

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

E*TRADE FINANCIAL CORPORATION,
E*TRADE SECURITIES, LLC, E*TRADE BANK,
SCOTTRADE, INC., SCOTTRADE FINANCIAL SERVICES, INC.,
TD AMERITRADE HOLDING CORPORATION, and
TD AMERITRADE, INC.,
Petitioners,

v.

DROPLETS, INC.,
Patent Owner.

Case IPR2015-00470
Patent 8,402,115 B2

PETITIONERS' NOTICE OF APPEAL

Pursuant to 35 U.S.C. §§ 141(c) and 142 and 37 C.F.R. § 90.2(a), Petitioners E*TRADE Financial Corporation, E*TRADE Securities, LLC, E*TRADE Bank, Scottrade, Inc., Scottrade Financial Services, Inc., TD Ameritrade Holding Corporation, and TD Ameritrade, Inc. ("Petitioners") give notice that Petitioners appeal to the United States Court of Appeals for the Federal Circuit from certain aspects of the Patent Trial and Appeal Board's Final Written Decision entered on June 23, 2016 (Paper 35), and from all underlying orders, decisions, rulings, and opinions.

Pursuant to 37 C.F.R. § 90.2(a)(3)(ii), the issues on appeal include the Board's determinations that Petitioners did not establish that (1) claims 1–3, 6, 9, 10, 12–14, 17, 20, 21, and 24 are unpatentable as obvious based on Ferris and Moshfeghi; (2) claims 4, 5, 15, and 16 are unpatentable as obvious based on Ferris, Moshfeghi, and Outlook 98; (3) claims 7, 8, 18, and 19 are unpatentable as obvious based on Ferris, Moshfeghi, and Gish; and (4) claims 11, 22, and 23 are unpatentable as obvious based on Ferris, Moshfeghi, and Shaw '836. The issues on appeal also include any finding or determination supporting or related to those issues, as well as all other issues decided adversely to Petitioners in any order, decision, ruling, or opinion.

Petitioners cross-appeal only to preserve arguments relating to additional grounds of unpatentability that were not adopted by the Board. While the Board's Final Written Decision correctly determined claims 1-25 unpatentable (which the Patent Owner has appealed), the Board should have additionally held the claims unpatentable under the grounds noted above. Petitioners appreciate the Federal

Circuit's guidance in appeals from the district courts that a party generally should not "cross-appeal to reach issues that do not otherwise expand the scope of the judgment." *Aventis Pharma S.A. v. Hospira, Inc.*, 637 F.3d 1341, 1343 (Fed. Cir. 2011). But that rule is prudential and premised on the ability to raise the same issues in briefing as alternative grounds for affirmance. *See id.* And it has been argued that Supreme Court precedent limits the ability to raise alternative grounds for affirmance in appeals from administrative agencies, because "an administrative order cannot be upheld unless the grounds upon which the agency acted in exercising its powers were those upon which its action can be sustained." *SEC v. Chenery Corp.*, 318 U.S. 80, 87 (1943); *see also In re Zurko*, 258 F.3d 1379, 1385 (Fed. Cir. 2001) (citing *Chenery* in not considering alternative grounds for affirming determination of obviousness). Accordingly, Petitioners cross-appeal to ensure that their arguments relating to the grounds not adopted by the Board in the Final Written Decision are preserved and are not subject to doubt or allegations of waiver. *Cf. Corning Gilbert, Inc. v. PPC Broadband, Inc.*, IPR2013-00340, Paper 85 at 4 (PTAB 2106) (on remand declining to consider issue not raised before the Federal Circuit); *see also El Paso Natural Gas Co. v. Neztosie*, 526 U.S. 473, 479-80 (1999) (explaining cross appeal is necessary to provide "fair notice" of additional issue).

A copy of Petitioners' Notice of Appeal is being filed with the Board and with the Clerk's Office for the United States Court of Appeals for the Federal Circuit.

Respectfully submitted,

Dated: September 1, 2016

/ Michael T. Rosato /

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CERTIFICATE OF SERVICE

I hereby certify that, in addition to being filed electronically through the Board's End to End system, the foregoing "Petitioners' Notice of Appeal" was served by Express Mail on this 1st day of September 2016 on the Director of the United States Patent and Trademark Office at the following address:

Director of the United States Patent and Trademark Office
c/o Office of the General Counsel,
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, Virginia 22313-1450

I hereby further certify on this 1st day of September 2016 that the requisite fee and the foregoing "Petitioners' Notice of Appeal" were filed electronically with the Clerk's Office of the United States Court of Appeals for the Federal Circuit.

I hereby further certify that a true and correct copy of the foregoing "Petitioners' Notice of Appeal" was served via email, by agreement of the parties, on this 1st day of September 2016 on counsel for Patent Owner Droplets, Inc. at the following addresses:

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Respectfully submitted,

Dated: September 1, 2016

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TD AMERITRADE, INC.,
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DROPLETS, INC.,
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Case IPR2015-00470
Patent 8,402,115 B2

Before LINDA M. GAUDETTE, MICHAEL R. ZECHER, and
SCOTT A. DANIELS, *Administrative Patent Judges*.

GAUDETTE, *Administrative Patent Judge*.

FINAL WRITTEN DECISION
35 U.S.C. § 318(a) and 37 C.F.R. § 42.73

E*TRADE Financial Corporation, E*TRADE Securities, LLC, E*TRADE Bank, Scottrade, Inc., Scottrade Financial Services, Inc., TD Ameritrade Holding Corporation, and TD Ameritrade, Inc. (collectively, “Petitioner”) filed a Petition (Paper 9, “Pet.”)¹ requesting an *inter partes* review of claims 1–25 (“the challenged claims”) of U.S. Patent No. 8,402,115 B2 (Ex. 1001, “the ’115 patent”). Droplets, Inc. (“Patent Owner”) filed a Preliminary Response to the Petition (Paper 16, “Prelim. Resp.”). Based on these submissions, an *inter partes* review of claims 1–25 of the ’115 patent was instituted on July 6, 2015, pursuant to 35 U.S.C. § 314. Paper 18 (“Dec. on Inst.” or “Institution Decision”).

After institution, Patent Owner filed a Response (Paper 21, “PO Resp.”), and Petitioner filed a Reply to the Patent Owner Response (Paper 34, “Pet. Reply”).² Oral argument was held on March 15, 2016, and a transcript (Paper 33, “Tr.”) has been entered into the record.

We have jurisdiction under 35 U.S.C. § 6(c). This Final Written Decision, issued pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73, addresses issues and arguments raised during trial.

For the reasons discussed below, we determine Petitioner has met its burden to prove, by a preponderance of the evidence, that claims 1–25 of the ’115 patent are unpatentable.

¹ The Petition was filed on December 19, 2014, but subsequently accorded an earlier filing date upon grant of Petitioner’s unopposed Motion to Change the Filing Date to December 17, 2014. Paper 17.

² The original Reply was filed on December 30, 2015 as Paper 26. Citations in this Final Written Decision, however, are to the Corrected Reply, filed April 8, 2016 (Paper 34).

I. BACKGROUND

A. *Related Matters*

Petitioner previously filed two petitions requesting a covered business method patent review of the '115 patent: *E*TRADE Financial Corp. v. Droplets, Inc.*, Cases CBM2014-00123 and CBM2014-00124 (PTAB May 12, 2014) (Paper 9). Both petitions were denied based on our determination that Petitioner had not met the requirements for standing under 37 C.F.R. § 42.304(a). *Id.* (Paper 15). Contemporaneous with the filing of the Petition in the present *inter partes* review, Petitioner filed a second request for institution of an *inter partes* review of the '115 patent wherein it challenged the patentability of claims 1–25 based on additional prior art. *E*TRADE Financial Corp. v. Droplets, Inc.*, Case IPR2015-00471 (PTAB Dec. 17, 2014) (Paper 9). We declined to institute trial in that case based on our finding that the grounds in the second request did not add substantively to the grounds on which we instituted *inter partes* review in the present case. *Id.* (Paper 18). Petitioner also advises that Patent Owner filed an infringement action against Petitioner alleging infringement of the '115 patent in *Droplets, Inc. v. E*TRADE Financial Corp.*, No. 1:12-cv-02326-CM (S.D.N.Y. Apr. 7, 2014). Pet. 11; Paper 14, 2.

B. The References

The pending grounds of unpatentability in this *inter partes* review are based on the following references:

Reference	Patent/Printed Publication	Exhibits
Frese	US 5,909,545	1005
Gish	US 5,768,510	1006
Shaw '836	US 6,362,836 B1	1008
Ferris	WO 98/44695 A1	1010
Moshfeghi	US 6,076,166	1011
Outlook 98	Alan Neibauer, Running Microsoft Outlook 98, Microsoft Press, United States (1998)	1013
Franco PCT	WO 01/20848 A1	1017

C. The Instituted Grounds of Unpatentability

We instituted the instant *inter partes* review of claims 1–25 of the '115 patent claims on the following grounds of unpatentability:

Grounds	Reference(s)	Basis	Claims Challenged
1	Franco PCT and Moshfeghi	§ 103(a)	1–25
2	Frese	§ 102(b)	1, 7, 9, 10, 12, 18, 20, 21, and 25
3	Ferris and Moshfeghi	§ 103(a)	1–3, 6, 9, 10, 12–14, 17, 20, 21, 24, and 25
4	Ferris, Moshfeghi, and Outlook 98	§ 103(a)	4, 5, 15, and 16
5	Ferris, Moshfeghi, and Gish	§ 103(a)	7, 8, 18, and 19
6	Ferris, Moshfeghi, and Shaw '836	§ 103(a)	11, 22, and 23

II. EXPERT TESTIMONY

Petitioner relies on the testimony of Ronald L. Burback, Ph.D., in support of its patentability challenges. Dr. Burback executed a declaration (Ex. 1002, “the Burback Declaration”) in support of the Petition. Dr. Burback was cross-examined on the subject matter of his declaration, and a transcript of the testimony was filed as Exhibit 2024. Patent Owner relies on the testimony of David A. Wilson, Ph.D. Dr. Wilson executed a declaration (Ex. 2022, “the Wilson Declaration”) in support of Patent Owner’s Response. Dr. Wilson was cross-examined on the subject matter of his declaration, and a transcript of the testimony was filed as Exhibit 1030. Patent Owner also relies on the declaration testimony of Irving S. Rappaport (Ex. 2019, “the Rappaport Declaration”).

To testify as an expert under Federal Rule of Evidence (FRE) 702, a person need not be a person of ordinary skill in the art, but rather “qualified in the pertinent art.” *Sundance, Inc. v. DeMonte Fabricating Ltd.*, 550 F.3d 1356, 1363–64 (Fed. Cir. 2008). Petitioner’s description of the pertinent art as internet-based client/server interactivity (*see* Pet. 1) is consistent with the ’115 patent’s description of the background of the invention (*see, e.g.*, Ex. 1001, 2:29–39), and is not disputed by Patent Owner (*see generally*, PO Resp.).

The rules of trial practice and procedure provide that “[e]xpert testimony that does not disclose the underlying facts or data on which the opinion is based is entitled to little or no weight.” 37 C.F.R. § 42.65 (a). We do not admit “[t]estimony on United States patent law or patent examination practice.” *Id.*

A. Irving S. Rappaport

Mr. Rappaport testified as follows: he “received a B.S.E.E. from Washington University in St. Louis, MO in 1962, a J.D. with Honors from George Washington University in 1966 . . . , and an M.B.A. from the Boston University Graduate School of Management in 1969.” Ex. 2019 ¶ 4. He “ha[s] been registered to practice before the United States Patent and Trademark Office (USPTO) since 1964 as a patent agent and as an attorney since 1966.” *Id.* ¶ 3. Mr. Rappaport “worked as a Patent Examiner at the USPTO beginning in June 1962 . . . until March 1965.” *Id.* ¶ 5. From 1971 to the early 1990s, he served as Chief Patent Counsel or Associate General Counsel for IP and Licensing at companies such as Data General Corporation and Apple Computer. *Id.* ¶ 6. He is “named as a co-inventor on over 27 issued U.S. patents, as well as corresponding international counterparts covering numerous inventions related to the software platform and other technologies.” *Id.* ¶ 7.

Mr. Rappaport testified that he was requested by Patent Owner to provide [his] expert opinions whether based on: i) [his] 50+ years of experience registered to practice before the PTO; ii) the customs, standards, and practices in the patent field; and iii) the evidence of record, there is support for finding that the claimed invention in U.S. Patent 8,402,115 (’115) is duly issued and entitled to the priority date of U.S. Provisional application 60/153917 (’917) filed on September 14, 1999, and also as to whether the technical issues raised by Petitioner based on the declaration and testimony of Dr. Ronald LeRoy Burbach have any merit.

Id. ¶ 19.

Petitioner contends “Mr. Rappaport is offered as a legal expert on patent law and Patent Office procedure.” Pet. Reply 9. Petitioner argues

Patent Owner’s “submission of the Rappaport declaration for this purpose is a violation of 37 C.F.R. § 42.65,” and requests that we not admit and expunge the Rappaport declaration from the record or, at minimum, give no weight to Mr. Rappaport’s testimony. *Id.*

During the oral hearing, the Panel posed the following question to Patent Owner’s attorney, Mr. Timothy J. Bechen: “With respect to the Rappaport declaration, under Rule 42.65 it says the testimony on United States patent law or patent examination practice will not be admitted. Why should we consider this testimony given that rule?” Tr. 53:17–20. Mr. Bechen, in response, stated: “We submit that his testimony is not directing this Board as to how the Board should read patent law or telling the Board what the examiner should have done. Instead, his opinion is an application of the reasonable examiner standard or the reasonable person standard under applicable case law.” *Id.* at 53:22–54:1. Out of an abundance of caution, we have considered the portions of Mr. Rappaport’s testimony cited by Patent Owner in support of its arguments made in connection with the effective filing date of the ’115 patent. *See* Section III.A., below. We have not given any weight to his testimony, however, for the reasons discussed below. *See id.*

B. David A. Wilson

Dr. Wilson testified as follows: he “earned a B.S. in Engineering Physics from Cornell University [in 1965], and M.S. and Ph.D. degrees in Applied Physics from Stanford University [in 1967 and 1970, respectively].” Ex. 2022 ¶ 5; *see* Ex. 2023, 12. He has “worked in the electronics and computer fields for over forty years,” and has “taught classes to professional programmers on using C, C++, Smalltalk, Java, and Objective-C to develop

applications.” *Id.* ¶¶ 5, 7. He is “a co-author of a number of books about computer programming” and has “a number of apps published in Apple’s iOS App Store, and in Apple’s Mac App Store.” *Id.* ¶¶ 9–10. Dr. Wilson further testified that, during his career, he has “developed expertise in several areas including object-oriented programming, graphical user interfaces, distributed computing, software development processes and practices, relational databases, mobile computing, web-based applications, and mobile app development.” *Id.* ¶ 6.

Petitioner requests that we disregard or give little weight to various testimony in Dr. Wilson’s declaration. *See, e.g.*, Pet. Reply 1 (“To the extent the claim construction discussion in Dr. Wilson’s declaration is reviewed by the Board, it can be ignored for several reasons.); *id.* at 11 (“Dr. Wilson’s testimony regarding Moshfeghi is unreliable and should be given little weight.”). Petitioner’s arguments go to the weight to be accorded to Dr. Wilson’s testimony, not to its admissibility. *See generally* Pet. Reply.

Based on our review of Dr. Wilson’s education and work experience, we find Dr. Wilson is qualified to testify as an expert under FRE 702.

C. Ron L. Burback

Dr. Burback testified as follows: he “received a Ph. D. degree in Computer Science from Stanford University in 1999[,] . . . a[n] M.S. degree from Stanford in 1982 with course work in Computer Science, Electrical Engineering, and Mechanical Engineering[, and] . . . a B.A. degree from the University of Colorado in Physics and Mathematics [in 1974].” Ex. 1002 ¶ 2. He “currently maintain[s] an independent consulting business where [he] provide[s] consulting services to businesses and law firms on topics such as healthcare software, financial systems, transportation systems, web

applications, distributed client/server applications, networking, graphical user interfaces, and the intellectual property evaluation of software.” *Id.* ¶ 4. He has provided computer consulting services since 1980, and that his work has included architecting a distributed health care information system for TDS Health Care Systems. *Id.* ¶ 3. Dr. Burback also testified that from 2000–2001 he was the Chief Technology Officer and Vice President of Engineering for EAinvest.com, where he developed web-based financial tools. *Id.* He has “published extensively on the topics of distributed computing environments.” *Id.* ¶ 5.

Patent Owner contends we should disregard the Burback Declaration because “Dr. Burback failed to conduct essential analysis and provides improper support for his conclusions.” PO Resp. 1; *see also id.* at 52–56 (arguing we should give no weight to Dr. Burback’s declaration or deposition testimony). Patent Owner’s arguments go to the weight to be accorded to Dr. Burback’s testimony, not to its admissibility. *See generally* PO Response.³

Based on our review of Dr. Burback’s education and work experience, we find Dr. Burback is qualified to testify as an expert under FRE 702.

³ Although Patent Owner has not challenged explicitly Dr. Burback’s qualifications to testify as an expert under FRE 702, Mr. Rappaport testified that, in his opinion, Dr. Burback “does not qualify as an expert witness based on his credibility regarding his credentials, his inability to support his technical conclusions with actual language of the discussed references and his failure to perform a basic antecedent basis analysis of the claims.” Ex. 2019 ¶ 75. In response to Mr. Rappaport’s testimony, Petitioner provided evidence to support Dr. Burback’s testimony regarding his teaching experience. *See* Pet. Reply 24; Ex. 1028.

III. THE '115 PATENT (EX. 1001)

The '115 patent relates to a method and system “for delivering interactive links for presenting applications and second information at a client computer from remote sources in a network-configured computer processing system.” Ex. 1001, Abstract. Petitioner and Patent Owner disagree over the effective filing date of the '115 patent. Patent Owner contends the '115 patent claims priority to U.S. Provisional Application No. 60/153,917 (“the '917 provisional”) and is entitled to the benefit of the '917 provisional’s filing date of September 14, 1999. PO Resp. 2. Petitioner contends November 24, 2003, is the earliest priority date to which the '115 patent is entitled. Pet. 7. In its first patentability challenge, Petitioner relies on Franco PCT. *See* Pet. 17. Patent Owner does not dispute that Franco PCT is entitled to the benefit of the '917 provisional’s filing date of September 14, 1999, but argues Franco PCT is not prior art because it shares the same priority date with the '115 patent. *See* PO Resp. 17. A determination of the effective filing date of the '115 patent is necessary, therefore, to verify that Petitioner properly can rely on Franco PCT as a prior art reference.

A. *Effective Filing Date*

As illustrated in the table below, in which the colored boxes represent the pendency of each corresponding application, the '115 patent is part of a chain of applications related to the '917 provisional:

	9-14-99	6-22-00	9-14-00	3-22-01	11-24-03	2-3-04	1-26-09	3-10-09	3-19-13
917 provisional									
745 patent									
Franco PCT									
838 patent									
115 patent									

The table above illustrates the copendencies of the applications.⁴

The first page of the '115 patent indicates a filing date of January 26, 2009, and identifies the patent as a “[c]ontinuation of application No. 10/720,728, filed on Nov. 24, 2003, now Pat. No. 7,502,838.” Ex. 1001, at [22], [63] (“Related U.S. Application Data”). The first paragraph of the '115 patent reads as follows:

CLAIM OF PRIORITY

The present application is a continuation of allowed US. patent application Ser. No. 10/720,728, entitled “SYSTEM AND METHOD FOR DELIVERING REMOTELY STORED APPLICATIONS AND INFORMATION” filed on Nov. 24, 2003 now US. Pat. No. 7,502,838, the disclosure of which is hereby incorporated by reference in its entirety.

Id. at 1:5–12.

The first page of U.S. Patent No. 7,502,838 (Ex. 2009, “the '838 patent”) identifies the patent as a “[c]ontinuation of application No. 09/599,382, filed on Jun. 22, 2000, now Pat. No. 6,687,745,” and related to “Provisional application No. 60/153,917, filed on Sep. 14, 1999.” Ex. 2009, at [60], [63] (“Related U.S. Application Data”). In the first paragraph of its specification, the '838 patent is likewise identified as a continuation of U.S. Patent No. 6,687,745 (Ex. 1016, “the 745 patent”). Ex. 2009, 1:5–7.

Both the '838 and '745 patents list “Provisional application No. 60/153,917, filed on Sep. 14, 1999” under the section entitled “Related U.S. Application Data.” Ex. 1016, at [60]; Ex. 2009, at [60]. Each of the '115, '838, and '745 patents includes the following paragraph on the first page of its specification:

⁴ Full citations to the '838 and '745 patents are provided below.

CROSS REFERENCE TO RELATED DOCUMENTS

Priority is herewith claimed under 35 U.S.C. §119(e) from *copending* Provisional Patent Application No. 60/153,917, filed Sep. 14, 1999, entitled “METHOD AND SYSTEM FOR DELIVERING APPLICATIONS IN CLIENT/ SERVER ENVIRONMENT,” by Louis M. Franco et al. The disclosure of this Provisional Patent Application is incorporated by reference herein in its entirety.

Ex. 1001, 1:14–24; Ex. 2009, 1:9–18; Ex. 1016, 1:6–15 (emphasis added).

Section 119(e)(1) of Title 35 of the United States Code⁵ reads as follows:

An application for patent filed under section 111(a) . . . for an invention disclosed . . . in a provisional application filed under section 111(b) . . . shall have the same effect, as to such invention, as though filed on the date of the provisional application . . . if the application for patent filed under section 111(a) . . . is filed not later than 12 months after the date on which the provisional application was filed and if it contains or is amended to contain a specific reference to the provisional application.

As noted above, both the ’115 and ’838 patents are continuation applications. 37 C.F.R. § 1.53(b) provides that a continuation application may be filed under the conditions specified in 35 U.S.C. § 120 and 37 C.F.R. § 1.78(a). Section 120 of Title 35 of the United States Code reads, in relevant part:

An application for patent for an invention disclosed in the manner provided by the first paragraph of section 112 of this title in an application previously filed in the United States, . . .

⁵ Citations to the United States Code (U.S.C.) and Code of Federal Regulations (C.F.R.) sections pertaining to benefit claims and incorporation by reference, are to the patent laws and rules in effect as of the January 26, 2009, which is the filing date of the ’115 patent.

which is filed by an inventor or inventors named in the previously filed application shall have the same effect, as to such invention, as though filed on the date of the prior application, if filed before the patenting or abandonment of or termination of proceedings on the first application or on an application similarly entitled to the benefit of the filing date of the first application and if it contains or is amended to contain a specific reference to the earlier filed application.

Section 1.78 of Title 37 of the Code of Federal Regulations provides, in relevant part:

[A] nonprovisional application . . . [may] claim the benefit of a prior-filed copending nonprovisional application. [§1.78(a)(1)].

* * *

[A]ny nonprovisional application . . . claiming the benefit of one or more prior-filed copending nonprovisional applications . . . must contain or be amended to contain a reference to each such prior-filed application, identifying it by application number (consisting of the series code and serial number) . . . and indicating the relationship of the applications. [§1.78 (a)(2)(i) (emphasis added)]

* * *

Any nonprovisional application . . . claiming the benefit of one or more prior-filed provisional applications must contain or be amended to contain a reference to each such prior-filed provisional application, identifying it by the provisional application number (consisting of series code and serial number). [1.78 (a)(5)(i) (emphasis added)].

This section also requires the reference(s) to prior-filed nonprovisional and provisional applications “be included in an application data sheet (§ 1.76), or in the first sentence(s) [of the specification] following the title.” 37 C.F.R. § 1.78(a)(2)(iii), (a)(5)(iii).

The parties do not dispute that: (1) the '745 patent met the requirements of 35 U.S.C. § 119(e)(1), and is entitled to the benefit of the September 14, 1999, filing date of the '917 provisional; (2) the '838 patent is entitled to the benefit of the September 14, 1999, filing date of the '917 provisional, because it was copending with the '745 patent, and contains the specific references to the '745 patent and '917 provisional required under 35 U.S.C. § 120 and 37 C.F.R. § 1.78; (3) the '115 patent is entitled to the benefit of the November 24, 2003, filing date of the '838 patent; and (4) the '115 patent was not copending with the '917 provisional as required for a benefit claim under 35 U.S.C. § 119(e)(1). *See generally* Pet. 7–10; PO Resp. The parties disagree, however, over whether the '115 patent is entitled to the benefit of the September 14, 1999, filing date of the '917 provisional by virtue of its incorporation by reference of the '838 patent. *See* Pet. 7; PO Resp. 2–17. Both Petitioner and Patent Owner rely on the Manual of Patent Examination Procedure (“MPEP”) to support their respective positions. *See* Pet. 8 (citing Ex. 1015); PO. Resp. 2 (citing Ex. 2010).⁶ Although the MPEP does not have the force of law, the courts give deference to an agency’s interpretation of the statutes it enforces. *Ethicon, Inc. v. Quigg*, 849 F.2d 1422, 1425 (Fed. Cir. 1988).

MPEP § 201.11⁷ relates to claiming benefit of an earlier filing date under 35 U.S.C. § 119(e) and § 120, and 37 C.F.R. § 1.78. *See* Ex. 2010,

⁶ Exhibit 1015 contains excerpts from MPEP § 201.11. We refer to Exhibit 2010, which contains MPEP Chapter 200 in its entirety.

⁷The eighth edition of the MPEP was in effect on the filing date of the '115 patent, and the latest applicable revision was revision 7, published July 2008. Neither revision 7 nor revision 6 (published September 2007) affected the language of MPEP § 201. Therefore, the parties rely on the language

200-55. MPEP § 201.11 includes a section entitled “Benefit Claims to Multiple Prior Applications,” that provides the following discussion:

Sometimes a pending application is one of a series of applications wherein the pending application is not copending with the first filed application but is copending with an intermediate application entitled to the benefit of the filing date of the first application. If applicant wishes that the pending application have the benefit of the filing date of the first filed application, applicant must, besides making reference to the intermediate application, also make reference to the first application. . . . The reference to the prior applications must identify all of the prior applications and indicate the relationship (i.e., continuation, divisional, or continuation-in-part) between each nonprovisional application in order to establish copendency throughout the entire chain of prior applications.

Ex. 2010, 200-64–200-65.

Petitioner contends the statement in the ’115 patent claiming priority to the ’917 provisional fails to meet the criteria for a proper benefit claim because the ’115 patent was not amended to contain a specific reference to the intermediate ’745 patent, i.e., the patent that was copending with the ’917 provisional, as required under 35 U.S.C. § 120. *See* Pet. 9. Patent Owner contends the ’115 patent, by virtue of its statement in the first paragraph of the specification that the ’838 patent disclosure is “incorporated by reference in its entirety,” satisfies the requirements under 37 C.F.R. § 1.78 to identify all prior applications, because the ’838 patent properly claims priority to the ’745 patent and the ’917 provisional. PO Resp. 6. Patent Owner acknowledges 37 C.F.R. § 1.57 provides the

that appears in revision 5 of the eighth edition (Aug. 2006). *See* Pet. 8; PO Resp. 2.

conditions and requirements for incorporation by reference (*id.* at 3), and contends “MPEP § 2163.07(b) provides instruction on how the Patent Office interprets an applicant’s claim to incorporating by reference,” and requires us to “treat the ’838 Patent incorporation by reference as if the full ’838 Patent specification w[ere] written verbatim in the first sentence of the ’115 Patent” (*id.* at 5–6). Patent Owner also cites MPEP § 201.06(c) and § 608.01(p) in support of its argument. *See id.* at 5.

Section 1.57 of Title 37 of the Code of Federal Regulations expressly provides for incorporation by reference of “essential” and “nonessential” material in a United States patent. 37 C.F.R. § 1.57 (c), (d). “Essential material” is defined as material necessary for a patent to comply with the requirements of the first, second, or sixth paragraphs of 35 U.S.C. § 112, and “may be incorporated by reference, but only by way of an incorporation by reference to a U.S. patent or U.S. patent application publication . . . [that] does not itself incorporate such essential material by reference.” 37 C.F.R. § 1.57(c)(1)–(3); *see also* MPEP § 608.01(p) (8th ed., Rev. 7, July 2008), 600-94.⁸ MPEP § 608.01(p) states that “[t]he limitations on the material which may be incorporated by reference in U.S. patent applications which are to issue as U.S. patents do not apply to applications relied on only to establish an earlier effective filing date under 35 U.S.C. 119 or 35 U.S.C. 120. . . . Accordingly, an application is entitled to rely upon the filing date of an earlier application, even if the earlier application itself incorporates essential

⁸ A copy of MPEP § 608.01(p) as it appears in revision 5 of the eighth edition (Aug. 2006) of the MPEP was entered into the record as Exhibit 1031. We determine, however, that the applicable version as of the filing date of the ’115 patent was revision 7 of eighth edition (July 2008).

material by reference to another document.” MPEP § 608.01(p), 600-98. MPEP § 201.06(c) relates to application filing requirements for continuation applications filed under 37 C.F.R. § 1.53(b). Ex. 2010, 200-22. MPEP § 201.06(c) includes a sub-section entitled “Incorporation by Reference” which states that:

An applicant may incorporate by reference the prior application by including, in the continuation . . . application-as-filed, an explicit statement that such specifically enumerated prior application or applications are “hereby incorporated by reference.” The statement must appear in the specification. *See* 37 CFR 1.57(b) and MPEP § 608.01(p). The inclusion of *this incorporation by reference statement will permit an applicant to amend the continuation . . . application to include subject matter from the prior application(s), without the need for a petition* provided the continuation . . . application is entitled to a filing date notwithstanding the incorporation by reference.

Ex. 2010, 200-26 (emphasis added). Similar to MPEP § 201.06(c), MPEP § 608.01(p) states that “[t]he inclusion of such an incorporation by reference statement in the later-filed application *will permit applicant to include subject matter from the prior application into the later-filed application without the subject matter being considered as new matter.*” MPEP § 608.01(p), 600-99 (emphasis added).

Based on the foregoing, we determine a claim for benefit of the filing date of an earlier application under 35 U.S.C. § 119(e)(1) or 35 U.S.C. § 120 does not fall within the scope of “essential material” that can be incorporated by reference under 37 C.F.R. § 1.57(c).

MPEP § 2163 is entitled “Guidelines for the Examination of Patent Applications Under the 35 U.S.C. 112, para. 1, ‘Written Description’ Requirement” (MPEP § 2100, 2100-164 (8th ed., Rev. 6, Sep. 2007)). MPEP § 2163 thus pertains to the manner in which the Patent Office treats

incorporation by reference of essential material. We are not persuaded, therefore, by Patent Owner's argument that this section imposes requirements on the Patent Office with respect to treatment of a priority claim.

Section 1.57(d) of Title 37 of the Code of Federal Regulations states that "nonessential material" may be incorporated by reference, but does not define "nonessential material" explicitly. *See* 37 C.F.R. § 1.57(d) (referring to incorporation by reference of "[o]ther material ('Nonessential material')"). The MPEP defines "[n]onessential subject matter as subject matter referred to for purposes of indicating the background of the invention or illustrating the state of the art." MPEP § 608.01(p), 600-95. The version of 37 C.F.R. § 1.78 in effect at the time of filing the '115 patent authorized, but did not require, inclusion in the specification of a benefit claim to a prior-filed provisional or nonprovisional application. *See* 37 C.F.R. § 1.78 (a)(2)(iii), (a)(5)(iii). When included in the specification, 37 C.F.R. § 1.77 ("Arrangement of application elements") provides that the benefit claim should appear in a section titled "Cross-reference to related applications." 37 C.F.R. § 1.77(b)(2). The "Cross-reference to related applications" section is a separate section from the "Background of the invention section." *Compare* 37 C.F.R. § 1.77(b)(2), *with* 37 C.F.R. § 1.77(b)(6). MPEP § 608.01(c) states that "[t]he Background of the Invention ordinarily comprises two parts: . . . A statement of the field of art to which the invention pertains" and "paragraph(s) describing to the extent practical the state of the prior art or other information disclosed known to the applicant, including references to specific prior art or other information where appropriate." MPEP § 608.01(c), 600-80.

Based on the foregoing descriptions, we determine a claim for benefit of the filing date of an earlier application under 35 U.S.C. § 119(e)(1) or 35 U.S.C. § 120 does not indicate the background of the invention or illustrate the state of the art and, therefore, does not fall within the scope of “nonessential material” that can be incorporated by reference under 37 C.F.R. § 1.57(d).

Although 37 C.F.R. § 1.57 only expressly provides for incorporation by reference of “essential” and “nonessential” material,” we nonetheless consider whether the case law supports Patent Owner’s contention that a priority claim can be incorporated by reference.

Patent Owner, relying on *Harari v. Hollmer*, 602 F.3d 1348 (Fed. Cir. 2010) (“*Harari I*”), argues we should apply a “reasonable examiner” standard in determining whether the ’115 patent’s incorporation by reference of the ’838 patent in its entirety included the ’838 patent’s priority claim to the ’745 patent and the ’917 provisional. PO Resp. 10–11. The issue in *Harari I* was whether an incorporation by reference statement in the involved patent application (“the ’880 application”), as originally filed, met the 37 C.F.R. § 1.57(b)(2) requirement to clearly identify the application incorporated by reference. *See Harari I*, 602 F.3d at 1350–51. The ’880 application claimed priority to a chain of patent applications as follows: “a continuation of U.S. Patent Application No. 08/771,708, which is a continuation of U.S. Patent Application No. 08/174,768, which is a continuation of U.S. Patent Application No. 07/963,838, which is a divisional of the original ’566 application.” *Id.* at 1350. The ’880 application included a statement incorporating by reference an application (“the ’579 application”) filed on the same day as the ’566 application, but

identified in the incorporation statement only by its title and the names of the inventors. The Examiner rejected as new matter a preliminary amendment revising the incorporation statement to identify the referenced application by its serial number and filing date. *Id.* at 1351. Incorporation of the '579 application was necessary for the '880 application to meet the written description requirement under 35 U.S.C. § 112, first paragraph. *See id.* at 1350. Section § 1.57(c)(1) of Title 37 of the Code of Federal Regulations expressly states that material necessary to meet the requirements of 35 U.S.C. § 112, first paragraph, is “essential material” that may be incorporated by reference provided certain requirements are met. We are not persuaded that the reasonable examiner standard applied by the Federal Circuit in *Harari I* in connection with the incorporation by reference of “essential material” is applicable to incorporation by reference of a benefit claim, i.e., material that does not fall within the scope of material expressly identified in 37 C.F.R. 1.57 as subject to incorporation by reference.

In addition to *Harari I*, we have considered the subsequent related case, *Hollmer v. Harari*, 681 F.3d 1351 (Fed. Cir. 2012) (“*Harari II*”), cited by Petitioner (Pet. Reply 6, n.1). In *Harari II*, the court considered the issue of whether statements in the intervening '838 and '768 applications that attempted to incorporate the '579 application by reference without identifying the serial number and filing date, complied with the written description requirement of 35 U.S.C. § 112 such that the '880 application was entitled to claim the benefit of the filing date of the '566 application under 35 U.S.C. § 120. *See Harari II*, 681 F.3d at 1354–55. *Harari II*, as well as the cases cited therein (*see id.* at 1355), do not support Patent

Owner's contention that a priority claim is subject matter that can be incorporated by reference.

Patent Owner argues we “must grant deference to [the primary examiner's] grant of the proper, unbroken priority chain from the '115 Patent to the '917 Provisional.” PO Resp. 12. Patent Owner notes that, during prosecution of the '115 patent, the primary examiner generated a Bib Data Sheet on June 7, 2012, and three separate filing receipts, issued February 11, 2009, March 5, 2009, and April 22, 2009, in the '115 patent, each including the following priority chain: “This application is a CON of 10/720,728 11/24/2003 PAT 7,502,838 which is a CON of 09/599,382 06/22/2000 PAT 6,687,745 which claims benefit of 60/153,917 09/14/1999.” *Id.* at 11–12 (citing Ex. 1014, 68, 145, 149, 160). Patent Owner further notes the Examiner's prior art search was based on the '917 provisional filing date, rather than the '838 patent filing date. *Id.* (citing Ex. 1014, 136). Patent Owner contends it had no reason to believe there was any problem with the sufficiency of its incorporation by reference statement/priority claim until it received a fourth filing receipt on July 19, 2012, that identified only the '838 patent under the heading “Domestic Priority data as claimed by applicant” (Ex. 1014, 59). PO Resp. 13. Patent Owner contends prosecution was officially closed prior to that date because a Notice of Allowance was mailed on June 7, 2012. *Id.* Patent Owner argues it “was legally time-barred from seeking to correct the improper July 19, 2012 filing receipt” because 37 C.F.R. § 1.57(g) states that an “incorporation by reference that does not comply with paragraphs (b), (c), or (d) of this section is not effective to incorporate such materials unless corrected . . . in no case later than the close of prosecution.” *Id.*

Patent Owner relies on the declaration testimony of Mr. Rappaport in support of the above arguments. *See* PO Resp. 12–13 (citing Ex. 2019 ¶¶ 45, 58–60, 64). Mr. Rappaport testified that “[t]he claims of priority of the ’115 Patent based on the claim of priority to the ’838 Patent and its incorporation by reference in its entirety and further the cross reference to the priority date of the ’917 Provisional application and the incorporation by reference of the ’917 Provisional in its entirety clearly meets the reasonable examiner standard.” Ex. 2019 ¶ 64.

As explained above, *Harari I* stands for the proposition that a reasonable examiner standard may be applied during patent prosecution to determine compliance with 37 C.F.R. § 1.57(b)(2). This section presumes, however, that the material sought to be incorporated by reference falls within the scope of material that is subject to incorporation by reference under 37 C.F.R. § 1.57, i.e., essential or nonessential material. Mr. Rappaport’s testimony that a benefit claim is material subject to incorporation by reference conflicts with the language of the patent laws and rules, and MPEP in effect at the time the ’115 patent was filed, as well as the case law.

In sum, we determine Patent Owner’s incorporation by reference of the ’838 patent in its entirety, at most, afforded Patent Owner an opportunity to add a reference to the ’745 patent in the first paragraph of the specification so as to obtain a proper claim for benefit to the filing date of the ’917 provisional. *See* 37 C.F.R. § 1.78(a)(2)(i), (a)(5)(i).

We are not persuaded that the requirements for obtaining the benefit of the filing date of an earlier application (*see* 35 U.S.C. § 119(e) and § 120, and 37 C.F.R. § 1.78) should be waived as a result of any error on the part of

the examiner. The burden was on Patent Owner to read and understand the applicable patent laws and rules. *See Medtronic CoreValve, LLC v.*

Edwards Lifesciences Corp., 741 F.3d 1359, 1366 (Fed. Cir. 2014)

(declining to adopt the “reasonable person” test proposed by Medtronic to interpret the sufficiency of a priority claim under 35 U.S.C. § 120:

“Medtronic’s proposal runs afoul of the language of the statutory provision, which requires ‘a specific reference’ to each earlier filed application, as well as the implementing regulation for § 120, which requires precise details in priority claims down to the ‘application number (consisting of the series code and serial number),’ 37 C.F.R. § 1.78(a)(2)(i).”). We find the requirements for a benefit claim as of the filing date of the ’115 patent were clearly explained in the applicable version of the MPEP:

The Office may not recognize any benefit claim where there is no indication of the relationship between the nonprovisional applications or no indication of the intermediate nonprovisional application that is directly claiming the benefit of the provisional application. Even if the Office has recognized a benefit claim by entering it into the Office’s database and including it on applicant’s filing receipt, the benefit claim is not a proper benefit claim under 35 U.S.C. 119(e) or 35 U.S.C. 120 and 37 CFR 1.78 unless the reference is included in an [Application Data Sheet] or in the first sentence(s) of the specification and all other requirements are met.)

Ex. 2010, 200–66.

Patent Owner also argues

[t]he ’115 Patent was fully litigated in a patent infringement charge in the Eastern District of Texas[, and] . . . “found valid and infringed. . . [A]t no time did . . . [the] defendants even contest the chain of priority for the ’115 Patent. . . . Therefore, this further illustrates the recognition of a proper priority claim of the ’115 Patent to the ’917 Provisional.

PO Resp. 16 (citing Ex. 2019 ¶¶ 22–23, 49–54). Petitioner does not appear to have been a party to the Eastern District of Texas case, and it is not apparent on this record, that the effective filing date of the ’115 patent was relevant to the defendants’ invalidity claims. *See* Ex. 2021, 1, 6–7. Patent Owner has not cited any support for its contention that the absence of a challenge to the chain of priority for the ’115 patent in the district court case amounts to a determination that the ’115 patent is entitled to claim the benefit of the ’917 provisional application. *See* PO Resp. 16; Ex. 2019 ¶¶ 49–54. We decline to accord weight to Mr. Rappaport’s opinion that “this Board owes some level of deference to the findings of the Federal District trial court that by not just a preponderance of the evidence, but by the Supreme Court-declared-standard of ‘clear and convincing evidence’ in *Microsoft v. i4i*, the ’745, ’838, and ’115 patent are indeed valid” (Ex. 2019 ¶ 23). *See* 37 C.F.R. § 42.65(a) (“Testimony on United States patent law or patent examination practice will not be admitted.”).

In sum, based on the record before us, we determine the effective filing date of the ’115 patent is November 24, 2003, and that Franco PCT, published March 22, 2001, is a valid prior art reference with respect to the ’115 patent.

B. Overview of the Subject Matter

A block diagram of one embodiment of the ’115 patent system is shown in Figure 1, reproduced below. Ex. 1001, 7:11–13.

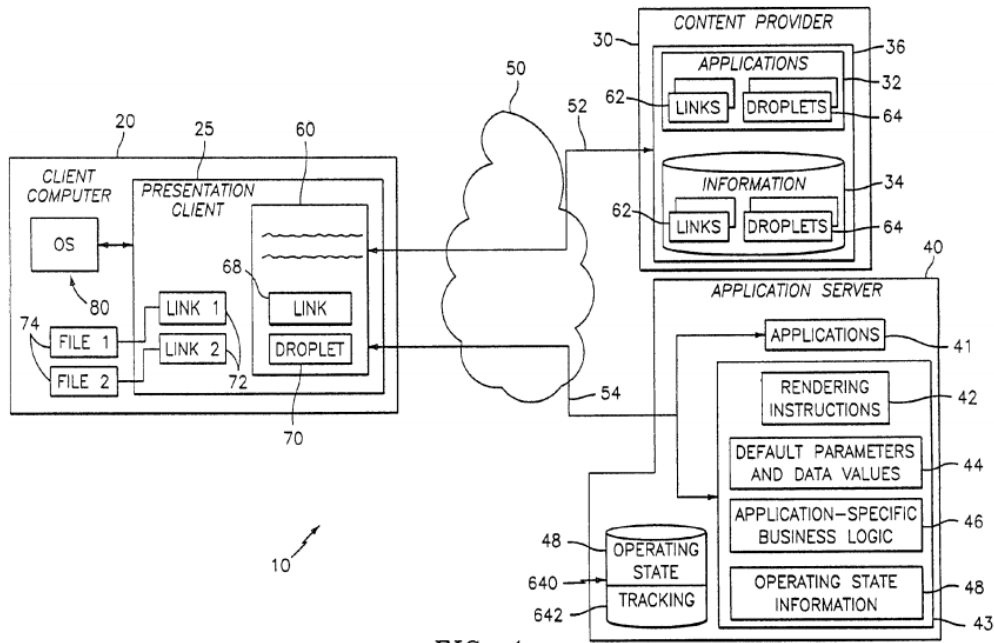


FIG. 1

Figure 1, above, shows the general architecture of client/server configured computer processing system 10 wherein single client computer 20 is coupled operatively over a network 50 to a content provider 30 and an application server 40. *Id.* at 7:45–50. In use, client computer 20 requests from content provider 30 informational content 36 shared by users over network 50, e.g., the Internet. *Id.* at 7:58–60, 7:65–8:1. In response, content provider 30, containing Droplets™ 64 and links 62, delivers document 60 containing, e.g., one link 68 and one droplet™ 70, over communication connection 52. *Id.* at 8:1–6.

“Droplets™ are generic or universal applications that can be implemented on a variety of computer hardware and software platforms,” *id.* at 10:47–49, including computer workstations, and portable devices such as laptop and notebook computers and internet-enabled telephones, *id.* at 9:3–5, that typically have different user interfaces and graphic capabilities, *id.* at

9:5–8. For example, a user, via a web browser application (e.g., MICROSOFT® Internet Explorer™) on client computer 20, may navigate to a web page having embedded therein one or more Droplets™, such as a downloadable Java applet, ActiveX controls, a browser plug-in written in the Java, C++ or other suitable programming language, or other multimedia objects, that are invoked as a web page is loaded. *Id.* at 10:6–10, 18–20, 51–56. Droplet™ 70, once loaded, notifies client computer 20 and then cooperates with presentation client 25 and operating system software 80 of client computer 20 to establish the communication connection 54 to application server 40. *Id.* at 8:41–47. Droplet™ 70 provides application server 40 with information regarding the operating environment, e.g., operating system, user interface, and hardware capabilities, of client computer 20. *Id.* at 8:59–67, 11:34–36. Based on the operating environment, application server 40 provides information 43 to present a requested application 41, such as a Stock Watcher application 100, on client computer 20. *Id.* at 9:8–12, 10:4–6. “[I]nformation 43 includes, for example, instructions 42 for rendering graphical objects within the presented application[] 41, default parameters or data values 44 displayed within the application[] 41 and application-specific business logic 46 for processing inputs to the application[] 41.” *Id.* at 9:12–17.

[Link 68] may be stored locally on the client computer 20 as interactive link[] 72 that, when selected, retrieve[s] the information 43 and invoke[s] the application[] 41 to present the functionality of the application[] 41 at the client computer. In particular, when performing a subsequent retrieval of the functionality presented by the application[] 41, the applications 32 and/or information 34 that originally provided the link 68 (now locally stored as the interactive link 72) to the application[] 41 need not be retrieved. Rather, the interactive

link 72 can be employed to directly invoke and execute the application[] 41 on the application server 40 to provide the requested functionality at the client computer 20.

Id. at 8:23–35.

When actively operating, properties of and events pertaining to components of application 41 are transmitted between client computer 20 and application server 40 by a network communication protocol. *Id.* at 11:56–63. The protocol includes message formats that provide a real-time push/pull messaging scheme between the user interface of application 41 presented on client computer 20 and application drivers supporting the user interface from application server 40. *Id.* at 12:42–47. Message formats include “Event Notifications—messages transmitted from a client computer 20 to the application server 40 reporting that a value or attribute of a component of the GUI [(graphical user interface)] has been altered,” and “Update Commands—messages transmitted from application drivers, e.g., the application specific logic 46 supporting a droplet-enabled application, on the application server 40 to the client computer 20 requesting action within screen components of the system 10.” *Id.* at 11:65–12:1, 12:9–13.

C. Representative Claims

The ’115 patent includes 25 claims, all of which are the subject of the present *inter partes* review. Challenged claims 1, 12, and 25 are independent. Claims 1 and 12 are directed to computerized methods, and claim 25 is directed to a system. Claims 1 and 25, reproduced below, are illustrative of the challenged claims:

1. A computerized method for delivering interactivity over the web to a client device from a remotely stored application residing on a server, the method comprising:

in response to receiving a request for a web page from the client device, serving a web page to the client device, the web page having executable code embedded therein which, when executed in a web browser running on the client device, communicates messages with the remotely stored application on the server, the web page further having user interface information for presenting within the web browser a user interface for the remotely stored application;

receiving an event message from the executable code on the client device, the event message reporting an action taken within one or more screen components in the user interface through the client device;

executing application logic within the remotely stored application on the server to generate data values based on the action reported in the event message and client device information; and

sending to the client device an update message with at least some of the generated data values and instructions for use by the executable code to present the data values within the user interface of the web page at the client device.

Ex. 1001, 29:37–61.

25. A system for delivering interactivity over the web to a client device from a remotely stored application residing on a server, the system comprising:

one or more web pages stored at the server, the web pages each having executable code embedded therein which are programmed to, when executed in a web browser running on the client device, communicate messages with the remotely stored application on the server, the web pages each further having user interface information for presenting within the web browser a user interface for the remotely stored application, the messages communicated by the executable code including an event message communicated from the executable code to the server reporting an action taken within one or more screen components in the user interface and an update message sent from the server to the client

device with data values and instructions for use by the executable code to present the data values within the user interface of the web page at the client device

the remotely stored application residing on the server and containing application logic executing within the remotely stored application to generate the data values based on the action reported in the event message and client device information.

Id. at 32:1–24.

IV. LEVEL OF ORDINARY SKILL IN THE ART

The level of ordinary skill in the art is relevant to claim construction and anticipation. *See Yorkey v. Diab*, 605 F.3d 1297, 1300 (Fed. Cir. 2010) (explaining that a determination of anticipation involves interpreting the claim language and then comparing the construed claim to a prior art reference); *In re Suitco Surface, Inc.*, 603 F.3d 1255, 1259–60 (Fed. Cir. 2010) (“[C]laim language should be read in light of the specification as it would be interpreted by one of ordinary skill in the art.”).

Petitioner contends a person of ordinary skill in the art in November 2003 (i.e., the effective filing date of the ’115 patent as determined in Section III.A., above), would have had “through education or practical experience, . . . at least 2-3 years of experience in web-based development, such as the development of web-based client/server applications using Java, JavaScript, ActiveX, or other similar technologies.” Pet. 7. Petitioner contends such person would have been familiar with pre-existing remote application technologies, such as those described in the background of the invention section of the ’115 patent. *Id.* Petitioner further contends “[t]his person would [have been] aware of the 1990’s trend of moving web sites toward dynamic web pages utilizing JavaScript and well-known graphical

user interface features such as drop down menus, buttons, and drag and drop[, and] . . . would [have been] familiar with graphical user interfaces, client/server systems, web sites operation, the various ways of navigating a web site, and Java 1.2.” *Id.*

Petitioner relies on the testimony of Dr. Burback in support of its proposed definition of the level of ordinary skill in the art. *See id.* (citing Ex. 1002 ¶¶ 37–40). We find Dr. Burback is qualified to give an opinion as to the level of ordinary skill in the art in the field of internet-based client/server interactivity. *See* Section II, above. Based on our own review of the ’115 patent and the applied references, and the types of problems and solutions described therein, we agree with Dr. Burback’s opinion on the level of ordinary skill in the art. In its Patent Owner Response, Patent Owner does not comment on Petitioner’s proposed definition of the level of ordinary skill in the art, or offer an alternative definition. *See generally* PO Resp.⁹ Accordingly, we adopt Petitioner’s definition of the level of ordinary skill in the art for purposes of this proceeding.

V. CLAIM CONSTRUCTION

In an *inter partes* review, we interpret claim terms in an unexpired patent according to the broadest reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b); *see also In re Cuozzo Speed Techs., LLC*, 793 F.3d 1268, 1278–80 (Fed. Cir. 2015) (“Congress implicitly approved the broadest reasonable interpretation standard in enacting the AIA,” and “the standard was properly adopted by

⁹We note Dr. Wilson’s opinion as to the level of ordinary skill in the art is not inconsistent with Dr. Burback’s opinion. *See* Ex. 2022 ¶¶ 29–30.

PTO regulation.”), *aff’d sub nom. Cuozzo Speed Techs. LLC v. Lee*, No. 15–446, 2016 WL 3369425, at *12 (U.S. June 20, 2016) (upholding the use of the broadest reasonable interpretation standard). Under that standard, and absent any special definitions, we give claim terms their ordinary and customary meaning, as would be understood by one of ordinary skill in the art at the time of the invention. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007); *see also Trivascular, Inc. v. Samuels*, 812 F.3d 1056, 1062 (Fed. Cir. 2016) (“Under a broadest reasonable interpretation, words of the claim must be given their plain meaning, unless such meaning is inconsistent with the specification and prosecution history.”). Only terms which are in controversy need to be construed, and only to the extent necessary to resolve the controversy. *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999).

In its Petition, Petitioner offers proposed constructions for the claim terms “remotely stored application,” “client device information,” “event message,” and “interactive link.” Pet. 13–17. In its Preliminary Response, Patent Owner requested that we defer claim construction until the institution of a trial. Prelim. Resp., 11. We determined that no express construction of the claim language was required for purposes of rendering the Institution Decision. *See* Dec. on Inst. 10.

In its Patent Owner Response, Patent Owner contends the claim terms should be given their ordinary meaning. PO Resp. 2. Patent Owner does not provide an express definition of any claim term, but references paragraphs 26–29 of the Wilson Declaration for definitions of the four claim terms construed in the Petition. *Id.* Dr. Wilson testified that Petitioner’s asserted

claim constructions are overly narrow and proposes that the terms construed by Petitioner be given their ordinary meaning. Ex. 2022 ¶¶ 25–28.

In its Reply, Petitioner argues that, although “Dr. Wilson alleges that Petitioners’ proposed constructions are ‘unnecessarily narrow,’ he does not explain how an alternate broader construction of any term has any meaningful impact on the present proceeding.” Pet. Reply 1. Petitioner contends, in other words, that Dr. Wilson’s broader construction of the claim terms does not impact its application of the prior art to the claims as set forth in the Petition. *Id.* at 2. Petitioner also asserts that Patent Owner’s Response improperly attempts to incorporate by reference material from the Wilson Declaration. Pet. Reply 1 (citing 37 C.F.R. § 42.6(a)(3) (“Arguments must not be incorporated by reference from one document into another document.”)). Petitioner argues we should not give any weight to Dr. Wilson’s testimony regarding the meaning of the claim language because Dr. Wilson failed to identify underlying support for, and provide meaningful analysis of, his proposed constructions. *See id.* at 1–3.

In its Reply, Petitioner also indicates that there is a disagreement between the parties over the meaning of the claim term “instructions.” *See* Pet. Reply 21. During the oral hearing, Patent Owner agreed that there was a dispute over the scope of the claim term “instructions,” and that this term also might require construction. *See, e.g.,* Tr. 37:21–38:3.

Having now considered Patent Owner’s Response and Petitioner’s Reply, and evidence in support thereof, as well as the arguments made during the oral hearing, we maintain our initial determination that no express construction is needed to determine the patentability of the challenged claims in this *inter partes* review. *See Vivid Techs.*, 200 F.3d at 803.

VI. ANALYSIS

To prevail in its challenges to the patentability of the claims, a petitioner must establish facts supporting its challenges by a preponderance of the evidence. 35 U.S.C. § 316(e); 37 C.F.R. § 42.1(d).

To establish anticipation, each and every element in a claim, arranged as recited in the claim, must be found in a single prior art reference.

Net MoneyIN, Inc. v. VeriSign, Inc., 545 F.3d 1359, 1369 (Fed. Cir. 2008); *Karsten Mfg. Corp. v. Cleveland Golf Co.*, 242 F.3d 1376, 1383 (Fed. Cir. 2001). While the elements must be arranged or combined in the same way as in the claim, “the reference need not satisfy an *ipsisssimis verbis* test.” *In re Gleave*, 560 F.3d 1331, 1334 (Fed. Cir. 2009).

A single prior art reference that discloses, either expressly or inherently, each limitation of a claim invalidates that claim by anticipation. Thus, a prior art reference without express reference to a claim limitation may nonetheless anticipate by inherency. “Under the principles of inherency, if the prior art necessarily functions in accordance with, or includes, the claims limitations, it anticipates.”

Perricone v. Medicis Pharm. Corp., 432 F.3d 1368, 1375–76 (Fed. Cir. 2005) (citations omitted). “In general, a limitation or the entire invention is inherent and in the public domain if it is the ‘natural result flowing from’ the explicit disclosure of the prior art.” *Schering Corp. v. Geneva Pharm., Inc.*, 339 F.3d 1373, 1379 (Fed. Cir. 2003).

A claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406

(2007). The question of obviousness is resolved on the basis of underlying factual determinations, including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of skill in the art; and (4) when in evidence, objective evidence of nonobviousness, i.e., secondary considerations. *See Graham v. John Deere Co.*, 383 U.S. 1, 17-18 (1966). An obviousness analysis “need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.” *KSR*, 550 U.S. at 418.

We analyze the instituted grounds of unpatentability in accordance with the above-stated principles.

A. Obviousness of Claims 1–25 over Franco PCT (Ex. 1017) and Moshfeghi (Ex. 1011)

Challenged claims 1–25 are directed to computerized methods (claims 1 and 12) and a system (claim 25) “for delivering interactivity over the web to a client device from a remotely stored application residing on a server” (claims 1, 12, 25). *See Ex. 1001*, 29:36–32:24.

Patent Owner raises two arguments in support of patentability of these claims. PO Resp. 17–18. Patent Owner’s first argument is that Franco PCT is not a prior art reference with respect to the ’115 patent, because Franco PCT and the ’115 patent share the same effective filing date by virtue of their benefit claims to the ’917 provisional. *Id.* at 17. In Section III.A., above, we determined the ’115 patent is entitled only to the benefit of the November 24, 2003, filing date of the ’838 patent. Accordingly, we are not persuaded by this argument.

Patent Owner’s second argument is that the ordinary artisan would not have been motivated to combine Moshfeghi and Franco PCT. PO Resp. 18. We address this argument below.

1. Franco PCT (Ex. 1017)

Patent Owner does not dispute Petitioner’s contention that “[t]he Franco PCT specification is substantively identical to that of the ’115 patent . . . [and] [t]he only differences between Franco PCT and the ’115 patent are the claims themselves and the addition of a brief ‘Claim of Priority’ in the ’115 patent” (Pet. 18). *See* PO Resp. 17–18. Petitioner’s contention is supported by its redline comparison of Franco PCT and the ’115 patent. *See* Ex. 1022.

2. Moshfeghi (Ex. 1011)

Moshfeghi “relates to a web system or site which provides web or hypertext pages and/or other data objects that are personalized to the user.” Ex. 1011, 1:8–11. The system is said to be applicable to internal networks (intranets), as well as the Internet. *Id.* at 8:11–16. Figure 1, reproduced below, is a block diagram illustrating an embodiment of the invention.

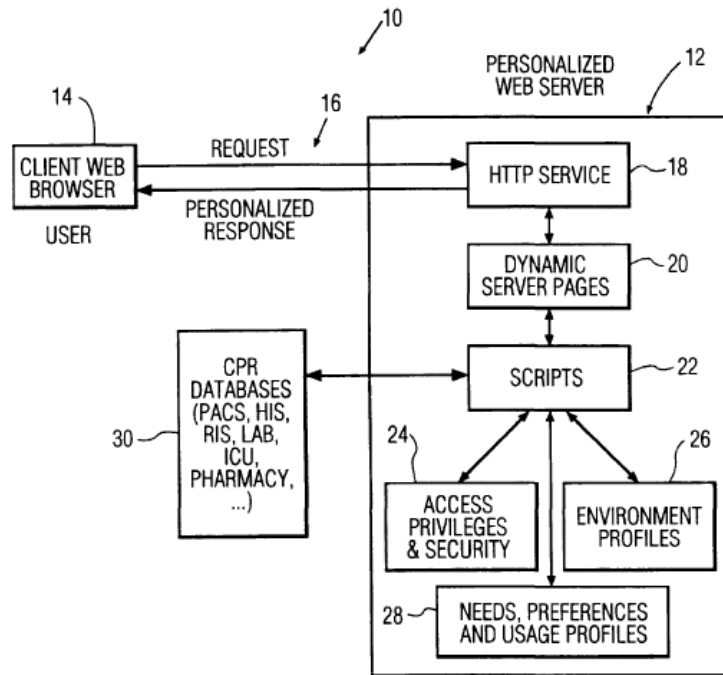


FIG. 1

Figure 1, above, shows a web system for an intranet of a hospital, *id.* at 2:6–7, whereby a user, e.g., a physician, patient, or visitor, *id.* at 2:24–25, can obtain information about a patient, *id.* at 2:45. User web browser operating equipment 14 and web server 12 are coupled for bidirectional communication via network path 16. *Id.* at 2:14–17. User web browser operating equipment 14 may be a computer workstation, a laptop or notebook, a personal digital assistant, or other device equipped to request downloads of particular web pages and other data objects (such as images and documents in the form of graphics). *Id.* at 2:18–22, 29–32. A user enters a name and password at user web browser operating equipment 14, *id.* at 6:50–52, via, e.g., a Java applet, *id.* at 4:2–4. If the user is authorized, the user then inputs the identification (“ID”) of a patient for which the user desires information. *Id.* at 6:59–60. Information about “the user’s environment such as capabilities of the computer, network connection,

display, browser, and room characteristics,” *id.* at 7:10–12, may be obtained from the Internet Protocol address of user web browser operating equipment 14, where the user web browser operating equipment 14 remains in a fixed location, *id.* at 6:58–59. Personalized web server 12 can also “communicate with the client web browser [14] and detect the browser capabilities (support for Java, ActiveX, versions of HTML [(HyperText Markup Language)] and HTTP [(Hypertext Transfer Protocol)], plug-ins, etc.),” so that the appropriate content can be served. *Id.* at 4:39–42. The foregoing personalizing information, once entered, can be stored in databases 24, 26, and 28 maintained by web server 12. *Id.* at 4:61–63.

When a user requests computer-based patient records (CPR) information distributed in CPR databases 30, server scripts 22 check the personalizing information maintained in databases 24 (pertaining to access privileges and security), 26 (pertaining to environment profiles), and 28 (pertaining to user needs, preferences, and usage profiles). *Id.* at 2:37–45, 50–51. “The outcome is rules for retrieving [CPR] information and rules for generation of web pages.” *Id.* at 2:46–49. “[Server] scripts [22] filter, retrieve, and process the CPR information.” *Id.* at 2:49–50. Server scripts 22 then generate dynamic personalized web pages and/or data objects in module 20, which web server 12 sends to client web browser 14. *Id.* at 2:34–37, 54–57.

3. *Analysis*

Petitioner contends Franco PCT discloses the invention as recited in claims 1–25, with the exception of an explicit description of the independent claim limitations related to execution of application logic to generate data values based on an action reported in an event message and client device

information. *See* Pet. 19. More specifically, Petitioner contends Franco PCT teaches addressing the client device operating environment at the client device side, prior to the server executing, but does not describe creating and dynamically serving web pages based on the capabilities of the users' computers and client device information. *See id.* at 19–21. Petitioner contends this feature is described in Moshfeghi, which

discloses a system where “the web pages are created dynamically based on the capabilities of the users' computers, computer bandwidth connection, display characteristics, browser capabilities, and physical room characteristics. In order to achieve this, the web server has to be supplied with information about the user and the user's environment.” Ex. 1011 at 1:35-58; *see also id.* at Abstract; FIGS. 1 and 2.

Pet. 19–20.

Petitioner contends one of ordinary skill in the art would have been motivated to use “the techniques of Moshfeghi in the context of Franco PCT” (*id.* at 21), because

[t]he person of skill would [have] recognize[d] that, given increased user mobility and as the references suggest, generating customized web content based on user-interface events (e.g., entry of user information via an applet) and client device information such as screen characteristics and browser capabilities would improve client-device interoperability and the overall user experience.

(*id.* at 20).

Petitioner's arguments are supported by the declaration testimony of Dr. Burbach. *See* Pet. 18–25 (citing Ex. 1002 ¶¶ 49–58). Dr. Burbach testified that “using the techniques of Moshfeghi according to Franco PCT would have been within the capabilities of those of ordinary skill at the time [of the invention].” Ex. 1002 ¶ 56.

Patent Owner relies on Dr. Williams' declaration testimony in support of its contention that one of ordinary skill in the art would not have been motivated to combine the Franco PCT system with the Moshfeghi system. *See* PO Resp. 18 (citing Ex. 2022 ¶¶ 37, 44, 45). Patent Owner contends "[t]he Moshfeghi system requires the user to always access . . . information from the same IP address, and hence the user is restricted to explicit pre-registered client devices." *Id.* (citing Ex. 1011, 4:21–25; Ex. 2022 ¶ 37). Dr. Wilson testified that "a person of ordinary skill would not see that a technical ability exists to combine Franco and Moshfeghi" because: (1) Moshfeghi's delivery of "specialized apps on a closed hospital intranet" differs from Franco's delivery of "general-purpose applications anywhere on the open web;" and (2) "Moshfeghi does not deliver executable code to the client while Franco does." Ex. 2022 ¶¶ 44, 45.

Petitioner contends Patent Owner's arguments are based on an overly narrow view of Moshfeghi's teachings. Pet. Reply 14. Petitioner contends Moshfeghi

actually teaches that a user may access information from a number of different devices at different locations, and that the principles of its system are not limited to a hospital intranet but rather are "also applicable to intranets in other settings, to internets, and to the World Wide Web accessible via the essentially global network known as the Internet." *Id.* (citing Ex. 1011, 1:10–15, 5:60–65). Petitioner also argues Moshfeghi describes "the use of smart cards and active badges to enable mobility and allow a user to log on from, e.g., 'laptops connected via a telephone or wireless connection,' where the computer's [Internet Protocol] address cannot be used to locate its position." *Id.* (citing Ex. 1011, 4:43–60).

Petitioner contends Dr. Wilson’s declaration testimony is flawed, because Dr. Wilson: (1) admitted that in preparing his declaration, his review of Franco PCT was limited to the abstract (*id.* at 13 (citing Ex. 1030, 35:16–36:5)); (2) admitted that, contrary to his statement in paragraph 14 of his declaration, he did not review Moshfeghi in preparing his declaration, but reviewed the corresponding PCT version, and, “[d]espite being aware of at least one difference, he never performed an analysis between Exhibit 1011 and [the PCT] version of . . . Moshfeghi [he relied upon] . . . to see how extensive the discrepancies might go” (*id.* at 10–11 (citing Ex. 2022 ¶ 14; Ex. 1030, 25:12–26:7, 28:16–18; 26:22–27:7)); (3) misapprehended Moshfeghi’s system as limited to use in a closed hospital intranet (*id.* at 12 (citing Ex. 1030 28:23–31:1; Ex. 2022 ¶ 33)); and (4) based his opinion that one of ordinary skill in the art would not have combined Franco PCT and Moshfeghi on an improper legal standard that the ordinary artisan would not have been able to physically combine Franco PCT and Moshfeghi (*id.* at 15–16 (citing Ex. 2022 ¶ 45; Ex. 1030, 40:8–41:17)).

We agree with Petitioner that Patent Owner’s arguments are not supported by the evidence of record and accord little weight to the testimony of Dr. Wilson with respect to this challenge as a result of the errors and inconsistencies in his testimony. *See* Pet. Reply 9–16. We find Petitioner’s arguments are supported by the evidence of record and accord weight to Dr. Burbach’s testimony that one of ordinary skill in the art would have been motivated to modify Franco PCT based on Moshfeghi, and possessed the requisite level of skill to make such modifications. *See* Ex. 1002 ¶¶ 55–57.

In particular, Petitioner has identified a teaching or suggestion of each of the limitations recited in the challenged claims in Franco PCT and/or

Moshfeghi, explained the motivation to combine these references in the manner claimed, and shown that one of ordinary skill in the art would have had a reasonable expectation of success in making the proposed combination. *See* Pet. 17–25. We adopt these findings and conclusions as our own. Consequently, we conclude Petitioner has shown by a preponderance of the evidence that each of claims 1–25 would have been unpatentable over Franco PCT and Moshfeghi.

B. Anticipation of Claims 1, 7, 9, 10, 12, 18, 20, 21, and 25 by Frese

Independent claims 1, 12, and 25 recite “a remotely stored application residing on a server.” Each of the independent claims requires executable logic “within” the remotely stored application to generate data values based on client device information. Ex. 1001, 29:53–56, 30:49–54, 32:20–24.

Patent Owner raises two arguments in support of patentability. *See* PO Resp. 19–35. Patent Owner first argues Frese is old art that was already considered by the Patent Office during prosecution, as well as during re-examination. *Id.* at 19–20.

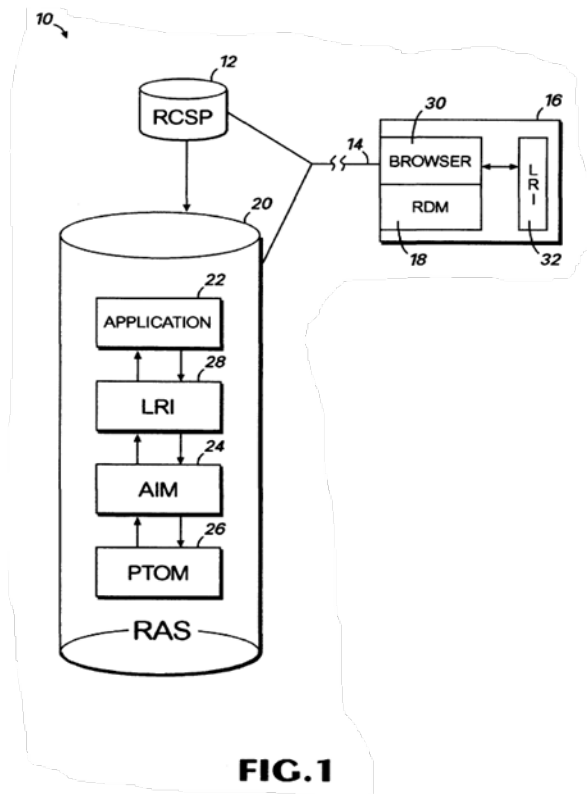
We are not persuaded that consideration of Petitioner’s challenge based on Frese is improper in this *inter partes* proceeding or that deference must be given to prior determinations by the Patent Office as to patentability of the ’115 patent claims over this reference. Section 325(d) of Title 35 of the United States Code states that, in determining whether to institute an *inter partes* review, “the Director may take into account whether, and reject the petition or request because, the same or substantially the same prior art or arguments previously were presented to the Office.” The statutory language gives the Director the authority not to institute review on the basis that the same or substantially the same prior art or arguments were presented

previously to the Office, but does not require that result. *See also* Pet. Reply 17 (citing *Geosys, Int’l, Inc. v Farmers Edge Precision Consulting, Inc.*, Case IPR2015-00708, slip op. 21–22 (PTAB Aug. 21, 2015) (Paper 9) (rejecting similar argument where prosecution history did not contain analysis of issues raised in ground or expert testimony)).

Patent Owner’s second argument is that Frese does not anticipate the challenged claims because Petitioner has not identified in Frese a description of a remotely stored application residing on a server that contains executable application logic for generating data values based on client device information as recited in independent claims 1, 12, and 25 (*see* Ex. 1001, 29:53–54, 30:50–52, 32:20–22). PO Resp. 20–35. We address this argument below.

1. Frese (Ex. 1005)

Frese “relates . . . to remote execution of computer programs over a network.” Ex. 1005, 1:7–9. Figure 1 of Frese, reproduced below, is a block diagram of system 10, which is used to remotely access an application program. *Id.* at 6:23–25.



As shown in Figure 1, above, Frese's system 10 includes user system 16 coupled through network 14, e.g., the Internet (*id.* at 7:23), to remote control service publisher server ("RCSP") 12 and to remote application server ("RAS") 20, e.g., HTTP servers (*id.* at 7:28–29). *Id.* at 6:41–42. User system 16 is typically a personal computer, and communicates with RCSP 12 and RAS 20 over network 14 via browser 30. *Id.* at 6:65–7:1. RCSP 12 presents HTML documents, which a user at user system 16 retrieves using browser 30 and views through local resource interface ("LRI") 32. *Id.* at 7:36–38. The HTML documents describe application programs 22 available for demonstration through RAS 20. *Id.* at 7:33–35. The HTML documents include applet tag fields that allow a user to activate a demonstration of one of the described application programs 22. *Id.* at 7:38–41. "When a user activates [an] applet tag field, browser 30 transmits a request for activation of the selected application program [22] along with

attributes and parameters describing the operating system environment of system 16.” *Id.* at 7:41–45. RCSP 12 then communicates to browser 30 a remote display module, RDM 18, which best corresponds to the operating environment of user system 16. *Id.* at 8:3–5, 10:9–11. Execution of RDM 18 by browser 30’s internal interpreter opens a window for RDM 18 to allow communication between RDM 18 and LRI 32. *Id.* at 9:66–10:4. RAS 20 launches requested application program 22 and any corresponding application interception module (“AIM”) 24. *Id.* at 13:51–53. The computer executing requested application program 22 and user system 16 are thereby able to communicate with one another over network 14. *Id.* at 13:54–56.

RDM 18 monitors calls to LRI 32 by input devices and converts the information in the system calls to remote control protocol statements for encapsulation in the transport, network and link layer protocols by browser 30 for transporting across network 14 to AIM 24. *Id.* at 14:1–5. Likewise, if application program 22 generates low level input/output (I/O) calls, AIM 24 converts the I/O streams for LRI 28 into remote control protocol messages that are then transported across network 14 to RDM 18. *Id.* at 13:60–65. RDM 18 converts the remote control protocol messages to system calls for LRI 32. *Id.* at 13:66–67.

2. *Analysis*

Petitioner contends the broadest reasonable construction of “remotely stored application,” as used in the challenged claims, encompasses multiple combined layers and modules. *See* Pet. Reply 20 (citing Ex. 1001, 28:19–

43).¹⁰ Petitioner’s proposed construction is consistent with the claim language and the ’115 patent’s description of the Figure 7 embodiment of conventional application 500 and droplet-enabled application 550 that include user interface 510, 560, business logic 520, 570, and data storage 530, 580 layers or modules. *See* Ex. 1001, 28:10–18, 40. Patent Owner does not disagree with Petitioner’s use of this proposed construction in its patentability challenge based on anticipation by Frese. *See* PO Resp. 27 (“Any Board decision on claim construction would not alter Petitioner’s consistent mapping of the Frese ‘application program 22’ to the claimed ‘remote application program.’”). *See Vivid Techs.*, 200 F.3d at 803.

Patent Owner argues the claims require generation of data values by application logic within the remotely stored application on the server, the data values being based on (1) the action reported in the event message and (2) client device information. PO Resp. 27. Patent Owner contends the Petition relies solely on Frese’s application program 22 as meeting the limitation of the claimed “remotely stored application” (*see id.* at 23–26), but application program 22 cannot meet the claim limitations because it lacks the ability to use information about client device 16 (*id.* at 28). Patent Owner agrees with Petitioner’s assertion that “AIM 24 and LRI 28 are software modules in the Frese system accounting for information or characteristics of the client device” (*compare id.* at 31 (citing Pet. 30), *with id.* at 29), but argues these components are not *within* the remotely stored

¹⁰ *See also* Pet. 13–14 (asserting that the term “remotely stored application” “should be construed in accordance with its plain meaning in light of the specification to mean *a software program, stored remotely from the client device (i.e., stored on a server), that executes specific tasks based on end user input*”).

application as required by the '115 patent claims (*id.* at 29, 32). Patent Owner, thus, contends Petitioner has not met its burden to show Frese anticipates the invention as recited in challenged claims 1, 7, 9, 10, 12, 18, 20, 21, and 25. *See id.* at 35.¹¹

Petitioner argues its Petition clearly relies on both application program 22 and AIM 24 as the components that meet the “remotely stored application” limitation recited in the claims. Pet. Reply 18. Petitioner cites, e.g., pages 30–31 of the Petition wherein it relies on Frese’s description of the operation of application program 22 *and* AIM 24 for a teaching of the claim 1 step of “executing application logic within the remotely stored application . . . to generate data values based on . . . client device information.” Pet. Reply 18.

We have considered Petitioner’s and Patent Owner’s citations to the record in support of their respective positions. We remain of the same opinion stated in our Institution Decision that Petitioner clearly relied on Frese’s application program 22 and AIM 24 for the claim limitations

¹¹ Patent Owner does not advance additional arguments in support of patentability of any dependent claims, but includes a separate paragraph wherein it states that dependent claims 9, 10, 20, and 21 are patentable for the reasons argued in connection with independent claims 1 and 12. *See* PO Resp. 35. Out of an abundance of caution, we assume Patent Owner’s omission of claims 7 and 18 from this paragraph was inadvertent, and treat Patent Owner’s argument as also directed to claims 7 and 18. It appears the omission of claims 7 and 18 from Patent Owner’s Response may have arisen because Petitioner did not include claims 7 and 18 in the main heading of its anticipation challenge based on Frese (*see* Pet. 26, Section VIII.B.). Anticipation of claims 7 and 18 by Frese is, however, discussed in the Petition under a subheading on page 36 of the Petition (Section VIII.B.2.; *see also* Pet., Table of Contents). *See also* Dec. on Inst. 29, Section VI (2).

requiring application logic *within* a remotely stored application. *See* Dec. on Inst. 23. As noted above, Patent Owner has not disputed that the claims encompass an embodiment of the “remotely stored application” that comprises multiple layers and modules, e.g., the application may include a separate interface and logic module. Patent Owner contends, however, that Frese cannot anticipate because it does not include an explicit description of, or a figure depicting, application program 22 and AIM 24 as layers within an application, as in Figure 7 of the ’115 patent. *See* PO Resp. 32 (“Frese clearly and unambiguously illustrates the AIM 24, LRI 28 and PTOM 26 as being outside of the application program 22.”) (citing Ex. 2022 ¶ 63). Patent Owner suggests that the claim limitation “remotely stored application” can be read properly only on Frese’s application program 22, because this is consistent with Frese’s use of the term “application.” *See id.* at 32–35. We are not persuaded by Patent Owner’s argument, because a finding of anticipation requires only that the claims, as construed, “read on” something disclosed in the reference, i.e., all limitations of the claim are found in the reference, or fully met by it. *In re Schreiber*, 128 F.3d 1473, 1478 (Fed. Cir. 1997); *see also Hewlett-Packard Co. v. Mustek Sys., Inc.*, 340 F.3d 1314, 1324 n.6 (Fed. Cir. 2003) (“The anticipation analysis asks solely whether the prior art reference discloses and enables the claimed invention, and not how the prior art characterizes that disclosure.”). Here, we note that Frese’s disclosure undermines Patent Owner’s argument because it acknowledges that, in at least one instance, AIM 24 is implemented as a component of application program 22. *See, e.g.,* Ex. 1005, 10:53–55 (stating “AIM 24 is typically implemented by replacing . . . a component of application program 22”).

We determine that Petitioner has identified a description of the invention as recited in each of the challenged claims, and conclude Petitioner has shown by a preponderance of the evidence that claims 1, 7, 9, 10, 12, 18, 20, 21, and 25 are anticipated by Frese. *See* Pet. 26–38.

C. Obviousness of Claims 1–3, 6, 9, 10, 12–14, 17, 20, 21, 24, and 25 Over Ferris and Moshfeghi

The term “instruction” is recited in each of independent claims 1, 12, and 25 as follows: Claim 1 recites a step of “sending [by the server] to the client device an update message with at least some of the generated data values and *instructions* for use by the executable code to present the data values within the user interface of the web page at the client device.” Ex. 1001, 29:57–61 (emphasis added). Claim 12 recites

the client device receiving an update message from the server with data values and *instructions* for use by the executable code to present the data values within the user interface of the web page at the client device, the data values having been generated by application logic executing within the remotely stored application on the server based on the action reported in the event message and client device information.

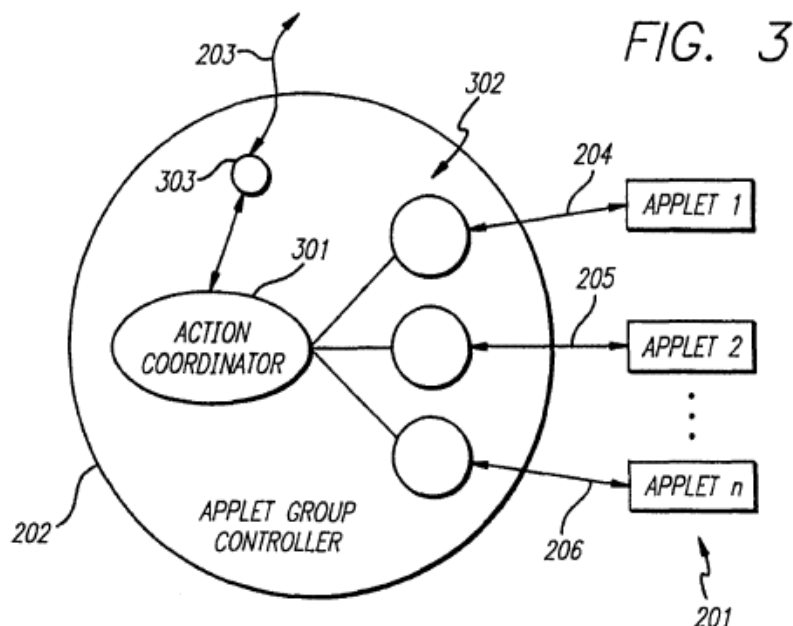
Id. at 30:45–54 (emphasis added). Claim 25 recites a system for delivering interactivity over the web to a client device from a remotely stored application residing on a server, the system includes a “device with data values and *instructions* for use by the executable code [executable in a web browser running on the client device] to present the data values within the user interface of the web page at the client device.” *Id.* at 32:16–19 (emphasis added).

Patent Owner contends the combination of Ferris and Moshfeghi discloses a server that sends data, but fails to describe a system that is capable of, or method that includes a step of, sending instructions to the

client device as required by these independent claims. See PO Resp. 37, 43. We address this argument below.

1. *Ferris (Ex. 1010)*

Ferris discloses that, “[i]n the computer industry, a program that commences operation from a WWW document (an HTML document) is referred to as an ‘applet’. An applet can be used to transmit data to a server and receive data from the server without having to transmit the entire Web page.” Ex. 1010, 12:17–20. Ferris’s invention is directed to “a mechanism that integrates applets (e.g. Java applets) running on a browser with applications running on a server.” *Id.* at 20:4–6. Specifically, Ferris utilizes an AppletGroupController (“controller”) 202 to communicate with any number of active applets on a client computer, and to maintain a line of communication 203 with a server, which is transparent to the user, to control other applets and manage communication and data synchronization between the client computer and the server. *Id.* at 21:24–26, 22:4–7. Controller 202 is shown in Figure 3, reproduced below.



As illustrated in Figure 3, controller 202 passes data to applets 201 via associations 302 that provide a fixed interface for communications with controller 202. *Id.* at 22:10–12. “Action [c]oordinator 301 communicates with [a]ssociations 302[, and] . . . is responsible for state synchronization and for building a package of data to be transmitted back to the server . . . through [c]ommunications [c]hannel 303.” *Id.* at 22:22–25. In use, upon invocation of an event in the browser (e.g., the pressing of a button created by one of applets 201), one of associations 302 instructs action coordinator 301 to invoke an action (e.g., search a database on the server containing user specified values). *Id.* at 8:21–25. In response, action coordinator 301 obtains and transmits a list of all of the values received from the user, and the action to be invoked to the server. *Id.* at 8:25–9:2. The server invokes the appropriate functions utilizing the values transmitted from action coordinator 301 and retransmits the values (including any values that may have changed as a result of the invoked action) back to action coordinator 301. *Id.* at 9:3–6. Action coordinator 301 then pushes the updated values out to applets 201 through associations 302. *Id.* at 9:6–7. Applets 201 update their displays in the browser’s display using the new values. *Id.* at 9:8. In this manner, the information between the client computer and the server is synchronized quickly without the need to display a new HTML document. *Id.* at 9:9–10.

Figure 7, reproduced below, “demonstrates the relationship between Applets, their Associations, and the Server according to an embodiment of the invention.” *Id.* at 10:17–18.

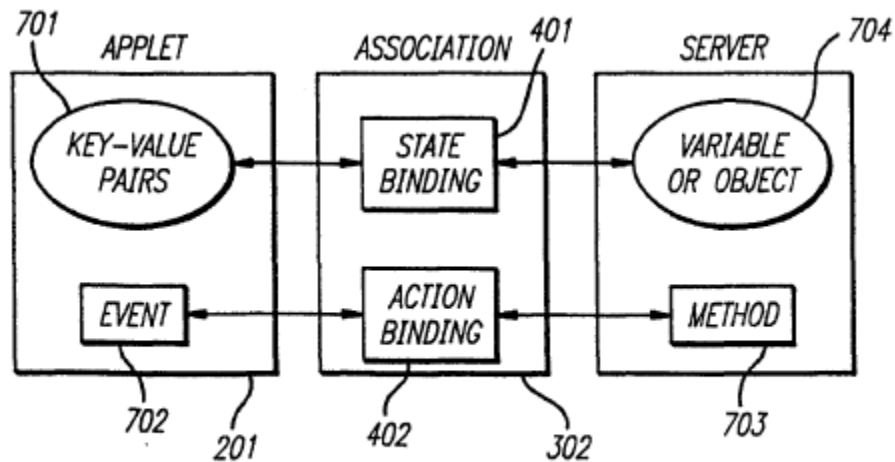


FIG. 7

As shown in Figure 7, associations 302 includes state bindings 401 and action bindings 402. *Id.*, Fig. 7. Applets 201 trigger actions in the server using action bindings 402, i.e., action bindings 402 associate events 702, such as a button being pressed in the client or a carriage return, with the invocation of methods 703 on the server. *Id.* at 23:2–5, 24:7. “State bindings 401 include a list of ‘keys’ that represent the data or state managed by applets 701.” *Id.* at 23:7–8. The keys correspond to the keys in key-value pairs 701 managed by applets 201. In addition, a key is bound to a specific object or variable 704 in the server to which it is synchronized. *Id.* at 23:7–10. “[T]he value in a key-value pair 701 is preferably an object or an aggregation of objects that is one of four classes: string, array, dictionary, or data (referred to as a property-list type of object).” *Id.* at 23:11–14.

When an event occurs, e.g., by clicking a button icon in Applet 201, Association 302 recognizes the event and instructs Action Coordinator 301 to invoke an action if Association 302 determines an action associated with the clicked button is required. *Id.* at 27:4–12. Upon receiving invocation instructions from Association 302, Action Coordinator 301 queries

Associations 302 to determine the keys and their values and performs a comparison of those values with the values contained in the dictionary. *Id.* at 27:15–18. If any values have changed, “Action Coordinator 301 constructs a package of data to be sent to the server” and “the action that is to be invoked on the server.” *Id.* at 27:18–23. The server then invokes the action and constructs a package for transfer to Action Coordinator 301. *Id.* at 28:21–23; 29:12–13. “[C]hanged values are pushed to the appropriate applets (through their Associations) and the values are displayed by the browser. In this manner, the information is updated and synchronized between the client and the server.” *Id.* at 30:22–25.

2. Analysis

Petitioner’s contentions with respect to the step of sending data values and instructions from the server to the client device recited in claim 1, and corresponding limitations in claims 12 and 25, are set forth in the Petition as follows:

Ferris discloses that the server’s execution of the application logic results in “updated [data] values” which the server “pushes ... out to the applets” in on the client-side, “at which time the browser’s display is updated.” *See, e.g.,* Ex. 1010 at Abstract. In this way, the client device receives a message from the server with values and instructions that results in presentation of data within the user’s browser interface. *Id.*; *see also* Ex. 1002 at ¶104.

Likewise, Moshfeghi discloses that the server scripts dynamically generate data values in the form of “web pages for the client,” which are then sent to the client device for display in the user’s browser. *See* Ex. 1011 at 7:27-30, FIGs. 1 and 2; *see also* Ex. 1002 at ¶ 105.

Pet. 45–46.

Patent Owner's expert, Dr. Wilson, testified that instructions are "[s]ome indication of what you're supposed to do" (Ex. 1030, 71:25–72:2), and "information that's used by . . . executable code" (*id.* at 74:1–4). Dr. Wilson testified that "an instruction . . . itself is not [necessarily] executable, but the executable code on the client [computer] would understand how to execute that instruction." *Id.* at 74:5–13. Petitioner does not dispute this testimony. *See* Pet. Reply 21–22. There is also no dispute that Ferris, like the '115 patent, utilizes Java applets (*see* Tr. 38:12–15, 55:15–19; Ex. 1001, 10:52–53), which are programs containing logic that is executable on either a client or a server (Ex. 1010, 13:6–7), and that Ferris describes a server that sends updated data to client computers. *See* Pet. 45; PO Resp. 36. Patent Owner disagrees, however, with Petitioner's assertion that Ferris' key-value pairs include "instructions" in addition to data as recited in the challenged claims. *See* PO Resp. 39–41.

During oral argument, Petitioner argued that the instruction limitations in the challenged claims necessarily read on Ferris' key-value pairs because it is difficult to distinguish Ferris' invention from the embodiment described at column 12, lines 42–56 of the '115 patent. *See* Tr. 55:13–22. In the relied-upon disclosure, the '115 patent describes a network communication protocol that transmits information between droplet-enabled applications 41 and application server 40. Ex. 1001, 11:56–59. The '115 patent discloses that information stored by application server 40 includes presentational information such as "*instructions* for rendering components of the application, default parameters and data values exhibited within the components, and application-specific business logic for processing input to the application." *Id.* at 6:17–22 (emphasis added). The '115 patent

describes the network communication protocol as including “a number of message formats wherein properties of and events pertaining to components, such as the GUI [(graphical user interface)] components, of actively operating droplet-enabled applications 41 are communicated between the client computer 20 and the application server 40.” *Id.* at 11:59–63. The message formats include:

Event Notifications—messages transmitted from a client computer 20 to the application server 40 reporting that a value or attribute of a component of the GUI has been altered . . . [e.g.], data entry into text boxes[;] . . .

Update Commands—messages transmitted from application drivers, e.g., the application specific logic 46 supporting a droplet-enabled application, on the application server 40 to the client computer 20 requesting action within screen components of the system 10, such as GUI components within the delivered content[; and] . . .

Window Commands—messages transmitted from the application drivers on the application server 40 to the client computer 20 that specify that a generic window should be opened or closed, or that the droplet-enabled application should present one of a set of standard dialogs (e.g., a message box, a question box or a menu).

Id. at 11:64–12:20.

Ferris describes a transparent applet, the “Controller,” that is responsible for managing communication between the server and the applets on the client. Ex. 1010, 8:19–21. Ferris discloses that upon the invocation of an event in the browser, such as the pressing of a button created by an applet), an Association instructs an Action Coordinator (both located in the Controller) to invoke an action on the server. *Id.* at 8:21–25. The Action Coordinator must then query the Associations to determine the keys and their values. *Id.* at 27:13–15. Ferris discloses that the server updates values

and retransmits the key-value pairs containing the updated values back to the Controller. *See id.* at 28:13–29:8. The updated values are pushed to the appropriate applets (through their Associations). *Id.* at 9:3–7. The applets update their displays in the browser’s display using the new values. *Id.* at 9:7–8.

a. Claims 1–3, 6, 9, 10, 12–14, 17, 20, 21, and 24

Based on our comparison of the above descriptions of the messaging protocols in Ferris and the ’115 patent, we are not persuaded by Petitioner’s argument that the two are indistinguishable. *See* Tr. 55:13–22. Rather, we agree with Patent Owner, that a preponderance of the evidence favors a finding that Ferris’ key-value pairs are data and do not contain an instruction for use by executable code on the client device. *See* PO Resp. 37.

With respect to messages from the client to the server, Ferris clearly indicates that the key-value pairs do not contain instructions. *See* Ex. 1010, 8:21–25 (“one of associations 302 instructs action coordinator 301 to invoke an action”), 27:10–12 (“If Associations 302 determine that an action should be invoked, it instructs Action Coordinator 301 at step 603 to invoke the action.”). We find no disclosure in Ferris that the key-value pairs returned from the server to the client are modified in any manner other than to change the value, i.e., there is no indication that an instruction is added.

Dr. Wilson’s testimony is consistent with our understanding of Ferris’ disclosure, and we accord weight to his expert opinion that Ferris’ “key-value pair[s] contains no logic, algorithms, or instructions” (Ex. 2022 ¶ 115), and one of ordinary skill in the art would have understood “a key-value pair is a simple data structure where a key represents a particular object and a value represents the value for that object” (*id.* ¶ 102). We further accord

weight to Dr. Wilson’s testimony that the applets on the client device are capable of handling received data without instructions from the server because, unlike the embodiments of the ’115 patent wherein the application server stores instructions, e.g., for rendering components (*see* Ex. 1001, 12:15–20 (Window Commands)), Ferris’s instructions are loaded to the client as part of the applets during the initial page load. *See* Ex. 2022 ¶ 105; *cf.* Ex. 1001, 37–55 (discussed in Section VI.C.2.b, below). Petitioner has not challenged this testimony or provided evidence to the contrary. *See* Pet. Reply 21–23.

In its Reply, Petitioner also relies on Moshfeghi for a disclosure of sending a URL, that Petitioner contends meets the claim limitation of an instruction, from the server to the client device. Pet. Reply 22–23. Section 42.22(a)(2) of Chapter 37 of the Code of Federal Regulations, however, requires that a petition for *inter partes* review must include “[a] full statement of the reasons for the relief requested, including a detailed explanation of the significance of the evidence including material facts, and the governing law, rules, and precedent.” Petitioner’s challenge, as set forth in the Petition, only relies on Ferris’s disclosure of sending key-value pairs for a teaching of the claim limitations relating to sending instructions to the client device, and relies on Moshfeghi for the sole purpose of teaching that “the server scripts dynamically generate *data values* in the form of ‘web pages for the client,’ which are then sent to the client device for display in the user’s browser.” Pet. 45–46 (emphasis added). The argument advanced in the Reply, therefore, is inconsistent with Petitioner’s statement in its Petition that a URL is data, as well as with the declaration testimony of Dr. Burbach. *Compare* Pet. Reply 22–23, *with* Pet. 45; Ex. 1002 ¶¶ 103–104;

see also Ex. 2022 (“[A] uniform resource locator is well known in the art as a data field, e.g. <http://www.upsto.gov>. A URL is a data field and therein does not teach or suggest instructions as claimed.”).

Although we have considered Petitioner’s citation to column 2, lines 55–58 of the ’115 patent as evidence that a URL is instructions within the meaning of the claims (*see* Pet. Reply 22–23), we are not convinced that the language “instructions (including the desired URL),” read in the context of the entire sentence at column 2, lines 55–58, is understood properly as meaning that the URL itself is an instruction. Rather, given the testimony of both experts that a URL is data, we understand this sentence as describing the sending, by a web browser on the user’s computer, both data (i.e., the URL) and instructions for connecting to a specified host computer (i.e., something other than the URL).

In sum, based on our consideration of the respective positions advanced by Petitioner and Patent Owner, and the evidence in support thereof, we determine Petitioner has not shown, by a preponderance of the evidence, that claims 1–3, 6, 9, 10, 12–14, 17, 20, 21, and 24 of the ’115 patent would have been unpatentable over the combination of Ferris and Moshfeghi.

b. Claim 25

Claim 25 differs from independent claims 1 and 12 because it is directed to a system, not a method, and does not require the server to send instructions to the client device responsive to an event message from the client device. Claim 25 recites a “device with data values and instructions for use by the executable code to present the data values within the user interface of the web page at the client device.” Ex. 1001, 32:17–19. Claim

25 does not specify the location of the device, although claim 25 does require a remotely stored application residing on the server that is capable of generating the data values. *Id.* at 32:20–22. In addition to the embodiment discussed in Section VI.C.2, above, the ’115 patent describes an embodiment in which information 43 normally stored on application server 40, e.g., instructions for rendering components of the application, and remotely stored application 41 are downloaded and locally installed and/or stored at client computer 20. Ex. 1001, 11:41–44; *see generally id.* at 11:37–55. In this embodiment, “the locally installed application (in the form of, for example, native executables) may execute eliminating, during at least a portion of its execution, the need to receive rendering instructions 42, default parameters 44, or application-specific logic 46 from the application server 40.” *Id.* at 11:51–55. Given its broadest reasonable interpretation, claim 25 encompasses this embodiment.

According to Dr. Wilson, in Ferris, the server does not send instructions, but rather the instructions are loaded to the client device, as in the embodiment described in column 11, lines 37–55 of the ’115 patent. As discussed in Section VI.C.2.a., above, there is no dispute that Ferris discloses a remotely stored application residing on the server that includes logic for generating key-value pairs that contain data values sent to the applets on the client device. We find, therefore, that Ferris describes a “device [(the client device)] with data values [(key-value pairs (*see* Ex. 2022 ¶ 102))] and instructions [(the instructions loaded to the client device as part of the applets during the initial page load (*see* Ex. 2022 ¶ 105))] for use by the executable code to present the data values within the user interface of the web page at the client device” as recited in challenged claim 25.

Patent Owner has not disputed Petitioner's contentions that the combination of Ferris and Moshfeghi discloses or suggests each of the remaining limitations recited in claim 25. *See generally* PO Resp. 35–46. Petitioner has explained the motivation to combine these references in the manner claimed and shown a reasonable expectation of success in making the proposed combination. *See* Pet. 47–48, 52; *see generally id.* at 38–48. We adopt these finding and conclusions as our own. Consequently, we conclude Petitioner has shown by a preponderance of the evidence that claim 25 would have been unpatentable over Ferris and Moshfeghi.

D. Obviousness Over Ferris, Moshfeghi and: (1) Outlook 98 (Claims 4, 5, 15, and 16); (2) Gish (Claims 7, 8, 18, and 19); or (3) Shaw '836 (Claims 11, 22, and 23)

Petitioner relies on Outlook 98 (Ex. 1013), Gish (Ex. 1006), and Shaw '836 (Ex. 1008) for descriptions of limitations recited in various claims dependent from claims 1 and 12. *See* Pet. 52–60. In Section VI.C.2.a., above, we determined Petitioner had not met its burden to show unpatentability of claims 1 and 12 based on the combination of Ferris and Moshfeghi. The Petition does not explain how Outlook 98, Gish, and/or Shaw cure the deficiencies of the combination of Ferris and Moshfeghi in failing to teach or suggest sending instructions in the manner claimed. Accordingly, we determine Petitioner has not met its burden to show unpatentability of claims 4, 5, 7, 8, 11, 15, 16, 18, 19, 22, and 23 for the reasons discussed in Section VI.C.2.a., above. Having concluded that Petitioner has not met its burden to show unpatentability of claims 11, 22, and 23, we find it unnecessary, and therefore decline, to address Patent Owner's argument that Shaw '836 is not a prior art reference. *See* PO Resp. 47–51.

VII. CONCLUSION

Petitioner has met its burden to show, by a preponderance of the evidence, the unpatentability of: claims 1–25 under 35 U.S.C. § 103(a) based on Franco PCT and Moshfeghi; claims 1, 7, 9, 10, 12, 18, 20, 21, and 25 under 35 U.S.C. § 102(b) based on Frese; and claim 25 under 35 U.S.C. § 103(a) based on Ferris and Moshfeghi.

Petitioner, however, has failed to meet its burden to establish the unpatentability of: claims 1–3, 6, 9, 10, 12–14, 17, 20, 21, and 24 under 35 U.S.C. § 103(a) based on Ferris and Moshfeghi; claims 4, 5, 15, and 16 under 35 U.S.C. § 103(a) based on Ferris, Moshfeghi, and Outlook 98; claims 7, 8, 18, and 19 under 35 U.S.C. § 103(a) based on Ferris, Moshfeghi, and Gish; and claims 11, 22, and 23 under 35 U.S.C. § 103(a) based on Ferris, Moshfeghi, and Shaw '836.

VIII. ORDER

For the reasons given, it is

ORDERED that claims 1–25 of the '115 patent are unpatentable; and

FURTHER ORDERED that, because this is a Final Written Decision, parties to the proceeding seeking judicial review of the decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

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