**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

CIOFFI et al.,
    Plaintiffs,
v.
 	
GOOGLE LLC,
    Defendant.
	§ § § § § § § § § § §	Civil Action No. 2:13-cv-103

<u>**STIPULATED FINAL JUDGMENT**</u>

A jury trial commenced in this case on February 6, 2017. The jury returned a unanimous verdict (Dkt. No. 259) finding infringement and that the claims in suit were not invalid.

Thereafter, Defendant Google, LLC moved for judgment as a matter of law and new trial on (i) invalidity under 35 U.S.C. §§ 102, 103 and 251 (Dkt. No. 292), and (ii) non-infringement, damages, patent ineligibility, and intervening rights (Dkt. No. 293).

On March 29, 2018, the Court granted Google's motion for new trial in part as to Google's § 251 invalidity defenses, instructing the parties to submit proposed findings of fact and conclusions of law, and carried Google's § 102 and 103 invalidity arguments.

On August 26, 2021, the Court issued its findings of facts and conclusions of law denying Google's invalidity defenses under 35 U.S.C. § 251 (Dkt. No. 340).

On September 3, 2021, the Court issued a memorandum and order denying Google's motion for judgment as a matter of law and new trial as to a non-infringement, damages, patent ineligibility, and intervening rights (Dkt. No. 342).

On December 6, 2021, the Court issued a memorandum and order denying Google's motion for judgment as a matter of law and new trial as to invalidity under 35 U.S.C. § 102 and 103 (Dkt. No. 344).

Pursuant to Rule 58 of the Federal Rules of Civil Procedure and in accordance with the jury's verdict, the Court's post-trial rulings and findings, and the entirety of the record available to the Court, the Court hereby **ORDERS** and **ENTERS JUDGMENT** as follows:

1. Defendant Google infringes claim 43 of U.S. Patent No. RE43,500; claims 5 and 67 of U.S. Patent No. RE43,528; and claim 49 of U.S. Patent No. RE43,529.

2. The asserted claims are not invalid under 35 U.S.C. §§ 102 and 103, pursuant to the jury verdict returned in this case.

3. The asserted claims are not invalid under § 251, pursuant to the Court's findings of fact and conclusions of law (Dkt. Nos. 340, 341).

4. The asserted claims are not ineligible for patent protection under 35 U.S.C. § 101 (*see* Dkt. Nos. 212, 226, 342).

5. Plaintiffs are hereby awarded compensatory damages against Google and shall accordingly have and recover from Google the sum of $20,000,000 U.S. Dollars ($20 million), which amount is a running royalty.

6. As explained in the Court's Order regarding ongoing royalties (Dkt. No. 307), Google is **ORDERED** to pay an ongoing royalty of $0.002601 per Chrome user per month. Such royalty rate shall apply to infringing uses that occurred during the period from February 1, 2017, through the entry of this Final Judgment, as well as for all future infringing uses during the remaining life of the asserted patents.

7. Twice a year, Google shall produce a report of 7-day active users of all infringing versions of Chrome as of the 1st day of each month beginning February 1, 2017 and there forward for all ongoing and future infringing uses during the remaining life of the asserted patents (Dkt. No. 307). During the appeal of this judgment to the Federal

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Circuit, Google shall deliver to Plaintiffs such reports by the last day of each month of February and August of the year. For avoidance of doubt, in 2022, the first report shall be due by February 28, 2022, and the second report shall be due by August 31, 2022.

8. Pursuant to 35 U.S.C. § 284, the Court awards Plaintiffs pre-judgment interest based on the 5-Year Treasury Note (constant maturity) rate,[1] compounded monthly, and calculated based on monthly payments. The Court also awards pre-judgment interest at the corresponding per-diem rate from February 11, 2017 (the day after the jury's verdict) through entry of this Final Judgment.

9. Pursuant to 28 U.S.C. § 1961, the Court awards Plaintiffs post-judgment interest applicable to all sums awarded herein, at the statutory rate, from the date of entry of this Final Judgment until paid.

10. Pursuant to Rule 54(d) of the Federal Rules of Civil Procedure and 28 U.S.C. § 1920, Plaintiffs are the prevailing party in this matter and are entitled to recover their costs from Google. Pursuant to the agreed Bill of Costs filed by Plaintiffs (Dkt. No. 281, Ex.B), Plaintiffs are awarded $89,931.28 in costs.

11. All other relief requested by either party and not specifically addressed herein is **DENIED**.

12. In accordance with the parties' agreement as reflected herein, this judgment is stayed during its appeal to the Federal Circuit, except for the bi-annual reporting of 7-day active users discussed above. If this judgment becomes enforceable after appeal, Google will continue to provide bi-annual reports of 7-day active users according to the same schedule and also make corresponding

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[1] Said rate further described at: http://www.bankrate.com/rates/interest-rates/5-year-treasury-bill.aspx.

bi-annual payments on the judgment on the same schedule, with the first payment

covering past damages and ongoing royalties through to the last date reported in the

first report provided after the appeal.

The Clerk is directed to **CLOSE** the above referenced case.

So ORDERED and SIGNED this 19th day of January, 2022.

_____
RODNEY GILSTRAP
UNITED STATES DISTRICT JUDGE

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IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

ALFONSO CIOFFI, MELANIE ROZMAN, MEGAN ROZMAN, MORGAN ROZMAN, *Plaintiffs*, v. GOOGLE LLC, *Defendant*.	§ § § § § § § CIVIL ACTION NO. 2:13-CV-00103-JRG § § § § § § §

ORDER AND MEMORANDUM OPINION REGARDING DEFENDANT'S RULE 50(B) MOTIONS BASED ON 35 U.S.C. § 251 AND THE RULE AGAINST RECAPTURE SUPPORTED BY FINDINGS OF FACT AND CONCLUSIONS OF LAW

The Court held a jury trial in this case from February 6 to 10, 2017. (Dkt. Nos. 255–58, 261). At the conclusion of the trial, the jury returned a unanimous verdict finding that the patents asserted by Plaintiffs Alfonso Cioffi, Melanie Rozman, Megan Rozman, and Morgan Rozman (collectively, "Plaintiffs") against Defendant Google Inc. ("Google") were infringed and not invalid. (Dkt. No. 259). After the trial, Google filed a Motion for Post-Trial Relief on Invalidity Under 35 U.S.C. §§ 102, 103 and 251, seeking either entry of judgment as a matter of law under Fed. R. Civ. P. 50(b) or the granting of a new trial pursuant to Fed. R. Civ. P. 59 (the "Motion"). (Dkt. No. 292). The Court granted-in-part Google's Motion as to the issue of invalidity pursuant to 35 U.S.C. § 251 on March 29, 2018, and ordered that the § 251 issues be adjudicated to the bench. (Dkt. No. 319). The Court now separately issues the following Findings of Fact ("FF") and Conclusions of Law ("CL") addressing Google's § 251 defenses. After careful consideration

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of the evidence and the parties' arguments, and for the reasons set forth herein, the Court concludes that Google has not shown by clear and convincing evidence that U.S. Reissue Patent Nos. RE43,500 (the "'500 Patent"), RE43,528 (the "'528 Patent"), and RE43,529 (the "'529 Patent") (collectively, the "Asserted Patents") are invalid under 35 U.S.C. § 251. Accordingly, the Motion as to § 251 is **DENIED**.

I.   FINDINGS OF FACT

A.   The Parties

[FF1]   Plaintiff Alfonso J. Cioffi ("Mr. Cioffi") and the late Allen F. Rozman ("Mr. Rozman") (collectively, "Inventors" or "Applicants") are co-Inventors of U.S. Reissue Patent Nos. RE43,500 (the "'500 Patent"), RE43,528 (the "'528 Patent"), and RE43,529 (the "'529 Patent") (collectively, the "Asserted Patents"), which reissued from U.S. Patent No. 7,484,247 (the "'247 Patent"). *See* PTX-001 ('247 Patent); PTX-002 ('529 Patent); PTX-003 ('500 Patent); and PTX-004 ('528 Patent). Mr. Cioffi lives in Murphy, Texas. (Dkt. No. 1 ¶ 1).

[FF2]   Plaintiffs Melanie Rozman, Morgan Rozman, and Megan Rozman (the "Rozmans") are the daughters of the late Mr. Rozman. (*Id.* ¶¶ 5–7). The Rozmans each live in Murphy, Texas. (*Id.* ¶¶ 5–7).

[FF3]   Mr. Cioffi and the Rozmans are the joint and one hundred percent (100%) owners of the Asserted Patents. (*Id.* ¶ 8).

[FF4]   Google is a Delaware Corporation having its principal place of business at 1600 Amphitheater Parkway, Mountain View, California 94043. (Dkt. No. 1 ¶ 9; Dkt. No. 8 ¶ 9).

B.   Procedural History

[FF5]   On February 5, 2013, Plaintiffs sued Google for patent infringement. (Dkt. No. 1). Plaintiffs alleged that Google infringed the Asserted Patents based on features of Google's

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Chrome web browser. (*See id.* ¶¶ 15–26; *see also* Dkt. Nos. 179, 183 (narrowing this case to the Asserted Patents)).

[FF6] Each of the Asserted Patents is titled "System and Method for Protecting a Computer System from Malicious Software" and is a reissue patent derived from U.S. Patent No. 7,484,247 ("the '247 Patent"). *See* PTX-001 ('247 Patent); PTX-002 ('529 Patent); PTX-003 ('500 Patent); PTX-004 ('528 Patent). The '247 Patent issued from U.S. Patent Application No. 10/913,609 (the "'609 Application"). PTX-001 at 1.

1. Relevant Claim Construction

[FF7] On August 28, 2014, the Court construed the term "web browser process," as recited in the claims of the Asserted Claims, to mean a "process that can access data on websites." (Dkt. No. 71 at 15). The Court's construction also explained that the "'web browser process' must be capable of accessing a website without using another web browser process." (*Id.* at 14).

[FF8] On November 26, 2014, Plaintiffs filed a stipulation and proposed final judgment of non-infringement based in part on the Court's construction of "web browser process." (Dkt. No. 99). The Court entered the proposed judgment on December 2, 2014. (Dkt. No. 104).

[FF9] Plaintiffs appealed the Court's claim construction of "web browser process" to the Court of Appeals for the Federal Circuit. (Dkt. No. 105.) The Federal Circuit agreed with the Court's construction of "web browser process" as a "process that can access data on websites" but clarified the construction by noting that the "'web browser process' alone does not have a 'direct' access capability requirement." *Cioffi v. Google, Inc.*, 632 F. App'x. 1013, 1021–22 (Fed. Cir. 2015). The Federal Circuit remanded this case for further proceedings pursuant to its guidance. *Id.* at 1023–24. (*See also* Dkt No. 200 (Joint Pre-Trial Order) § V.D. (Stipulated Claim Construction)).

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2. Jury Trial

[FF10] On remand from the Federal Circuit, the parties proceeded through discovery, pretrial practice, and trial.

[FF11] A jury trial was conducted from February 6 to 10, 2017. (Dkt. Nos. 263–273). Plaintiffs asserted four claims of the Asserted Patents at trial: Claim 43 of the '500 Patent; Claims 5 and 67 of the '528 Patent; and Claim 49 of the '529 Patent (collectively, the "Asserted Claims").

[FF12] Google did not use the full 12 hours allotted to present its case to the jury. (*See* Dkt. No. 297 at 3 (admitting that "Google did not use its full 12 hours")).

[FF13] On February 10, 2017, the jury returned a unanimous verdict finding that the Asserted Claims were infringed and not invalid. (Dkt. No. 259). As to invalidity, the jury found that Google did not prove by clear and convincing evidence: (1) invalidity of Claim 67 of the '528 Patent as anticipated, as violating the rule against recapture, or as violating the original patent requirement; (2) invalidity of Claim 43 of the '500 Patent as obvious, as violating the rule against recapture, or as violating the original patent requirement; (3) invalidity of Claim 5 of the '528 Patent as obvious, or as violating the original patent requirement; or (4) invalidity of Claim 49 of the '529 Patent as obvious, or as violating the original patent requirement. (*Id.*)

[FF14] On September 15, 2017, the Court entered Final Judgment in accordance with the jury's verdict. (Dkt. No. 308).

3. Rule 50(a) Motions

[FF15] Before the jury was charged, Google filed a Motion for Judgment as a Matter of Law under Fed. R. Civ. P. 50(a). (Dkt. No. 251). Google argued, among other things, that since "[t]wo asserted claims violate the recapture rule[] and all [asserted claims] violate the original-patent requirement[,] [a]ll [Asserted Claims] are thus invalid under § 251." (*Id.* at 4). As to the

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original patent requirement, Google argued that the Asserted Claims "cover[ed] subject matter that was not disclosed in the '247 patent's specification" on four grounds: (1) "Two of the asserted reissue claims now operate on a single processor or processor core"; (2) "All of the asserted claims require both a first and a second 'web browser process'; (3) "asserted claims require passing network data from the first to the second web browser process"; and (4) "asserted claim 49 of the '529 patent requires the first web browser process to open or initialize the second web browser process." (*Id.* at 6).

[FF16]   The Court subsequently provided Google with an opportunity to present its § 251 defenses outside the presence of the jury. (*See* Dkt. No. 271 (Trial Tr. 2/9/17 pm) at 122:9–11, 131:18–134:22 ("Counsel, the Court will now entertain motions under Rule 50(a) of the Federal Rules of Civil Procedure. . . . Let me hear anything that falls under Section 251. . . .")); *see also Biscotti Inc. v. Microsoft Corp.*, No. 2:13-cv-01015, Dkt. No. 310 at 1 (E.D. Tex. Oct. 3, 2017) ("After the close of evidence, and while the jury was deliberating, the Court provided the parties an opportunity to present evidence and argument in support of and in opposition to, as appropriate, any equitable defenses urged by Microsoft."); *Eidos Display, LLC v. Chi Mei Innolux Corp.*, No. 6:11-cv-201, Dkt. No. 895 at 1 (E.D. Tex. Dec. 28, 2017) ("[A]fter both sides finished presenting evidence to the jury and before the Court submitted to the jury those issues proper for its consideration, the Court conducted a bench trial outside the presence of the jury on [defendant]'s equitable estoppel defense.").

[FF17]   However, Google did not offer any evidence or argument related to its third and fourth original patent requirement grounds under § 251. (*Compare* Dkt. No. 271 (Trial Tr. 2/9/17 pm) at 131:17–132:12 ("Google moves for invalidity under 35 U.S.C. Section 251 that Claim 43 of the '500 patent and Claim 67 of the '528 patent are invalid because the Plaintiffs recaptured

surrendered claim scope, and these claims are not directed to overlooked aspects . . . . Google also moves for judgment as a matter of law that all asserted claims are invalid under 35 U.S.C. [§ 251] and the original patent requirement, including at least because, number one, for Claim 43 of the '500 patent and Claim 67 of the '528 patent, original '247 patent does not clearly and unequivocally disclose a single-core processor. And number two, the original '247 patent does not clearly and unequivocally disclose a first web browser process with access to a network.") *with* Dkt. No. 251 at 6 (identifying four asserted invalidity grounds under the original patent requirement of § 251)).

4. Rule 50(b) Motions

[FF18] After acceptance of the verdict and entry of judgment, Google filed a Motion for Post-Trial Relief on Invalidity under 35 U.S.C. §§ 102, 103, and 251, seeking either entry of judgment as a matter of law under Fed. R. Civ. P. 50(b) or a new trial pursuant to Fed. R. Civ. P. 59. (Dkt. No. 292). Google argued, among other things, that a new trial should be granted on all issues because the § 251 issues—that is, invalidity under the rule against recapture and original patent requirement—should not have been presented to and decided by the jury. (*Id.* at 2–20). Specifically, Google argued that Claim 43 of the '500 Patent and Claim 67 of the '528 Patent violated the rule against recapture by improperly recapturing surrendered subject matter of a system with just one processor. (*Id.* at 6–14) Google also argued that the Asserted Claims violated the original patent requirement under § 251 because the '247 Patent specification does not clearly and unequivocally disclose: (1) the limitations of all the Asserted Claims requiring two or more "web browser processes"; (2) the limitations of Claim 43 of the '500 Patent and Claim 67 of the '528 Patent encompassing an embodiment with only one processor; (3) the limitations of Claim 43 of the '500 Patent, Claim 67 of the '528 Patent, and Claim 49 of the '529 Patent requiring that

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a "first web browser process" pass data to a "second web browser process"; and (4) the limitations of Claim 49 of the '529 Patent requiring a "first web browser process" to initialize a "second web browser process." (*Id.* at 14–20).

[FF19] On March 29, 2018, the Court granted-in-part Google's motion for a new trial and ordered that final judgment be vacated, the jury verdict be preserved except as to invalidity under § 251, and that the § 251 invalidity issues be adjudicated before the bench. (Dkt. No. 319).

C. Trial Witnesses

[FF20] The Court finds the witnesses' live testimony in this case credible, including that of Mr. Cioffi, Dr. Aviel Rubin, Dr. Hubert Dunsmore, Dr. William Arbaugh, and Dr. Michael Kogan.

[FF21] Mr. Cioffi testified at trial as a fact witness and was precluded from offering expert opinions. (*See* Dkt. No. 217 (Order on Motions *in Limine*) at 5 ("Exclude fact/lay witnesses from offering opinions regarding whether or not any accused product or asserted prior art reference reads on the asserted claims. To be clear, Mr. Alfonso Cioffi . . . . may not reference any specific patent claims or offer any infringement analysis for specific claims or limitations as part of his testimony")).

[FF22] Google's expert—Dr. Michael Kogan ("Dr. Kogan")—and Plaintiffs' expert—Dr. Hubert Dunsmore ("Dr. Dunsmore")—each testified on, among other things, invalidity under 35 U.S.C. § 251—including both the rule against recapture and the original patent requirement. (*See* Dkt. Nos. 268 (Trial Tr. 2/8/17 pm), 270 (Trial Tr. 2/9/17 am), 271 (Trial Tr. 2/9/17 pm)).

[FF23] Dr. William Arbaugh ("Dr. Arbaugh") testified on behalf of Google on the issues of invalidity under 35 U.S.C. §§ 102 and 103, including general technical issues. (*See* Dkt. No. 268 (Trial Tr. 2/8/17 pm) at 52:8–18).

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[FF24] The Court further finds the experts proffered by the Plaintiffs and by Google were qualified to offer the expert testimony that they provided in this case.

D.   Disclosure of the '247 Patent

[FF25] The '247 Patent discloses a security architecture for protecting a computer system from malicious software. *See* PTX-001 at 1:6–7, 2:1–2. The '247 Patent explains that with the growing usage of the Internet and networked services, "malicious software generally known a[s] malware" had emerged as a significant threat to computer users. *Id.* at 3:46–47. When downloaded to a user's computer, malware "interferes with the smooth operation of the computer system, and in the extreme, can lead to the unauthorized disclosure of confidential information stored on the computer system, significant degradation of computer system performance, or the complete collapse of computer system function." *Id.* at 3:57–62.

[FF26] Figure 1 below depicts this architecture in a "computer system 100," which may be a "personal computer (PC) system, a server, a portable computer, such as a notebook computer, or any data processing system, a personal digital assistant (PDA), [or] a communication device such as a cell phone." *Id.* at Fig. 1, 9:30–37.
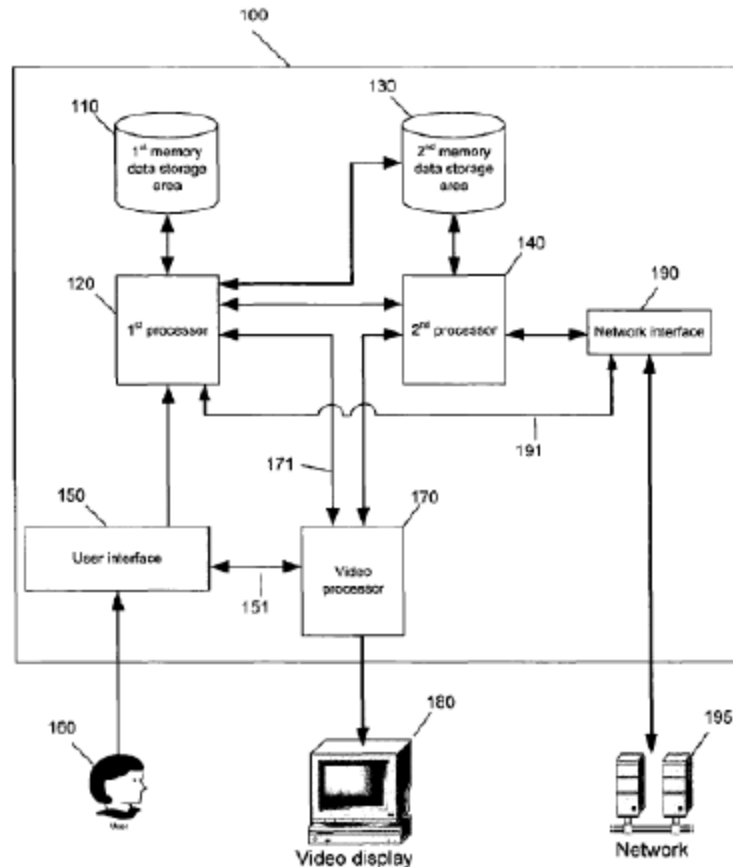
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Fig. 1

[FF27]   The '247 Patent specification teaches that the computer system 100 includes:

(1) "a first processor 120 (P1)" connected to a "first memory and data storage area 110 (M1)" and

(2) a "second processor 140 (P2)" connected to a "second memory and data storage area 130 (M2)."

Id. at 9:37–39, 10:29–37. P1 may be physical hardware processor:

> P1 100 may comprise, for example, a microprocessor, such as a Pentium® 4 processor, manufactured by the Intel Corporation, or a Power PC® processor, manufactured by the IBM Corporation. Other electronic data processors manufactured by other companies, including but not limited to electronic data processors realized in Application Specific Integrated Circuits (ASICs) or in Field Programmable Gate Arrays (FPGAs), are within the spirit and scope of the present invention.

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Id. at 9:39–47. Likewise, "second processor 140 (P2) . . . may comprise any electronic data processor, such as the devices previously described as applicable to first processor 120." *Id.* at 10:31–34.

E.   Google's § 251 Invalidity Grounds

[FF28]   Google identified 35 U.S.C. § 251 as a defense in its pre-trial statement. (Dkt. No. 18-1 ¶¶ 22, 120).

[FF29]   Google alleges four grounds of invalidity under the original patent requirement of § 251. (*See* Dkt. No. 292 at 15–20). *See also* FF ¶ 15.

[FF30]   Google also alleges one invalidity ground under the rule against recapture of § 251. (*See* Dkt. No. 292 at 6–14). *See also* FF ¶ 15.

1.   Facts Relevant to Google's Original Patent Requirement Defense

a.   *Two or More "Web Browser Processes" Limitation of the Asserted Claims*

[FF31]   The originally issued claims of the '247 Patent recited two "logical processes": (1) a "first logical process," and (2) a "second logical process." PTX-001 at Claims 1–20.

[FF32]   All four Asserted Claims replace the two "logical processes" limitations as claimed in the '247 Patent with limitations requiring two "web browser processes." *See* PTX-003 at Claim 41; PTX-004 at Claim 1; PTX-002 at Claim 36. In particular, each Asserted Claim recites a "first web browser process" and a "second web browser process." PTX-003 at Claim 41; PTX-004 at Claim 1; PTX-002 at Claim 36.

[FF33]   Asserted Claim 43 of the '500 Patent depends from independent Claim 41, which recites:

> 41.   A computer program product comprising a program code stored in a non-transitory computer readable medium operable on a portable computer and communication device capable of executing instructions using a common operating

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system and having at least one electronic data processor communicatively coupled to a first memory space with at least one system file and a second memory space, the portable computer and communication device including a network interface device configured to exchange data across a network of one or more computers using a wireless connection, and an intelligent cellular telephone capability with a secure web browser including *a first web browser process and a second web browser process*, configured to:

    open the *first web browser process* within the common operating system, wherein the first web browser process is capable of accessing data of a website via the network and accessing data contained in the first memory space;

    open the *second web browser process* within the common operating system on command from the *first web browser process*, wherein the *second web browser process* is capable of accessing data contained in the second memory space and is further capable of generating data;

    pass data from the *first web browser process* to the *second web browser process*; and process data from the *second web browser process*;

      wherein the at least one system file residing on the first memory space is protected from corruption by a malware process downloaded from the network and executing as part of the *second web browser process*.

PTX-003 at Claim 41 (emphasis added).

[FF34]   Asserted Claim 5 of the '528 Patent depends from independent Claim 1, which

recites:

1.   A method of operating a computer system capable of exchanging data across a network of one or more computers and having at least a first and second electronic data processor capable of executing instructions using a common operating system, comprising:

    executing a *first web browser process*, capable of accessing data of a website via the network, in a first logical process within the common operating system using the first electronic data processor, wherein the first logical process is capable of accessing data contained in a first memory space;

    executing a *second web browser process* in a second logical process within the common operating system using the second electronic data processor, wherein the second logical process is capable of accessing data contained in the second memory space; and

    displaying data from the first logical process and the second logical process, wherein a video processor is adapted to combine data from the first and second logical processes and transmit the combined data to a display;

      wherein the computer system is configured such that the second electronic data processor is operating in a protected mode and data residing on the first memory space is protected from corruption by a malware process downloaded from the network and executing as part of the *second web browser process*.

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PTX-004 at Claim 1 (emphasis added).

[FF35]   Claim 67 of the '528 Patent depends from independent Claim 64, which recites:

64.   A computer program product comprising a program code stored in a non-transitory computer readable medium operable on computer capable of executing instructions using a common operating system and having at least one electronic data processor communicatively coupled to a first and second memory space and to a network interface device configured to exchange data across a network of one or more computers and access at least one website, configured to:
       store at least one system file within the first memory space;
       open a *first web browser process*, capable of accessing data of the at least one website via the network, in a first logical process, the first logical process being configured to access data contained in the first memory space;
       open a *second web browser process* in a second logical process, the second logical process being configured to access data contained in the second memory space; and
       pass data from the *first web browser process* to the *second web browser process*, wherein the at least one system file residing on the first memory space is protected from corruption by a malware process downloaded from the network and executing as part of the *second web browser process*.

Id. at Claim 64 (emphasis added).

[FF36]   Asserted Claim 49 of the '529 Patent depends from independent Claim 36,

which recites:

36.   A method of operating a portable computer based system employing a common operating system and configured with a first memory space and a second protected memory space and at least one electronic data processor, comprising:
       storing at least one system file within the first memory space;
       downloading website content potentially containing malware from a network of one or more computers using a secure web browser process, wherein the secure web browser process is configured to execute on the at least one electronic data processor, and comprises *a first web browser process* and at least *one second protected web browser process*, the *first web browser process* and the at least one *second protected web browser process* being configured to access the website content via the network of one or more computers;
       executing instructions in the *first web browser process*, wherein the *first web browser process* is configured to access data contained in the first memory space and to initialize the at least one *second protected web browser process*;
passing data from the *first web browser process* to the at least one *second protected web browser process*;
       passing data from the *first web browser process* to the at least one *second protected web browser process*;

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executing instructions in the at least one *second protected web browser process*, wherein the at least one *second protected web browser process* is configured to access data contained in the second protected memory space and to execute instructions from the downloaded website content, wherein the downloaded website content is capable of accessing the second protected memory space but is denied access to the first memory space;

displaying digital content generated by the secure web browser process;

wherein the secure web browser process is configured such that the at least one system file residing on the first memory space is protected from corruption by website content potentially containing malware downloaded from the network and executing as part of the at least one *second protected web browser process*.

PTX-002 at Claim 36 (emphasis added).

[FF37]   The '247 Patent specification discloses the use of "logical processes." *See, e.g.*, PTX-001 at 16:34–43. The specification identifies a number of exemplary functions carried out by such logical processes: "executing instructions," PTX-001 at 7:64–65, 8:2–3; "accessing data contained in a first memory space and a second memory space," PTX-001 at 7:65–67; "exchanging data across a network of one or more computers," PTX-001 at 8:5–6; providing data for display, PTX-001 at 8:8–10; "a malware program" executing as part of a logical process, PTX-001 at 8:15–17; "executing instructions necessary to carry out the functions of an operating system," PTX-001 at 16:25–27; "executing instructions necessary to carry out a first computer program, including but not limited to a word processor," PTX-001 at 16:27–30; "executing instructions necessary to carry out the functions of a web browser program," PTX-001 at 16:30–32; and "executing instructions necessary to carry out the functions of an instant messenger program," PTX-001 at 16:32–34.

[FF38]   The '247 Patent specification also discloses that "the functions carried out by processors 920 and 940 may comprise separate, secure logical processes executing on the same physical processor." PTX-001 at 16:22–24. The specification teaches that "[a] computer system 100 constructed in accordance with the principles of the present invention would be capable of

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disallowing a secure logical process, such as the ***second logical process*** described above, access to certain memory spaces, and/or disallowing a secure logical process from initiating access to another logical process." PTX-001 at 16:34–39 (emphasis added). The specification continues: "For example, the functions carried out by P2 140 (FIG. 1) may comprise a secure logical process, which may be configured to be unable to automatically initiate access to either M1 110 or another ***logical process performing the functions of P1*** 120." PTX-001 at 16:39–43.

[FF39]   Additionally, Processors P1 and P2 described in Column 14 of the '247 Patent specification refer back to elements 120 and 140 of Figure 1. *See* FF ¶¶ 25–27. (*See also* Dkt. No. 292 at 19 (Google's JMOL Motion) (arguing that "both P1 and P2 refer back to elements 120 and 140 in Figure 1"); Dkt. No. 268 (Trial Tr. 2/8/17 pm) at 145:5–10 (Testimony of Dr. Kogan) ("Figure 6 is a different thing. As we can see in the text that's blocked here, Figure 6 is about online gaming carried out on computer system 100. Now, the computer system 100, that's the two processor/two memory space thing we keep seeing in Figure 1."); Dkt. No. 271 (Trial Tr. 2/9/17 pm) at 37:23–25 (Testimony of Dr. Dunsmore) ("Q: So Figure 6 describes using the processors 120 and 140 of Figure 1, right? A: Yes.")).

[FF40]   Figure 1 of the '247 Patent discloses a first processor P1 120 with direct access to the network interface via item 191:

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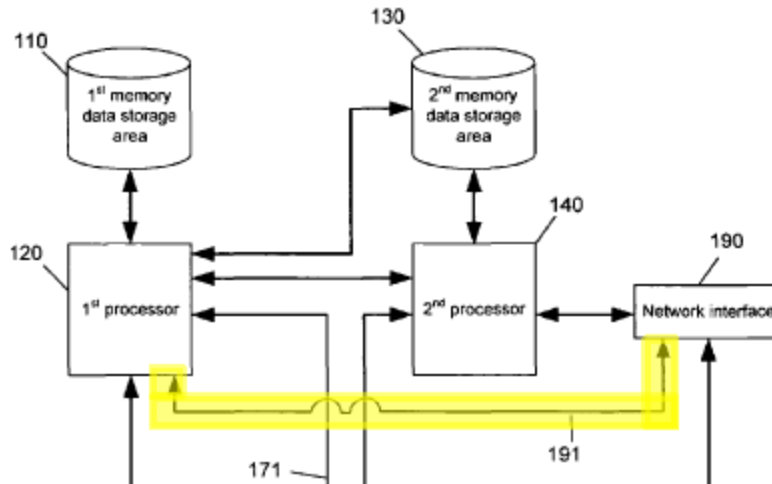
PTX-001, Fig. 1 (highlighting added).

[FF41]   Further, Google concedes that "web browser processes" are a narrower sub-species of "logical processes" as described throughout the specification. (*See* Dkt. No. 292 at 11 (arguing that "by broadly reciting 'logical processes,' the originally filed '247 Patent claims indisputably encompassed web browser processes, including a first web browser process"); *id.* at 12 (arguing that "[c]hanging the originally filed claims of the '247 Patent to recite a 'first web browser process' requires revising only one term, 'first logical process,' to a 'first web browser process.' This change is minor given that *a 'web browser process' is a type of 'logical process.*'") (emphasis added)).

[FF42]   Google's invalidity expert also explained that logical processes encompass web browser processes. (*See* Dkt. No. 268 (Trial Tr. 2/8/17 pm) at 67:21–68:4 ("Q: What about the first logical process. . . . Where is that? A: It's the same as the first web browser process. . . . A web browser process is going to be a logical process. . . . It's the way the computer works. It starts processes. And a web browser process would be a logical process.") (Testimony of Dr. Arbaugh)).

[FF43]   Dr. Dunsmore testified, consistent with Dr. Arbaugh's explanation, that "a logical process could be just about anything. It could be a process that was running, working with

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a gaming system. It could be a process that's running working with email. It could be a *process working with web browsers*." (Dkt. No. 271 (Trial Tr. 2/9/17 pm) at 12:16–13:2 (Testimony of Dr. Dunsmore)). When asked about the types of programs that would be included as "secure logical processes," Dr. Dunsmore testified that Column 16 of the '247 Patent specification discloses to a person of ordinary skill in the art "that there could be . . . a number of things that could be done by these processes. And among those would be . . . processes that are part of a web browser. So the specification specifically talks about . . . a web browser program and processes that work with that." (Dkt. No. 271 (Trial Tr. 2/9/17 pm) at 6:24–9:1).

[FF44]   As such, Dr. Dunsmore explained that those skilled in the art reading Column 14 would understand that P1 and P2 can refer to two processes, both of which are accessing data from the Internet, which thus meet the Court's construction of "web browser process"—*i.e.*, a process that can access data on websites. (*See id.* at 9:21–10:21 ("Here we have two processes, P1 and P2. And both of them are retrieving data from the network, and that's exactly what needs to be done by the processes of a web browser. Q: And does P1 and P2 accessing website data meet . . . the Court's definition of what a web browser process is? A: Yes, it does.")).

[FF45]   Dr. Dunsmore also explained that Column 16 of the '247 Patent specification would disclose to a person of skill in the art the various types of processes that could be executed in a secure logical process, including the "functions of a web browser program." (*Id.* at 7:14-8:9 ("Q: Professor Dunsmore, how would a person of ordinary skill understand or interpret these disclosures that we've just looked at in column 16? A: Well, a person of ordinary skill would realize that there could be . . . a number of things that could be done by these process [*sic*]. And among those would be . . . processes that are part of a web browser.")).

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[FF46] However, Dr. Dunsmore also noted at trial that the term "web browser process" is never used in the '247 Patent specification to describe Figure 6. (*Id.* at 38:1–6). Although the '247 Patent specification does not expressly refer to two instances of "web browser" or "browser" programs in describing the claimed invention, the Court notes that the '247 Patent specification explains that prior art solutions "could significantly slow or preclude the *interactive nature of many applications such as* gaming, messaging, and *browsing*." PTX-001 at 6:16–20.

[FF47] As further stated in the '247 Patent specification, the "interactive network process" embodiment describes P1 120 connecting to the "network," PTX 001 at 14:23–24, which is defined as the "Internet, a LAN, WAN, VPN, etc.," *id.* at 10:5–7.

[FF48] Google's expert, Dr. Kogan, disputed Dr. Dunsmore's opinion and testified that the embodiment disclosed in Figure 6 and Column 14 of the '247 Patent was limited to "online gaming." (Dkt. No. 268 (Trial Tr. 2/8/17 pm) at 145:1–23). Dr. Kogan's opinion was that there was no disclosure of web browser processes in the '247 Patent specification:

> A: . . . Well, Figure 6 kind of goes along with some text that's in the specification. There's a bunch of text that talks all about that Figure 1, and you've heard people talking about that. And that *Figure 1 is about browsing the Internet. Figure 6 is a different thing. As we can see in the text that's blocked here, Figure 6 is about online gaming carried out on computer system 100*. Now, the computer system 100, that's the two processor/two memory space thing we keep seeing in Figure 1. So this is just a use case of how that works with respect to running games. So, you know, you're – I'm sure you've had kids or grandkids or – they're all playing Call of Duty and games with their friends, and you can't get the headphones off their heads.

> Q: How does Figure 6 relate to web browsers?

> A: Well, *Figure 6 doesn't relate to web browsers because games deal with game servers on the Internet.* There's a lot of stuff on the Internet, and everything on the Internet is not a website. And everything that comes and goes on the Internet is not website data. So when you have a game running on your computer, your game is talking to a specific game server, and that game server is providing you game data, not website data.

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(*Id.*). Dr. Kogan testified that many types of data are exchanged over the Internet, not just website data for web browsing. Thus, Dr. Kogan's expert opinion was that processes that access "interactive network process status data" from a network are not accessing "website data" and cannot fit the Court's definition of "web browser process." (*Id.*).

[FF49]   Figure 6 refers to the broader "interactive network process" and denotes "interactive network process status data" being received from the network connection (step 620), the first process on P1 receiving the "interactive network process status data" from P2 (step 640), and that the "updated interactive network process status data" is passed back to the network via the network connection (step 660). PTX-001, Figure 6. Online gaming is never mentioned in Figure 6, which instead refers more broadly to an "interactive network process." *Id.* The specification also makes clear that online gaming is just one example of an "interactive network process" described in Figure 6. (*Id.*, at 14:3-4, 14:28-30).

> b.   *"One Processor" Limitation of Claim 43 of the '500 Patent and Claim 67 of the '528 Patent*

[FF50]   Asserted Claim 43 of the '500 Patent depends from independent Claim 41, which recites in relevant part: "A computer program product . . . having ***at least one electronic data processor*** communicatively coupled to a first memory space with at least one system file and a second memory space. . . ." FF ¶ 33 (emphasis added).

[FF51]   Asserted Claim 67 of the '528 Patent depends from independent Claim 64, which recites in relevant part: "A computer program product . . . having ***at least one electronic data processor*** communicatively coupled to a first and second memory space. . . ." FF ¶ 35 (emphasis added).

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[FF52]   Both parties' experts testified at trial that these two Asserted Claims require only one processor. (Dkt. No. 268 (Trial Tr. 2/8/17 pm) at 148:2–22 (Testimony of Dr. Kogan); Dkt. No. 271 (Trial Tr. 2/9/17 pm) at 33:8–25 (Testimony of Dr. Dunsmore)).

[FF53]   The parties' experts also agreed that although two processor cores may be on a single processor chip, each processor core still constitutes a separate processor. (Dkt. No. 264 (Trial Tr. 2/7/17 am) at 51:5–16; Dkt. No. 268 (Trial Tr. 2/8/17 pm) at 148:2–10).

[FF54]   Although Figure 1 of the '247 Patent specification depicts the first processor P1 120 and second processor P2 140 as physically separate data processors, PTX-001 at Fig. 1, Figure 9 depicts an alternative embodiment using a single, physical processor chip:
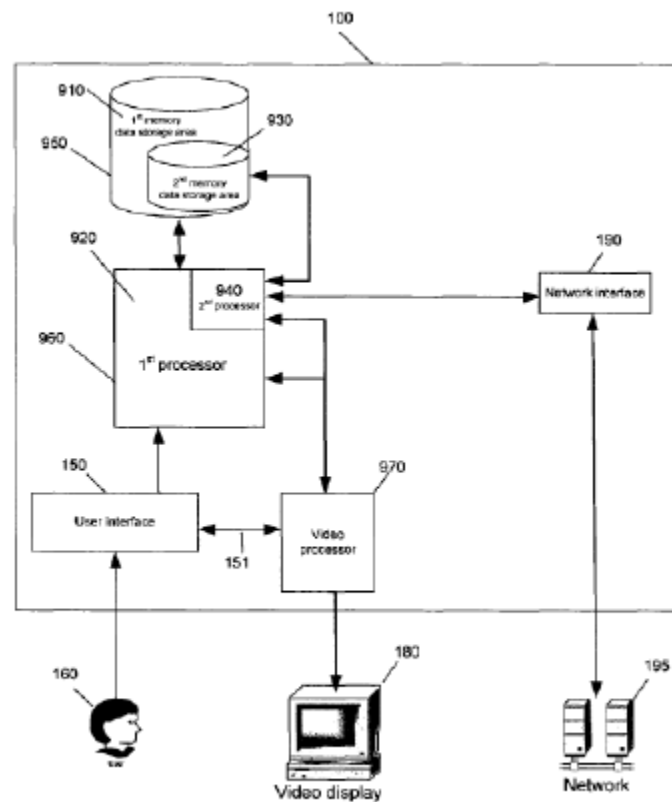

Fig. 9

PTX-001 at Fig. 9.

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[FF55]   Column 16 of the '247 Patent specification explains: "In accordance with a preferred embodiment of the present invention, an alternate configuration for computer system 100 is illustrated in FIG. 9. Computer system 100 comprises a video processor 970, ***processor 960***, and a memory data storage area 950." PTX-001 at 16:8–10 (emphasis added).

[FF56]   Column 16 of the '247 Patent specification further discloses: "Processor 960 ***may further*** comprise multiple processor cores, illustrated by 1st processor 920 and 2nd processor 940." *Id.* at 16:10–12. (emphasis added). Since "[m]icroprocessors manufactured with multiple processor cores are becoming common in the industry, and such multi-core processors may be particularly advantageous when used in accordance with the present teachings," the '247 Patent explains that "[i]t is understood that processor 960 may contain more than 2 processor cores." *See id.* at 16:12–17.

[FF57]   Additionally, the '247 Patent specification teaches that "the functions carried out by processors 920 and 940 may comprise separate, secure logical processes executing on ***the same physical processor***." PTX-001 at 16:22–24 (emphasis added). The specification continues immediately thereafter with examples of embodiments of the invention implemented using two logical processes:

> For example, a first logical process may comprise ***executing instructions*** necessary to carry out the functions of an operating system, or the first logical process may comprise ***executing instructions*** necessary to carry out the functions of a first computer program, including but not limited to a word processor. A second logical process may comprise ***executing instructions*** necessary to carry out the functions of a web browser program, or may comprise executing instructions necessary to carry out the functions of an instant messenger program, for example. A computer system 100 constructed in accordance with the principles of the present invention would be capable of disallowing a secure logical process, such as the second logical process described above, access to certain memory spaces, and/or disallowing a secure logical process from initiating access to another logical process. For example, the functions carried out by P2 140 (FIG. 1) may comprise a secure logical process, which may be configured to be unable to automatically initiate access to either M1 110 or another logical process ***performing the functions of P1 120***.

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PTX-001 at 16:24–34 (emphasis added).

[FF58]   However, Dr. Dunsmore testified that the '247 Patent specification's teaching that "[p]rocessor 960 may further comprise multiple processor cores," FF ¶ 56, signals to those skilled in the art that the invention may be executed on multiple processor cores, but could also be executed on a single processor. (Dkt. No. 271 (Trial Tr. 2/9/17 pm) at 6:24–7:11, 8:2–15 (opining that the "specification in the patent says that, in fact, instead of being separate processors, these can simply be separate processes that are executing on the same physical processor, a single processor. . . . [and that] the patent specification speaks to . . . both doing this on a single processor or on a multi-core processor")).

[FF59]   Moreover, the Summary of the Invention never refers to physical processors, but instead notes that an "object of the present invention" is to provide a computer system capable of executing instructions in a "first logical process" and "second logical process," and that malware "downloaded from the network and executing as part of the second logical process is incapable of initiating access to the first memory space." PTX-001 at 7:63–8:19. This is described in column 16, which makes clear that the functions carried out by the processors "may comprise separate, secure logical processes." *Id.* at 16:23–24.

[FF60]   The '247 Patent specification notes specifically that the functions of P1 120 in Figure 1 may be carried out by a first logical process, and the functions of P2 140 may be carried out by a second logical process:

> [a] computer system 100 constructed in accordance with the principles of the present invention would be capable of disallowing a secure logical process, such as the second logical process described above, access to certain memory spaces, and/or disallowing a secure logical process from initiating access to another logical process. For example, the functions carried out by P2 140 (FIG. 1) may comprise a secure logical process, which may be configured to be unable to automatically

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initiate access to either M1 110 or another logical process performing the functions of P1 120.

Id. at 16:34–43.

[FF61]   Google's expert, Dr. Kogan, provided conclusory testimony—without reference to any portion of the intrinsic record of the '247 Patent—that the single processor limitation is not disclosed by the '247 Patent specification:

> Q. And finally, have you heard of something called the original patent rule?
> A. Yes, I have.
> Q. And have you reached any conclusions regarding that rule?
> A. Yes, I have. The original patent rule, as a result of it, the – the patents that the ***claims with one single processor are not supported by the specification***, and, therefore, by the original patent rule, they are invalid. ***Trust me***, the original patent rule is big and ugly, and I can't remember all the legal standards specifically, but it speaks to if the specification doesn't call out exactly what's being asked for, you can't have it. And so the original patent rule is – renders the two claims with a single processor invalid. . . .

(Dkt. No. 268 (Trial Tr. 2/8/17 pm) at 150:15–151:6). In post-trial briefing, Google argues that Figure 9 of the '247 Patent, which depicts two processors, informs the disclosure of Column 16 of the '247 Patent's specification and indicates that Column 16 does not clearly disclose a single processor embodiment. (Dkt. No. 292 at 17–19).

> c.   *A First Web Browser Process Passing Data to a Second Web Browser Process Limitation of Claim 43 of the '500 Patent, Claim 67 of the '528 Patent, and Claim 49 of the '529 Patent*

[FF62]   Claim 43 of the '500 Patent depends from Claim 41, which recites in relevant part: "pass data from the first web browser process to the second web browser process." FF ¶ 33.

[FF63]   Claim 49 of the '529 Patent depends from Claim 36, which recites in relevant part: "passing data from the first web browser process to the at least one second protected web browser process." FF ¶ 36.

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[FF64]   Claim 67 of the '528 Patent depends from Claim 64, which recites in relevant part: "pass data from the first web browser process to the second web browser process." FF ¶ 35.

[FF65]   Google contends that Claim 43 of the '500 Patent, Claim 49 of the '529 Patent, and Claim 67 of the '528 Patent are invalid under § 251 for failure to disclose a first web browser process that passes and/or exchanges website data with the second web browser process. (Dkt. No. 292 at 23).

[FF66]   Google submitted this § 251 invalidity ground in its Rule 50(a) motion on the papers and did not present oral argument to the Court. FF ¶¶ 15–17.

[FF67]   Plaintiffs argue that Google waived this argument because it failed to offer evidence at trial on the question of whether a person of ordinary skill in the art would consider the "passing" or "exchanging" of website data between the first and second web browser processes as adequately disclosed. (Dkt. No. 295 at 12). Google admits that it did not present any expert testimony regarding this argument at trial. (Dkt. No. 320 at 3–4 (acknowledging that "[t]he record from the jury trial provides an incomplete record of extrinsic evidence on Google's § 251 invalidity defenses" and recognizing that "neither party presented separate extrinsic evidence on th[is original patent] defense[]")).

[FF68]   Although Google "request[ed] that the parties be permitted to present evidence and live witness testimony at the bench trial to provide the Court with a complete record on which to decide § 251 invalidity" (Dkt. No. 320), the Court clarified that it did "not intend to conduct a new evidentiary hearing in this regard" because Google already had an opportunity to provide such evidence before the jury and the Court. (*See* Dkt. No. 327). *See also* FF ¶¶ 16–17.

[FF69]   The Court finds that Figure 6 of the '247 Patent is a flow chart that discloses: (1) processor P2 retrieving "interactive network process" status data, (2) processor P2 passing the

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data to processor P1, and (3) then processor P1 passing the updated "interactive network process
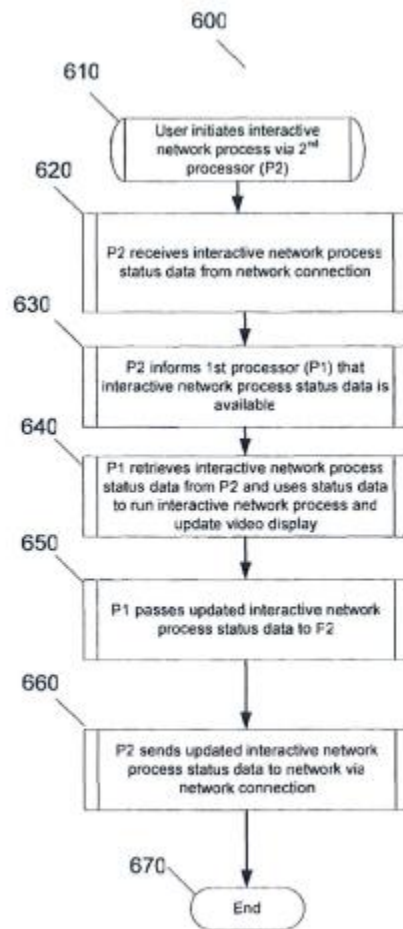
status data" back to processor P2:

Fig. 6

PTX-001 at Fig. 6.

[FF70]   When describing Figure 6, the '247 Patent specification notes that a "interactive

network process" could be an "interactive game" but does not limits an "interactive network

process" to online games. PTX-001 at 14:3–4 ("Interactive network process *such as* interactive

gaming") (emphasis added); *id.* at 14:30–31 "allows an interactive network process, *such as* online

gaming") (emphasis added).

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[FF71]   The '247 Patent specification makes a similar distinction between "interactive network process status data" and "game status data" or "game status information," signifying that "interactive network process status data" is broader than just "game status data." *See* PTX-001 at 14:49–51 ("By using *exemplary* process 600 (or an equivalent). . . . The 120-120 system *may* be advantageously configured to *only* accept game status information. . . .") (emphases added); *see also id.* at 14:28–31 ("In accordance with a preferred embodiment of the present invention, an *exemplary* process flow 600, illustrated in FIG. 6, allows an interactive network process, *such as* online gaming, to be carried out on computer system 100.") (emphasis added).

[FF72]   Therefore, the Court views the specification of the '247 Patent as clearly disclosing the first and second processes, P1 and P2, exchanging "interactive network process status data" (PTX-001 at 14:28–45). The term "interactive network process" on its face includes web browser processes, which by definition interact with the network. The Court finds that, consistent with Figure 6, Column 14 of the '247 Patent specification discloses passing "interactive network process status data" from processor P1 to processor P2 and back to processor P1. *See* PTX-001 at 14:32–45; *see also* FF ¶ 69.

[FF73]   Additionally, Plaintiffs' expert Dr. Dunsmore testified at trial with respect to Claim 43 of the '500 Patent, Claim 67 of the '528 Patent, and Claim 49 of the '529 Patent, that the "data" passed from the "first web browser process" to the "second web browser process" must be "website data." (Dkt. No. 270 (Trial Tr. 2/9/17 am) at 119:2–23). He testified that a POSITA would interpret P1 and P2 as "web browser processes" because both are capable of accessing website data. (Dkt. No. 271 (Trial Tr. 2/9/17 pm) at 7:14–8:9, 9:21–10:21, 12:16–24, 67:21–68:4).

[FF74]   This is consistent with Figure 1, which discloses a two-way communication arrow between P1 and P2. *Compare* FF ¶¶ 61–63 *with* PTX-001 at Fig. 1.
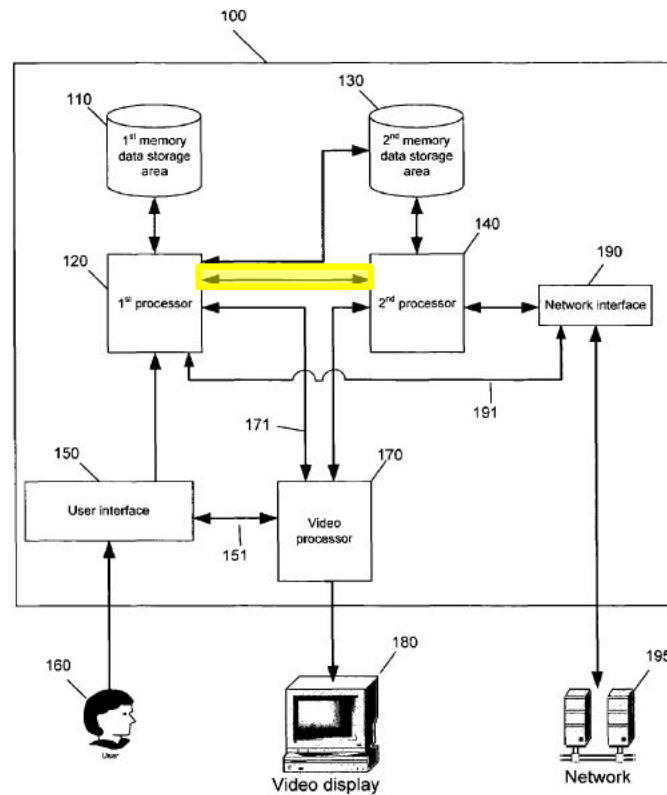
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Fig. 1

PTX-001 at Fig. 1 (highlighting added).

[FF75] Dr. Dunsmore testified that a person of ordinary skill in the art would interpret P1 and P2 as "web browser processes" because both are capable of accessing website data. *See* FF ¶¶ 43–46.

> d. *A First Web Browser Process Initializing a Second Web Browser Process Limitation of Claim 49 of the '529 Patent*

[FF76] Claim 49 of the '529 Patent recites an additional feature of the two "web browser processes," requiring that the "first web browser" "initialize" the "second web browser process." Specifically, Claim 49 depends from Claim 36 of the '529 Patent, which recites in relevant part: "executing instructions in the first web browser process, wherein the first web

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browser process is configured to access data contained in the first memory space and *to initialize the at least one second protected web browser process*." FF ¶ 36.

[FF77]   Google submitted this § 251 invalidity ground in its Rule 50(a) motion on the papers and did not present oral argument to the Court. FF ¶¶ 15–17.

[FF78]   Plaintiffs argue that Google waived this argument because it failed to offer evidence at trial on this issue. (Dkt. No. 295 at 13). Google admits that it did not present any expert testimony regarding this argument at trial. (Dkt. No. 320 at 3–4 (acknowledging that "[t]he record from the jury trial provides an incomplete record of extrinsic evidence on Google's § 251 invalidity defenses" and recognizing that "neither party presented separate extrinsic evidence on th[is original patent] defense[]")).

[FF79]   Although Google "request[ed] that the parties be permitted to present evidence and live witness testimony at the bench trial to provide the Court with a complete record on which to decide § 251 invalidity" (Dkt. No. 320), the Court clarified that it did "not intend to conduct a new evidentiary hearing in this regard" because Google already had an opportunity to provide such evidence before the jury and the Court. (*See* Dkt. No. 327). *See also* FF ¶¶ 16–17.

[FF80]   Figure 2 of the '247 Patent specification describes "(P1)" instructing "(P2)" to initiate a "protected process" and open one or more process windows (step 220). PTX-001 at Fig. 2. The discussion of Figure 2 discloses the user launching of a "protected process" such as Internet Explorer or Netscape Navigator. *Id.* at 10:64–11:2. A user inputs commands to launch the overall program. *Id.* at 11:2–4; *see also id.* at Fig. 2, step 210. The '247 Patent specification then describes "1st processor 120" (P1) instructing the "2nd processor 140" (P2) to initiate the protected process and open one or more process windows. *Id.* at 11:4–6. The specification further explains that the protected process may be "browsing the internet." *Id.* at 11:6–10.

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[FF81]   Figure 10 of the '247 Patent specification further discloses "1st processor (P1) instruct[ing] 2nd processor (P2) to initiate protected process and open process window." PTX-001, Fig. 10. The '247 Patent specification then describes Figure 10 as disclosing "processor P1 120 instruct[ing] processor P2 140 to initiate a protected process and open a process window." *Id.* at 17:16–18. The specification also explains that that the "method of operating a computer system involving data encryption" prior to sending data to processor P2 " as set forth in Figure 10 and described in Column 17 is "[i]n accordance with the present teachings" and "[i]n accordance with a preferred embodiment of the present invention." *See id.* at 17:11–13, 33–35.

[FF82]   The Court finds that the '247 Patent specification (in the figures and in multiple places throughout the detailed description) discloses that processor P1 is capable of opening and/or initializing processes on processor P2. The specification further discloses that the functions carried out by processor P1 and processor P2 can also be carried out by, and referred to as, "logical processes." *See* FF ¶ 59–60. It is undisputed that "logical processes" can be any number of computer program processes including "web browser processes." *See* FF ¶¶ 37, 41–47. Additionally, the '247 Patent specification discloses a user opening a web browser program, followed by P1 instructing P2 to open one or more protected process windows for web browsing. FF ¶ 80–81.

2.   Facts Relevant to Google's Recapture Defense

[FF83]   At trial, Plaintiffs' expert Dr. Dunsmore agreed that the Claim 43 of the '500 Patent and Claim 67 of the '528 Patent encompass a single processor system, whereas the '247 Patent's issued claims do not. (Dkt. No. 271 (Trial Tr. 2/9/17 pm) at 33:8–25.) Google's expert Dr. Kogan testified that the first step of the recapture is met. (Dkt. No. 268 (Trial Tr. 2/8/17 pm)

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at 148:2–22). Plaintiffs did not dispute the first step of the recapture test in post-trial briefing.

(*See* Dkt. No. 295 at 14–23).

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a.   *Threshold Inquiry Regarding Overlooked Aspects of the '247 Patent*

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[FF84]   While the '247 Patent describes a system that includes two processors, the original claims of the '247 Patent were not so limited. Originally filed Claim 1 of the '609 Application recited a method of operating a computer system with "a first logical process" and "a second logical process," but it did not specify how many *processors* the system included:

> 1. A method of operating a computer system, comprising the steps of:
> executing instructions in ***a first logical process***, wherein the first logical process is capable of accessing data contained in a first memory space and a second memory space;
> executing instructions in ***a second logical process***, wherein the second logical process is capable of accessing data contained in the second memory space, the ***second logical process being further capable of exchanging data across a network*** of one or more computers;
> . . .
> wherein the computer system is configured such that malware program downloaded from the network and executing as part of the ***second logical process*** is incapable of initiating access to the first memory space.

See PTX-007 at R00000587 (emphasis added).

[FF85]   Similarly, originally filed Claim 15 of the '609 Application, reproduced in part below, recited executing a "first logical process" and "second logical process" on "at least one electronic data processor":

> 15. A computer system, comprising:
> ***at least one electronic data processor*** capable of executing instructions;
> . . .
> wherein the electronic data processor, first and second memory space, and video processor are configured for performing the steps of:
> executing instructions in a ***first logical process***, wherein the ***first logical process*** is capable of accessing data contained in the first memory space and the second memory space;
> executing instructions in a ***second logical process***, wherein the

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> *second logical process* is capable of accessing data contained in the second memory
> space, the *second logical process being further capable of exchanging data across
> a network* of one or more computers;
> . . . .

Id. at R00000591 (emphasis added).

[FF86]   Although the originally filed Claims 1 and 15 of the '609 Application recited a first logical process with access only to the first memory space and second memory space, the claims further recited a second logical process with access to the second memory space *and* that was capable of exchanging data across a network of computers. *See* FF ¶¶ 84, 85. Accordingly, the originally filed Claims 1 and 15 of the '247 Patent set forth a first and second logical process where only the second logical process had access to the network. (*See id.*)

[FF87]   In contrast, the challenged reissue claims (Claim 43 of the '500 Patent and Claim 67 of the '528 Patent) contain a first and second *web browser* processes (not merely *logical* processes of any type), and thus by definition ***both*** processes require access to the network. *See* FF ¶¶ 33, 35; *see also* FF ¶¶ 7–9, 40–47.

[FF88]   Google's expert, Dr. Arbaugh, opined that the original '247 Patent required a second processor to isolate the computer system from the network. (Dkt. No. 268 (Trial Tr. 2/8/17 pm) at 112:10–113:7). Additionally, Dr. Kogan, another Google expert, testified that the Asserted Patents (*i.e.*, the reissue patents) disclosed a different invention from the '247 Patent (the original patent), albeit he inconsistently couched his opinion as applying only for the original patent rule and not the rule against recapture. (Dkt. No. 268 (Trial Tr. 2/8/17 pm) at 30:5–31:5).

[FF89]   Google argues that Dr. Dunsmore essentially conceded on cross-examination that, were the original filed-for claims read broadly enough, they could encompass a first logical process with access to the network (*i.e.*, a "web browser process"). (*E.g.*, Dkt. No. 271 (Trial Tr. 2/9/17 pm) at 41:6–23). Such a reading, however, would eschew any reliance on the intrinsic

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record and the critical context it provides—essentially reading the '247 Patent's claim language in a vacuum.

[FF90]   Furthermore, the Court previously determined that "the essence of the invention claimed in the '247 Patent was isolation—only the second logical process could access the network; the rest of the system could not." (Dkt. No. 212 at 8 (Magistrate Judge's Report and Recommendation); *see also* Dkt. No. 226 (Order Adopting)). In contrast, the Court found that the Asserted Claims of the reissue patents are "directed to processes that occur on web browsers and thus are not related to isolation." (Dkt. No. 212 at 8; *see also* Dkt. No. 226). This conclusion is consistent with the Inventors' representations to the PTO to advance prosecution on the '609 Application. (*See* PTX-007 at R00000681 ("[T]he physical hardware separation or partitioning of instruction execution on physically separate processors (or processor cores), as taught by the Applicants, allows malicious instructions to be executed within the second logical process, using the second electronic data processor operating in a protected mode.").

[FF91]   The Court also noted that determination of whether a reissue claim was patentably distinct over the original claims required consideration of whether the reissue claims were obvious in light of the original claims. (Dkt. No. 212 at 9). Neither party at summary judgment presented evidence on the issue of obviousness, and the Court denied Google's motion because of unresolved issues of fact. (*Id.* at 10). Notwithstanding the opportunity to present evidence on obviousness at trial, Google failed to do so.

[FF92]   Additionally, the Court finds that Google's argument (for its original patent requirement challenge under § 251) to be a concession that reinforces the Court's prior conclusion that the Asserted Patents are in essence directed to a different invention than the original claims of the '247 Patent. (Dkt. No. 251 at 5–6 (Google's Rule 50(a) Motion) (arguing that "the invention

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disclosed in the reissue patents is ***entirely different*** from the one disclosed in the original '247

Patent . . . [The] first logical process ran on the first processor and a second logical process ran on

the second processor, and ***only the second process*** . . . ***was a network-interface program or***

browser.") (emphasis added)).

<p style="text-align:center">b.   *Facts Relevant to the Recapture Test*</p>

[FF93] Originally filed Claim 1 of the '609 Application claimed a "first logical process"

and "second logical process." FF ¶ 84.

[FF94] Originally filed Claim 15 of the '609 Application claimed "at least one

electronic data processor" executing a "first logical process" and "second logical process."

FF ¶ 85.

[FF95] During prosecution of the '609 Application, the PTO examiner rejected

originally filed Claim 1 as anticipated by U.S. Patent No. 6,192,477 ("Corthell"). PTX-007 at

R00000651–52. With respect to originally filed Claim 1, the examiner did not discuss whether

Corthell discloses multiple processors, presumably because Claim 1 was not limited to a particular

number of processors. *Id.* at R00000651; *see also* FF ¶ 84.

[FF96] During prosecution of the '609 Application, the PTO examiner also rejected the

originally filed Claim 15 as obvious in view of U.S. Patent Nos. 6,578,140 ("Policard") and

5,673,403 ("Brown"). (PTX-007 at R00000656.) With respect to originally filed Claim 15, the

examiner reasoned that since the claim could be interpreted to encompass a multiprocessor system

executing on multiple operating systems, Claim 15 was obvious over Policard in view of Brown

because Policard describes a system in which two processors operated in "dual, separate operating

systems." *See id.* at R00000650, 656.

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[FF97]   On April 29, 2008, Plaintiffs responded by amending Claims 1 and 15 to recite

at least two processors.   Specifically, Plaintiffs amended Claim 1 of the '609 Application,

reproduced in part below, to require "having at least a first and second electronic data processor":

> 1. (Currently Amended) A method of operating a computer system **having at least a first and second electronic data processor capable of executing instructions using a common** ~~running an~~ operating system, comprising the steps of:
>   executing instructions in a first logical process within the **common** operating system **using the first electronic data processor**, wherein the first logical process is capable of accessing data contained in a first ~~electronic~~ memory space **and a second memory space**;
>   executing instructions in a second logical process within the common operating system **using the second electronic data processor**, wherein the second logical process is capable of accessing data contained in ~~a~~ **the** second ~~electronic~~ memory space, the second logical process being further capable of exchanging data across a network of one or more computers;
>   . . .
>   wherein the computer system is configured such that **the second electronic data processor is operating in a protected mode and** data residing on the first ~~electronic~~ memory space is protected from corruption by a malware process downloaded from the network and executing ~~on~~ **as part of** the second logical process.

PTX-007 at R00000672 (amendments indicated).

[FF98]   Likewise, Claim 15 of the '609 Application, reproduced in part below, was

amended to require a "multi-processor" system with "a first and second electronic data processor":

> 15. (Currently Amended) A **multi-processor** computer system **using a common operating system**, comprising:
>   at least **a first and second** ~~one~~ electronic data processor capable of executing instructions **using the common operating system**;
>   . . .
>   wherein the **first and second** electronic data ~~processor~~ **processors**, first and second memory space, and video processor are configured for performing the steps of:
>   executing instructions in a first logical process **with the first electronic data processor**, wherein the first logical process is executing within **the common** ~~an~~ operating system and is capable of accessing data contained in the first memory space and the second memory space;
>   executing instructions in a second logical process **with the second electronic data processor**, wherein the second logical process is executing within the **common** operating system and is capable of accessing data contained in the second memory space, the second logical process being further capable of

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exchanging data across a network of one or more computers;
            . . . .

Id. at R00000675–76 (4/29/2008 Amendment at 5–6); *see also id.* at R00000672.

[**FF99**]   The Inventors relied on these amendments to traverse Corthell, Policard, and

Brown.   To distinguish Corthell, the Inventors argued that adding a "second electronic data

processor" provides "physical isolation" between the first and second logical processes:

> As per claim 1, Examiner believes that Corthell discloses the Applicant's claimed invention. . . . ***Corthell teaches the use of a computer system using a single electronic data processor*** (Figure 1, [block 102]), utilizing a redirector (Figure 2, [block 214]) and filter (Figure 2, [block 216]) mechanism to protect against attacks by malware. ***Corthell, therefore, teaches the use of a single electronic data processor that is necessarily executing all instructions*** . . . . While Corthell does teach partitioning of the memory space into a primary partition (Figure 2, [block 204]) and a protected partition (Figure 2, [block 206]), ***he does not teach or suggest the partitioning of "secure" and "unsecure" instruction execution onto separate electronic data processors.***
>
> ***In stark contrast, Applicants teach the use of a multi-processor computer having at least a first and second electronic data processor*** capable of executing instructions using a common operating system. . . . Such a configuration allows for a physical hardware separation or partitioning of instruction execution on physically separate processors (or processor cores), in contrast to Corthell's teaching of executing all instructions on a single electronic data processor. ***By physically separating the execution of trusted instructions*** (the operating system running on the first electronic data processor, for example) ***from untrusted network process instructions*** (a Java script downloaded for the internet, for example), a higher level of security may be achieved.

Id. at R00000679–80 (4/29/2008 Amendments/Remarks at 9–10) (emphasis added); *compare with*

FF ¶¶ 84, 93.

[**FF100**]   The Inventors made similar arguments as to the Policard and Brown references:

> Applicants understand the Examiners suggestion regarding independent claims 10 and 15, and have amended the claims to specify a computer system having at least a first and second electronic data processor capable of executing instructions ***using a common operating system***. Additionally, Applicants have incorporated elements of amended independent claim 1 . . . into the amended claims 10 and 15, further patentably distinguishing claims 10 and 15 from the teachings of Policard and Brown.

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Id. at R00000685 (4/29/2008 Amendments/Remarks at 15) (emphasis added); *compare with* FF ¶¶ 85, 94.

[FF101] In issuing the Notice of Allowance for the '609 Application, the examiner accepted "the Applicant's argument that the prior art does not show a single operating system that executes on multiprocessors such that ***one processor handles processes from the Internet*** and other potentially malicious data in order ***to protect the file system on the other processors***." *Id.* at R00000709 (emphasis added). Thus, in order for the '247 Patent to issue, the Inventors added the second processor limitation—which added physical isolation of the first logical process—to distinguish the isolated and non-isolated processes of Corthell, Policard, and Brown, which execute on the same processor. The '609 Application—reciting at least two processors—issued as the '247 Patent on January 27, 2009. PTX-001 at 1.

[FF102] As to prosecution of the Asserted Claims (*e.g.*, of the reissue patents), Mr. Cioffi testified at trial that the Inventors intended to cover unclaimed embodiments that were originally disclosed in the'247 Patent specification. (Dkt. No. 263 at 97:24–98:6, 122:15–124:19.) In particular, the Inventors claimed "browser processes," whereby the first logical process was no longer isolated from the network. PTX-010 at R00001550 (Claim 1), R00001557 (Claim 21). The Inventors also eliminated the requirement of a second electronic data processor for many of the reissue claims. (*See id.*).

[FF103] Dr. Dunsmore also testified at trial that the Inventors added the second electronic data processor requirement to the original '247 Patent claims to physically isolate the first logical process from the network. (Dkt. No. 271 (Trial Tr. 2/9/17 pm) at 13:8–20). Since the first logical process in the reissued Asserted Patents was now a "browser process" with access to the network (*i.e.* non-isolated), there was no longer a need for the physical isolation from the

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network afforded by the previously claimed the second electronic data processor. (*Id.*). Dr. Dunsmore agreed that these amendments surrendered all single-processor embodiments in the '247 Patent and were made for the purpose of distinguishing prior art. (*Id.* at 27:8–21, 30:5–18).

[FF104]   Dr. Kogan similarly opined that Inventors' amendment was made to distinguish prior art and had the effect of surrendering single-processor embodiments. (Dkt. No. 268 (Trial Tr. 2/8/17 pm) at 147:1–148:1).

[FF105]   The issue of § 251 recapture was raised by the PTO during the prosecution of the challenged reissue claims on two occasions. PTX-010 at R00001657–59, ¶¶ 4–8; PTX-11 at R00002194–95, ¶¶ 4–5. The PTO withdrew both recapture rejections in response to the Inventors' explanatory remarks. PTX-010 at R00001660–65, 1657–59, 1747–50, 1786–1805.

[FF106]   In the first office action for the '528 Patent, the PTO examiner raised rejections under recapture and anticipation, noting that the Inventors had "removed the limitation that the 'second logical process executing on the second electronic data processor is' capable of exchanging data across a network of one more computers" and that "the reissue claims were not materially narrowed in other respects, and therefore recapture exists." PTX-010 at R00001657–59. The examiner explained that the claims of the '247 Patent were interpreted "as having a processor dedicated to network communications and the claimed system to display the data from both processors in a windowed format. This interpretation was supported by the Applicant's final amendment prior to allowance, which further specified that the system comprised two processors, one of which was capable of exchanging data across a network." *Id.* at R00001659. However, the examiner did not re-raise Corthell as an anticipating prior art reference. *See id*. at R00001660–65.

[FF107]   The Inventors explained that "the claims of [the '247 Patent] do not include a limitation wherein a processor is dedicated to communicating across a network [and t]hus[]

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recapture cannot apply . . . inasmuch as the claims of the ['247 Patent] do not recite a dedicated processor for communicating across the network." *Id.* at R00001747. In response to the Inventors' argument, the PTO withdrew its rejection, finding the Inventors' arguments "persuasive." *Id.* at R00001786.

[FF108] However, the examiner subsequently raised a new anticipatory reference, U.S. Patent Application Publication No. 2002/0002673 ("Narin"), against all the reissue claims because, among other reasons, Narin disclosed two "browser processes." *See* PTX-009 ('500 Patent File History) at R00001389–90 (11/17/2011 Final Rejection at 2–3); PTX-010 ('528 Patent File History) at R00001911–12 (11/14/2011 Final Rejection at 2–3); PTX-011 ('529 File History) at R00002314–15 (11/8/2011 Final Rejection at 2–3).

[FF109] The Inventors attempted to traverse Narin by explaining that Narin's "closed [first] process" was not the same "first browser process" found in the reissue patents because Narin's closed first process did not have access to the network. *Id.* at R00001866–871. The examiner acknowledged the Inventors' argument that their "first browser process is a web process," but noted the claims did not specify the "claimed browsers are actually <u>web</u> browsers." *Id.* at R00001911–12.

[FF110] Based on the examiner's remarks, the Inventors subsequently narrowed the term "browser process" to "web browser process" and specified that the "first browser process" is "capable of accessing data of a website via the network." *Id.* at R00001973, 1979, 1990–91. As a result, the reissue claims were allowed. *Id.* at 2025.

[FF111] Dr. Dunsmore explained at trial that the Inventors, in claiming "web browser processes" in the reissue claims rather than the broader species of "logical processes," materially narrowed the reissue claims by excluding all types of processes other than "web browser processes."

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(Dkt. No. 271 (Trial Tr. 2/9/17 pm) at 12:1–13:2). He further explained that this narrowing related directly to the surrendered subject matter: a single-processor embodiment where the first logical process was isolated from the network but the second process was not. (Dkt. No. 263 (Trial Tr. 2/6/17 am) at 13:3–20, 14:12–19, 14:21–15:22). This is consistent with Mr. Cioffi's testimony on the subject. (*Id.* at 181:3–9).

[**FF112**]   Google argues that Asserted Claims 43 and 67 are not materially narrowed with respect to the surrendered subject matter because a single processor has been added back into the claims. This argument assumes that the surrendered subject matter in its totality was the single-processor embodiment. As the Court has noted, however, the surrendered subject matter was not merely a single-processor embodiment, but also the first process being isolated from the network and the second process not being isolated. *See, e.g.*, FF ¶ 90.

II.   CONCLUSIONS OF LAW

A.   Legal Standard

1.   Issues Tried to the Bench

[**CL1**]   "In an action tried on the facts without a jury or with an advisory jury, the court must find the facts specially and state its conclusions of law separately." Fed. R. Civ. P. 51(a)(1). "If a party has been fully heard on an issue . . . the court may enter judgment against the party on a claim or defense that, under the controlling law, can be maintained or defeated only with a favorable finding on that issue." Fed. R. Civ. P. 52(c). Such a judgment "must be supported by findings of fact and conclusions of law." *Id.*

[**CL2**]   The purpose of these findings is to "afford[] . . . a clear understanding of the ground or basis of the decision of the trial court." *S. S. Silberblatt, Inc. v. U.S. for Use & Benefit of Lambert Corp.*, 353 F.2d 545, 549 (5th Cir. 1965) (internal quotation marks omitted); *see also*

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Schlesinger v. Herzog, 2 F.3d 135, 139 (5th Cir. 1993) (explaining that trial courts need not "recite every piece of evidence" or "sort through the testimony of . . . dozen[s] [of] witnesses").

[CL3]   In making a particular finding, the district court "does not . . . draw any inferences in favor of the non-moving party and . . . [instead] make[s] a determination in accordance with its own view of the evidence." *Fairchild v. All Am. Check Cashing, Inc.*, 815 F.3d 959, 964 n.1 (5th Cir. 2016) (internal quotation marks omitted). However, a district court must still arrive at each of its factual determinations based on the applicable burden of proof. *In re Medrano*, 956 F.2d 101, 102 (5th Cir. 1992) (reversing the district court because it applied the preponderance of the evidence standard rather than the clear and convincing standard in making its factual determinations under Rule 52).

2.   Reissue of Patents under 35 U.S.C. § 251

[CL4]   The reissue statute provides in relevant part that "[w]henever any patent is, through error, deemed wholly or partly inoperative . . . the Director shall . . . reissue the patent for the invention disclosed in the original patent. . . . No new matter shall be introduced into the application for reissue." 35 U.S.C. § 251. Compliance with the statutory requirements of § 251 is a question of law for the Court that may involve underlying determinations of fact. *In re Youman*, 679 F.3d 1335, 1343 (Fed. Cir. 2012); *Forest Labs., Inc. v. Ivax Pharm., Inc.*, 501 F.3d 1263, 1270 (Fed. Cir. 2007); *Medtronic, Inc. v. Guidant Corp.*, 465 F.3d 1360, 1373 (Fed. Cir. 2006); *Pannu v. Storz Instruments, Inc.*, 258 F.3d 1366, 1370 (Fed. Cir. 2001); *Hester Indus., Inc. v. Stein, Inc.*, 142 F.3d 1472, 1479 (Fed. Cir. 1998); *In re Clement*, 131 F.3d 1464, 1468 (Fed. Cir. 1997).

[CL5]   Google's § 251 defenses present questions of law for determination by the Court analogous to claim construction and prosecution history estoppel. *See Hester*, 142 F.3d at 1481. Nonetheless, where a question of law turns on how a person having ordinary skill in the art

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would interpret disclosures in a specification, it is within the Court's purview to make factual findings. *Cf. Eli Lilly & Co. v. Teva Parenteral Meds., Inc.*, 845 F.3d 1357, 1369 (Fed. Cir. 2017) (noting the question of indefiniteness is a part of claim construction and therefore a question of law, but clarifying that "the district court's underlying determination, based on extrinsic evidence, of what a person of ordinary skill would understand" is a question of fact reviewed for "clear error").

a. Original Patent Requirement Under 35 U.S.C. § 251

[CL6] The original patent requirement derives from the reissue statute's language stating that a reissue patent must be "for the invention disclosed in the original patent." 35 U.S.C. § 251(a) (emphasis added). The Federal Circuit has applied this language to require that the reissue claims be for the "same invention" as the original patent. *Antares Pharma, Inc. v. Medac Pharma Inc.*, 771 F.3d 1354, 1358–59 (Fed. Cir. 2014).

[CL7] A "reissue claim is for the 'same invention' if the original patent specification fully describes the claimed inventions." *Id.* at 1359 (citing *U.S. Indus. Chems., Inc. v. Carbide & Carbon Chems. Corp.*, 315 U.S. 668, 676 (1942)). However, "for broadening reissue claims, the specification of the original patent must do more than merely suggest or indicate the invention recited in reissue claims; '[i]t must appear *from the face of the instrument* that what is covered by the reissue was intended to have been covered and secured by the original." *Forum US, Inc. v. Flow Valve, LLC*, 926 F.3d 1346, at 1351–52 (Fed. Cir. 2019) (quoting *U.S. Indus. Chems.*, 315 U.S. at 676) (emphasis in original). Thus, "the essential inquiry under the 'original patent' clause of § 251 . . . is whether one skilled in the art, reading the specification, would identify the subject matter of the new claims as invented and disclosed by the patentees." *In re Amos*, 953 F.2d 613, 618 (Fed. Cir. 1991).

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[CL8]   As the original patent requirement of § 251 compares the reissue claims to the disclosure of the original patent specification, it is "analogous to the written description requirement" of 35 U.S.C. § 112. *See Antares*, 771 F.3d at 1362 (Fed. Cir. 2014); *see also In re Depomed Patent Litig.*, No. 13-4507, 2016 WL 7163647 at *28 (D.N.J. Sept. 30, 2016) ("'[A] reissue application must find support in the original patent's description such that the original description 'clearly allow[s] persons of ordinary skill in the art to recognize that the inventor invented what is claimed.'" (quoting *Antares*, 771 F.3d at 1362)). However, unlike the written description requirement of § 112, to satisfy the original patent requirement of § 251, the reissue claims' subject matter must be "clearly and unequivocally" disclosed—i.e., the "exact embodiment claimed on reissue" must be "expressly disclosed in the [original patent] specification." *See Antares*, 771 F.3d at 1362–63; *see also Depomed*, 2016 WL 7163647 at *28 ("The original patent rule requires that reissue claims must be to matter 'explicitly disclosed and taught rather' than merely 'suggested or indicated in the specification.'" (quoting *Antares*, 771 F.3d 1354, 1361)).

b.   Rule Against Recapture Under 35 U.S.C. § 251

[CL9]   "The recapture rule bars a patentee from recapturing subject matter, through reissue, that the patentee intentionally surrendered during the original prosecution in order to overcome prior art and obtain a valid patent." *Youman*, 679 F.3d at 1343. "Under this rule, claims that are 'broader than the ***original patent claims*** in a manner directly pertinent to the subject matter surrendered during prosecution' are impermissible." *Clement*, 131 F.3d at 1468 (emphasis added).

[CL10]   "Whether the claims of a reissue patent violate" the recapture rule under "35 U.S.C. § 251, and thus are invalid, is a question of law." *In re Mostafazadeh*, 643 F.3d 1353, 1358 (Fed. Cir. 2011). Recapture is assessed using the following three-step inquiry:

> (1) whether and in what respect the reissue claims are broader in scope than the original patent claims;

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(2) whether the broader aspects of the reissue claims relate to subject-matter surrendered in an original application; and

(3) whether the reissue claims were materially narrowed in other respects, so that the claims may not have been enlarged.

Greenliant Sys., Inc. v. Xicor LLC, 692 F.3d 1261, 1267 (Fed. Cir. 2012). If the answer to the first two questions is yes, and the last is no, "the surrendered subject matter has crept into the reissue claims and they are barred under the recapture rule." *Youman*, 679 F.3d at 1345.

[CL11]   However, the recapture rule is not triggered if the reissued claims are directed to "overlooked aspects" of the invention, such as "patentably distinct (1) inventions; (2) embodiments; or (3) species not originally claimed—not mere incidental features of the originally claimed invention." *Mostafazadeh*, 643 F.3d at 1360.

B.   Analysis

[CL12]   The Court first considers whether Google has met its burden to show by clear and convincing evidence that the Asserted Claims are invalid under the original patent requirement of 35 U.S.C. § 251. *See U.S. Indus. Chems.*, 315 U.S. at 678 ("[I]t is the duty of a court to determine for itself, by examination of the original and the reissue, whether they are for the same invention."); *cf. Fisher-Price, Inc. v. Safety 1st, Inc.*, 109 F. App'x 387, 393 (Fed. Cir. 2004) (explaining that the accused infringer has "the burden of proving by clear and convincing evidence that the written description requirement [i]s not met").

1.   Original Patent Requirement of § 251

a.   *Two or More "Web Browser Processes" Limitation of the Asserted Claims*

[CL13]   Each of Asserted Claims require two or more "web browser processes." FF ¶¶ 32–36. A "web browser process" as set forth in the Asserted Claims is a "process that can

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[directly or indirectly] access data on websites." *See* FF ¶ 7–9. Accordingly, for the Asserted Claims to satisfy the original patent requirement of § 251, the '247 Patent specification must "clearly and unequivocally" disclose an "exact embodiment" with two or more "process[es] that can [directly or indirectly] access data on websites." *See Antares*, 771 F.3d at 1362–63; *see also* FF ¶¶ 7–9.

[CL14]   Google argues that "[t]here is no clear and unequivocal disclosure in the '247 Patent specification" of the term "first web browser process." (Dkt. No. 292 at 15). Specifically, Google contends that the '247 Patent specification only discloses a second logical process capable of accessing website data, and thus there is no disclosure of a first process that can access data on websites (*i.e.*, a "first web browser process"). (*Id.* at 19). Google relies on Dr. Kogan's opinion that Figure 6 and Column 14 of the '247 Patent specification are limited to online gaming such that "interactive network process status data" is not "website data," and therefore Figure 6 and Column 14 cannot refer to "web browser processes." FF ¶ 48.

[CL15]   Plaintiffs counter that Dr. Kogan's opinions narrowly interpret the embodiment disclosed at Figure 6 and Column 14 of the '247 Patent specification. They assert that Column 14 describes "online gaming" as an *example* of an "interactive network process." (Dkt. No. 295 at 56.)   They further contend that Figure 6 of the '247 Patent identifies the broader "interactive network process" embodiment and specifies (1) that "interactive network process status data" is received from the network connection (step 620); (2) the first process on P1 receiving the "interactive network process status data" from P2 (step 640), and (3) the "updated interactive network process status data" being passed back to the network via the network connection (step 660). FF ¶¶ 49. Moreover, Plaintiffs note Dr. Dunsmore's disagreement with Dr. Kogan's narrow interpretation of Figure 6 and Column 14. Dr. Dunsmore instead opined that a skilled artisan

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would recognize these portions of the specification as disclosing two processes executing on two processors, both accessing data from the network—and therefore, disclosing first and second web browser processes. FF ¶¶ 44, 58.

[CL16]   Google also argues that P1 and P2 in Column 14 refer to *physical* processors, not processes. (Dkt. No. 292 at 15). Plaintiffs respond that Google's interpretation contradicts the clear language of the '247 Patent specification when read as a whole. (Dkt. No. 295 at 6). Plaintiffs assert that the specification specifically notes (1) the functions of P1 120 in Figure 1 may be carried out by a first logical process, and (2) the functions of P2 140 may be carried out by a second logical process. (*Id.* at 67). The Court addresses this below in relation to the parties' dispute over whether the "one processor" claim limitations violate § 251. *See* CL ¶¶ 31–38. In short, the Court agrees that the specification teaches an embodiment with two processes on a single processor. *Id.*

[CL17]   On balance, the Court is persuaded that Google has not shown by clear and convincing evidence that the Asserted Claims violate the original patent rule. Despite Google's arguments to the contrary, the Court finds that the '247 Patent specification clearly and unequivocally discloses both first and second web browser processes.

[CL18]   First, "interactive network process" is not limited online gaming processes. Google's interpretation of the "interactive network process" embodiment of Column 14 of the '247 Patent is unduly narrow and is not supported by the specification's express teachings. Figure 6 refers more broadly to an "interactive network process" and is not limited to online gaming. FF ¶¶ 69–71. Column 16 of the '247 Patent corresponds to Figure 6 and clearly indicates that online gaming is just one example of the "interactive network process" described in Figure 6. *Id.* Accordingly, the Court is persuaded that the '247 Patent specification discloses online gaming as an *example* of an interactive network process. *See, e.g.*, *Williamson v. Citrix Online, LLC*, 792

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F.3d 1339, 1346–47 (Fed. Cir. 2015) ("This court has repeatedly 'cautioned against limiting the claimed invention to preferred embodiments or specific examples in the specification.'").

[CL19]   Second, the "interactive network process status data" disclosed in Column 14 of the '247 Patent is likewise not limited to "game status data." Although the '247 Patent specification teaches that an "interactive network process" *may be used*, for online "gaming," the specification teaches that "messaging[] and browsing" are also applications that have an "interactive nature." *See* FF ¶ 46. Furthermore, the "interactive network process" embodiment describes P1 120 connecting to the "network," which is defined in the '247 Patent specification as the "Internet, a LAN, WAN, VPN, etc." FF ¶ 47. Accordingly, the Court is persuaded that "interactive network process status data" includes "website data."

[CL20]   The specification does not use the terms "interactive network process" and "online game" interchangeably, but instead describes an online game as one example of an interactive network process. The Court finds that Figure 6 and Column 14 of the '247 Patent specification are not limited to online gaming and game status data as Dr. Kogan suggests.

[CL21]   Having rejected Google's argument that the "interactive network process" embodiment of the '247 Patent is limited to gaming processes and gaming data, the Court finds that Dr. Dunmore's and Dr. Arbaugh's trial testimonies are helpful in aiding the Court to understand what the '247 Patent specification "actually say[s]."[1] *See U.S. Indus. Chems.*, 315 U.S. at 678 ("[I]t is permissible, and often necessary, to receive expert evidence to ascertain the meaning

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[1] Since Mr. Cioffi testified as a *fact witness* and *inventor*, his testimony is not helpful in determining what those skilled in the art would recognize as being disclosed by the '247 Patent specification. FF ¶¶ 1, 21; *see also Kimberly-Clark Corp. v. Johnson & Johnson*, 745 F.2d 1437, 1454 (Fed. Cir. 1984) ("It should be clear that that hypothetical person is not the inventor, but an imaginary being possessing 'ordinary skill in the art' created by Congress to provide a *standard of patentability*. . . . Realistically, courts never have judged patentability by what the real inventor/applicant/patentee could or would do.").

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of a technical or scientific term or term of art so that the court may be aided in understanding not what the instruments mean but what they actually say."). Their testimonies indicate that those skilled in the art would understand that web browser processes are *narrower* members of the broader class of "interactive network processes"— a class that also includes gaming applications. *Cf. U.S. Indus. Chems.*, 315 U.S. at 678 ("It is inadmissible to *enlarge* the scope of the original patent by recourse to expert testimony to the effect that a process described and claimed in the reissue, different from that described and claimed in the original patent, is, because equally efficacious, in substance that claimed originally.") (emphasis added) (footnotes omitted).

[CL22]   The Federal Circuit's decision in *Forum US, Inc. v. Flow Valve, LLC*, outlines how expert testimony may be properly used to resolve the factual questions raised by Google's "original patent" defense. *See* 926 F.3d at 1352 ("We apply the standard set forth in *Industrial Chemicals* and *Antares* to this case."). In *Forum*, the specification disclosed, and all the original claims claimed, use of "arbors" in all embodiments of the invention. *Id.* at 1348–50. Although the plaintiff conceded there was no disclosure of an "arbor-less" embodiment of the invention, the plaintiff's expert testified that a person of ordinary skill in the art would recognize an arbor-less embodiment was possible based on "boilerplate language [in the specification] that modifications can be made to the original disclosed invention." *Id*. at 1352.

[CL23]   The Federal Circuit affirmed summary judgment of invalidity and rejected the patentee's reliance on a a person of ordinary skill's understanding, stating that "[e]ven if a person of ordinary skill in the art would understand that the newly claimed, arbor-less invention would be possible, that is insufficient to comply with the" original patent requirement. *Id.* at 1353. The court specifically rejected the plaintiff's expert declaration because it "d[id] not aid the court in understanding what the 'instruments . . . actually say,' but instead assert[ed] what a person of

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ordinary skill in the art would purportedly understand *in the absence* of the disclosure of an arbor-less embodiment." *Id* at 1352 (emphasis added).

[CL24]   Here, in contrast to *Forum*, Plaintiffs have not conceded that the '247 Patent specification fails to disclose the challenged limitations of the Asserted Claims. Instead of relying on a POSITA's understanding that "modifications to the invention are possible," Plaintiffs identify specific portions of the '247 Patent specification corresponding to each challenged limitation and provide expert testimony explaining what such disclosures convey to a person of ordinary skill in the art. Simply put, the parties' disputes here focus on whether such as skilled person would understand such portions of the '247 Patent specification as clearly and unequivocally disclosing the Asserted Claims.

[CL25]   Dr. Dunsmore testified that a person of skill in the art would recognize that (1) "interactive network process" encompasses web browser processes, and (2) "interactive network process status data" encompasses "website data." FF ¶¶ 69–75. Dr. Dunsmore also opined that a logical process could be just about any process, including a "process working with web browsers." FF ¶ 43. Indeed, the parties agree that a "logical process" includes a "web browser process." Google concedes that "web browser processes" are a narrower subspecies of "logical processes" described throughout the specification. FF ¶ 41. Moreover, Google's invalidity expert, Dr. Arbaugh, called the "first logical process" the "same as the first web browser process." FF ¶¶ 42.

[CL26]   Accordingly, substantial evidence indicates that the '247 Patent specification clearly and unequivocally discloses both a first process capable of accessing website data (*i.e.*, a "first web browser process") and a second web browser process, in satisfaction of § 251. *Antares*, 771 F.3d at 1362; *see also Revolution Eyewear, Inc. v. Aspex Eyewear, Inc.*, 563 F.3d 1358, 1367 (Fed. Cir. 2009) (explaining that the § 251 "inquiry is analogous to the written description

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requirement under § 112, ¶ 1."); *cf. In re Wilder*, 736 F.2d 1516, 1520 (Fed. Cir. 1984) (explaining in the context of the analogous § 112 analysis that "[i]t is not necessary that the claimed subject matter be described identically, but the disclosure originally filed must convey to those skilled in the art that applicant had invented the subject matter later claimed").

[CL27]   Moreover, Google's § 251 arguments regarding web browser processes are contradictory. Google contends that the '247 Patent specification does not clearly disclose a first "web browser process" for purposes of the *original patent requirement* because the specification's disclosure of a first "logical process" is not specific enough and that "logical processes" could refer to a number of different software processes besides "web browser processes" (Dkt. No. 292 at 19.) However, when alleging *improper recapture*, Google contends that the patents' "first logical process" includes a process that "could 'access website data,'" which is the precise definition of a "web browser process." (*Id.* at 14–15). If a person of ordinary skill would recognize that the '247 Patent specification's disclosure of a "first logical process" encompasses a "web browser process," then narrowing the disclosed "logical process" to directly claim a known sub-species (*i.e.*, the "web browser process" of the Asserted Claims) is clearly and unequivocally within the scope of the original invention disclosed in the '247 Patent specification.

[CL28]   Furthermore, the '247 Patent's Summary of the Invention never refers to physical processors, but instead repeatedly notes that an "object of the present invention" is to provide a computer system capable of executing instructions in a "first logical process" and "second logical process," and that malware "downloaded from the network and executing as part of the second logical process is incapable of initiating access to the 'first memory space'." FF ¶¶ 59–60. *See Wireless Agents LLC v. Sony Ericsson Mobile Comm'cns AB*, 189 F. App'x 965, 966 (Fed. Cir. 2006) ("This description is not merely referring to a preferred embodiment; rather,

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as part of the 'Summary of the Invention,' it is 'commensurate with the invention as claimed.'"). (citing 37 C.F.R. 1.73). This is described in Column 16 of the '247 Patent specification, which discloses that the functions carried out by the processors "may comprise separate, secure logical processes." FF ¶¶ 59–60.

[CL29]   While the exact term "web browser process" does not appear in the '247 Patent specification, Google has not presented clear and convincing evidence demonstrating that those skilled in the art would not recognize the first and second "web browser processes" recited in the Asserted Claims as being disclosed by the '247 Patent specification. As such, the Court is persuaded that those skilled in the art would recognize that the '247 Patent specification's "interactive network processes" embodiment encompasses the dual-web-browser process limitations set forth in the Asserted Claims. Such is sufficient to comply with the clear and unequivocal disclosure standard set forth in *U.S. Industrial Chemicals* and *Antares*. *See Forum*, 926 F.3d at 1352.

[CL30]   Accordingly, the Court finds that the '247 Patent specification uses the terms "first" and "second" "logical processes" to refer interchangeably to P1 and P2, and that "logical processes" refer to a number of possible computer processes including "web browser processes." *See* FF ¶¶ 31–47. As a result, the Court is persuaded that Google has not shown by clear and convincing evidence that the dual-web-browser processes of the Asserted Claims violate the original patent requirement of § 251.

> b.   *"One Processor" Limitation of Claim 43 of the '500 Patent and Claim 67 of the '528 Patent*

[CL31]   Google contends that Claim 43 of the '500 Patent and Claim 67 of the '528 Patent violate the original patent requirement of § 251 for claiming a "single processor." (Dkt. No. 292 at 17–19; Dkt. No. 297 at 7).

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[CL32]   Google argues that Dr. Dunsmore misreads the '247 Patent specification because Column 16—which discloses that "the functions carried out by processors 920 and 940 may comprise separate, secure logical processes executing on the same physical processor," FF ¶¶ 38, 56–57—should be interpreted as describing "processes running on two processors, not one." (Dkt. No. 292 at 18). Plaintiffs argue that processor 960 depicted in Figure 9 and described in Column 16 of the '247 Patent specification teaches a single processor embodiment. (*See* Dkt. No. 295 at 10–11).

[CL33]   The '247 Patent specification supports Plaintiffs' position. "In accordance with a preferred embodiment of the present invention . . . Computer system 100 comprises a video processor 970, ***processor 960***, and a memory data storage area 950. Processor 960 ***may further*** comprise multiple processor ***cores***, illustrated by 1st processor 920 and 2nd processor 940." FF ¶ 55–56 (emphasis added). The first sentence discloses processor 960 in isolation; the second sentence *further* discloses that processor 960 *may* comprise two processor *cores*. *Id.*

[CL34]   As to this particular disclosure, Google argues that the word "may," in context, indicates that the disclosed embodiment has only two or more processor cores but excludes the possibility of having only one core. (Dkt. No. 292 at 18). However, such an interpretation reads out the word "further." FF ¶ 56. "Every word has consequences." *See* Arthur Hirsh, THE FRENCH LEFT: A HISTORY & OVERVIEW 41 (Black Rose Books 1982) (quoting and translating Jean-Paul Sartre, *Présentation*, 1 LES TEMPS MODERNES: REVUE MENSUELLE, Oct. 1945, at 1, 5). Giving meaning to every word of Column 16, dual- and multi-processor configurations are disclosed as additive to the initial disclosure of singular processor 960. *See* FF ¶ 54–60 *see also U.S. Indus. Chems.*, 315 U.S. at 678 (explaining that although "it is permissible, and often necessary, to receive expert evidence to ascertain the meaning of a technical or scientific term or term of art," "it is the

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duty of a court to determine *for itself*, by examination of the original and the reissue, whether they are for the same invention.") (emphasis added).

[CL35]   The Court's conclusion is also confirmed by the subsequent disclosure of Column 16: "[T]he functions carried out by processors 920 and 940 may comprise separate, secure logical processes executing on *the same physical processor*." FF ¶ 38, 57.

[CL36]   Google argues that this passage discloses only that "logical processes" and related "functions" are "carried out" or executed on two different processors (P1 and P2) and does not disclose that processors P1 or P2 are themselves software processes. (Dkt. No. 292 at 18)

[CL37]   However, the '247 Patent specification explains that the "first logical process may comprise *executing instructions* necessary to carry out the functions of a first computer program" and the "second logical process may comprise *executing instructions* necessary to carry out the functions of a web browser program." FF ¶ 57. The first and second logical processes therefore are not instructions or functions executing *on* processors P1 or P2. Instead, the first and second logical processes—"executing on *the same physical processor*"—*actually execute* instructions to "carry out the functions of a first computer program" or "the functions of a web browser program," respectively, that would have been executed by the physical processors P1 and P2 of the alternative Figure 1 embodiment. This reading is confirmed by the '247 Patent specification explaining that "*the functions carried* out by P2 140 (FIG. 1) may comprise a secure logical process, which may be configured to be able to automatically initiate access to either M1 110 or *another logical process performing the functions of P1 120*." FF ¶¶ 38, 57.

[CL38]   In summary, Column 16 of the '247 Patent specification clearly and unequivocally discloses a single processor embodiment. Accordingly, Google has failed to prove

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by clear and convincing evidence that the single processor claim limitations of Claim 43 of the '500 Patent and Claim 67 of the '528 Patent violate the original patent requirement of § 251.

> c. *A First Web Browser Process Passing Data to a Second Web Browser Process Limitation of Claim 43 of the '500 Patent, Claim 67 of the '528 Patent, and Claim 49 of the '529 Patent*

[CL39]   Google next contends that Claim 43 of the '500 Patent, Claim 49 of the '529 Patent, and Claim 67 of the '528 Patent are invalid under the original patent rule for failure to disclose a first web browser process that passes and/or exchanges website data with the second web browser process. (Dkt. No. 292 at 23).

[CL40]   Although Google did not present any expert testimony or offer oral argument on this § 251 defense at trial, *see* FF ¶¶ 16–17, 78, the Court finds that Google has not waived this § 251 defense. Google identified § 251 as defense in its pre-trial statement and specifically identified this defense in its Rule 50(a) motion. *See* FF ¶¶ 15, 28.

[CL41]   The Court has already determined that (1) the '247 Patent specification clearly and unequivocally discloses an "interactive network process" embodiment that includes two web browser processes; and (2) "interactive network process data" encompasses "website data." CL ¶¶ 13–30.

[CL42]   Moreover, the '247 Patent specification clearly and unequivocally discloses the passing of website data from a first web browser process to a second web browser process by disclosing the passing and exchange of "interactive network process status data" between the two processes. *See* FF ¶ 72. As discussed above, Column 14 discloses passing "interactive network process status data" from the network between P1 and P2. *Id*. "Interactive network processes" on its face would include "web browser processes" and would be understood by a person of ordinary skill in the art to include "web browser processes" because both are capable of accessing website

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data. FF ¶¶ 72, 73. "Interactive network process data" exchanged between P1 and P2 would include website data. FF ¶¶ 72, 73. Finally, Figure 1 discloses a first process (P1 120) and second process (P2 140) with two-way communication arrows between each other, which further supports the exchange of data between the first and second web browser processes. FF ¶ 74.

[CL43]   As a result, Google has not met its burden of clear and convincing evidence to prove that the '247 Patent specification does not clearly and unequivocally disclose a first web browser process passing website data to or exchanging website data with a second web browser process.

d.   A First Web Browser Process Initializing a Second Web Browser Process Limitation of Claim 49 of the '529 Patent

[CL44]   Google's last argument under the original patent requirement is that the specification does not disclose the "first web browser process initializing a second web browser process," as recited by of Claim 49.

[CL45]   Although Google did not present any expert testimony or offer oral argument on this § 251 defense at trial, *see* FF ¶¶ 16–17, 78, the Court finds that Google has not waived this § 251 defense. Google identified § 251 as defense in its pre-trial statement and specifically identified this defense in its Rule 50(a) motion. *See* FF ¶¶ 15, 28.

[CL46]   The Court has already determined that (1) the '247 Patent specification clearly and unequivocally discloses "interactive network process" embodiment that includes two web browser processes; and (2) "interactive network process data" encompasses "website data." CL ¶¶ 13–30.

[CL47]   The '247 Patent specification provides specific language that clearly and unequivocally discloses a "first web browser process initializing a second web browser process." Specifically, the figures and written description disclose in several instances that processor P1 is

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capable of opening and/or initializing the processes on processor P2. FF ¶¶ 80, 82. For example, Figure 2 of the '247 Patent describes processor P1 instructing processor P2 to initiate a "protected process" and open a process window (step 220). *Id.* The specification's description of Figure 2 notes the "1st processor 120 instruct[ing] 2nd processor 140 to initiate the protected process and open one or more process windows." *Id.* The specification further explains that the protected process may be "browsing the internet." *Id.*

[CL48]   In another embodiment, the '247 Patent specification again discloses "processor P1 120 instruct[ing] processor P2 140 to initiate a protected process and open a process window." FF ¶¶ 81, 82. This embodiment discloses a user opening a web browser program, followed by processor P1 instructing processor P2 to open one or more protected process windows for web browsing. *Id.* Although this particular disclosure involves a Figure 10 of the '247 Patent, the specification explains that the disclosure is "[i]n accordance with the present teachings"—*i.e.*, the disclosure of Figure 2—and "[i]n accordance with a preferred embodiment of the present invention." *See id.*

[CL49]   Since P1 and P2 also refer to "logical processes" and not just processors, the Court is persuaded that the '247 Patent specification clearly and unequivocally discloses in multiple places a first web browser process (P1) capable of initializing a second web browser process (P2). Accordingly, Google has not met its burden to prove that the '247 Patent specification does not clearly and unequivocally disclose "first web browser process initializing a second web browser process."

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2. The Rule Against Recapture Under § 251

a. Threshold Inquiry Regarding Overlooked Aspects

[CL50]   The Federal Circuit has explained that the recapture rule is not triggered if the reissue claims are directed to "overlooked aspects" of the invention, which are "patentably distinct (1) inventions; (2) embodiments; or (3) species not originally claimed—not mere incidental features of the originally claimed invention." *Mostafazadeh*, 643 F.3d at 1360. "The purpose of this exception to the recapture rule is to allow the patentee to obtain through reissue a scope of protection to which he is rightfully entitled for such overlooked aspects." *Hester*, 142 F.3d at 1483.

[CL51]   Google raises three arguments why the challenged reissue claims were not directed towards overlooked aspects of the original '247 Patent claims. (Dkt. No. 292 at 9–13).

[CL52]   Google first argues that the originally filed claims of the '609 Application were broad enough to encompass "web browser processes" and therefore "web browser processes" were originally "claimed." (*See* Dkt. No. 292 at 9–11 (citing *Hester*, 142 F.3d at 1483)). The original '247 Patent claimed first and second "logical processes" where the reissue patents claim first and second "web browser processes." *See* FF ¶ 32; *compare also, e.g.*, FF ¶¶ 84–85, 93–94 *with* FF ¶¶ 33–36. Google argues that since the embodiments set forth in Claim 43 of the '500 Patent and Claim 67 of the '528 Patent were "potentially" covered by the originally filed claims of the '609 Application, the challenged reissue claims cannot be considered "overlooked." (Dkt. No. 292 at 10).

[CL53]   However, *Hester* is not applicable to the facts of this case. In *Hester*, the allegedly overlooked claim features were *not narrower* than the original claims or were *explicitly* recited in the originally filed patent claims, and thus the claimed features could not be considered "overlooked." *See* 142 F.3d at 1483 ("Hester argues that the claims are materially narrower by the

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additional of the 'spiral conveyance path' and 'high humidity stream' limitations. . . . However, the term 'high humidity stream' is actually *the same as or broader* than the limitation in [the] original claim . . . . [and] Hester concedes that the term 'high humidity steam' is not narrower. . . . [Accordingly,] these aspects were included in original claim 1. Additionally, with regard to the 'spiral conveyance path' limitation, original dependent claim 12 *explicitly recites* 'a spiral path.'") (emphasis added).

[CL54] Here, however, the originally filed Claim 1 of the '609 Application set forth a first logical process with access to the first memory space and second memory space. FF ¶¶ 84. The second logical process was claimed as "being further capable of exchanging data across a network of one or more computers." *Id.*

[CL55] Although Google cites Professor Dunsmore's testimony for the proposition that the "logical processes" of the '609 Application's originally filed claims do not *per se* exclude a first web browser process with access to website data, the claims cannot be construed in a vacuum—*i.e.*, without reference to the intrinsic record and how it informs those skilled in the art.[2] FF ¶ 89.

[CL56] Google's own experts and the Court have already interpreted the original '247 Patent as excluding the very embodiment Google claims is covered by the original claims. FF ¶¶ 86–90. Google's expert, Dr. Arbaugh, confirmed it was his opinion that the original '247 Patent required a second processor to isolate the computer system from the network. FF ¶ 88. Google's other expert, Dr. Kogan, opined that the reissue patents disclosed a different invention from the

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[2] *See David Netzer Consulting Eng'r LLC v. Shell Oil Co.*, 824 F.3d 989, 993 (Fed. Cir. 2016) (explaining that patent claims are construed with reference to the intrinsic record).

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original '247 Patent, but inconsistently couched his opinion as applying only for the original patent rule, not for recapture. FF ¶ 88.

[CL57]   Moreover, the Court agrees with the Magistrate Judge's ruling that "the essence of the invention claimed in the '247 Patent was isolation—only the second logical process could access the network; the rest of the system could not." (*See* Dkt. No. 212 at 8).

[CL58]   Finally, Google conceded as a part of its original patent rule arguments in its Rule 50(a) motion for JMOL that "the invention disclosed in the reissue patents is entirely different from the one disclosed in the original '247 Patent . . . . [The] first logical process ran on the first processor and a second logical process ran on the second processor, and only the second process . . . was a network-interface program or browser." FF 92 (Dkt. No. 251 at 5–6). *Cf. Amazon.com, Inc. v. Barnesandnoble.com, Inc.*, 239 F.3d 1343, 1351 (Fed. Cir. 2001) ("A patent may not, like a 'nose of wax,' be twisted one way . . . and another" (internal quotation marks omitted)).

[CL59]   Accordingly, the Court finds that both a first and second "web browser process," though disclosed in the '247 Patent specification, were not originally claimed by the '247 Patent. *Hester* is therefore inapplicable.

[CL60]   Google's second argument for why Claim 43 of the '500 Patent and Claim 67 of the '528 Patent are not directed to overlooked aspects similarly falls short. Google argues that the '247 Patent specification does not at all disclose an embodiment with "two web browsers." (Dkt. No. 292 at 11). However, this argument is the same as Google's previously considered argument that the '247 Patent specification fails to disclose a first "web browser process" in violation of the original patent rule, and the Court is unpersuaded for the reasons previously discussed. *See* CL ¶¶ 13–30.

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[CL61]   Google's third argument is that the narrowing from first a "logical process" in the '247 Patent to a first "web browser process" in Claim 43 of the '500 Patent and Claim 67 of the '528 Patent was not a patentable distinction because changing "logical" to "web browser" is too minor, given that a "web browser process" is a type of logical process. (Dkt. No. 292 at 12). Google had the opportunity but failed to offer evidence at trial to establish that Claims 43 and 67 were obvious (*e.g.*, not patentably distinct) over the original claims, given the Court's ruling that a genuine dispute of material fact remained as to overlooked aspects that precluded summary judgment. *See* FF ¶ 91.

[CL62]   The only evidence Google presented at trial as to whether Claims 43 and 67 are patentably distinct over the original '247 Patent claims was the intrinsic record and prosecution history of the reissue patents. FF ¶¶ 91, 93–101, 104–109. However, the Court has already determined that the '247 Patent claims are directed towards a different invention than the challenged reissue claims. FF ¶ 90. The '247 Patent's original claims were directed toward isolation, where only the second process could access the network and the rest of the system could not. *Id.* Claim 43 of the '500 Patent and Claim 67 of the '528 Patent are distinct because they no longer claim an isolated first process. *See* FF ¶¶ 33–36, 86, 87, 90, 92. Indeed, Google and its experts have acknowledged on several occasions that the invention disclosed in the '247 Patent claims is materially different than the invention disclosed in the challenged reissue claims. FF ¶ 88. The Court is not persuaded that Claim 43 of the '500 Patent and Claim 67 of the '528 Patent fail to claim inventions patentably distinct from those of in the original '247 Patent.

[CL63]   Accordingly, the Court is persuaded that Google has not proven by clear and convincing evidence that a first and a second "web browser process" were originally claimed by the '247 Patent. Google's argument that "web browser processes" were "claimed" in the original

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patent (1) cannot overcome the intrinsic record and its own admissions and (2) is not supported by the cited case law. As the web browser processes are supported by the specification and have not been shown to be patentably indistinct from those claimed in the '247 Patent, the Court agrees with Plaintiffs that the challenged Asserted Claims are directed t overlooked aspects of the specification.

b. Test for the Rule Against Recapture

[CL64] In addition to the Court's findings that Claim 43 of the '500 Patent and Claim 67 of the '528 Patent are directed towards "overlooked aspects" of the '247 Patent, and thus would not trigger the rule against recapture, the Court is independently persuaded that Google could not show by clear and convincing evidence that challenged claims violate the rule against recapture.

> i. Step 1: Claim 43 of the '500 Patent and Claim 67 of the '528 Patent Are Broader than the '247 Patent's Originally Issued Claims

[CL65] The first step of the recapture test is to "determine whether and in what 'aspect' the reissue claims are broader than the [original] patent claims." *Mostafazadeh*, 643 F.3d at 1358. "A reissue claim that deletes a limitation or element from the [original] patent claims is broader with respect to the modified limitation." *Id.*

[CL66] The '247 Patent's originally issued claims require two or more physical processors because they each recite having a "first" and a "second" "electronic data processor." FF ¶ 31. By comparison, Claim 43 of the '500 Patent and Claim 67 of the '528 Patent do not require two or more processors because they recite having "at least one electronic data processor." FF ¶¶ 33, 35.

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[CL67]   The parties agree that the first step of the recapture test is met. Professor

Dunsmore and Dr. Kogan agreed on this point, and Plaintiffs did not dispute this in their briefing.

FF ¶ 83.

[CL68]   Accordingly, the Court is persuaded that Claim 43 of the '500 Patent and Claim

67 of the '528 Patent are broader than the '247 Patent's originally issued claims with respect to

the number of required processors. Claims 43 and 67 encompass systems with either a single

processor or two or more processors, rather than only encompassing systems with two or more

processors, as the '247 Patent's originally issued claims required. Indeed, the two reissue claims

delete the '247 Patent's claim limitations that require at least a "second electronic data processor."

The first step of the recapture test is met with respect to Claim 43 of the '500 Patent and Claim 67

of the '528 Patent.

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ii.   Step 2: The Broadened Subject Matter Relates to
Surrendered Subject Matter

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[CL69]   The second step of the recapture test is to "determine whether the broader

aspects of the reissue claims relate to surrendered subject matter." *Mostafazadeh*, 643 F.3d at 1358

(quotations omitted). "To determine whether an applicant surrendered particular subject matter,

[courts] look to the prosecution history for arguments and changes to the claims made in an effort

to overcome a prior art rejection." *Id.*

[CL70]   For example, in *North American Container, Inc. v. Plastipak Packaging, Inc.*,

reissue claims covering plastic bottle structures were broadened to "no longer require the 'inner

walls' to be 'generally convex.'" 415 F.3d 1335, 1350 (Fed. Cir. 2005). The Federal Circuit found

that the broadened subject matter was surrendered during prosecution because the applicants had

"amended [the claims] to refer to the convex nature of the inner wall portions" and "argued that

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the 'shape of the base as now defined in the claims differs from those of . . . the [prior art] patent, wherein the corresponding wall portions are slightly concave.'" *Id*.

[CL71]   Here, the second step is met because the broadened subject matter of a single processor system was surrendered during prosecution of the original '247 Patent. To overcome the prior art references Corthell, Policard, and Brown, the Inventors amended the originally filed Claims 1 and 15 of the '609 Application to require at least a "first and second electronic data processor." *Compare* FF ¶¶ 84–85 *with* FF ¶¶ 93–94.

[CL72]   In accompanying remarks, the Inventors relied on these amendments to distinguish the prior art, stating: "In stark contrast [to Corthell], ***Applicants teach the use of a multi-processor computer*** having at least a first and second electronic data processor," and "amend[ments to] the claims to specify a computer system ***having at least a first and second electronic data processor*** . . . distinguish[] claims 10 and 15 from the teachings of Policard and Brown." *See* FF ¶¶ 99–101 (emphasis added). Based on these amendments and remarks, the examiner allowed the claims because "the prior art does not show a single operating system that executes on multiprocessors." FF ¶ 101.

[CL73]   The parties agree that step two of the recapture test is met. Plaintiffs' expert Dr. Dunsmore confirmed in his jury trial testimony that the Asserted Claims were amended to require two processors to distinguish prior art. FF ¶ 103.   Dr. Dunsmore also confirmed that these amendments surrendered all single-processor embodiments in the '247 Patent. *Id*. Additionally, Google's expert Dr. Kogan testified that the second step is met because Plaintiffs surrendered the subject matter of a single processor to distinguish prior art. FF ¶ 104. Lastly, Plaintiffs also did not dispute the second step of the recapture test in in post-trial proceedings. (Dkt. No. 295 at 14–23).

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[CL74]   The Court is persuaded that the second step of the recapture test is met with

respect to the Claim 43 of the '500 Patent and Claim 67 of the '528 Patent because the broadened

subject matter of a single processor set forth in the aforementioned claims was surrendered during

prosecution of the '247 Patent.

> iii.   Step 3: Claim 43 of the '500 Patent and Claim 67 of
> the '528 Patent Are Materially Narrowed With Respect to
> Surrendered Subject Matter

[CL75]   The third step of the recapture analysis is to "determine whether the reissue

claims were materially narrowed in other respects, so that the claims may not have been enlarged,

and hence avoid the recapture rule." *N. Am. Container*, 415 F.3d at 1349. "[T]he recapture rule is

violated when a limitation added during prosecution [of the original patent] is eliminated entirely,

even if other [unrelated] narrowing limitations are added to the claim." *Mostafazadeh*, 643 F.3d

at 1361; *see also Youman*, 679 F.3d at 1345 ("[W]here the patentee eliminates the added limitation

in its entirety . . . [,] it is clear that the surrendered subject matter has been recaptured."). The

Federal Circuit has also explained the policy motivation underlying the third step: "a limitation

that is added during prosecution to overcome prior art cannot be entirely eliminated on reissue

because doing so would constitute recapture of the surrendered subject matter."   *In re*

Mostafazadeh, 643 F.3d at 1359.

[CL76]   However, a "[v]iolation of the rule against recapture may be avoided . . . if the

reissue claims 'materially narrow' the claims relative to the original claims such that full or

substantial recapture of the subject matter surrendered during prosecution is avoided." *In re*

Mostafazadeh, 643 F.3d at 1358, 1361 ("[T]he narrowing must relate to the subject matter

surrendered during the original prosecution (i.e., the applicant cannot recapture the full scope of

what was surrendered)."); *see also In re Youman*, 679 F.3d 1335; *N. Am. Container,* 415 F.3d at

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1350 (applying recapture rule bar because the narrowing of claims did not relate to the surrendered subject matter).

[CL77]   It is undisputed that the reissue claims (*e.g.*, the Asserted Claims) have been narrowed from first and second logical processes to first and second "web browser processes." Google argues that the narrowing does not relate to the surrendered subject matter in violation of the rule against recapture. Plaintiffs respond that narrowing the claims to two "web browser processes" was directly related to the surrendered subject matter. As discussed below, the Court agrees with Plaintiffs, and finds that Google has failed to prove by clear and convincing evidence that the challenged claims violate the rule against recapture.

[CL78]   During the prosecution of the original '247 Patent, the examiner rejected the original claims, citing Corthell as disclosing every limitation. FF ¶ 95. In response, the Inventors amended the original claims, adding a "second electronic data processor" to provide physical isolation between the first and second logical processes. FF ¶¶ 96–99. The Inventors explained why the pending claims were no longer anticipated by Corthell. FF ¶ 99. To distinguish Corthell's isolated process and non-isolated processes executing on the same processor, the Inventors claimed a physically isolated first processor and a non-isolated second processor. FF ¶¶ 96–99.

[CL79]   This distinction between the '247 Patent claims and the Asserted Claims is evident from the Inventors' attempts to traverse a rejection based on Narin when prosecuting the Asserted Patents. FF ¶ 108–09. The Inventors explained that Narin's "closed process" was not the same "first browser process" in the reissue patent claims because Narin's closed process did not have access to the network. FF ¶ 109. The examiner acknowledged the Inventors' argument that their "first browser process is a web process," but noted the claims did not specify the "claimed browsers are actually web browsers." *Id.* In response to this second rejection, the Inventors

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narrowed the term "browser process" to "web browser process" and specified that the "first browser process" is "capable of accessing data of a website via the network." FF ¶ 110. Physical isolation was no more.

[CL80]   Dr. Dunsmore explained to the jury that by claiming "web browser processes" in the reissue claims instead of the original "logical processes," the Inventors materially narrowed the reissue claims because they now excluded all types of processes other than "web browser processes." FF ¶ 111. Dr. Dunsmore also explained that this narrowing was directly related to the surrendered subject matter—*i.e.*, a single processor embodiment where the first logical process was isolated from the network but the second logical process was not. *Id.* Thus, the reissue claims, though broader in the sense that they reclaimed a single processor and no longer required isolation, were also materially narrowed from logical processes to web browser processes.

[CL81]   Mr. Cioffi also testified that narrowing to web browser processes in reissue was a material narrowing directly related to reclaiming the use of a single processor. FF ¶ 111. Professor Dunsmore also explained that this narrowing was directly related to the surrendered subject matter—a single processor embodiment where the first logical process was isolated from the network, but the second logical process was not. FF ¶ 111.

[CL82]   As the Court previously recognized, the invention claimed in the '247 Patent was "isolation" where "the second logical process could access the network [but] the rest of the system could not." FF ¶ 90; CL ¶ 57; (ECF No. 212 at 8). When the Inventors amended the '247 Patent's original claims over Corthell, they added a second electronic processor to provide physical isolation between the first and second logical processes. FF ¶¶ 97, 99. Accordingly, by adding the second physical processor during prosecution of the '247 Patent, the Inventors surrendered the isolation embodiment using a single processor. FF ¶¶ 97, 99.

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[CL83]   Dr. Dunsmore also explained that the Inventors narrowing of the reissue claims to web browser processes results in the first logical process no longer being isolated because web browser processes must be capable of accessing website data. FF ¶¶ 103, 111. Since the Inventors were no longer claiming isolation of the first logical process from the network, reintroducing single processor claims was not improper recapture because the Inventors directly and materially narrowed the surrendered subject matter to web browser processes.

[CL84]   Google's argument that the Inventors surrendered all single processor embodiments over Corthell abstracts the language of the '247 Patent's original claims—without acknowledging that the invention set forth in the originally filed claims of the '247 Patent was directed to a first logical process isolated from the network, executing on at least a single processor. FF ¶ 112. Accordingly, when the Inventors surrendered their single processor embodiment, it was with respect to the isolation embodiment of the invention—not with respect to a single processor full stop. FF ¶¶ 103–11. Since (1) the originally filed claims of the '609 Application (i.e., the '247 Patent) were directed to isolation of a first logical process, and (2) the reissue claims are directed toward a first logical process without isolation (i.e., a first "web browser process), the Court finds that Claim 43 of the '500 Patent and Claim 67 of the '528 Patent are materially narrowed with respect to the surrendered subject matter (i.e., a single processor executing a first, isolated logical process and a second, unisolated logical process).
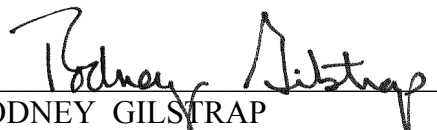
[CL85]   Accordingly, the Court finds Google failed to prove by clear and convincing evidence that the challenged claims violate the rule against recapture under 35 U.S.C. § 251.

III.   CONCLUSION

For the reasons set forth above, the Court concludes that Defendants have not shown by clear and convincing evidence that the Asserted Claims are invalid under 35 U.S.C. § 251.

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Accordingly, Google's Motion for Post-Trial Relief on Invalidity under 35 U.S.C. § 251 (Dkt. No.

292) is **DENIED**.

        So ORDERED and SIGNED this 26th day of August, 2021.

                                                RODNEY GILSTRAP
                                              UNITED STATES DISTRICT JUDGE

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IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION

ALFONSO CIOFFI, MELANIE
ROZMAN, MEGAN ROZMAN,
MORGAN ROZMAN,

     Plaintiffs,

v.

GOOGLE LLC,

     Defendant.

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CIVIL ACTION NO. 2:13-CV-00103-JRG

FILED UNDER SEAL

MEMORANDUM OPINION AND ORDER

Before the Court is Defendant Google LLC's ("Google") Motion for Post-Trial Relief on

Non-Infringement, Damages, Patent Ineligibility, and Intervening Rights (Dkt. No. 293) (the

"Motion") regarding Reissued U.S. Patent No. 43,500 (the "'500 Patent), Reissued U.S. Patent

No. 43,528 (the "'528 Patent"), and Reissued U.S. Patent No. 43,529 (the "'529 Patent")

(collectively, the "Patents-in-Suit" or individually, an "Asserted Patent"). For the reasons stated

herein, the Motion is **DENIED**.

I.   LEGAL STANDARD

A.   Judgement as a Matter of Law

"Judgment as a matter of law is proper when 'a reasonable jury would not have a legally

sufficient evidentiary basis to find for the party on that issue.'" *Abraham v. Alpha Chi Omega*,

708 F.3d 614, 620 (5th Cir. 2013) (quoting Fed. R. Civ. P. 50(a)). The non-moving party must

identify "substantial evidence" to support its positions. *TGIP, Inc. v. AT&T Corp.*, 527 F. Supp.

2d 561, 569 (E.D. Tex. 2007). "Substantial evidence is more than a mere scintilla. It means such

relevant evidence as a reasonable mind might accept as adequate to support a conclusion." *Eli Lilly & Co. v. Aradigm Corp.*, 376 F.3d 1352, 1363 (Fed. Cir. 2004).

"The Fifth Circuit views all evidence in a light most favorable to the verdict and will reverse a jury's verdict only if the evidence points so overwhelmingly in favor of one party that reasonable jurors could not arrive at any contrary conclusion." *Core Wireless Licensing S.A.R.L. v. LG Elecs., Inc.*, 880 F.3d 1356, 1361 (Fed. Cir. 2018) (citing *Bagby Elevator Co. v. Schindler Elevator Corp.*, 609 F.3d 768, 773 (5th Cir. 2010)). A court must "resolve all conflicting evidence in favor of [the verdict] and refrain from weighing the evidence or making credibility determinations." *Gomez v. St. Jude Med. Daig. Div. Inc.*, 442 F.3d 919, 937–38 (5th Cir. 2006).

B. New Trial

A new trial may be granted on all or part of the issues on which there has been a trial by jury for "any reason for which a new trial has heretofore been granted in an action at law in federal court." Fed. R. Civ. P. 59(a). Notwithstanding the broad sweep of Rule 59, "courts do not grant new trials unless it is reasonably clear that prejudicial error has crept into the record or that substantial justice has not been done, and the burden of showing harmful error rests on the party seeking the new trial." *Metaswitch Networks Ltd. v. Genband US LLC*, No. 2:14-CV-00744, 2017 WL 3704760, at *2 (E.D. Tex. Aug. 28, 2017); *Erfindergemeinschaft UroPep GbR v. Eli Lilly & Co.*, 276 F. Supp. 3d 629, 643 (E.D. Tex. 2017). "A new trial may be granted, for example, if the district court finds the verdict is against the weight of the evidence, the damages awarded are excessive, the trial was unfair, or prejudicial error was committed in its course." *Smith v. Transworld Drilling Co.*, 773 F.2d 610, 612–13 (5th Cir. 1985); *see also Laxton v. Gap Inc.*, 333 F.3d 572, 586 (5th Cir. 2003) ("A new trial is warranted if the evidence is against the great, and not merely the greater, weight of the evidence."). Furthermore "[u]nless justice requires otherwise, no error in admitting or excluding evidence—or any other error by the court or a party—is ground

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for granting a new trial . . . . the court must disregard all errors and defects that do not affect any

party's substantial rights." Fed. R. Civ. P. 61.

II.   DISCUSSION

A.   Infringement

1.   Indirect Infringement

Google first argues that Plaintiffs failed to present evidence as to the mental state required

for indirect infringement of Claim 5 of the '528 Patent and Claim 49 of the '529 Patent. (Dkt. No.

293 at 3–6). Google argues that Plaintiffs' only evidence of the specific intent required for induced

and contributory infringement was provided by Plaintiffs' infringement expert, Dr. Aviel Rubin,

"who is in no position to know of Google's intent to infringe." (*Id.* at 4). Google further argues

that the evidence actually supports the opposite conclusion: that Google had a reasonable, good-

faith belief of non-infringement; that the accused product had substantial non-infringing uses; and

that post-suit knowledge is insufficient for indirect infringement. (*Id.* at 5–6).

Plaintiffs respond that they presented substantial evidence that Google had the requisite

mental state and that Google knew of the Patents-in-Suit at least as of December 11, 2012. (Dkt.

No. 294 at 3). Plaintiffs contend that post-suit knowledge is sufficient for indirect infringement.

(*Id.* at 4). Plaintiffs also argue that the accused product, Chrome, had no substantial non-infringing

uses. (*Id.* at 3).

Both induced and contributory infringement require knowledge that the induced acts

constitute patent infringement. *Global-Tech Appliances, Inc. v. SEB S.A.*, 563 U.S. 754, 765–66

(2011). Whether an accused infringer has the requisite mental state for indirect infringement

considers the totality of the circumstances and may be supported by circumstantial evidence. *See*

Broadcom Corp. v. Qualcomm Inc., 543 F.3d 683. 698–99 (Fed. Cir. 2008); *see also Suprema,*

Inc. v. Int'l Trade Comm'n, 626 F. App'x 273, 280–81 (Fed. Cir. 2015). Post-suit knowledge is

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sufficient. *Huawei Techs. Co. Ltd. v. T-Mobile US, Inc.*, No. 2:16-cv-52, 2017 WL 1129951, at

*3 (E.D. Tex. Feb. 21, 2017).

The Court finds that Plaintiffs presented substantial evidence to support a finding of

indirect infringement. The parties apparently dispute the December 11, 2021 date and whether

Plaintiffs' reliance on that date is proper. (Dkt. No. 294 at 3; Dkt. No. 296 at 2 n.1). The Court

need not resolve that dispute to resolve this Motion given that post-suit knowledge is sufficient to

support a finding of indirect infringement. Plaintiffs presented substantial evidence that Google

had the requisite knowledge that the induced acts constituted indirect infringement. Plaintiffs'

expert, Dr. Rubin, identified how Google encouraged its end users to infringe the Patents-in-Suit.

(Dkt. No. 264 at 74:1–6, 74:9–12, 74:15–22). In particular, Plaintiffs presented evidence that

Chrome is configured to infringe upon opening. (*Id.* at 74:7–12). Further, Plaintiffs presented

evidence, based on Google documentation, that Google discourages users from operating Chrome

in a manner that does not infringe. (*Id.* at 74:13–22). Finally, Plaintiffs presented evidence that

Google emphasized the accused infringing features in its marketing materials. (*Id.* at 74:24–75:2).

Plaintiffs point out, and Google does not dispute, that this testimony went unrebutted. (Dkt. No.

294 at 3). Google argues that this evidence was "conclusory" and that similar facts have been

rejected by this Court in *Tierra Intelectual Borinquin, Inc. v. ASUS Computer Int'l, Inc.*, No. 2:13-

CV-0038, 2014 WL 894805 (E.D. Tex. Mar. 4, 2014). (Dkt. No. 296 at 2). The Court disagrees.

As shown above, the record contains evidence, including documents and testimony, supporting the

requisite intent for indirect infringement. Based on the totality of the evidence, the Court

concludes that a reasonable juror could have found the requisite intent for indirect infringement.

The Court also finds that there is substantial evidence supporting a finding of no substantial

non-infringing uses of Chrome. (Dkt. No. 264 at 75:5–12). Google's post-trial argument

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regarding Chrome's local file viewing capability (Dkt. No. 293 at 5) does not show a substantial

non-infringing use. Rather, the cited testimony merely shows that a non-infringing mode may be

possible. Such a showing provides no insight into if (and how often) the allegedly non-infringing

functionality" is ***used***—the central analysis under substantial non-infringing ***use***. *Google Inc. v.*

Beneficial Innovations, Inc., No. 2:11-cv-00229, 2014 WL 4215402, at *7 (E.D. Tex. Aug. 22,

2014). Accordingly, the Court is persuaded that the jury's finding of no substantial non-infringing

use is supported by substantial evidence.

2. Direct Infringement: Claim 5 of the '528 Patent and Claim 49 of the '529 Patent

Google argues that there are no fact disputes relevant to its defense of non-infringement

for Claim 5 of the '528 Patent and Claim 49 of the '529 Patent. (Dkt. No. 293 at 6). Google argues

that it raised this issue at summary judgment, and according to Google, the Court recognized that

the defense raised a claim construction issue, but that claim construction issue was nonetheless

sent to the jury. (*Id.*) In parsing the patent claims and specification, Google contends that

substantial evidence does not support the verdict under a correct reading of the claims. (*Id.*)

Plaintiffs respond that Google is barred from raising this argument at this stage in the case

under the doctrines of judicial estoppel and/or waiver. (Dkt. No. 294 at 5–6). Plaintiffs argue that

Google is taking a view contrary to its stated position during trial. (*Id.* at 5). During trial, Google

successfully argued that its expert, Dr. Michael Kogan, would not present testimony on claim

construction, but instead would present testimony regarding the application of the plain and

ordinary meaning of the claims at issue. (*Id.*). Plaintiffs argue this is directly contrary to the

position Google now takes: that the claims at issue require claim construction and the Court erred

in submitting that issue to the jury. (*Id.* at 5–6). In reviewing the patent claims and specification

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and trial testimony, Plaintiffs also contend that, in the alternative, the merits of Google's claim construction position is baseless. (*Id.* at 8–11).

The Court is persuaded by Plaintiffs' claims of judicial estoppel. The Fifth Circuit analyzes three factors to determine if judicial estoppel applies: whether "(1) the party against whom judicial estoppel is sought has asserted a legal position which is plainly inconsistent with a prior position; (2) a court accepted the prior position; and (3) the party did not act inadvertently." *Love v. Tyson Foods, Inc.*, 677 F.3d 258, 261 (5th Cir. 2012).

A comparison of Google's Opposition to Plaintiffs' Bench Memo (the "Google Opposition") (Dkt. No. 249) and the present Motion reveal the tension in Google's position. In the Google Opposition, Google relied on Magistrate Judge Payne's order stating that "[t]he parties' experts can opine on whether the plain and ordinary meaning of the first and second process terms encompasses a system in which…" to argue that Dr. Kogan's testimony was proper and not claim construction. (Dkt. No. 249 at 1–2). Indeed, Google acknowledged that its expert was simply providing his "opinion on the application of the plain and ordinary meaning of unconstrued terms" and called Plaintiffs' attempts to limit Dr. Kogan's testimony "wrong on the merits." (*Id.* at 2, 4). Now, however, Google argues that very same order was incorrect. (Dkt. No. 293 at 6) ("Failure to resolve that claim construction dispute before submitting the case to the jury was an error of law that, at a minimum, requires a new trial.") (*see also* Dkt. No. 296 at 4). In other words, Google is now arguing that the experts were opining on claim construction and that issue was submitted to the jury. This is directly contrary to Google's trial position that the experts were merely opining on the application of the plain meaning of unconstrued terms. The Court finds these two positions irreconcilable. They are plainly inconsistent. During trial, the Court accepted Google's position that in allowing Dr. Kogan's testimony the jury would hear testimony on the application of the

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plain and ordinary meaning of the claim terms. The Court finds that Google did not act inadvertently. Instead, Google now argues that the issue of claim construction was improperly sent to the jury to obtain a new trial. Though Google is unhappy with the outcome of the trial, it cannot now take this type of opposite position. The Court finds that Google is judicially estopped from raising those inconsistent arguments in its post-trial briefing.

The Court also finds that Google waived its argument regarding claim construction of the claim terms. Google's current Motion plainly contends that Magistrate Judge Payne erred in not construing the claim language at issue. However, such an objection is nowhere within Google's objections to Magistrate Judge Payne's Report and Recommendation. (Dkt. No. 221). Instead, in its objections, Google argued that the "plain meaning" of the claim language warranted a grant of summary judgment of non-infringement. (*Id.* at 4–5). Google cannot now raise new objections to the Report and Recommendation.

3.   Direct Infringement: Memory Space Limitations

Google argues that "[t]he trial record shows that Chrome does not have two 'distinct' memory spaces because it allows the 'second web browser process' to access the 'first memory space.'" (Dkt. No. 293 at 12). Google points to testimony by Plaintiffs' expert, Dr. Rubin, Google witnesses, and its own expert, Dr. Kogan, as allegedly confirming that the two memory spaces are not distinct (i.e., there is a section of shared memory between the two processes). (*Id.* at 13). Google argues that Plaintiffs do not dispute any of the facts about the shared memory in Chrome. (*Id.* at 14).

Plaintiffs respond that Google's argument is "a factual dispute regarding the identification of a 'first memory space' and a 'second memory space' in Chrome." (Dkt. No. 294 at 11). Plaintiffs argue that their expert, Dr. Rubin, and Google's expert, Dr. Kogan, "provided contradictory testimony regarding what constituted the first and second memory spaces in
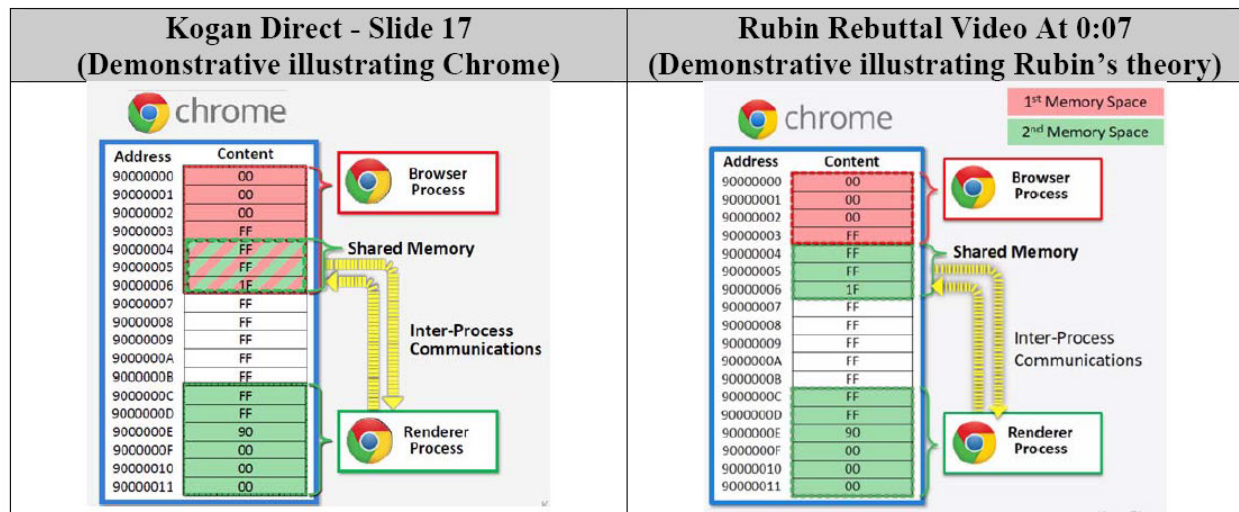
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Chrome," and the jury "believed Dr. Rubin over Dr. Kogan and found that Google infringed all

asserted claims." (*Id.* at 11–12). Plaintiffs point out that "Google does not argue that the jury's

verdict lacked a sufficient evidentiary basis nor that Dr. Rubin committed legal error by straying

from the Court's construction." (*Id.* at 12).

The Court finds this to be a classic battle of the experts, and the jury, not the Court, is the

appropriate body to make the credibility determinations necessary to resolve conflicting testimony.

As explained below, the Court finds that substantial evidence supports a finding of infringement

with respect to these claim limitations.

Plaintiffs' expert, Dr. Rubin, explained, relying-in-part on Google documents, how

Chrome's two web browser processes (the browser process and the renderer process, respectively)

each have their own distinct memory spaces as this Court's claim construction required. (Dkt. No.

264 at 37:1–20, 38:14–39:11). These distinct memory spaces are the claimed first and second

memory spaces—the first memory space being distinct to the browser process and the second

memory space being distinct to the renderer process. (*Id.*). Dr. Rubin explained his understanding

in the context of the Patents-in-Suit. (Dkt. No. 264 at 19:15–21:1, 86:6–87:13, 102:17–103:16).

In particular, Dr. Rubin explained that the claimed first and second memory spaces cannot overlap

(i.e., each browser process must have its own memory space), but the Patents-in-Suit contemplate

shared memory in addition to the distinct memory spaces. (*Id.* at 20:13–21:1, 86:6–87:13).

Although Google's expert, Dr. Kogan, provided contrary testimony that Chrome's browser

and renderer processes did not have the claimed distinct memory space because they used shared

memory for communication (Dkt. No. 268 at 153:10–23, 154:17–166:1), the jury was free to

choose which expert it found more credible. The Court finds that a reasonable juror could have

found for Plaintiffs—supported by Dr. Rubin's testimony. This conclusion is further confirmed

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by Dr. Rubin's rebuttal testimony where he explained his position and the flaws in Dr. Kogan's analysis. (Dkt. No. 271 at 98:14–101:13, 99:10–100:14). Although not evidence, Dr. Kogan provided the following demonstrative (cited by both parties in their briefing) that illustrates the differences in the opinions of Dr. Rubin and Dr. Kogan.

Kogan Direct - Slide 17 (Demonstrative illustrating Chrome)	Rubin Rebuttal Video At 0:07 (Demonstrative illustrating Rubin's theory)

(Dkt. No. 293 at 15; Dkt. No. 294 at 14). This provides further support that the dispute between the experts was factual in nature—the identification of the first and second memory spaces. It was appropriate for the jury to resolve this dispute as the fact finder. The Court does not agree that Google has shown that no reasonable juror could have found for Plaintiff. The Court finds that the verdict is supported by substantial evidence. For these reasons, Google's Motion for JMOL or new trial on non-infringement is **DENIED**.

B. Damages

Google also moves for either JMOL or a new trial on the issue of damages. Google raises several arguments—none of which the Court finds persuasive. As explained below, Plaintiffs' damages case was supported by substantial evidence and did not taint the verdict by introducing any prejudicial error.

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Confidential Information Redacted

1. Mr. Bratic's Royalty Base and Rate

Google's first argument is that Plaintiffs' damages expert, Mr. Walter Bratic, conflated two separate revenue pools to determine a royalty base and royalty rate. Google argues that Mr. Bratic should not have both (1) relied on the *total* number of monthly Chrome users to develop a royalty base; and (2) relied on the estimated incremental revenue from *new* Chrome users to develop a royalty rate. (Dkt. No. 293 at 20–22).

Determining a reasonable royalty award is not an exact science and necessarily involves some approximation and uncertainty. *Lucent Techs., Inc. v. Gateway, Inc.*, 580 F.3d 1301, 1336 (Fed. Cir. 2009). As a hypothetical negotiation analysis inherently attempts to predict the outcome of an event that never occurred, it is not surprising that the most reliable sources that inform a hypothetical negotiation are often not perfect analogues. *Cf. ResQNet.com, Inc. v. Lansa, Inc.*, 594 F.3d 860, 872 (Fed. Cir. 2010) ("This court observes as well that the most reliable license in this record arose out of litigation. On other occasions, this court has acknowledged that the hypothetical reasonable royalty calculation occurs before litigation and that litigation itself can skew the results of the hypothetical negotiation.").

The Court is persuaded that Mr. Bratic's testimony as to his royalty base and rate are supported by substantial evidence. Mr. Bratic explained that he relied on an internal Google analysis regarding the per-user incremental revenue Google would receive with and without inclusion of technology from another company, ██████ (Dkt. No. 265 at 21:23–22:23). Mr. Bratic was permitted some leeway in adapting or modifying the figures in Google's "████ Model" to appropriately inform the hypothetical negotiation. Moreover, Google's counsel cross-examined Mr. Bratic on his use of the ████ Model. (*Id.* at 53:21–58:24). Google also presented competing testimony from its own damages expert, Mr. Chris Bakewell. (*See generally* Dkt. No. 270 at 41–75). The jury was entitled to believe or disbelieve either of the damages experts and assign

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appropriate weight to their respective testimony. In fact, the verdict suggests that the jury did

exactly that: rather than award Mr. Bratic's conclusion of $26,275,887, the jury awarded Plaintiffs

$20,000,000.

    2.   **Advertising Revenue**

  Google next argues that it was improper for Mr. Bratic to base his valuation of Google's

Chrome browser on advertising revenue. (Dkt. No. 293 at 22–25). It argues, in essence, that Mr.

Bratic's reliance on the ▮▮▮▮ Model—which ultimately derives its per-user valuation of Chrome

from advertising revenue—is tantamount to inclusion of a separate, unrelated, unaccused product

in the royalty base. The Court disagrees. The hypothetical negotiation analysis recognizes and

allows for the fact that the value of a product may not always derive from direct sales of such

product, and there are several possible factors that may contribute to the value of the patented

invention. *See Georgia-Pacific Corp. v. United States Plywood Corp.,* 318 F. Supp. 1116

(S.D.N.Y. 1970). Mr. Bratic testified that the ▮▮▮▮ Model is not merely a valuation of Google's

advertising revenue, but an attempt to capture the value of Chrome itself. (Dkt. No. 265 at 21:23–

24:11, 25:8–24, 29:8–16, 31:13–19, 42:1–17). Google also argues that advertising revenue does

not sufficiently inform the value of Chrome because Google's ads are displayed across many

different browsers, including unaccused browsers and third-party browsers. (Dkt. No. 293 at 24).

Nonetheless, Mr. Bratic accounted for this by basing his royalty calculation only on the Chrome

browsers accused by Plaintiffs. (Dkt. No. 265 at 25:8–24, 31:13–19). He further tailored his

royalty calculation by considering other information, including depositions of Google witnesses,

Google financial documents and filings, and Google marketing documents. (*E.g.*, Dkt. No. 265 at

30:8–31:9, 32:4–34:2). Mr. Bratic's damages calculation is not, as Google contends, a one-for-

one substitution of Google Chrome for Google advertising revenue. Mr. Bratic was entitled to

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give his opinions on the value of the accused products, and the jury was entitled to give his testimony the weight it felt was appropriate.

3. Apportionment

Google argues that Mr. Bratic failed to apportion his royalty base and rate to the value attributable to the infringing features of the product. (Dkt. No. 293 at 25–28); *see Ericsson, Inc. v. D-Link Sys., Inc.*, 773 F.3d 1201, 1226 (Fed. Cir. 2014). Google contends that Mr. Bratic improperly relied on the technical apportionment analysis performed by Plaintiffs' infringement expert, Dr. Aviel Rubin, but failed to conduct an economic analysis. (*Id.*). Plaintiffs counter that it was not improper for Mr. Bratic to rely on Dr. Rubin for technical matters, and that he relied on several other sources to develop his economic apportionment analysis. (Dkt. No. 294 at 23–24). Plaintiffs note that Mr. Bratic relied on testimony from Google's engineering representative, Mr. Mark Larson, about the four most important features in Chrome's success: speed, security, simplicity, and stability. (*Id.* at 16). Mr. Bratic also relied on Ms. Vivian Leung, Google's marketing representative, who testified and identified marketing documents (including a research study) showing that the same four "pillars" are identified by customers as the most important features. (*Id.*). Mr. Bratic then relied on Dr. Rubin's analysis of the relative contribution of the patented technology to each of these four features. (*Id.*).

The Court is persuaded that Mr. Bratic's apportionment analysis is supported by substantial evidence. The jury was entitled to believe or disbelieve his testimony, taking into account the testimony he relied on, and the competing expert testimony from Mr. Bakewell. Further, the Court finds there was no prejudicial error of the type identified in the cases cited by Google. *E.g.*, *Energy Transp. Grp., Inc. v. William Demant Holding A/S*, 697 F.3d 1342, 1356 (Fed. Cir. 2012) (grossly excessive, unsupported by the evidence, or speculative); *LaserDynamics, Inc. v. Quanta*

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Computer, Inc., 694 F.3d 51, 69 (Fed. Cir. 2012) (25% "rule of thumb"); *Ericsson*, 773 F.3d at

1226–27 (Fed. Cir. 2014) (entire market value rule).

The Court is persuaded that Plaintiffs' damages theory is supported by substantial

evidence. Likewise, the Court is not persuaded that Plaintiffs' damages theory introduced

prejudicial error into the trial record. For these reasons, Google's Motion for JMOL or new trial

on damages is **DENIED**.

C.   Subject Matter Eligibility

Next, Google argues that JMOL of ineligibility should be granted under 28 U.S.C. § 101.

The Court disagrees. Magistrate Judge Payne recommended denial of Google's § 101 summary

judgment motion, and the Court adopted those recommendations. (Dkt. Nos. 208, 226). The Court

denied the motion because it could not "conclude that representative claim 30 is abstract under the

first step of the *Alice* test," noting that the representative claim was similar to those at issue in *DDR*

Holdings, LLC v. Hotels.com, L.P., 773 F.3d 1245 (Fed. Cir. 2014) and *Enfish, LLC v. Microsoft*

Corp., 822 F.3d 1327, 1335 (Fed. Cir. 2016). (Dkt. No. 208).

The Court previously found Claim 30 of the '500 Patent to be representative of the asserted

claims:

> 30.   A method of operating a portable computing and communication device
> capable of executing instructions using a common operating system, comprising:
>
>   exchanging data across a network of one or more computers with a network
> interface device using a wireless connection;
>
>   providing an intelligent cellular telephone capability with a secure web
> browser including a first web browser process and a second web browser process;
>
>   storing at least one system file within a first memory space;
>
>   executing the first web browser process within the common operating
> system using at least one electronic data processor, wherein the first web browser
> process is configured to access data of a website via the network, access data

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contained in the first memory space and is further configured to initialize the second web browser process;

executing the second web browser process within the common operating system using the at least one electronic data processor, wherein the second web browser process is configured to access data contained in the second memory space and is capable of generating data;

passing data from the first web browser process to the second web browser process; and

displaying data from the second web browser process;

wherein the portable computing and communication device is configured such that the at least one system file residing on the first memory space is protected from corruption by a malware process downloaded from the network and executing as part of the second web browser process.

'500 Patent at 21:29–58.

With the benefit of the entire trial record, the Court is not persuaded that the claims of the Patents-in-Suit are directed to an abstract idea. Rather, the claims are directed to an improvement in the prevention and containment of computer malware, implemented through a combination of hardware and software. Such an improvement in computer functionality is not a mere abstract idea and is eligible for patent protection under 28 U.S.C. § 101. *See Enfish*, 88 F.3d at 1335 ("[S]ome improvements in computer-related technology when appropriately claimed are undoubtedly not abstract . . . . Software can make non-abstract improvements to computer technology just as hardware improvements can, and sometimes the improvements can be accomplished through either route.").

For these reasons, the Motion on patent ineligibility is **DENIED**.

D. Intervening Rights

Google next argues that it is entitled to JMOL that it has intervening rights to the invention claimed in the asserted reissue patents, extinguishing all liability for infringement. The reissue statute provides:

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A reissued patent shall not abridge or affect the right of any person or that person's successors in business who, prior to the grant of a reissue, made, purchased, offered to sell, or used within the United States, or imported into the United States, anything patented by the reissued patent, to continue the use of, to offer to sell, or to sell to others to be used, offered for sale, or sold, the specific thing so made, purchased, offered for sale, used, or imported unless the making, using, offering for sale, or selling of such thing infringes a valid claim of the reissued patent which was in the original patent. The court before which such matter is in question may provide for the continued manufacture, use, offer for sale, or sale of the thing made, purchased, offered for sale, used, or imported as specified, or for the manufacture, use, offer for sale, or sale in the United States of which substantial preparation was made before the grant of the reissue, and the court may also provide for the continued practice of any process patented by the reissue that is practiced, or for the practice of which substantial preparation was made, before the grant of the reissue, to the extent and under such terms as the court deems equitable for the protection of investments made or business commenced before the grant of the reissue.

35 U.S.C. § 252. This provision gives rise to two types of intervening rights: (1) absolute intervening rights, which are "intervening rights that abrogate liability for infringing claims added to or modified from the original patent if the accused products were made or used before the reissue," and (2) equitable intervening rights, which are "intervening rights that apply as a matter of judicial discretion to mitigate liability for infringing such claims even as to products made or used after the reissue if the accused infringer made substantial preparations for the infringing activities prior to reissue." *Marine Polymer Techs., Inc. v. Hemcon, Inc.*, 672 F.3d 1350, 1361–62 (Fed. Cir. 2012).

The doctrine of absolute intervening rights cannot apply in this case for the simple reason that Plaintiffs did not seek and the jury did not award any damages prior to the reissue dates of each Asserted Patent. (*See* Jury Instructions, Dkt. No. 272 (Trial Tr. 2/10/17 am) at 48:12–17 ("The parties in this case agree that . . . that the date damages could be due regarding the '528 patent and the '529 patent is December the 11th, 2012, and with regard to the '500 patent, is February the 5th, 2013. *Plaintiffs, therefore, cannot recover damages for infringement prior to those dates.*" (emphasis added))). The damages period for each Asserted Patent post-date each

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patent's (re)issue date. (*See* Dkt. No. 200 (Joint Pre-Trial Order, Stipulations) ¶¶ 30–32). The jury is presumed to have followed the Court's instructions.

As to equitable intervening rights, Google has not made an adequate showing. Equitable intervening rights are a matter of judicial discretion. 35 U.S.C. § 252. Google must show, at a minimum, that it made "substantial preparation" of the accused products prior to reissue. If this showing is made, the Court has discretion to mitigate liability on equitable terms. Here, however, the only evidence Google presented in its Motion is that it first released an iteration of Chrome 2008 and has continued to release various versions on different platforms with varying functionality. (*E.g.*, Dkt. No. 267 at 37:25–38:3). Consequently, Google tells the Court that Chrome *as a whole* predated the reissue patents, but Google is silent as to the specific features actually accused. Equitable intervening rights cannot immunize an entire product with a large set of features simply because some version of the product is amorphously stated to have predated the reissue patents. Further, Google has not attempted to present any evidence as to its "investments made or business commenced" or what terms might equitably protect the same. In short, Google demands complete and total excusal of all liability. On this meager record, the Court declines to find Google has equitable intervening rights.

For these reasons, the Motion on no liability due to intervening rights is **DENIED**.

E. Venue

Lastly, Google contends (conclusorily) that a new trial should be granted for improper venue. The Court disagrees. Google has waived any objection to the propriety of venue by failing to timely file a motion to dismiss or transfer under Fed. R. Civ. P. 12(b)(3) or 28 U.S.C. §§ 1404 or 1406. Further, Google admitted that venue was proper in its Amended Answer. (Dkt. No. 15 ¶ 3). Under these facts, Google cannot now seek dismissal, transfer, or a new trial. The Motion is **DENIED** as to this ground.

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III.   CONCLUSION

For the reasons stated herein and in all respects, Google's Motion is **DENIED**.

So ORDERED and SIGNED this 2nd day of September, 2021.

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RODNEY GILSTRAP
UNITED STATES DISTRICT JUDGE

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