2019-1506, 2019-2133

IN THE
UNITED STATES COURT OF APPEALS FOR
THE FEDERAL CIRCUIT

FREE STREAM MEDIA CORP. d/b/a SAMBA TV,
Plaintiff-Appellant

v.

ALPHONSO INC., ASHISH CHORDIA, LAMPROS KALAMPOUKAS, RAGHU KODIGE
Defendants, Cross-Appellants

APPEAL FROM THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA IN
CASE NO. 3:17-CV-02107-RS, JUDGE RICHARD SEEBORG

APPELLANT FREE STREAM MEDIA CORP. d/b/a SAMBA TV'S PETITION FOR REHEARING *EN BANC*

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June 10, 2021

CERTIFICATE OF INTEREST

Counsel for Plaintiff-Appellant Free Stream Media Corp. d/b/a Samba TV ("Samba") in Appeal Nos. 2019-1506 & 2019-2133 certifies the following:

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

Free Stream Media Corp. d/b/a Samba TV.

2. The name of the real party in interest (if the party named in the caption is not the real party in interest) represented by me is:

N/A

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

N/A

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 are:

Baker Botts LLP: George Hopkins Guy, III, Amy K. Liang, Jeremy John Taylor, Kurt Nax Pankratz, Christopher Norfleet;

Findlay Craft PC: Eric Hugh Findlay, Roger Brian Craft; and

Tensegrity Law Group, LLP: Matthew Douglas Powers, Paul Tsutomu Ehrlich, William Patrick Nelson, Samantha Ann Jameson, Stefani Cherie Smith, Jennifer K. Robinson, Natasha Marusja Saputo, Wanli Chen, Alex H. Chan.

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 are:

N/A

Dated: June 10, 2021

/s/ Matthew D. Powers
Matthew D. Powers

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STATEMENT OF COUNSEL

Based on my professional judgment, I believe the panel decision is contrary to at least the following decisions of the Supreme Court of the United States and the precedents of this Court: *Aatrix Software, Inc. v. Green Shades Software, Inc.*, 882 F.3d 1121 (Fed. Cir. 2018), *Berkheimer v. HP Inc.*, 881 F.3d 1360 (Fed. Cir. 2018), and *Cellspin Soft, Inc. v. Fitbit, Inc.,* 927 F.3d 1306 (Fed. Cir. 2019).

Dated: June 10, 2021

Respectfully submitted,

/s/ *Matthew D. Powers*
Matthew D. Powers

I. INTRODUCTION

In a first-impression evaluation of Samba's U.S. Patent No. 9,386,356 (the "356 Patent") under step two of the *Alice* test for patent eligibility on appeal from a motion to dismiss — a question the district court never reached given its finding of eligibility under step one at the Rule 12 stage — the panel opinion summarily concluded on the limited record before it (*i.e.,* the patent and the Complaint) that the claims of the 356 Patent disclosed only the abstract idea of "providing targeted content to a client device." Opinion at 18. In so doing, the panel ignored both the language of the claims, and the unrebutted statements in the specification which explicitly confirm that the claimed elements operate in ways that are not well-understood, routine, or conventional.

The panel's opinion cannot be reconciled with this Court's precedential decisions limiting any court's power to resolve patent eligibility issues in the face of material disputes of fact concerning whether claims recite more than "well-understood, routine, [and] conventional activities previously known to the industry," including *Aatrix Software, Inc. v. Green Shades Software, Inc.*, 882 F.3d 1121, 1128 (Fed. Cir. 2018), *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1367 (Fed. Cir. 2018), and *Cellspin Soft, Inc. v. Fitbit, Inc.,* 927 F.3d 1306, 1315-6 (Fed. Cir. 2019). These decisions brought clarity to the question of how courts should address disputes over the conventionality of patent claims in connection with *Alice* step two by articulating

a bright-line standard: where patent claims recite an ordered combination of elements that the specification confirms through unrefuted factual assertions is unconventional, there is a material dispute of fact that prevents a determination of patent ineligibility under step two. *See Aatrix* 882 F.3d at 1125 ("Indeed, we have explained that 'plausible factual allegations may preclude dismissing a case under § 101 where, for example, 'nothing on th[e] record . . . refutes those allegations as a matter of law or justifies dismissal under Rule 12(b)(6).'").

The panel opinion, which disregards specific and plausible unrebutted assertions in the specification that the elements of the 356 Patent claims recite an unconventional solution to a technological problem, does exactly what those decisions tell lower courts they may not do on the same limited record. The panel's decision, if left undisturbed, would return patent litigants and courts to the period of uncertainty regarding when courts may determine patent eligibility that predated *Berkheimer, Aatrix,* and *Cellspin.* By empowering courts to make adverse determinations about whether patent claims were routine, conventional or well-understood in the face of unrebutted, plausible factual assertions to the contrary, the decision threatens to engender more of the *ad hoc* judicial resolutions of material factual disputes, based on a limited record, that characterized patent eligibility decisions before this Court's intervention. The Court should grant rehearing *en banc*.

II. BACKGROUND

The 356 Patent provides a solution to sharing information between network-connected devices, such as mobile devices and televisions, that results from the security model (often called a "security sandbox") employed by these devices. Appx333 at 11:6-12. The specification explains that such devices are generally unaware of and inaccessible to each other because the security sandbox "limit[s] access to the network, thereby making it difficult for the [device] to find [other devices] and/or to obtain information directly from" those other devices. Appx333 at 11:6-12.

The 356 Patent explains that when devices are constrained to operate independently (*e.g.*, by a sandbox security), end users may "get tired, annoyed, and/or bored" or when they "waste a significant amount of time" processing "irrelevant" information, or "be inconvenienced when the information on the networked device and the client device remain independent of each other," instead of being presented with relevant information provided by devices aware of what other nearby devices are doing. *See* Appx328-329 at 2:39-3:2; Claim 1 (Appx353).

The specification explains that, prior to the inventions claimed in the 356 Patent, overcoming these challenges to the inability of sandboxed devices to share relevant information was difficult, requiring end users to attempt to perform complicated configuration tasks: "the user may need to configure the networked

device to share the information with an other networked device," such as by needing "to read a manual to understand a configuration protocol," which they may be "unable to understand." Appx328 at 2:47-58. "As such, the user may spend a significant amount of customer support time in configuring the networked device. Alternatively, the user may need to expend a significant amount of financial resources for a network administrator to assist the user in configuring the networked device. As a result, the user may give up and remain unable to configure the networked device to share the information with the other networked device." *Id*.

The inventions of the 356 Patent solved these problems by providing a way to circumvent the existing "sandbox" barriers between devices, without requiring time-consuming end user configuration, and obtain information about the content on one device (*e.g.,* a television) and use that information to identify content that can be provided to a second device (*e.g.,* a mobile device). As both the specification and claims explain, they do so through a set of structural components that intermediate between a television and a mobile device, including a "content identification server" that recognizes the content being displayed on a television through telltale "fingerprints," and a "relevancy-matching server," which uses that information to identify "targeted data," such as additional or supplementary relevant information, that can be supplied to a user's mobile device despite its security sandbox, thereby

enabling a communication between the television and mobile device that could not otherwise occur.

For example, the system of Claim 1 includes a ***television*** to generate "fingerprint data": analogous to a human fingerprint, which can be used to identify a human, this fingerprint data represents unique features of the content playing on the television and can be used to identify that content. *See* Appx35. The claimed ***"content identification server"*** then processes the fingerprint data to generate "primary data," such as content identification data, from the fingerprint data. *See* Appx35, Appx353. Thus, based on the fingerprints, the content identification server is able to identify the content actually being watched on the television. *See, e.g.,* Appx331-332, 8:56-9:5. A ***"relevancy-matching server"*** then matches this primary data with "targeted data," such as an advertisement, recommendation, or other information related to the identified content. *See* Appx54. Claim 1 also recites a ***"mobile device"*** with a "security sandbox": as the specification explains, the sandbox "limit[s] access to the network, thereby making it difficult for the [device] to find [other devices] and/or to obtain information directly from" those other devices, including information about "what is currently playing on the networked device." Appx333 at 11:6-12, Appx353.

The claims further recite ***how*** the intermediation of the relevancy-matching server between a television and a sandboxed mobile device enables the sandbox to

be traversed with the "targeted data" related to what is being shown on a television. Claim 1 recites that the mobile device is "capable of being associated with the television," construed as "capable of communicating with the television" (Appx47), and processes an "embedded object," which is an "object in an application or webpage linked to an external source, such as a script, an image, a player, an iframe, or other external media," such as an advertisement. Appx35. As the specification explains, by processing this embedded object that is "linked to an external source," (*i.e.,* the relevancy-matching server), the claimed application executing in the mobile device sandbox can be provided with the claimed targeted data by that external source, thereby enabling communication with the television despite the presence of the sandbox: "The sandboxed application **112** of the client device **100** may ***process the embedded object* 204 *from the relevancy-matching server* 200** (e.g., ***by pulling in the embedded object 204 from the relevancy-matching server 200***)." Appx334 at 13:17-21. Through these elements, the claimed invention overcomes the traditional barriers to communications between Internet-connected devices through the intermediation of specialized services that can bypass the security sandbox.

The 356 Patent ***never*** concedes that the claimed arrangement of components for overcoming security barriers to communication between Internet-connected devices was in any way conventional, routine, or well-understood in the industry. Rather, it consistently asserts that, prior to the claimed inventions, security

sandboxing prevented inter-device communication, Appx333 at 11:6-12, and enabling such communication was difficult if achievable at all, requiring cumbersome "installation, configuration, login, and/or user registration," Appx353 at 51:34-38; *see also* Appx328 at 2:47-58, and creating boredom, annoyance, and inconvenience. Appx328-329 at 2:39-3:2. Only with the claimed techniques of the 356 Patent, the 356 Patent asserts, were these constraints removed.

These factual assertions were unrebutted by defendant Alphonso when it moved pursuant to Fed. R. Civ. P. 12(b)(6) to dismiss Samba's complaint on the grounds that the 356 Patent was drawn to ineligible subject matter under 35 U.S.C. § 101. Instead, it contended only that the individual components were conventional. *See* Appx1090-1094, Appx1344-1348. The district court did not reach step two of the *Alice* inquiry — and the question of whether disputed issues of fact concerning the conventionality of the claims prevented dismissal at the Rule 12 stage — because it denied Alphonso's motion to dismiss at step one. Appx1418-1423.

In response to Samba's appeal of the district court's grant of summary judgment of non-infringement, Alphonso cross-appealed from the district court's denial of the motion to dismiss on patent eligibility grounds. As such, the panel decision was the first to assess the eligibility of the 356 Patent under step two, and did so on the basis of the materials properly before the district court at the Rule 12 stage. Its short opinion concedes that "sandbox security prevents, in part, internet-

connected devices from communicating," Opinion at 18, and that the claimed invention "seeks to undo that by 'working around the existing constraints of the conventional functioning of television and mobile devices.'" *Id.* Without explanation or citation to the record, however, the panel concluded that "such a 'work around' or 'bypassing' of a client device's sandbox security does nothing more than describe the abstract idea of providing targeted content to a client device." Opinion at 18. Again without explanation or discussion of the specification statements that are in direct contradiction, the panel opinion next summarily asserts that "there is nothing inventive disclosed in the claims that permits communications that were previously not possible," Opinion at 18, and "[p]rocessing an 'embedded object' of claim 1 or rendering targeted data 'through a sandboxed application of a mobile device' of claim 10 are not the kind of 'additional features that provide practical assurance that the [claim] is more than a drafting effort designed to monopolize the [abstract idea] itself.'" Opinion at 19. With that, the panel found the 356 Patent was directed to patent-ineligible subject matter, reversing the district court's denial of Alphonso's motion to dismiss. *Id.*

III. ARGUMENT

A. Rehearing *En Banc* Is Warranted Because The Panel Opinion Disregards This Court's Precedent That Unrebutted Factual Assertions That The 356 Patent Claims Are Not Routine, Conventional, Or Well-Understood Prevent A Judicial Finding Of Ineligibility Under *Alice* Step Two

Whether an element (or combination of elements) is well-understood, routine and conventional under step two is a question of fact that "must be proven by clear and convincing evidence." *Berkheimer*, 890 F.3d at 1368. As a consequence, this Court's precedent states unmistakably that where factual assertions in the record properly before the Court—here, the patent and the complaint on appeal from denial of a Rule 12(b)(6) motion—create a fact issue as to whether the claims recite an inventive concept, a motion to find those claims ineligible for patenting must be denied. *Berkheimer,* 890 F.3d at 1370 ("[O]n this record summary judgment was improper, given the fact questions created by the specification's disclosure."); *Aatrix,* 882 F.3d at 1125, 1125-27 ("Indeed, we have explained that 'plausible factual allegations may preclude dismissing a case under *§ 101* where, for example, 'nothing on th[e] record . . . refutes those allegations as a matter of law or justifies dismissal under Rule 12(b)(6)'". . . "We have held that patentees who adequately allege their claims contain inventive concepts survive a *§ 101* eligibility analysis under Rule 12(b)(6)'"); *Cellspin,* 927 F.3d at 1317 (Fed. Cir. 2019) ("plausible and

specific factual allegations that aspects of the claims are inventive are sufficient" to preclude dismissal under step two).

The panel opinion cannot be reconciled with this authority. As discussed, the 356 Patent specifically and plausibly asserts that the claimed arrangement of components for overcoming security barriers to communication between Internet-connected devices was not in any way conventional in the industry. Specifically, it asserts that, prior to the claimed inventions, the mobile device security sandbox "limit[ed] access to the network, thereby making it difficult for the [device] to find [other devices] and/or to obtain information directly from" those other devices. Appx333 at 11:6-12. As a consequence, enabling such communication was difficult if achievable at all, requiring cumbersome "installation, configuration, login, and/or user registration," Appx353 at 51:34-38; *see also* Appx328 at 2:47-58. End users were therefore often "tired, annoyed, and/or bored" with "irrelevant" information, or "inconvenienced" because the information on the television and a mobile device "remain independent of each other." *See* Appx328-329 at 2:39-3:2. These specific and plausible factual assertions are unrebutted in the record.

The 356 Patent specification further describes how the ordered combination of the claimed components, regardless of whether each standing alone could be considered conventional, operate together to achieve the unconventional result of bypassing the security sandbox so that information may be shared between

sandboxed devices—thereby disclosing an inventive concept. Specifically, the 356 Patent describes how the intermediation of the claimed "relevancy-matching server" of Claims 1 and 10 between the television and the sandboxed mobile device permits the mobile device sandbox to be bypassed, for example in Claim 1 by associating the mobile device with the television and causing it to "process an embedded object", and in Claim 10, where the relevancy-matching server "cause[s] a rendering of the targeted data to the user through the sandboxed application of the mobile device." As the specification explains, the "sandboxed application **112** of the client device **100** may ***process the embedded object* 204 *from the relevancy-matching server* 200** (e.g., ***by pulling in the embedded object 204 from the relevancy-matching server 200***)." Appx334 at 13:17-21 (emphasis added). The result is that these components function differently than they did before the invention: previously operating in isolation, or requiring complicated manual configuration steps to share information, Appx328 at 2:47-58, Appx333 at 11:6-12, following the claimed invention these devices can share information without annoyance or inconvenience to end users. *See* Appx328-329 at 2:39-3:2. These specific and plausible factual assertions are also unrebutted in the record.

If this Court's decisions in *Berkheimer, Aatrix,* and *Cellspin Soft* stand for anything, they stand for the proposition that on this record and under the posture of a motion to dismiss, the panel should not have found under step two that the 356

Patent claims lacked an inventive concept because they "simply recite that the abstract idea will be implemented using conventional components and functions generic to the technology." Opinion at 18. That proposition is contradicted at every turn by the unrebutted factual assertions in the 356 Patent specification that these claims operate unconventionally, which precludes a finding to the contrary at this stage of the case. *See, e.g., Cellspin*, 927 F.3d at 1319 ("[C]laims that use an environment—a computer, a mobile phone, etc.—to do significantly more than simply carry out an abstract idea are patent eligible. . . .[Plaintiff's] asserted claims do precisely that, ***at least based on the allegations we must accept as true at this stage***. In particular, they ***recite a specific, plausibly inventive way of arranging devices and using protocols*** rather than the general idea of [performing an abstract idea]."). Rehearing *en banc* is called for here to correct this error and provide appropriate guidance to litigants and courts in this and future cases.

B. Rehearing *En Banc* Is Warranted Because The 356 Patent Claims Are Indistinguishable From Claims Found By This Court To Disclose The Necessary "Inventive Concept"

There is no support for the panel opinion's conclusory assertion that "the claimed elements of Samba's asserted claims comprise generic computing components—e.g., 'servers'—arranged in a conventional manner and thus does not transform the claim into something other than the abstract idea." Opinion at 19. The 356 Patent claims, in view of the unrebutted descriptions in the specification which

must be taken as true at this stage, instead recite a specific, ordered combination of elements that operate in unconventional ways, such that they overrode their routine and conventional inability to share information with each other. Such claims are eligible for patenting, as this Court has consistently found.

The panel opinion seeks but fails to differentiate the 356 Patent claims from claims found eligible under step two by this Court in *DDR Holdings, LLC v. Hotels.com, L.P.,* 773 F.3d 1245 (Fed. Cir. 2014) and *BASCOM Glob. Internet Servs. v. AT&T Mobility LLC*, 827 F.3d 1341 (Fed. Cir. 2016). The panel opinion contends that, in contrast to the challenged claims in those cases, which featured inventions that are "not merely the routine or conventional use of the Internet," Opinion at 17-18, the 356 Patent invention "simply seeks to. . . 'work[] around the existing constraints of the conventional functioning of television and mobile devices.'" Opinion at 18. That objective, in the panel opinion's view, "does nothing more than describe the abstract idea of providing targeted content to a client device." *Id.* In short, while the panel opinion acknowledges the specific technical problem the 356 Patent solves (that "sandbox security prevents, in part, internet-connected devices from communicating" (Opinion at 18)), and acknowledges that the claimed invention "seeks to undo that by 'working around the existing constraints of the conventional functioning of television and mobile devices'" (*id.*), it inexplicably

finds the solution recited in the 356 Patent claims and described in the specification to be a conventional and non-patentable addition to an abstract idea.

The panel's false equivalence between the 356 Patent claims and the abstract idea of providing targeted content would turn this Court's patent eligibility jurisprudence on its head, because a claimed invention that ***works around existing constraints of the conventional functioning of television and mobile devices*** to provide targeted content on its face describes "significantly more" than an abstract idea. *See Mayo Collaborative Servs. v. Prometheus Labs., Inc.,* 566 U.S. 66, 72-73, 132 S. Ct. 1289, 1294 (2012) (Claims must "also contain other elements or a combination of elements, sometimes referred to as an 'inventive concept,' sufficient to ensure that the patent in practice amounts to significantly more than a patent upon the natural law itself.").

Such a "working around" or "bypassing" existing constraints of the conventional operation of computer systems has long been a hallmark of this Court's decisions upholding patent claims under step two. *See, e.g., DDR Holdings,* 773 F.3d at 1258-1259 (claims disclosed an "inventive concept" because "the claims at issue here specify how interactions with the Internet are manipulated to yield a desired result—a result that overrides the routine and conventional sequence of events ordinarily triggered by the click of a hyperlink."); *BASCOM,* 827 F.3d at 1349-1350 (even though claims "recite generic computer, network and Internet components,"

the claims' particular arrangement "of a filtering tool at a specific location, remote from the end-users, with customizable filtering features specific to each end user" disclosed a patent-eligible concept because this "arrangement of elements is a technical improvement over prior art ways of filtering such content.").

The challenged claims of the 356 Patent, which also describe causing the recited components to operate in an unconventional way, are indistinguishable from these patent-eligible claims. By enabling a new and unconventional operation of mobile devices and televisions by intermediating their communication through components that, when functioning together, obtain information about content on the television and use it to identify content that can be provided to the mobile device despite its security sandbox, these claims disclose a patent-eligible inventive concept. Rehearing *en banc* is warranted to correct the panel opinion's holding to the contrary.

IV. CONCLUSION AND STATEMENT OF RELIEF SOUGHT

The Court should grant the petition for rehearing *en banc*.

Dated: June 10, 2021

Respectfully submitted:

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Counsel for Appellant Free Stream Media Corp. d/b/a Samba TV

FORM 30. Certificate of Service **Form 30**
July 2020

UNITED STATES COURT OF APPEALS FOR THE FEDERAL CIRCUIT

CERTIFICATE OF SERVICE

Case Number 2019-1506, 2019-2133

Short Case Caption Free Stream Media Corp. d/b/a Samba TV, v. Alphonso Inc., Ashish Chordia, Lampros Kalampoukas, Raghu Kodige

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☐ Additional pages attached.

Date: 06/10/2021 Signature: /s/ Matthew D. Powers

Name: Matthew D. Powers

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: 2019-1506, 2019-2133

Short Case Caption: Free Stream Media Corp. d/b/a Samba TV, v. Alphonso Inc., Ashish Chordia, Lampros Kalampoukas, Raghu Kodige

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Date: 06/10/2021

Signature: /s/ Matthew D. Powers

Name: Matthew D. Powers

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ADDENDUM

Opinion, *Free Stream Media Corp. d/b/a Samba TV, v. Alphonso Inc., Ashish Chordia, Lampros Kalampoukas, Raghu Kodige*, Nos. 2019-1506, 2019-2133 (Fed. Cir. May 11, 2021)

United States Court of Appeals for the Federal Circuit

FREE STREAM MEDIA CORP., DBA SAMBA TV,
Plaintiff-Appellant

v.

ALPHONSO INC., ASHISH CHORDIA, LAMPROS KALAMPOUKAS, RAGHU KODIGE,
Defendants-Cross-Appellants

2019-1506, 2019-2133

Appeals from the United States District Court for the Northern District of California in No. 3:17-cv-02107-RS, Judge Richard Seeborg.

Decided: May 11, 2021

MATTHEW D. POWERS, Tensegrity Law Group LLP, Redwood Shores, CA, argued for plaintiff-appellant. Also represented by WILLIAM P. NELSON, DANIEL RADKE, JENNIFER ROBINSON, NATASHA SAPUTO.

INDRA NEEL CHATTERJEE, Goodwin Procter LLP, Redwood City, CA, argued for defendants-cross-appellants. Also represented by ELIZABETH J. LOW, ANDREW S. ONG; DAVID ZIMMER, Boston, MA.

Before DYK, REYNA, and HUGHES, *Circuit Judges*.

REYNA, *Circuit Judge*.

Free Stream Media Corp. d/b/a Samba TV appeals a summary judgment of noninfringement from the Northern District of California and a claim construction order from the Eastern District of Texas. Alphonso Inc. cross-appeals a denial of its motion to dismiss under 35 U.S.C. § 101 from the Northern District of California. We reverse the Northern District of California's judgment denying Alphonso's motion to dismiss and do not reach the grant of summary judgment of noninfringement in favor of Alphonso. In addition, we affirm the Eastern District of Texas's claim construction order.

BACKGROUND

Procedural History

In November 2015, Free Stream Media Corp. d/b/a/ Samba TV ("Samba") asserted infringement of U.S. Patent No. 9,026,668 ("the '668 patent") in the Northern District of California. Later, in a separate case, Samba asserted U.S. Patent No. 9,386,356 ("the '356 patent") against Alphonso Inc. ("Alphonso") in the Eastern District of Texas. Both cases were consolidated by stipulation of the parties and later transferred to the Northern District of California. In March 2017, just before transfer, the Texas district court construed a disputed term of the asserted claims for both patents.

Upon transfer to the California district court, and based on the Texas district court's claim construction, Samba stipulated to noninfringement as to the '668 patent. Thereafter, Alphonso filed a motion to dismiss on grounds that the asserted claims of the '356 patent are patent ineligible subject matter under § 101. The district court denied the motion to dismiss. J.A. 1418–23; ECF No. 277. In its decision, the district court treated claim 1 of the '356 patent as representative, J.A. 1418, and concluded that the claim

was not directed to an abstract idea of tailored advertising as argued by Alphonso, J.A. 1421, 1423. The district court found that the '356 patent "describes systems and methods for addressing barriers to certain types of information exchange between various technological devices, *e.g.*, a television and a smartphone or tablet being used in the same place at the same time." J.A. 1421.

In April 2018, Alphonso moved for reconsideration of its motion to dismiss or, alternatively, to certify interlocutory appeal and stay, and that too was denied. In December 2018, the California district court granted Alphonso summary judgment of noninfringement as to the asserted claims of the '356 patent.

Samba appeals the grant of summary judgment of noninfringement and the Texas district court's claim construction order. Alphonso cross-appeals the California district court's denial of its motion to dismiss. We have jurisdiction under 28 U.S.C. § 1295(a)(1).

The '356 Patent

The '356 patent is entitled "Targeting with Television Audience Data Across Multiple Screens." The patent generally relates to a system providing a mobile phone user with targeted information (i.e., advertisements) that is deemed relevant to the user based on data gathered from the user's television. *See generally* '356 patent. The asserted claims utilize three main components: (1) a networked device (e.g., a smart TV); (2) a client device (e.g., a mobile device); and (3) a relevancy matching server. *See* '356 patent Fig. 2; J.A. 303; Appellant's Br. at 4. The district court treated claim 1 as representative for purposes of Alphonso's motion to dismiss. J.A. 1418.[1] The district court acknowledged that Samba was continuing to allege

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[1] Samba asserts claims 1, 10, 13, 18, and 20 of the '356 patent; claims 13, 18 and 20 depend from claim 10.

infringement of claim 10 but stated that Samba conceded claims 1 and 10 are similar. Because claim 10 was treated as representative in the summary judgment decision, we discuss both claims 1 and 10 for purposes of this court's eligibility analysis.[2]

> 1. A system comprising:
>
> a television to generate a fingerprint data;
>
> a relevancy-matching server to:
>
> match primary data generated from the fingerprint data with targeted data, based on a relevancy factor, and
>
> search a storage for the targeted data;
>
> wherein the primary data is any one of a content identification data and a content identification history;
>
> a mobile device capable of being associated with the television to:
>
> process an embedded object,
>
> constrain an executable environment in a security sandbox, and execute a sandboxed application in the executable environment; and
>
> a content identification server to:
>
> process the fingerprint data from the television, and

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[2] Claim 10 was treated as the representative claim in the California district court's summary judgment decision. Because we conclude that both claims are directed to an abstract idea, we need not reach the merits of Samba's appeal of the summary judgment decision.

> communicate the primary data from the fingerprint data to any of a number of devices with an access to an identification data of at least one of the television and an automatic content identification service of the television.

'356 patent at col. 51 l. 62–col. 52 l. 16.

> 10. A relevancy-matching server communicatively coupled with a television and a mobile device through a network, comprising:
>
> a processor;
>
> a memory communicatively coupled with the processor; and
>
> instructions stored in the memory and executed using the processor configured to:
>
> > match primary data generated using a fingerprint data with targeted data, based on a relevancy factor comprising at least one of a category of the primary data, a behavioral history of a user, a category of a sandboxed application, and another information associated with the user,
> >
> > search a storage for the targeted data,
> >
> > wherein the primary data is any one of a content identification data and a content identification history, and
> >
> > wherein the relevancy-matching server is to cause a rendering of the targeted data to the user through the sandboxed application of the mobile device.

Id. at col. 53 ll. 8–27.

The network device collects primary data, which can consist of program information, location, weather information, or identification information. *See, e.g.*, *id.* at col. 4 ll. 39–45. There are two ways the primary data is collected: either directly, such as by identifying the show title of a specific commercial being broadcasted, or by using preliminary data, which includes watermarks. *See, e.g.*, *id.* at col. 11 ll. 3-12; col. 20 ll. 48–52. Watermarks are audio or video "snippets" called fingerprints that can be converted into primary data. *See* Order Denying Motion to Dismiss, ECF No. 277 at 2.

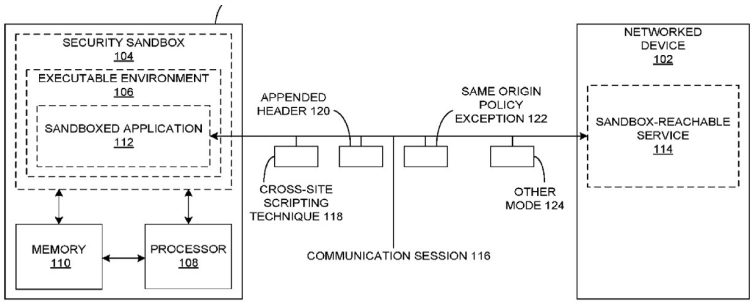
The client device may be a smartphone, computer, or other hardware on which applications run and advertisements may be shown. *See* '356 patent at col. 6 ll. 60–63. The client device includes a security sandbox, which is a security mechanism for separating running programs. *See generally id.* at col. 11 ll. 20–26. According to the specification,

> [t]he security sandbox may constrain what each of the number of applications is allowed to do. For example, the security sandbox may limit access to the network, thereby making it difficult for the client device to find the networked device of the user and/or to obtain information directly from the networked device. Such information may include what is currently playing on the networked device.

Id. at col. 11 ll. 5–12 (patent reference numbers omitted).

Finally, a relevancy-matching server uses primary data from the networked device to select advertisements or other targeted data based on a relevancy factor associated with the user. Further, the relevancy-matching server "may also be configured to render the targeted data to the user through the networked device and/or the sandboxed application of the client device." *Id.* at col. 12 ll. 59–64 (pat refernce numbers omitted); *see also id.* at col. 3 ll. 16–21.

A detailed review of the specification demonstrates that security sandboxes may be in place either at the operating system level, so that a user application "could not corrupt the traditional operating system," or at the application level, "so that each of the number of applications cannot access [] data of an other application." *Id.* at col. 11 ll. 15–26. The specification explains that the security sandbox may be "bypass[ed]" by establishing "a communication session between the sandboxed application and the sandbox-reachable service" of the networked device. *See id.* at col. 3 ll. 37–45. Specifically, "[t]he communication session may be established between the sandboxed application [within a client device] and the sandbox-reachable service [within a networked device] through [a] cross-site scripting technique, [an] appended header, [a] same origin policy exception, and/or [an] other mode of bypassing a number of (e.g., at least one) access controls of the security sandbox." *Id.* at col. 7 ll. 3–9 (patent reference numbers omitted). The communication session may exist directly between the client device and the networked device, or indirectly (e.g., through a pairing server). *Id.* at col. 11 l. 63–col. 12 l. 4 (patent reference numbers omitted).



Id. at Fig. 1. The specification discloses various mechanisms that can be used to bypass the security sandbox. First, the specification describes the "cross-site scripting technique" as using a "computer security vulnerability that enables an injection of a client-side script to bypass the

number of access controls." *Id.* at col. 12 ll. 6–10. Second, the patent discloses the "appended header," which is described as "a mechanism . . . that allows a cross-domain request by adding a new header." *Id.* at col. 12 ll. 12–16. Next, the patent discusses the "same origin policy exception," which may be "a technique for relaxing a rule preventing an access to . . . a number of different sites." *Id.* at col. 12 ll. 19–25. Finally, the disclosure explains that the "other mode" may be "a mechanism of bypassing a number of access controls of the security sandbox" by enabling multicast, broadcast, or an anycast-based discovery protocol or by enabling a "pairing via an entry of a short code and/or an account name in the client device [] and/or the networked device." *Id.* at col. 12 ll. 26–37. All of this can be done without intervention from the user of the client device. *See id.* at col. 2 ll. 46–59. Notably, the specification does not provide for any other mechanism that can be used to bypass the security sandbox other than "through a cross-site scripting technique, an appended header, a same origin policy exception, and/or an other mode of bypassing a number of access controls of the security sandbox." *Id.* at col. 3 ll. 37–45. The specification states that all of these mechanisms exist "as a component of the communication session." *Id.* at col. 12 ll. 5–30.

DISCUSSION

I

U.S. patent law provides that a patent may be obtained for: processes, machines, manufactures, and compositions. *See* 35 U.S.C. § 101. But there are exceptions. "Laws of nature, natural phenomena, and abstract ideas are not patentable." *Alice Corp. Pty. Ltd. v. CLS Bank Int'l*, 573 U.S. 208, 216 (2014).

Patent eligibility under § 101 is a question of law that may involve underlying questions of fact. *Berkheimer v. HP Inc.*, 881 F.3d 1360, 1365 (Fed. Cir. 2018). To determine whether an invention claims ineligible subject

matter, we engage in a two-step process established by the Supreme Court in *Alice*.

At Step 1, "we determine whether the claims at issue are directed to one of [the] patent-ineligible concepts," i.e., laws of nature, natural phenomena, or abstract ideas. *Alice*, 573 U.S. at 217. The inquiry may entail looking to the "focus of the claimed advance" over the prior art to see if the character of the claim as a whole, considered in light of the specification, is directed to ineligible subject matter. *Trading Techs. Int'l, Inc. v. IBG LLC*, 921 F.3d 1378, 1384 (Fed. Cir. 2019).

If we determine that the patent is drawn to an abstract idea or otherwise ineligible subject matter, we consider at Step 2 "the elements of each claim both individually and 'as an ordered combination' to determine whether the additional elements 'transform the nature of the claim' into a patent-eligible application." *Alice*, 573 U.S. at 217 (quoting *Mayo Collaborative Servs. v. Prometheus Labs., Inc.*, 566 U.S. 66, 78–79 (2012)). We analyze whether there is an "inventive concept" that takes the claim into the realm of patent eligibility. *Id.* at 217–19; *see also Elec. Power Grp., LLC v. Alstrom S.A*, 830 F.3d 1350, 1353 (Fed. Cir. 2016); *Enfish, LLC v. Microsoft Corp.*, 822 F.3d 1327, 1335 (Fed. Cir. 2016).

We review a district court's dismissal for failure to state a claim under the law of the regional circuit—here, the Ninth Circuit. *See BASCOM Glob. Internet Servs., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341, 1347 (Fed. Cir. 2016). The Ninth Circuit reviews the grant of a motion to dismiss de novo. *See Skilstaf, Inc. v. CVS Caremark Corp.*, 669 F.3d 1005, 1014 (9th Cir. 2012).

A. Step 1

The district court concluded that claim 1 was not directed to an abstract idea of tailored advertising as argued by Alphonso. J.A. 1421. Rather, the district court

determined that the '356 patent "describes systems and methods for addressing barriers to certain types of information exchange between various technological devices, e.g., a television and a smartphone or tablet being used in the same place at the same time." *Id.*

In its cross-appeal, Alphonso contends that the district court erred in concluding that the '356 patent is not directed to patent-ineligible subject matter because the '356 patent is directed to the abstract idea of targeted advertising. We agree. Our review of both claims 1 and 10 of the '356 patent reveals that the claims are directed to: (1) gathering information about television users' viewing habits; (2) matching the information with other content (i.e., targeted advertisements) based on relevancy to the television viewer; and (3) sending that content to a second device.

Samba argues that claims 1 and 10 are directed to a specific asserted improvement in computer capabilities, namely "television and mobile devices that operate with respect to each other differently from conventional televisions and mobile devices." Appellant's Resp. & Reply Br. at 41 (internal quotation marks and citations omitted); *see also* Appellee's Reply Br. at 1 (acknowledging that Samba asserts its claims address purported technological barriers that prevent "Internet-connected devices, such as a television and a mobile device, from communicating with one another"). In support of its assertion, Samba contends that its claimed invention is like those previously found eligible in *Enfish*, *Visual Memory*, *Finjan*, *Core Wireless*, and *Uniloc*. *Id.* at 40; *see* cases cited *infra* note 3. More specifically, Samba argues that claim 1 is "specifically directed to a system wherein a television and a mobile device are intermediated by a content identification server and relevancy-matching server that can deliver to a 'sandboxed' mobile device targeted data based on content known to have been displayed on the television, despite the barriers to communication imposed by the sandbox." *Id.* at 41.

Samba also contends that the purported claimed advance lies in sending the "relevant" content to a second device (i.e., a user's mobile device) *through* a sandboxed application of a mobile device. When asked about how claim 1 achieves the bypassing of the sandboxed application, counsel stated that "it has the embedded object that the phone is going to process that is placed there by the relevancy matching server . . . and the content identification server is also there to go through that sandboxed application." Oral Argument at 52:00–52:40. [3] Specifically, Samba's purported claimed advance lies in the following specific limitations of claim 1:

> a mobile device capable of being associated with the television to: process an embedded object, constrain an executable environment in a security sandbox, and execute a sandboxed application in the executable environment . . . [;]
>
> a content identification server to: process the fingerprint data from the television, and communicate the primary data from the fingerprint data to any of a number of devices with an access to an identification data of at least one of the television and an automatic content identification service of the television.

'356 patent at col. 52 ll. 3–16. We have, in other cases, noted that similar claims were directed to the abstract idea of "targeted advertising." *See, e.g.*, *Intellectual Ventures I LLC v. Cap. One Bank (USA)*, 792 F.3d 1363, 1369 (Fed. Cir. 2015); *Bridge & Post, Inc. v. Verizon Commc'ns, Inc.*, 778 F. App'x 882, 886 (Fed. Cir. 2019).

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[3] A recording of the Oral Argument is available at http://www.cafc.uscourts.gov/oral-argument-recordings?title=&field_case_number_value=19-1506&field_date_value2%5Bvalue%5D%5Bdate%5D=.

In the cases Samba relies on, this court determined that the respective claims were patent eligible because they were directed to a "specific improvement to the way computers operate."[4] More specifically, a common thread through all of the cited cases is a determination that the

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[4] *See, e.g.*, *Enfish*, 822 F.3d at 1333, 1336–37 (claims "directed to a self-referential table for a computer database" functioned "differently than conventional database structures" and resulted in "faster searching" and "more effective storage"); *Visual Memory LLC, v. NVIDIA Corp.*, 867 F.3d 1253, 1256–59 (Fed. Cir. 2017) (claims "directed to an improved computer memory system" allowed "different types of processors to be installed with the [same] subject memory system without significantly compromising their individual performance"); *Finjan, Inc. v. Blue Coat Sys., Inc.*, 879 F.3d 1299, 1304–05 (Fed. Cir. 2018) (claims directed to "behavior-based scans" "employ[ed] a new kind of file that enables a computer security system to do things it could not do before" by linking a security profile identifying suspicious code in a downloadable object before making it available to a client device); *Core Wireless Licensing S.A.R.L. v. LG Elecs., Inc.*, 880 F.3d 1356, 1362 (Fed. Cir. 2018) (claims "directed to a particular manner of summarizing and presenting information in electronic devices" made websites easier to navigate on a small-screen device); *Uniloc USA, Inc. v. ADP, LLC*, 772 F. App'x 890, 897–98 (Fed. Cir. 2019) (claim "directed to the use of file packets with segments configured to initiate centralized registration of an application from an application server . . . enable[d] the further functionality of initiating on-demand registration of the application," and the claim of the second patent "directed to a particular way of using a conventional application server . . . allow[ed] on[-]demand installation of an application incorporating preferences from two different sources by adding the application manager *and* configuration manager as additions to each application").

claims were directed to an improvement in computer functionality. For example, in *Enfish*, this court determined that claims directed to an improvement in computer functionality "might not succumb to the abstract idea exception." 822 F.3d at 1335 (citing *Alice*, 573 U.S. at 217–19). In that case, the "plain focus of the claims [wa]s on an improvement to computer functionality itself, not on economic or other tasks for which a computer is used in its ordinary capacity." *Id.* at 1336. As will be discussed below, *Enfish* materially differs from the instant case.

Further, this court has explained that a relevant inquiry at *Alice* Step 1 is "whether the claims in the[] patent[] focus on a specific means or method that improves the relevant technology or are instead directed to a result or effect that itself is the abstract idea and merely invoke generic processes and machinery." *McRO, Inc. v. Bandai Namco Games Am. Inc.*, 837 F.3d 1299, 1314 (Fed. Cir. 2016). Indeed, in response to Samba's arguments, Alphonso asserts that Samba "failed to identify any language in the '356 patent claims relating to overcoming the supposed communication barriers between a television and a mobile device." Appellee's Reply Br. at 4; *see also id.* at 5 ("[t]he claims do not explain in any way *how* the supposed communication barriers are overcome"); *see also id.* at 5 ("the claims do not describe *how* the purported 'barriers to communication imposed by the sandbox' are overcome"). As "reflected repeatedly in our cases," a claim must "ha[ve] the specificity required to transform [the] claim from one claiming only a result to one claiming a way of achieving it" to avoid ineligibility. *SAP Am., Inc. v. InvestPic, LLC*, 898 F.3d 1161, 1167–68 (Fed. Cir. 2018) (collecting cases). As a result, a claim is ineligible if it "fail[s] to recite a practical way of applying an underlying idea . . . [and] instead [is] drafted in such a result-oriented way that [it] amount[s] to encompassing 'the principle in the abstract' no matter how implemented." *Interval Licensing LLC v. AOL, Inc.*, 896 F.3d 1335, 1343 (Fed. Cir. 2018). All that is required at the

eligibility phase is that the claim itself "must identify 'how' that functional result is achieved by limiting the claim scope to structures specified at some level of concreteness, in the case of a product claim, or to concrete action, in the case of a method claim." *Am. Axle & Mfg., Inc. v. Neapco Holdings LLC*, 967 F.3d 1285, 1302 (Fed. Cir. 2020). Here, Samba asserts that its invention allows devices on the same network to communicate where such devices were previously unable to do so. The asserted claims provide for how that is achieved only by stating that the mechanism used to achieve this communication is by piercing or otherwise overcoming a mobile device's security sandbox. But the asserted claims do not at all describe how that result is achieved.

Even assuming the specification sufficiently discloses how the sandbox is overcome, the asserted claims nonetheless do not recite an improvement in computer functionality. According to the specification, the content identification server facilitates a communication session, which once established, "pierces" the sandboxed application via a "cross-site scripting technique, the appended header, the same origin policy exception, and/or the other mode of bypassing a number of (e.g., at least one) access controls of the security sandbox." '356 patent at col. 7 ll. 1–9 (patent reference numbers omitted). The only mechanisms recited in the specification used to bypass a number of access controls of the sandbox security do so by using a computer security vulnerability or relaxing a rule, which typically prevents access to a number of different sites, none of which are recited in the claims. *See id.*; *see also id.* at col. 12 ll. 6–10 (the "cross-site scripting technique" uses a "computer security vulnerability that enables an injection of a client-side script to bypass the number of access controls"); *id.* at col. 12 ll. 19–25 (the "same origin policy exception," may be "a technique for relaxing a rule preventing an access to . . . a number of different sites"). All of this is done without intervention from the user of the client

device. *See id.* at col. 2 ll. 46–59. The asserted claims do not incorporate any such methods of piercing the sandbox.

With respect to claim 10, like claim 1, Samba alleges that the claimed advance is the rendering of targeted data to a user through the sandboxed application based on a relevancy factor, which includes a "category of a sandboxed application."[5] Oral Argument at 52:53–53:53, 55:06–57:44. When asked what "category of sandboxed application" meant, counsel responded that the category could be whether the mobile device was an "iPhone" or "Android." *Id.* Thus, the relevancy-matching server "cause[s] a rendering of the targeted data to the user through the sandboxed application of the mobile device" by using the relevancy factor to first determine whether a user had an iPhone or Android. '356 patent at col. 53 ll. 25–27. Again,

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[5] During arguments on summary judgment, Samba argued that claim 10 does not include or comprise a mobile device or television. The only requirement of the claims pertaining to the "television" and "mobile device" is that the claimed "relevancy matching server" is "communicatively coupled"—which the parties stipulated to mean "connected in a way that permits communication" with each of them. *See* J.A. 34; Appellant's Br. at 6. While Samba argues that claim 10 does not require a mobile device, Samba also argues that the claimed advance of claim 10 is the piercing of a sandboxed application of the mobile device. There is a problem with the claimed advance including an element of the claim that Samba argues is not in fact required by the claim. In other words, the claimed advance of going through the sandboxed application of the mobile device necessarily requires the sandboxed application of the mobile device, but oddly a mobile device is not required by the claim according to Samba. Such an infirmity in the claim further favors concluding that claim 10 is patent ineligible.

claim 10 does not include how the targeted data is rendered. The specification provides some information as to how a sandboxed application may be bypassed by the establishment of a communication session, as described above, with the ultimate result being that a targeted advertisement "bypasses" a mobile device's security sandbox without any intervention, or request made, by a user of that mobile device.

There is nothing in claims 1 or 10 that demonstrates an improvement to computer functionality. And, even assuming, as Samba argues, that the claimed advance is in the ability to pierce the sandbox of a mobile device, Samba has not demonstrated that this is something more than a mere use of a computer as a tool. The sandboxed application here is breached unbeknownst to the user through a "vulnerability" or "relaxation of the rules" that are conventionally in place to effectively prevent such a communication. In fact, Samba readily admits that the "problem" solved by the invention is "to provide relevant information across a sandboxed environment without requiring 'installation, configuration, login, and/or user registration.'" Appellant's Resp. & Reply Br. at 49; '356 patent at col. 51 ll. 34–38. Therefore, the alleged technological improvement does nothing more than implement a computer to achieve the abstract idea of providing targeted advertising to the mobile device user.

Although Samba also asserts that its claimed invention results in televisions and mobile devices operating with respect to each other in a manner different from conventional televisions and mobile devices, Samba does not explain how that result improves the operability of these devices beyond providing a user with targeted content using generic processes and machinery. Samba's claims merely improve the abstract idea of targeted advertising. Because we find that Samba's asserted claims are not directed to an improvement of a technology or creation of a new computer

functionality, Samba's asserted claims are directed to an abstract idea.

B. Step 2

The district court did not reach Step 2 because it concluded that the claims were not directed to an abstract idea at Step 1. In response to Alphonso's cross-appeal, and its argument that there is nothing innovative about any of the computer processors or servers appearing in the claims, Samba argues that its claims are also eligible under Step 2 because they recite a specific, ordered combination of elements operating in unconventional ways, such that they override "their routine and conventional inability to share information with each other." Appellant's Resp. & Reply Br. at 52. In support of its arguments, Samba cites *DDR Holdings, LLC v. Hotels.com, L.P.*, 773 F.3d 1245 (Fed. Cir. 2014), and *BASCOM Global Internet Services., Inc. v. AT&T Mobility LLC*, 827 F.3d 1341 (Fed. Cir. 2016). Samba asserts that like the claims in the aforementioned cases, the claims of the '356 patent "specify the components or methods that permit the television and mobile device to operate in [an] unconventional manner, including the use of fingerprinting, a content identification server, a relevancy-matching server, and bypassing the mobile device security sandbox." Appellant's Br. at 53–54. In other words, the systems and methods of the '356 patent permit the "new and unconventional operation of mobile devices and televisions by intermediating their communication through components that, when functioning together, obtain information about content on the television and use it to identify content that can be provided to the mobile device despite its security sandbox." *Id.* at 55.

In *DDR Holdings*, the claimed invention solved the problem of allowing a website visitor to view a hyperlinked advertisement without being forced to leave the first website once the advertisement's hyperlink was activated. 773 F.3d. at 1258–59. The claims recited "an invention that is

not merely the routine or conventional use of the Internet." *Id.* In *BASCOM*, this court determined that "an inventive concept can be found in non-conventional and non-generic arrangement of known, conventional pieces." 827 F.3d at 1350 (explaining that the inventive concept rested in the installation of a filtering tool at a specific location, remote from the end-users, with customizable filtering features specific to each end user).

By contrast, here, sandbox security prevents, in part, internet-connected devices from communicating. *See* '356 patent at col. 11 ll. 5–12 ("[t]he security sandbox may constrain what each of the number of applications is allowed to do. For example, the security sandbox may limit access to the networked, thereby making it difficult for the client device to find the networked device of the user and/or to obtain information directly from the network device. Such information may include what is currently playing on the networked device."). The claimed invention simply seeks to undo that by "working around the existing constraints of the conventional functioning of television and mobile devices." Appellant's Resp. & Reply Br. at 53. However, such a "work around" or "bypassing" of a client device's sandbox security does nothing more than describe the abstract idea of providing targeted content to a client device.

But even assuming the bypassing of mobile device security mechanisms had not been done before, there is nothing inventive disclosed in the claims that permits communications that were previously not possible. Indeed, the claims simply recite the use of generic features, as well as routine functions, to implement the underlying idea. *See Affinity Labs of Tex., LLC v. DIRECTV, LLC*, 838 F.3d 1253, 1262 (Fed. Cir. 2016). We have explained that an abstract idea is not patentable if it does not provide an inventive solution to a problem in implementing the idea. *Id.* at 1263. The claims here simply recite that the abstract idea will be implemented using conventional components and functions generic to the technology.

Nor does the "work-around" add more features that give rise to a Step 2 "inventive concept." Processing an "embedded object" of claim 1 or rendering targeted data "through a sandboxed application of a mobile device" of claim 10 are not the kind of "additional features that provide practical assurance that the [claim] is more than a drafting effort designed to monopolize the [abstract idea] itself.'" *Mayo*, 566 U.S. at 77–78. Finally, unlike in *BASCOM*, the claimed elements of Samba's asserted claims comprise generic computing components—e.g., "servers"—arranged in a conventional manner and thus does not transform the claim into something other than the abstract idea. Therefore, Samba fails to demonstrate that claims 1 and 10 disclose patent eligible subject matter.

II

We turn next to Samba's appeal of the Texas district court's claim construction order construing disputed claim terms of the '668 patent. As mentioned above, the asserted claims were construed by the Texas district court before the case was transferred to the California district court. Representative claim 1 of the '668 patent recites in relevant part:

> 1. A system comprising: a networked device configured to: . . . automatically establish a **communication session** between the sandboxed application and the sandbox-reachable service through at least one of a cross-site scripting technique, an appended header, a same origin policy exception, and an other mode of bypassing a number of access controls of the security sandbox . . . .

'668 patent at col. 51 ll. 5–6, 31–37 (emphasis added).

The Texas district court construed "communication session" to mean a "period of time during which information is sent and received either directly or indirectly." J.A. 44. According to the Texas district court, this

construction required information to be both "sent and received (i.e., bidirectional exchange)" during the session. J.A. 40. The district court did not adopt either party's proposed construction but instead construed the limitation based on its own analysis of the evidence. J.A. 37–44.

Samba argues on appeal that the bidirectionality requirement of the Texas district court is too restrictive of an interpretation and is contrary to both the plain meaning of "communication session" and the intrinsic record. Specifically, Samba argues that the ordinary and customary meaning of "communication session" includes one-way communication and the '668 patent discloses embodiments with one-way communication sessions. Alphonso argues that Samba's reliance on the disclosure of "covert channels," as being a "one-way communication," mischaracterizes the specification because it improperly equates communicating to establish a communication session with communicating within the communication session. *See* J.A. 43. In other words, Alphonso argues that a covert channel simply enables a communication session but is not itself a communication session.

We review a district court's ultimate claim construction and interpretation of intrinsic evidence de novo. *See Teva Pharms. USA, Inc. v. Sandoz, Inc.*, 574 U.S. 318 (2015). Claim construction requires a determination as to how a person of ordinary skill in the art would understand a claim term 'in the context of the entire patent, including the specification. *See id.* (quoting *Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) (en banc)).

Based on a review of the '668 patent and specification, we conclude that the district court's construction is correct. J.A. 37–44. As the district court's order makes clear, Samba's desired construction, covering one-way communication, contradicts the specification because the section Samba points to does not actually refer to the same type of "communication session" recited in the claims. J.A. 43.

The district court also added that including "one-way" in the construction would improperly read "session" out of the claims, because Samba's construction would then encompass any "communication." *Id.* We agree.

It appears that the specification only graphically depicts "communication session" with a two-sided arrow connecting the client device and the networked device. '668 patent Figs. 1–2, 4, 10, and 11. Moreover, all references to the *claimed* communication session, as between the networked device and the client device, describe this session as bidirectional. *See, e.g.*, *id.* at col. 5 ll. 54–57, 64–65; col. 11 ll. 45–47. Therefore, one-way communication is not contemplated by the claim term "communication session."

Given the specification, we conclude that a person of ordinary skill in the art would have understood "communication session" as requiring bidirectional communication. Thus, the Texas district court's claim construction order is affirmed, and the California district court's judgment of noninfringement based on this claim construction order and Samba's stipulation remains unaffected.

CONCLUSION

As to Appeal No. 2019-2133, we reverse the California district court's denial of Alphonso's motion to dismiss because we conclude that claims 1, 10, 13, 18, and 20 of the '356 patent are in fact patent ineligible. As to Appeal No. 2019-1506, we affirm the Texas district court's claim construction of the asserted claims of the '668 patent. Accordingly, we do not reach the California district court's grant of summary judgment in Appeal No. 2019-1506.

REVERSED-IN-PART, AFFIRMED-IN-PART

COSTS

No Costs.