript from my stenographic notes in the proceeding.

/s/ Bonnie R. Archer
Bonnie R. Archer
Official Court Reporter
U.S. District Court

TEXAS SECRETARY of STATE
JOHN B. SCOTT

BUSINESS ORGANIZATIONS INQUIRY - VIEW ENTITY

Filing Number:	804193460	**Entity Type:**	Domestic Limited Liability Company (LLC)
Original Date of Filing:	August 17, 2021	**Entity Status:**	In existence
Formation Date:	N/A		
Tax ID:	32080608402	**FEIN:**	
Duration:	Perpetual		

Name: Nimitz Technologies LLC
Address: 3333 PRESTON RD STE 300
FRISCO, TX 75034-9013 USA

REGISTERED AGENT | FILING HISTORY | NAMES | MANAGEMENT | ASSUMED NAMES | ASSOCIATED ENTITIES | INITIAL ADDRESS

Name	Address	Inactive Date
InCorp Services, Inc.	815 Brazos St, Suite 500 Austin, TX 78701-78701 USA	

Order Return to Search

Instructions:
- To place an order for additional information about a filing press the 'Order' button.

UNITED STATES PATENT AND TRADEMARK OFFICE

12/167,412 | 004770.01721:

BROADCAST CONTENT ENCAPSULATION

Application #	Attorney Docket #	Patent #	Status	Filing or 371 (c) date
12/167,412	004770.01721	7,848,328 Issued - 12/07/2010	Patented Case - 11/17/2010	07/03/2008

4 Assignments found

Assignment 1

Reel/frame	Date recorded	Pages
021335/0856	08/04/2008	4

Conveyance

ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS). *PDF*

Assignors	Execution date	Correspondent
VARE, JANI PETTERI PEKONEN, HARRI J. ALAMAUNU, JYRKI TAPIO	08/04/2008 08/04/2008 08/04/2008	BANNER & WITCOFF, LTD. 1100 13TH STREET, N.W. SUITE 1200 WASHINGTON, DC 20005-4051

Assignee

NOKIA CORPORATION
KEILALAHDENTIE 4
ESPOO, FINLAND FIN-02150

Assignment 2

Reel/frame	Date recorded	Pages
030796/0459	07/15/2013	4

Conveyance

ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS). *PDF*

Assignors	Execution date	Correspondent
NOKIA CORPORATION	02/27/2013	BAKER HOSTETLER LLP 1050 CONNECTICUT AVENUE, N.W. SUITE 1100 WASHINGTON, DC 20036-5304

Assignee

FRANCE BREVETS
47 RUE DE LA VICTOIRE
PARIS, FRANCE 75009

Assignment 3

Reel/frame	Date recorded	Pages
057160/0940	08/12/2021	7

Conveyance

ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS). *PDF*

Assignors	Execution date	Correspondent
FRANCE BREVETS	03/11/2021	BURLEY LICENSING LLC 4757 W PARK BLVD, STE 113 - 1097 PLANO, TX 75093

Assignee

BURLEY LICENSING LLC
4757 W PARK BLVD, STE 113 - 1097
PLANO, TEXAS 75093

Assignment 4

Reel/frame	Date recorded	Pages
057291/0578	08/26/2021	3

Conveyance

ASSIGNMENT OF ASSIGNORS INTEREST (SEE DOCUMENT FOR DETAILS). *PDF*

Assignors	Execution date	Correspondent
BURLEY LICENSING LLC	08/20/2021	NIMITZ TECHNOLOGIES LLC 3333 PRESTON ROAD, SUITE 300, #1047 FRISCO, TX 75034

Assignee

NIMITZ TECHNOLOGIES LLC
3333 PRESTON ROAD, SUITE 300, #1047
FRISCO, TEXAS 75034

10 per page **Page 1 of 1**

Disclaimer: Assignment information on the assignment database reflects assignment documents that have been actually recorded. If the assignment for a patent was not recorded, the name of the assignee on the patent application publication or patent may be different. If you have any comments or questions concerning the data displayed, contact OPR / Assignments at 571-272-3350.

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

LAMPLIGHT LICENSING LLC,	)	
	)	
Plaintiff,	)	
	)	
v.	)	Civ. No. 22-418-CFC
	)	
ABB, INC.,	)	
	)	
Defendant.	)	

LAMPLIGHT LICENSING LLC,	)	
	)	
Plaintiff,	)	
	)	
v.	)	Civ. No. 22-1017-CFC
	)	
INGAM MICRO, INC.,	)	
	)	
Defendant.	)	

MEMORANDUM ORDER

Whereas the testimony of witnesses and representations of counsel at the November 4, 2022 hearing give rise to concerns that include but are not limited to the accuracy of statements in filings made by Plaintiff Lamplight Licensing LLC ("Lamplight") with the Court and whether the real parties in interest are before the Court;

NOW THEREFORE, at Wilmington on this Tenth day of November in 2022, it is HEREBY ORDERED that Plaintiff shall produce to the Court no later than December 8, 2022 copies of the following documents and communications

that are in the possession, custody, and control of Lamplight; Sally Pugal; and/or The Chong Law Firm, P.A.:

1. Any and all retention letters and/or agreements between Lamplight and The Chong Law Firm, P.A.
2. Any and all communications and correspondence, including emails and text messages, that Sally Pugal had with Mavexar, Linh Dietz, Papool Chaudhari, Brandon LaPray, and/or any representative of Mavexar regarding:
    a. the formation of Lamplight;
    b. assets, including patents, owned by Lamplight;
    c. the potential acquisition of assets, including patents, by Lamplight;
    d. the nature, scope, and likelihood of any liability, including but not limited to attorney fees, expenses, and litigation costs, Lamplight could incur as a result of its acquisition of and/or assertion in litigation of any patent;
    e. U.S. Patent No. 9,716,393;
    f. the retention of The Chong Law Firm, P.A. to represent Lamplight in these cases;
    g. the settlement or potential settlement of these cases;
    h. the dismissal of these cases; and

i. the November 4, 2022 hearing, including but not limited to the travel expenses and arrangements for Ms. Pugal to attend the hearing.

3. Any and all communications and correspondence, including emails and text messages, that Jimmy Chong and/or any employee or representative of The Chong Law Firm, P.A. had with Mavexar, Linh Dietz, Papool Chaudhari, Brandon LaPray, and/or any representative of Mavexar regarding:

   a. the formation of Lamplight;
   b. assets, including patents, owned by Lamplight;
   c. the potential acquisition of assets, including patents, by Lamplight;
   d. the nature, scope, and likelihood of any liability, including but not limited to attorney fees, expenses, and litigation costs, Lamplight could incur as a result of its acquisition of and/or assertion in litigation of any patent;
   e. U.S. Patent No. 9,716,393;
   f. the retention of The Chong Law Firm, P.A. to represent Lamplight in these cases;
   g. the settlement or potential settlement of these cases;
   h. the dismissal of these cases; and

i. the November 4, 2022 hearing, including but not limited to the travel expenses and arrangements for Ms. Pugal to attend the hearing.

4. Any and all monthly statements for any and all bank accounts held by Lamplight for the period March 1, 2022 through August 31, 2022.
5. Any and all documents relating to Lamplight's use, lease, purchase, and/or retention of 3571 Far West Blvd #3144, Austin, TX 78731 and 9901 Brodie Lane, Suite 160 PMB925, Austin, TX 78748.

It is FURTHER ORDERED that Plaintiff shall submit no later than December 8, 2022 a sworn declaration from Sally Pugal that identifies any and all assets owned by Lamplight as of (1) March 30, 2022; and (2) July 31, 2022.

CHIEF JUDGE

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

MELLACONIC IP, LLC, Plaintiff, v. TIMECLOCK PLUS, LLC, Defendant.	)))))))))	Civ. No. 22-244-CFC
MELLACONIC IP, LLC, Plaintiff, v. DEPUTY, INC., Defendant.	)))))))))	Civ. No. 22-541-CFC

MEMORANDUM ORDER

Whereas the testimony of witnesses and representations of counsel at the November 4, 2022 hearing give rise to concerns that include but are not limited to the accuracy of statements in filings made by Plaintiff Mellaconic IP, LLC ("Mellaconic") with the Court and whether the real parties in interest are before the Court;

NOW THEREFORE, at Wilmington on this Tenth day of November in 2022, it is HEREBY ORDERED that Plaintiff shall produce to the Court no later

than December 8, 2022 copies of the following documents and communications that are in the possession, custody, and control of Mellaconic; Hau Bui; Sand, Sebolt & Wernow Co., LPA; and/or The Chong Law Firm, P.A.:

1. Any and all retention letters and/or agreements between Mellaconic and Sand, Sebolt & Wernow Co., LPA.
2. Any and all retention letters and/or agreements between Mellaconic and The Chong Law Firm, P.A.
3. Any and all communications and correspondence, including emails and text messages, that Hau Bui had with Mavexar, Linh Dietz, Papool Chaudhari, and/or any representative of Mavexar regarding:
    a. the formation of Mellaconic;
    b. assets, including patents, owned by Mellaconic;
    c. the potential acquisition of assets, including patents, by Mellaconic;
    d. the nature, scope, and likelihood of any liability, including but not limited to attorney fees, expenses, and litigation costs, Mellaconic could incur as a result of its acquisition of and/or assertion in litigation of any patent;
    e. U.S. Patent No. 9,986,435;

f. the retention of Sand, Sebolt & Wernow Co., LPA to represent Mellaconic in these cases;

g. the retention of The Chong Law Firm, P.A. to represent Mellaconic in these cases;

h. the settlement or potential settlement of these cases;

i. the dismissal of these cases; and

j. the November 4, 2022 hearing, including but not limited to the travel expenses and arrangements for Mr. Bui to attend the hearing.

4. Any and all communications and correspondence, including emails and text messages, that Andrew Curfman and/or any employee or representative of Sand, Sebolt & Wernow Co., LPA had with Mavexar, Linh Dietz, Papool Chaudhari, and/or any representative of Mavexar regarding:

a. the formation of Mellaconic;

b. assets, including patents, owned by Mellaconic;

c. the potential acquisition of assets, including patents, by Mellaconic;

d. the nature, scope, and likelihood of any liability, including but not limited to attorney fees, expenses, and litigation costs, Mellaconic

could incur as a result of its acquisition of and/or assertion in litigation of any patent;

e. U.S. Patent No. 9,986,435;

f. the retention of Sand, Sebolt & Wernow Co., LPA to represent Mellaconic in these cases;

g. the settlement or potential settlement of these cases;

h. the dismissal of these cases; and

i. the November 4, 2022 hearing, including but not limited to the travel expenses and arrangements for Mr. Bui to attend the hearing.

5. Any and all communications and correspondence, including emails and text messages, that Jimmy Chong and/or any employee or representative of The Chong Law Firm, P.A. had with Mavexar, Linh Dietz, Papool Chaudhari, and/or any representative of Mavexar regarding:

a. the formation of Mellaconic;

b. assets, including patents, owned by Mellaconic;

c. the potential acquisition of assets, including patents, by Mellaconic;

d. the nature, scope, and likelihood of any liability, including but not limited to attorney fees, expenses, and litigation costs, Mellaconic

could incur as a result of its acquisition of and/or assertion in litigation of any patent;

e. U.S. Patent No. 9,986,435;

f. the retention of The Chong Law Firm, P.A. to represent Mellaconic in these cases;

g. the settlement or potential settlement of these cases;

h. the dismissal of these cases; and

i. the November 4, 2022 hearing, including but limited to the travel expenses and arrangements for Mr. Bui to attend the hearing.

6. Any and all monthly statements for any and all bank accounts held by Mellaconic for the period February 1, 2022 through May 31, 2022.

7. Any and all documents relating to Mellaconic's use, lease, purchase, and/or retention of 6009 West Parker Road – Suite 149-1027, Plano, Texas 75093.

It is FURTHER ORDERED that Plaintiff shall submit no later than December 8, 2022 a sworn declaration from Hau Bui that identifies any and all assets owned by Mellaconic as of (1) February 25, 2022; and (2) April 27, 2022.

CHIEF JUDGE

STAYED,PATENT

U.S. District Court
District of Delaware (Wilmington)
CIVIL DOCKET FOR CASE #: 1:22-cv-00418-CFC

Lamplight Licensing LLC v. ABB Inc.
Assigned to: Judge Colm F. Connolly
Related Cases: 1:21-cv-01689-CFC
1:21-cv-01690-CFC
1:21-cv-01691-CFC
1:22-cv-00417-CFC
1:22-cv-01017-CFC
Cause: 35:1 Patent Infringement

Date Filed: 03/30/2022
Jury Demand: Plaintiff
Nature of Suit: 830 Patent
Jurisdiction: Federal Question

Plaintiff

Lamplight Licensing LLC represented by **Jimmy C. Chong**
Chong Law Firm, PA
2961 Centerville Rd., Ste 350
Wilmington, DE 19808
302-999-9480
Fax: 302-800-1999
Email: chong@chonglawfirm.com
LEAD ATTORNEY
ATTORNEY TO BE NOTICED

V.

Defendant

ABB Inc.

Date Filed	#	Docket Text
03/30/2022	1	COMPLAINT FOR PATENT INFRINGEMENT - filed with Jury Demand against ABB Inc. - Magistrate Consent Notice to Pltf. (Filing fee $ 402, receipt number ADEDC-3838727.) - filed by Lamplight Licensing LLC. (Attachments: # 1 Exhibit 1, # 2 Exhibit 2, # 3 Civil Cover Sheet, # 4 Related Cases)(mal) (Entered: 03/31/2022)
03/30/2022	2	Notice, Consent and Referral forms re: U.S. Magistrate Judge jurisdiction. (mal) (Entered: 03/31/2022)
03/30/2022	3	Report to the Commissioner of Patents and Trademarks for Patent/Trademark Number(s) 9,716,393. (mal) (Entered: 03/31/2022)
03/30/2022	4	Disclosure Statement pursuant to Rule 7.1: No Parents or Affiliates Listed filed by Lamplight Licensing LLC. (mal) (Entered: 03/31/2022)
03/31/2022	5	Summons Issued as to ABB Inc. on 3/31/2022. (mal) (Entered: 03/31/2022)
04/05/2022	6	SUMMONS Returned Executed by Lamplight Licensing LLC. ABB Inc. served on 4/1/2022, answer due 4/22/2022. (Chong, Jimmy) (Entered: 04/05/2022)

04/06/2022		Case Assigned to Judge Colm F. Connolly. Please include the initials of the Judge (CFC) after the case number on all documents filed. Associated Cases: 1:22-cv-00417-CFC, 1:22-cv-00418-CFC (rjb) (Entered: 04/06/2022)
04/21/2022	7	STIPULATION TO EXTEND TIME to Answer the Complaint to 05/23/2022 - filed by Lamplight Licensing LLC. (Chong, Jimmy) (Entered: 04/21/2022)
04/21/2022		SO ORDERED, re 7 STIPULATION TO EXTEND TIME to Answer the Complaint to 05/23/2022, filed by Lamplight Licensing LLC. Reset Answer Deadlines: ABB Inc. answer due 5/23/2022. Ordered by Judge Colm F. Connolly on 4/21/2022. (kmd) (Entered: 04/21/2022)
05/18/2022	8	STIPULATION TO EXTEND TIME to Answer the Complaint to 06/22/2022 - filed by Lamplight Licensing LLC. (Chong, Jimmy) (Entered: 05/18/2022)
05/18/2022		SO ORDERED, re 8 STIPULATION TO EXTEND TIME to Answer the Complaint to 06/22/2022, filed by Lamplight Licensing LLC. Reset Answer Deadlines: ABB Inc. answer due 6/22/2022. Ordered by Judge Colm F. Connolly on 5/18/2022. (kmd) (Entered: 05/18/2022)
06/14/2022	9	STIPULATION TO EXTEND TIME to Answer the Complaint to 07/22/2022 - filed by Lamplight Licensing LLC. (Chong, Jimmy) (Entered: 06/14/2022)
06/14/2022		SO ORDERED, re 9 STIPULATION TO EXTEND TIME to Answer the Complaint to 07/22/2022, filed by Lamplight Licensing LLC. Reset Answer Deadlines: ABB Inc. answer due 7/22/2022. Ordered by Judge Colm F. Connolly on 6/14/2022. (kmd) (Entered: 06/14/2022)
07/20/2022	10	STIPULATION TO EXTEND TIME to Answer the Complaint to 09/06/2022 - filed by Lamplight Licensing LLC. (Chong, Jimmy) (Entered: 07/20/2022)
07/21/2022		SO ORDERED, re 10 STIPULATION TO EXTEND TIME to Answer the Complaint to 09/06/2022, filed by Lamplight Licensing LLC. Reset Answer Deadlines: ABB Inc. answer due 9/6/2022. Ordered by Judge Colm F. Connolly on 7/21/2022. (kmd) (Entered: 07/21/2022)
09/02/2022	11	MOTION to Stay *All Deadlines and Notice of Settlement to 10/06/22* - filed by Lamplight Licensing LLC. (Chong, Jimmy) (Entered: 09/02/2022)
09/02/2022	12	AMENDED DOCUMENT by Lamplight Licensing LLC. Amendment to 4 Disclosure Statement . (Chong, Jimmy) (Entered: 09/02/2022)
09/12/2022	13	MEMORANDUM ORDER Setting Hearings: An Evidentiary Hearing is set for 11/10/2022 at 10:00 AM in Courtroom 4B before Judge Colm F. Connolly to determine whether Plaintiff has complied with the Court's standing order regarding third-party litigation funding. The following individuals shall attend the hearing in person: Jimmy Chong and Sally Pugal. Signed by Judge Colm F. Connolly on 9/12/2022. (nmf) (Entered: 09/12/2022)
10/06/2022	14	STATEMENT *Regarding Third-Party Litigation Funding Arrangements* by Lamplight Licensing LLC. (Chong, Jimmy) (Entered: 10/06/2022)
10/06/2022	15	Letter to The Honorable Colm F. Connolly from Jimmy Chong regarding In response to Court's Memorandum Order - re (13 in 1:22-cv-00418-CFC, 13 in 1:22-cv-00418-CFC, 9 in 1:22-cv-01017-CFC, 9 in 1:22-cv-01017-CFC) Memorandum and Order,, Set Hearings,. (Attachments: # 1 Affidavit Declaration of Sally Pugal)(Chong, Jimmy) (Entered: 10/06/2022)
10/06/2022	16	Second MOTION to Stay *All Deadlines and Notice of Settlement to 10/20/22* - filed by

		Lamplight Licensing LLC. (Chong, Jimmy) (Entered: 10/06/2022)
10/12/2022	17	Letter to The Honorable Colm F. Connolly from Jimmy Chong regarding moving the November 10th Hearing to November 4th - re (13 in 1:22-cv-00418-CFC, 13 in 1:22-cv-00418-CFC, 9 in 1:22-cv-01017-CFC, 9 in 1:22-cv-01017-CFC) Memorandum and Order,, Set Hearings,. (Chong, Jimmy) (Entered: 10/12/2022)
10/17/2022		ORAL ORDER: It is HEREBY ORDERED that Plaintiffs' request to change the November 10 hearing to November 4, 2022 at 10:00 (D.I. 17) is GRANTED. Ordered by Judge Colm F. Connolly on 10/17/2022. (nmf) (Entered: 10/17/2022)
10/20/2022	18	Third MOTION to Stay *All Deadlines and Notice of Settlement to 11/03/22* - filed by Lamplight Licensing LLC. (Chong, Jimmy) (Entered: 10/20/2022)
10/24/2022	19	SO ORDERED, re 18 Third MOTION to Stay *All Deadlines and Notice of Settlement to 11/03/22*, filed by Lamplight Licensing LLC. Case stayed. Signed by Judge Colm F. Connolly on 10/24/2022. (kmd) (Entered: 10/24/2022)
10/31/2022	20	Letter to The Honorable Colm F. Connolly from Jimmy Chong regarding an update on Ms. Pugal attending November 4, 2022 - re Oral Order, Set Hearings. (Chong, Jimmy) (Entered: 10/31/2022)
11/02/2022	21	NOTICE of Voluntary Dismissal by Lamplight Licensing LLC as to ABB, Inc. (Chong, Jimmy) (Entered: 11/02/2022)
11/03/2022	22	Letter to The Honorable Colm F. Connolly from Jimmy Chong regarding a Second Update on Sally Pugal and her Signed Declaration. (Attachments: # 1 Affidavit Declaration of Sally Pugal)(Chong, Jimmy) (Entered: 11/03/2022)
11/04/2022		ORAL ORDER FOR STATUS REPORT:(Status Report due by 12/5/2022.) Ordered by Judge Colm F. Connolly on 11/4/2022. (nmf) (Entered: 11/04/2022)
11/04/2022		Minute Entry for proceedings held before Judge Colm F. Connolly - Evidentiary Hearing held on 11/4/2022. (Court Reporter Bonnie Archer.) (nmf) (Entered: 11/04/2022)
11/07/2022	23	Official Transcript of Evidentiary Hearing held on November 4, 2022 before Chief Judge Connolly. Court Reporter/Transcriber Bonnie Archer, Email: bonnie_archer@ded.uscourts.gov. Transcript may be viewed at the court public terminal or order/purchased through the Court Reporter/Transcriber before the deadline for Release of Transcript Restriction. After that date, it may be obtained through PACER. Redaction Request due 11/28/2022. Redacted Transcript Deadline set for 12/8/2022. Release of Transcript Restriction set for 2/6/2023. (nmf) (Entered: 11/07/2022)
11/10/2022	24	MEMORANDUM ORDER. ORDER, Setting Deadlines: (Notice of Compliance deadline set for 12/8/2022.) Signed by Judge Colm F. Connolly on 11/10/2022. (nmf) (Main Document 24 replaced on 11/10/2022) (nmf,). (Entered: 11/10/2022)
11/10/2022		CORRECTING ENTRY: The pdf of the Memorandum Order of today has been replaced with a corrected version to correct a typographical error in the case caption. Associated Cases: 1:22-cv-00418-CFC, 1:22-cv-01017-CFC(nmf) (Entered: 11/10/2022)

PACER Service Center			
Transaction Receipt			
11/11/2022 14:01:47			
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Description:	Docket Report	**Search Criteria:**	1:22-cv-00418-CFC Start date: 1/1/1973 End date: 11/14/2022
Billable Pages:	3	**Cost:**	0.30

PATENT

U.S. District Court
District of Delaware (Wilmington)
CIVIL DOCKET FOR CASE #: 1:22-cv-01017-CFC

Lamplight Licensing LLC v. Ingram Micro, Inc.
Assigned to: Judge Colm F. Connolly
Related Cases: 1:21-cv-01689-CFC
1:21-cv-01690-CFC
1:21-cv-01691-CFC
1:22-cv-00417-CFC
1:22-cv-00418-CFC
Cause: 35:271 Patent Infringement

Date Filed: 07/31/2022
Jury Demand: Plaintiff
Nature of Suit: 830 Patent
Jurisdiction: Federal Question

Plaintiff

Lamplight Licensing LLC represented by **Jimmy C. Chong**
Chong Law Firm, PA
2961 Centerville Rd., Ste 350
Wilmington, DE 19808
302-999-9480
Fax: 302-800-1999
Email: chong@chonglawfirm.com
LEAD ATTORNEY
ATTORNEY TO BE NOTICED

V.

Defendant

Ingram Micro, Inc.

Date Filed	#	Docket Text
07/31/2022	1	COMPLAINT filed with Jury Demand against Ingram Micro, Inc. (Filing fee $ 402, receipt number ADEDC-3926302.) - filed by Lamplight Licensing LLC. (Attachments: # 1 Exhibit 1, # 2 Exhibit 2, # 3 Civil Cover Sheet)(mpb) (Entered: 08/01/2022)
07/31/2022	2	Notice, Consent and Referral forms re: U.S. Magistrate Judge jurisdiction. (mpb) (Entered: 08/01/2022)
07/31/2022	3	Report to the Commissioner of Patents and Trademarks for Patent/Trademark Number(s) 9,716,393. (mpb) (Entered: 08/01/2022)
07/31/2022	4	Disclosure Statement pursuant to Rule 7.1: No Parents or Affiliates Listed filed by Lamplight Licensing LLC. (mpb) (Entered: 08/01/2022)
07/31/2022	5	Summons Issued as to Ingram Micro, Inc. on 7/31/2022. (mpb) (Entered: 08/01/2022)
08/03/2022		Case Assigned to Judge Colm F. Connolly. Please include the initials of the Judge (CFC) after the case number on all documents filed. (rjb) (Entered: 08/03/2022)
08/08/2022	6	SUMMONS Returned Executed by Lamplight Licensing LLC. Ingram Micro, Inc. served

		on 8/2/2022, answer due 8/23/2022. (Chong, Jimmy) (Entered: 08/08/2022)
08/17/2022	7	STIPULATION TO EXTEND TIME to Answer the Complaint to 09/22/2022 - filed by Lamplight Licensing LLC. (Chong, Jimmy) (Entered: 08/17/2022)
08/17/2022		SO ORDERED, re 7 STIPULATION TO EXTEND TIME to Answer the Complaint to 09/22/2022 filed by Lamplight Licensing LLC, Set/Reset Answer Deadlines: Ingram Micro, Inc. answer due 9/22/2022. Signed by Judge Colm F. Connolly on 8/17/2022. (nmf) (Entered: 08/17/2022)
09/02/2022	8	AMENDED DOCUMENT by Lamplight Licensing LLC. Amendment to 4 Disclosure Statement . (Chong, Jimmy) (Entered: 09/02/2022)
09/12/2022	9	MEMORANDUM ORDER Setting Hearings: An Evidentiary Hearing is set for 11/10/2022 at 10:00 AM in Courtroom 4B before Judge Colm F. Connolly to determine whether Plaintiff has complied with the Court's standing order regarding third-party litigation funding. The following individuals shall attend the hearing in person: Jimmy Chong and Sally Pugal. Signed by Judge Colm F. Connolly on 9/12/2022. (nmf) (Entered: 09/12/2022)
09/13/2022	10	NOTICE of Voluntary Dismissal by Lamplight Licensing LLC as to Ingram Micro, Inc. (Chong, Jimmy) (Entered: 09/13/2022)
10/06/2022	11	STATEMENT *Regarding Third-Party Litigation Funding Arrangements* by Lamplight Licensing LLC. (Chong, Jimmy) (Entered: 10/06/2022)
10/06/2022	12	Letter to The Honorable Colm F. Connolly from Jimmy Chong regarding In response to Court's Memorandum Order - re (13 in 1:22-cv-00418-CFC, 13 in 1:22-cv-00418-CFC, 9 in 1:22-cv-01017-CFC, 9 in 1:22-cv-01017-CFC) Memorandum and Order,, Set Hearings,. (Attachments: # 1 Affidavit Declaration of Sally Pugal)(Chong, Jimmy) (Entered: 10/06/2022)
10/12/2022	13	Letter to The Honorable Colm F. Connolly from Jimmy Chong regarding moving the November 10th Hearing to November 4th - re (13 in 1:22-cv-00418-CFC, 13 in 1:22-cv-00418-CFC, 9 in 1:22-cv-01017-CFC, 9 in 1:22-cv-01017-CFC) Memorandum and Order,, Set Hearings,. (Chong, Jimmy) (Entered: 10/12/2022)
10/17/2022		ORAL ORDER: It is HEREBY ORDERED that Plaintiffs' request to change the November 10 hearing to November 4, 2022 at 10:00 (D.I. 17) is GRANTED. Ordered by Judge Colm F. Connolly on 10/17/2022. (nmf) (Entered: 10/17/2022)
10/31/2022	14	Letter to The Honorable Colm F. Connolly from Jimmy Chong regarding an update on Ms. Pugal attending November 4, 2022 - re Oral Order, Set Hearings. (Chong, Jimmy) (Entered: 10/31/2022)
11/03/2022	15	Letter to The Honorable Colm F. Connolly from Jimmy Chong regarding a Second Update on Sally Pugal and her Signed Declaration. (Attachments: # 1 Affidavit Declaration of Sally Pugal)(Chong, Jimmy) (Entered: 11/03/2022)
11/04/2022		ORAL ORDER FOR STATUS REPORT:(Status Report due by 12/5/2022.) Ordered by Judge Colm F. Connolly on 11/4/2022. (nmf) (Entered: 11/04/2022)
11/04/2022		Minute Entry for proceedings held before Judge Colm F. Connolly - Evidentiary Hearing held on 11/4/2022. (Court Reporter Bonnie Archer.) (nmf) (Entered: 11/04/2022)
11/07/2022	16	Official Transcript of Evidentiary Hearing held on November 4, 2022 before Chief Judge Connolly. Court Reporter/Transcriber Bonnie Archer, Email: bonnie_archer@ded.uscourts.gov. Transcript may be viewed at the court public terminal or order/purchased through the Court Reporter/Transcriber before the deadline for Release of

		Transcript Restriction. After that date, it may be obtained through PACER. Redaction Request due 11/28/2022. Redacted Transcript Deadline set for 12/8/2022. Release of Transcript Restriction set for 2/6/2023. (nmf) (Entered: 11/07/2022)
11/10/2022	17	MEMORANDUM ORDER. ORDER, Setting Deadlines: (Notice of Compliance deadline set for 12/8/2022.) Signed by Judge Colm F. Connolly on 11/10/2022. (nmf) (Main Document 17 replaced on 11/10/2022) (nmf,). (Entered: 11/10/2022)
11/10/2022		CORRECTING ENTRY: The pdf of the Memorandum Order of today has been replaced with a corrected version to correct a typographical error in the case caption. Associated Cases: 1:22-cv-00418-CFC, 1:22-cv-01017-CFC(nmf) (Entered: 11/10/2022)

PACER Service Center			
Transaction Receipt			
11/11/2022 14:03:05			
PACER Login:	goodgolier	**Client Code:**	
Description:	Docket Report	**Search Criteria:**	1:22-cv-01017-CFC Start date: 1/1/1973 End date: 11/14/2022
Billable Pages:	3	**Cost:**	0.30

STAYED,PATENT

U.S. District Court
District of Delaware (Wilmington)
CIVIL DOCKET FOR CASE #: 1:22-cv-00244-CFC

Mellaconic IP LLC v. TimeClock Plus, LLC.
Assigned to: Judge Colm F. Connolly
Related Cases: 1:20-cv-01323-LPS
1:21-cv-00448-CFC
1:21-cv-00447-CFC
1:21-cv-00573-CFC
1:21-cv-00574-CFC
1:21-cv-00944-CFC
1:21-cv-00945-CFC
1:21-cv-01080-CFC
1:21-cv-01081-CFC
1:21-cv-01373-CFC
1:21-cv-01374-CFC
1:21-cv-01844-CFC
1:21-cv-01853-CFC
1:22-cv-00243-CFC
1:22-cv-00540-CFC
1:22-cv-00242-CFC
1:22-cv-00541-CFC
1:22-cv-00542-CFC
Cause: 35:1 Patent Infringement

Date Filed: 02/25/2022
Jury Demand: Plaintiff
Nature of Suit: 830 Patent
Jurisdiction: Federal Question

Plaintiff

Mellaconic IP LLC represented by **Jimmy C. Chong**
Chong Law Firm, PA
2961 Centerville Rd., Ste 350
Wilmington, DE 19808
302-999-9480
Fax: 302-800-1999
Email: chong@chonglawfirm.com
LEAD ATTORNEY
ATTORNEY TO BE NOTICED

Andrew S. Curfman
Email: andrew.curfman@sswip.com
PRO HAC VICE
ATTORNEY TO BE NOTICED

V.

Defendant

TimeClock Plus, LLC

Date Filed	#	Docket Text
02/25/2022	1	COMPLAINT FOR PATENT INFRINGEMENT filed with Jury Demand against TimeClock Plus, LLC - Magistrate Consent Notice to Pltf. (Filing fee $ 402, receipt number ADEDC-3811211.) - filed by Mellaconic IP LLC. (Attachments: # 1 Exhibit A, # 2 Exhibit B, # 3 List of Related Cases, # 4 Civil Cover Sheet)(apk) (Entered: 02/25/2022)
02/25/2022	2	Notice, Consent and Referral forms re: U.S. Magistrate Judge jurisdiction. (apk) (Entered: 02/25/2022)
02/25/2022	3	Report to the Commissioner of Patents and Trademarks for Patent/Trademark Number(s) US 9,986,435. (apk) (Entered: 02/25/2022)
02/25/2022	4	Disclosure Statement pursuant to Rule 7.1: No Parents or Affiliates Listed filed by Mellaconic IP LLC. (apk) (Entered: 02/25/2022)
02/25/2022	5	Summons Issued with Magistrate Consent Notice attached as to TimeClock Plus, LLC on 2/25/2022. (apk) (Entered: 02/25/2022)
03/02/2022		Case Assigned to Judge Colm F. Connolly. Please include the initials of the Judge (CFC) after the case number on all documents filed. Associated Cases: 1:22-cv-00242-CFC, 1:22-cv-00243-CFC, 1:22-cv-00244-CFC (rjb) (Entered: 03/02/2022)
03/03/2022	6	MOTION for Pro Hac Vice Appearance of Attorney Andrew S. Curfman - filed by Mellaconic IP LLC. (Chong, Jimmy) (Entered: 03/03/2022)
03/04/2022		SO ORDERED, re 6 (1:22-cv-00244-CFC, 1:22-cv-00242-CFC, 1:22-cv-00243-CFC) MOTION for Pro Hac Vice Appearance of Attorney Andrew S. Curfman, filed by Mellaconic IP LLC. Ordered by Judge Colm F. Connolly on 3/4/2022. Associated Cases: 1:22-cv-00243-CFC, 1:22-cv-00242-CFC, 1:22-cv-00244-CFC(kmd) (Entered: 03/04/2022)
03/07/2022		Pro Hac Vice Attorney Andrew S. Curfman for Mellaconic IP LLC added for electronic noticing. Pursuant to Local Rule 83.5 (d)., Delaware counsel shall be the registered users of CM/ECF and shall be required to file all papers. Associated Cases: 1:22-cv-00242-CFC, 1:22-cv-00243-CFC, 1:22-cv-00244-CFC(srs) (Entered: 03/07/2022)
03/08/2022	7	SUMMONS Returned Executed by Mellaconic IP LLC. TimeClock Plus, LLC served on 3/3/2022, answer due 3/24/2022. (Chong, Jimmy) (Entered: 03/08/2022)
03/22/2022	8	STIPULATION TO EXTEND TIME to Answer the Complaint to 04/25/2022 - filed by Mellaconic IP LLC. (Chong, Jimmy) (Entered: 03/22/2022)
03/22/2022		SO ORDERED, re 8 STIPULATION TO EXTEND TIME to Answer the Complaint to 04/25/2022 filed by Mellaconic IP LLC. Reset Answer Deadlines: TimeClock Plus, LLC answer due 4/25/2022. Ordered by Judge Colm F. Connolly on 3/22/2022. (kmd) (Entered: 03/22/2022)
04/19/2022	9	STIPULATION TO EXTEND TIME to Answer the Complaint to 05/25/2022 - filed by Mellaconic IP LLC. (Chong, Jimmy) (Entered: 04/19/2022)
04/19/2022		SO ORDERED, re 9 STIPULATION TO EXTEND TIME to Answer the Complaint to 05/25/2022, filed by Mellaconic IP LLC. Reset Answer Deadlines: TimeClock Plus, LLC answer due 5/25/2022. Ordered by Judge Colm F. Connolly on 4/19/2022. (kmd) (Entered: 04/19/2022)
05/23/2022	10	STIPULATION TO EXTEND TIME to Answer the Complaint to 06/24/2022 - filed by Mellaconic IP LLC. (Chong, Jimmy) (Entered: 05/23/2022)

05/23/2022		SO ORDERED, re 10 STIPULATION TO EXTEND TIME to Answer the Complaint to 06/24/2022, filed by Mellaconic IP LLC. Reset Answer Deadlines: TimeClock Plus, LLC answer due 6/24/2022. Ordered by Judge Colm F. Connolly on 5/23/2022. (kmd) (Entered: 05/23/2022)
06/22/2022	11	STIPULATION TO EXTEND TIME to Answer the Complaint to 07/25/2022 - filed by Mellaconic IP LLC. (Chong, Jimmy) (Entered: 06/22/2022)
06/22/2022		SO ORDERED, re 11 STIPULATION TO EXTEND TIME to Answer the Complaint to 07/25/2022, filed by Mellaconic IP LLC. Reset Answer Deadlines: TimeClock Plus, LLC answer due 7/25/2022. Ordered by Judge Colm F. Connolly on 6/22/2022. (kmd) (Entered: 06/22/2022)
07/13/2022	12	MOTION to Stay *All Deadlines and Notice of Settlement to 09/12/2022* - filed by Mellaconic IP LLC. (Chong, Jimmy) (Entered: 07/13/2022)
07/15/2022	13	SO ORDERED, re 12 MOTION to Stay *All Deadlines and Notice of Settlement to 09/12/2022*, filed by Mellaconic IP LLC. Case stayed. Signed by Judge Colm F. Connolly on 7/15/2022. (kmd) (Entered: 07/15/2022)
09/02/2022	14	AMENDED DOCUMENT by Mellaconic IP LLC. Amendment to 4 Disclosure Statement . (Chong, Jimmy) (Entered: 09/02/2022)
09/07/2022	15	MOTION for Extension of Time to *All Deadlines and Notice of Settlement to 11/11/22* - filed by Mellaconic IP LLC. (Chong, Jimmy) (Entered: 09/07/2022)
09/12/2022	16	MEMORANDUM ORDER Setting Hearings: An Evidentiary Hearing is set for 11/4/2022 at 10:00 AM in Courtroom 4B before Judge Colm F. Connolly to determine whether Plaintiff has complied with the Court's standing order regarding third-party litigation funding. The following individuals shall attend the hearing in person: Jimmy Chong; Andrew Curfman; and Hau Bui. Signed by Judge Colm F. Connolly on 9/12/2022. (nmf) (Entered: 09/12/2022)
10/05/2022	17	Letter to The Honorable Colm F. Connolly from Jimmy Chong and Andrew S. Curfman regarding In response to Court's Memorandum Order - re (16 in 1:22-cv-00244-CFC, 16 in 1:22-cv-00244-CFC, 10 in 1:22-cv-00541-CFC, 10 in 1:22-cv-00541-CFC) Memorandum and Order,, Set Hearings,. (Attachments: # 1 Affidavit Declaration of Hau Bui)(Chong, Jimmy) (Entered: 10/05/2022)
10/05/2022	18	NOTICE of Voluntary Dismissal by Mellaconic IP LLC as to TimeClock Plus, LLC (Chong, Jimmy) (Entered: 10/05/2022)
10/31/2022	19	Letter to The Honorable Colm F. Connolly from Jimmy Chong and Andrew S. Curfman regarding Andrew S. Curfman attendance at the November 4, 2022 hearing - re (16 in 1:22-cv-00244-CFC, 16 in 1:22-cv-00244-CFC, 10 in 1:22-cv-00541-CFC, 10 in 1:22-cv-00541-CFC) Memorandum and Order,, Set Hearings,. (Attachments: # 1 Exhibit)(Chong, Jimmy) (Entered: 10/31/2022)
11/03/2022		ORAL ORDER: The Court has reviewed Mr. Chong's letter (D.I. 12). Since Mr. Curfman continues to test positive for Covid, he is excused from tomorrow's hearing. Mr. Curfman shall inform the Court no later than November 9, 2022 of his Covid status. Tomorrow's hearing will go forward and Mr. Chong and Hau Bui are still required to attend in person. Ordered by Judge Colm F. Connolly on 11/3/2022. (nmf) (Entered: 11/03/2022)
11/04/2022		Minute Entry for proceedings held before Judge Colm F. Connolly - Evidentiary Hearing held on 11/4/2022. (Court Reporter Bonnie Archer.) (nmf) (Entered: 11/04/2022)
11/07/2022	20	Official Transcript of Evidentiary Hearing held on November 4, 2022 before Chief Judge Connolly. Court Reporter/Transcriber Bonnie Archer, Email:

		bonnie_archer@ded.uscourts.gov. Transcript may be viewed at the court public terminal or order/purchased through the Court Reporter/Transcriber before the deadline for Release of Transcript Restriction. After that date, it may be obtained through PACER. Redaction Request due 11/28/2022. Redacted Transcript Deadline set for 12/8/2022. Release of Transcript Restriction set for 2/6/2023. (nmf) (Entered: 11/07/2022)
11/08/2022	21	Letter to The Honorable Colm F. Connolly from Jimmy Chong and Andrew S. Curfman regarding Andrew S. Curfman COVID status - re Oral Order,. (Chong, Jimmy) (Entered: 11/08/2022)
11/10/2022	22	MEMORANDUM ORDER. ORDER, Setting Deadlines: (Notice of Compliance deadline set for 12/8/2022.) Signed by Judge Colm F. Connolly on 11/10/2022. (nmf) (Entered: 11/10/2022)

PACER Service Center			
Transaction Receipt			
11/11/2022 14:05:00			
PACER Login:	goodgolier	**Client Code:**	
Description:	Docket Report	**Search Criteria:**	1:22-cv-00244-CFC Start date: 1/1/1973 End date: 11/14/2022
Billable Pages:	4	**Cost:**	0.40

PATENT

U.S. District Court
District of Delaware (Wilmington)
CIVIL DOCKET FOR CASE #: 1:22-cv-00541-CFC

Mellaconic IP LLC v. Deputy, Inc.
Assigned to: Judge Colm F. Connolly
Related Cases: 1:20-cv-01323-LPS
1:21-cv-00448-CFC
1:21-cv-00447-CFC
1:21-cv-00573-CFC
1:21-cv-00574-CFC
1:21-cv-00944-CFC
1:21-cv-00945-CFC
1:21-cv-01080-CFC
1:21-cv-01081-CFC
1:21-cv-01373-CFC
1:21-cv-01374-CFC
1:21-cv-01844-CFC
1:21-cv-01853-CFC
1:22-cv-00243-CFC
1:22-cv-00242-CFC
1:22-cv-00244-CFC
1:22-cv-00540-CFC
1:22-cv-00542-CFC
Cause: 35:1 Patent Infringement

Date Filed: 04/27/2022
Jury Demand: Plaintiff
Nature of Suit: 830 Patent
Jurisdiction: Federal Question

Plaintiff

Mellaconic IP LLC represented by **Jimmy C. Chong**
Chong Law Firm, PA
2961 Centerville Rd., Ste 350
Wilmington, DE 19808
302-999-9480
Fax: 302-800-1999
Email: chong@chonglawfirm.com
LEAD ATTORNEY
ATTORNEY TO BE NOTICED

Andrew S. Curfman
Email: andrew.curfman@sswip.com
PRO HAC VICE
ATTORNEY TO BE NOTICED

V.

Defendant

Deputy, Inc.

Date Filed	#	Docket Text
04/27/2022	1	COMPLAINT FOR INFRINGEMENT OF PATENT - filed with Jury Demand against Deputy, Inc. - Magistrate Consent Notice to Pltf. (Filing fee $ 402, receipt number ADEDC-3860718.) - filed by Mellaconic IP LLC. (Attachments: # 1 Exhibit A, # 2 Exhibit B, # 3 Related Cases, # 4 Civil Cover Sheet)(mal) (Entered: 04/27/2022)
04/27/2022	2	Notice, Consent and Referral forms re: U.S. Magistrate Judge jurisdiction. (mal) (Entered: 04/27/2022)
04/27/2022	3	Report to the Commissioner of Patents and Trademarks for Patent/Trademark Number(s) US 9,986,435. (mal) (Entered: 04/27/2022)
04/27/2022	4	Disclosure Statement pursuant to Rule 7.1: No Parents or Affiliates Listed filed by Mellaconic IP LLC. (mal) (Entered: 04/27/2022)
04/27/2022	5	Summons Issued as to Deputy, Inc. on 4/27/2022. (mal) (Entered: 04/27/2022)
05/02/2022	6	SUMMONS Returned Executed by Mellaconic IP LLC. Deputy, Inc. served on 4/28/2022, answer due 5/19/2022. (Chong, Jimmy) (Entered: 05/02/2022)
05/02/2022	7	MOTION for Pro Hac Vice Appearance of Attorney Andrew S. Curfman - filed by Mellaconic IP LLC. (Chong, Jimmy) (Entered: 05/02/2022)
05/04/2022		Case Assigned to Judge Colm F. Connolly. Please include the initials of the Judge (CFC) after the case number on all documents filed. Associated Cases: 1:22-cv-00540-CFC, 1:22-cv-00541-CFC, 1:22-cv-00542-CFC (rjb) (Entered: 05/04/2022)
05/05/2022		SO ORDERED, re (7 in 1:22-cv-00541-CFC, 7 in 1:22-cv-00540-CFC, 7 in 1:22-cv-00542-CFC) MOTION for Pro Hac Vice Appearance of Attorney Andrew S. Curfman filed by Mellaconic IP LLC. Signed by Judge Colm F. Connolly on 5/5/2022. Associated Cases: 1:22-cv-00540-CFC, 1:22-cv-00541-CFC, 1:22-cv-00542-CFC(nmf) (Entered: 05/05/2022)
05/05/2022		Pro Hac Vice Attorney Andrew S. Curfman for Mellaconic IP LLC added for electronic noticing. Pursuant to Local Rule 83.5 (d)., Delaware counsel shall be the registered users of CM/ECF and shall be required to file all papers. (mpb) (Entered: 05/05/2022)
09/02/2022	8	AMENDED DOCUMENT by Mellaconic IP LLC. Amendment to 4 Disclosure Statement . (Chong, Jimmy) (Entered: 09/02/2022)
09/02/2022	9	NOTICE of Voluntary Dismissal by Mellaconic IP LLC as to Deputy, Inc. (Chong, Jimmy) (Entered: 09/02/2022)
09/12/2022	10	MEMORANDUM ORDER Setting Hearings: An Evidentiary Hearing is set for 11/4/2022 at 10:00 AM in Courtroom 4B before Judge Colm F. Connolly to determine whether Plaintiff has complied with the Court's standing order regarding third-party litigation funding. The following individuals shall attend the hearing in person: Jimmy Chong; Andrew Curfman; and Hau Bui. Signed by Judge Colm F. Connolly on 9/12/2022. (nmf) (Entered: 09/12/2022)
10/05/2022	11	Letter to The Honorable Colm F. Connolly from Jimmy Chong and Andrew S. Curfman regarding In response to Court's Memorandum Order - re (16 in 1:22-cv-00244-CFC, 16 in 1:22-cv-00244-CFC, 10 in 1:22-cv-00541-CFC, 10 in 1:22-cv-00541-CFC) Memorandum and Order,, Set Hearings,. (Attachments: # 1 Affidavit Declaration of Hau Bui)(Chong, Jimmy) (Entered: 10/05/2022)
10/31/2022	12	Letter to The Honorable Colm F. Connolly from Jimmy Chong and Andrew S. Curfman

		regarding Andrew S. Curfman attendance at the November 4, 2022 hearing - re (16 in 1:22-cv-00244-CFC, 16 in 1:22-cv-00244-CFC, 10 in 1:22-cv-00541-CFC, 10 in 1:22-cv-00541-CFC) Memorandum and Order,, Set Hearings,. (Attachments: # 1 Exhibit)(Chong, Jimmy) (Entered: 10/31/2022)
11/03/2022		ORAL ORDER: The Court has reviewed Mr. Chong's letter (D.I. 12). Since Mr. Curfman continues to test positive for Covid, he is excused from tomorrow's hearing. Mr. Curfman shall inform the Court no later than November 9, 2022 of his Covid status. Tomorrow's hearing will go forward and Mr. Chong and Hau Bui are still required to attend in person. Ordered by Judge Colm F. Connolly on 11/3/2022. (nmf) (Entered: 11/03/2022)
11/04/2022		Minute Entry for proceedings held before Judge Colm F. Connolly - Evidentiary Hearing held on 11/4/2022. (Court Reporter Bonnie Archer.) (nmf) (Entered: 11/04/2022)
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11/08/2022	14	Letter to The Honorable Colm F. Connolly from Jimmy Chong and Andrew S. Curfman regarding Andrew S. Curfman COVID status - re Oral Order,. (Chong, Jimmy) (Entered: 11/08/2022)
11/10/2022	15	MEMORANDUM ORDER. ORDER, Setting Deadlines: (Notice of Compliance deadline set for 12/8/2022.) Signed by Judge Colm F. Connolly on 11/10/2022. (nmf) (Entered: 11/10/2022)

PACER Service Center			
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11/11/2022 14:06:30			
PACER Login:	goodgolier	**Client Code:**	
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Billable Pages:	4	**Cost:**	0.40

CERTIFICATE OF SERVICE

I hereby certify that I electronically filed the foregoing with the Clerk of the Court for the United States Court of Appeals for the Federal Circuit by using the appellate CM/ECF system on November 15, 2022.

A copy of the foregoing was served upon the following counsel of record by electronic mail and upon the district court by Federal Express:

Via Email to counsel for Defendants:

Jeremy D. Anderson, Fish & Richardson P.C., 222 Delaware Ave., 17th Floor, P.O. Box 1114, Wilmington, DE 19801, janderson@fr.com; and

Neil J. McNabnay and Lance E. Wyatt, Fish & Richardson P.C., 1717 Main Street, Suite 5000, Dallas, TX 75201, mcnabnay@fr.com and wyatt@fr.com.

Via Federal Express to the Court:

The Honorable Colm F. Connolly
J. Caleb Boggs Federal Building
844 N. King Street
Unit 31
Room 4124
Wilmington, DE 19801-3555

November 15, 2022

/s/ George Pazuniak

GEORGE PAZUNIAK
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D: (207) 359-8576
gp@del-iplaw.com