

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

UNIFIED PATENTS, LLC,
Petitioner,

v.

FLEXIWORLD TECHNOLOGIES, INC.,
Patent Owner.

IPR2022-00775
Patent 9,836,257 B2

Before TERRENCE W. McMILLIN, CHRISTOPHER L. OGDEN, and
BRENT M. DOUGAL, *Administrative Patent Judges*.

OGDEN, *Administrative Patent Judge*.

JUDGMENT
Final Written Decision
Determining No Challenged Claims Unpatentable
Dismissing Patent Owner's Revised Motion to Amend
35 U.S.C. § 318(a)

I. INTRODUCTION

In response to a Petition (Paper 1, “Pet.”) filed by Petitioner Unified Patents, LLC (“Unified”), the Board instituted an *inter partes* review of claims 27 and 28 of U.S. Patent No. 9,836,257 B2 (Ex. 1001, “the ’257 patent”). Paper 10 (“Dec.”). Patent Owner Flexiworld Technologies, Inc. (“Flexiworld”) filed a Patent Owner Response (Paper 16, “PO Resp.”), Unified filed a Reply to the Patent Owner Response (Paper 23, “Pet. Reply”), and Flexiworld filed a Sur-reply (Paper 32, “PO Sur-reply”).

Flexiworld also filed a Contingent Motion to Amend (Paper 17), to which Unified filed an Opposition (Paper 24). After we issued Preliminary Guidance (Paper 27), Flexiworld filed a Revised Contingent Motion to Amend (Paper 31), to which Unified filed an Opposition (Paper 35). Flexiworld then filed a Reply (Paper 36) and Unified filed a Sur-reply (Paper 37).

We held an oral hearing on August 29, 2023, and the transcript is in the record. Paper 40.

This is a final written decision under 35 U.S.C. § 318(a) as to whether the claims challenged in the *inter partes* review are unpatentable. For the reasons below, we determine that Unified has not shown that either of the challenged claims are unpatentable on either of the grounds of the Petition. We also dismiss Flexiworld’s Contingent Revised Motion to Amend (Paper 31) as moot.

II. BACKGROUND

A. RELATED PROCEEDINGS

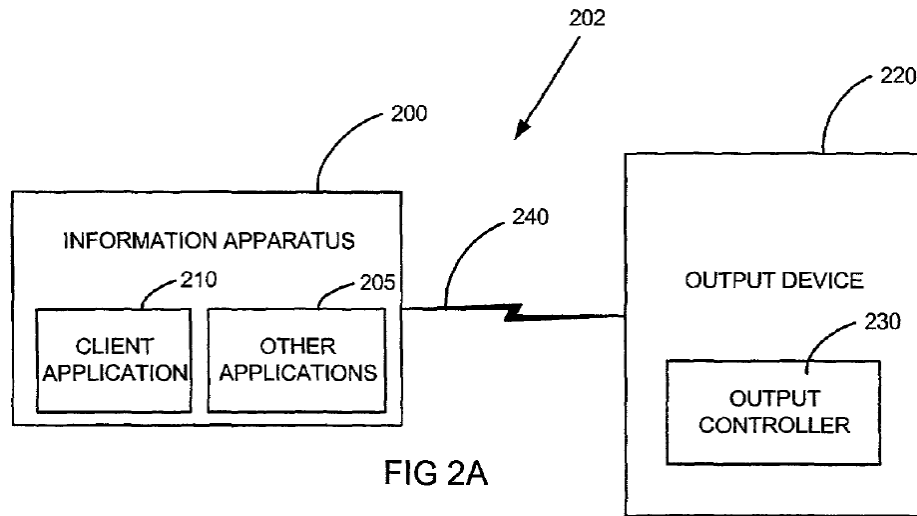
As a related matter, the parties identify *Flexiworld Technologies, Inc. v. Roku, Inc.*, No. 6:21-cv-00767-ADA(W.D. Tex. filed July 27, 2021). Pet. 81; Paper 5, 2.

B. THE '257 PATENT (EX. 1001)

The '257 patent describes “[a] method of transferring digital content from a mobile wireless information apparatus such as a smart phone . . . to a wireless output device associated with a television by short range wireless communication.” Ex. 1001, code (57). The output device can also be an “audio output device[.]” *Id.* at 1:46. The short-range wireless communication “is compatible with IEEE802.11 or with Bluetooth™ standard for output.” *Id.* at code (57).

According to the '257 patent, at the time of the claimed invention, if a user wished to send digital content to an output device, they would first need to install a device driver on their mobile device corresponding to the specific output device. Ex. 1001, 2:20–24. The '257 patent describes a number of difficulties associated with doing this. *See id.* at 2:57–5:35. To overcome these challenges, the '257 patent proposes “a convenient universal data output method” that “eliminates the need to install a plurality of device-dependent dedicated drivers or applications in the information apparatus.” *Id.* at 5:39–46.

Figure 2A, reproduced below, is a “block diagram[] illustrating components of an operating environment that can implement” this universal data output method:



Ex. 1001, 13:1–3. Figure 2A, above, shows information apparatus 200 and output device 220 in communication with each other over short-range communication interface 240 using a Bluetooth or IEEE 802.11 protocol. *Id.* at 13:3–5, 13:43–48.

Information apparatus 200 can be, among other things, a smart phone. Ex. 1001, 13:14–21. It includes “client application 210 that helps provide the universal data output capability” of the claimed invention and can be a stand-alone application, a part of another application, or a device driver. *Id.* at 14:49–51. Information apparatus 200 may also include other application software 205 such as a web browser. *See id.* at 14:18–39.

Output device 220 can be a television or an audio output device. *See* Ex. 1001, 16:18–30. It includes output controller 230, which can be implemented as hardware or software in the output device or “may be connected externally to . . . output device [220] as an external component or ‘box.’” *Id.* at 6:3–6, 13:5–6. Output controller 230 may implement an access control list that “specifies what device or user may obtain service from its host (or connected) output device 220,” so that “information apparatus 200

may gain access [only] after confirming with the control list.” *Id.* at 21:30–37.

Client application 210 may include a “communication manager” that “helps communicate with output device 220 and manages service requests and the discovery process” for locating and identifying any potential output devices 220 in the vicinity of information apparatus 200. Ex. 1001, 31:8–20. As part of this discovery process, the communication manager obtains “some basic information, or part of the entire output device profile, from each discovered output device 220.” *Id.* at 32:2–4. This may include “device identity, service charge, subscription, service feature, device capability, [and] operating instructions.” *Id.* at 32:5–7. This allows a user to “select one or more output devices 220 . . . , if any,” that are capable of accepting a particular digital output stream. *Id.* at 32:10–12.

The ’257 patent issued on December 5, 2017 from an application filed January 18, 2002, and claims the benefit of a provisional application filed January 19, 2001. Ex. 1001, codes (22), (45), (60), 1:14–16.

C. CHALLENGED CLAIMS AND GROUNDS

Claim 27, representative of the challenged claims, is as follows:

27. A non-transitory computer readable medium containing software that is executable by a wireless information apparatus for outputting digital content from a wireless information apparatus to a wireless output controller device associated with a television or an audio output device, the wireless information apparatus including:

- a display screen,
- a graphical user interface over the display screen of the wireless information apparatus for interacting with a user,
- an operating system,

a processor,

one or more wireless communication units with at least one wireless communication unit supporting wireless local area network communication with the wireless output controller device, the wireless output controller device being a distinct device from the wireless information apparatus, wherein the software, when executed, at least partly, by the processor at the wireless information apparatus and facilitated, at least partly, by the operating system, causes the wireless information apparatus to execute a method, comprising:

establishing, via the one or more wireless communication units, a wireless connection between the wireless information apparatus and the wireless output controller device that is associated with a television or an audio output device, the wireless connection further being compatible, at least partly, with at least one protocol within IEEE 802.11 wireless standards or within Bluetooth standards;

implementing a security or authentication procedure that includes transmitting one or more of a user name, a password, an ID number, a security key, or a voice, individually or in any combination, over the wireless connection between the wireless information apparatus and the wireless output controller device; and

subsequent to having implemented the security or authentication procedure, establishing a wireless local area network connection, between the wireless information apparatus and the wireless output controller device, the wireless local area network connection being established via the at least one wireless communication unit that is compatible, at least partly, with at least one protocol within IEEE 802.11 wireless standards for wireless local area networks;

receiving, over the graphical user interface of the wireless information apparatus, at least an indication related to a selected digital content for rendering or outputting, the selected digital content includes at least one of audio content or video content, individually or in any combination; and

wirelessly transferring output data related, at least partly, to the selected digital content and over the established wireless local area network connection from the wireless information apparatus to the wireless output controller device for rendering or outputting of at least part of the selected digital content at a television or an audio output device that is associated with the wireless output controller device.

Ex. 1001, 50:8–67. Claim 28, the only other challenged claim, depends from claim 27. *See id.* at 51:1–10.

Unified argues two grounds for *inter partes* review, as summarized in the following table:

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
27, 28	103(a) ¹	Olgaard, ² Moghadam ³
27, 28	103(a)	Acharya, ⁴ Griffiths ⁵

Pet. 2.

D. DECLARATORY TESTIMONY

Unified submits, as expert testimony on the various issues arising in the proceeding, three declarations by Dr. Immanuel Freedman. Exs. 1003, 1017, 1024; *see also* Ex. 1004 (curriculum vitae). Unified also submits a declaration of Kevin Jakel, Unified’s founder and current CEO, supporting

¹ 35 U.S.C. § 103(a) (2006), *amended by* Leahy–Smith America Invents Act, Pub. L. No. 112-29 § 103, sec. (n)(1), 125 Stat. 284, 287, 293 (2011) (effective Mar. 16, 2013). This version of § 103 applies because the ’257 patent issued from an application filed on January 18, 2002, which is before the effective date of the AIA amendments. *See* Ex. 1001, code (22).

² Olgaard et al., US 7,849,198 B2 (issued Dec. 7, 2010) (Ex. 1005).

³ Moghadam et al., US 5,917,542 (issued June 29, 1999) (Ex. 1006).

⁴ Acharya et al., US 2002/0080091 A1 (published June 27, 2002) (Ex. 1007).

⁵ Griffiths, US 7,136,999 B1 (issued Nov. 14, 2006) (Ex. 1008).

Unified's certification that it is the only real party in interest. Ex. 1014; Pet. 81.

Flexiworld submits three expert declarations by Dr. Todor Cooklev. Exs. 2010, 2042, 2044; *see also* Ex. 2011 (curriculum vitae). Flexiworld also submits a declaration by William Ho Chang, an inventor named in the '257 patent, on the issues of conception and diligence (Ex. 2031) and a supporting declaration by Flexiworld's counsel T. William Kennedy for authenticating certain exhibits and their associated metadata (Ex. 2032).

III. GROUNDS OF THE PETITION

For the reasons below, we determine that Unified has not shown, by a preponderance of the evidence, that the challenged claims of the '257 patent are unpatentable as obvious over either Olgaard in view of Moghadam, or Acharya in view of Griffiths.

A. LEVEL OF ORDINARY SKILL IN THE ART

The level of ordinary skill in the pertinent art at the time of the invention is a factor in how we construe patent claims. *See Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc). It is also one of the factors we consider when determining whether a patent claim is obvious over the prior art. *See Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

To assess the level of ordinary skill, we construct a hypothetical “person of ordinary skill in the art,” from whose vantage point we assess obviousness and claim interpretation. *See In re Rouffet*, 149 F.3d 1350, 1357 (Fed. Cir. 1998). This legal construct “presumes that all prior art references

in the field of the invention are available to this hypothetical skilled artisan.” *Id.* (citing *In re Carlson*, 983 F.2d 1032, 1038 (Fed. Cir. 1993)).

Relying on Dr. Freedman’s testimony, Unified argues that a person of ordinary skill in the art would have had “(1) an undergraduate degree in electrical and computing engineering or a closely related field; and (2) two or more years of experience in wireless content transmission,” where “[m]ore relevant experience could compensate for less education, and vice versa.” Pet. 7 (citing Ex. 1003 ¶¶ 36–38).

Flexiworld does not contest Unified’s description of the level of ordinary skill for this proceeding. *See* PO Resp. 8 (citing Ex. 2010 ¶ 67). Because Unified’s description is supported by uncontroverted testimonial evidence and appears consistent with the types of problems and solutions in the ’257 patent, we adopt it for this decision. *See, e.g.*, Ex. 1001, 1:20–5:35 (“Technical Field” and “Background” sections of the ’257 patent, describing background knowledge relating to wireless content transmission between electronic devices).

B. CLAIM CONSTRUCTION

In an *inter partes* review, we construe a patent claim “using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. 282(b).” 37 C.F.R. § 42.100(b) (2021). This generally includes “construing the claim in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.” *Id.* The ordinary and customary meaning of a claim term “is its meaning to the ordinary

artisan after reading the entire patent,” and “as of the effective filing date of the patent application.” *Phillips*, 415 F.3d at 1313, 1321.

Unified argues that “all terms should be given their plain meaning,” and does not propose any explicit constructions. *See* Pet. 8. In the context of this proceeding, Flexiworld agrees. *See* PO Resp. 29.

We do not find it necessary to explicitly construe any terms to resolve the issues in this proceeding. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (“[W]e need only construe terms ‘that are in controversy, and only to the extent necessary to resolve the controversy’” (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))).

C. ANALYSIS

The grounds of the petition assert that claims 27 and 28 are obvious over either (1) Olgaard in view of Moghadam or (2) Acharya in view of Griffiths. *See* Pet. 8–80.

A claim is unpatentable under § 103 for obviousness “if the differences between the claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains.” 35 U.S.C. § 103; *see also KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). For a combination of known elements that are not explicitly found together in the prior art, we consider “whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue.” *Id.* at 418 (citing *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)).

We base our obviousness inquiry on factual considerations 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) any objective indicia of obviousness or non-obviousness that may be in evidence. *See Graham*, 383 U.S. at 17–18.

As to the first factor, Unified bears the ultimate burden of persuasion that any reference upon which it relies is prior art. *See* 35 U.S.C. § 316(e); *Mahurkar v. C.R. Bard, Inc.*, 79 F.3d 1572, 1576 (Fed. Cir. 1996) (the patent challenger “bore the burden of persuasion . . . on all issues relating to the status of [the asserted reference] as prior art”); *Dynamic Drinkware, LLC v. National Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015) (“In an *inter partes* review, the burden of persuasion is on the petitioner to prove ‘unpatentability by a preponderance of the evidence,’ . . . and that burden never shifts to the patentee.”).

Considering the *Graham* factors as a whole,⁶ and in particular the first factor, we determine as explained below that Unified has not shown that either Olgaard or Acharya was prior art at the time of the claimed invention. Thus, Unified has not shown, by a preponderance of the evidence, that the challenged claims are unpatentable under either ground in the Petition.

1. Priority Date of the '257 Patent

Unified argues that Olgaard and Acharya are prior art under 35 U.S.C. § 102(e) because their earliest priority date is before the '257 patent's earliest asserted priority date of January 19, 2001. Pet. 1–2 & n.1. According

⁶ Neither party presents evidence of objective indicia of obvious or non-obviousness, so no such evidence factors into our decision.

to Unified, Olgaard “is a continuation of a non-provisional application filed October 24, 2000” as U.S. Application No. 09/695,518 (Ex. 1009) before the earliest priority date of the ’257 patent, and Acharya “was filed December 22, 2000.” Pet. 1–2 & n.2; *see also* Ex. 1005, code (63); Ex. 1007, codes (22), (43).

Having made these allegations in the Petition, the burden of going forward shifted to Flexiworld to produce evidence that the claimed invention occurred before Olgaard’s priority date of October 24, 2000 and Acharya’s priority date of December 22, 2000. *See Dynamic Drinkware*, 800 F.3d at 1379–80; *In re Magnum Oil Tools Int’l, Ltd.*, 829 F.3d 1364, 1375–76 (Fed. Cir. 2016). Such evidence may include “either an earlier reduction to practice, or an earlier conception followed by a diligent reduction to practice.” *Purdue Pharma L.P. v. Boehringer Ingelheim GmbH*, 237 F.3d 1359, 1365 (Fed. Cir. 2001). The sufficiency of corroboration is determined according to a rule-of-reason analysis, where “all pertinent evidence is examined in order to determine whether the inventor’s story is credible.” *Fleming v. Escort Inc.*, 774 F.3d 1371, 1377 (Fed. Cir. 2014) (quoting *Sandt Tech., Ltd. v. Resco Metal & Plastics Corp.*, 264 F.3d 1344, 1350 (Fed. Cir. 2001)); *see also Price v. Symsek*, 988 F.2d 1187, 1195 (Fed. Cir. 1993).

In this regard, Flexiworld argues in its Response that the challenged claims “should be afforded a conception and priority date of at least October 22, 2000” based on draft provisional patent applications that the inventors prepared on or before that date. PO Resp. 9 (citing Exs. 2013, 2031, 2032). According to Flexiworld, one of these draft applications (Ex. 2013) is entitled “mobile-printing-full version 10_21_00,” which “indicates that the document is dated October 21, 2000,” and bears metadata indicating that the

draft was last modified on October 22, 2000. *Id.* at 9 (citing Ex. 2031 ¶ 6; Exs. 2030–2032). Flexiworld also provides a claim chart purporting to show where each limitation in claims 27 and 28 may be found in Exhibit 2013. PO Resp. 10–27.⁷ This evidence satisfies Flexiworld’s burden of going forward on the issue of whether the claimed invention antedates Olgaard and Acharya. *See Dynamic Drinkware*, 800 F.3d at 1379–80.

Unified does not contest that Exhibit 2013 provides sufficient support for every limitation of claims 27 and 28. *See generally* Pet. Reply; Paper 40, 51:4–5 (“[Unified] is not disputing that Exhibit 2013 provides sufficient written description.”). Having reviewed Flexiworld’s comparison of Exhibit 2013 with the challenged claims, we agree with Flexiworld that Exhibit 2013 fully demonstrates the conception of claims 27 and 28 as of the date of this draft. *Sewall v. Walters*, 21 F.3d 411, 415 (Fed. Cir. 1994) (“Conception exists when a definite and permanent idea of an operative invention, including every feature of the subject matter sought to be patented, is known.”).

The disputed questions for us to resolve are (1) whether this conception, as documented in Exhibit 2013, was prior to October 24, 2000, and (2) whether, after conception, the applicant diligently reduced the claimed invention to constructive practice. We address these issues below.

(a) Date of Conception

Flexiworld argues that the date of Exhibit 2013 is October 21, 2000, as reflected in its filename. PO Resp. 9. Flexiworld submits a declaration by

⁷ The heading of this table incorrectly refers to the draft as “Ex. 2012,” but the citations in this table are to Exhibit 2013. PO Resp. 10–27.

inventor William Ho Chang testifying that he is the author and custodian of provisional patent application drafts including Exhibit 2013 and that he has kept them “in the ordinary course of business since their respective dates.” Ex. 2031 ¶¶ 1–3. He states that, working with his co-inventor Christina Ying Liu, their process “was to create a draft of the document and save it with a file name indicating the date of creation.” *Id.* ¶ 4.

Relying on testimony of Mr. Chang and its counsel T. William Kennedy, Flexiworld also relies on metadata associated with Exhibit 2013 and the other provisional application drafts. PO Resp. 9–10 (citing Exs. 2030–2032). Mr. Chang testifies that none of the metadata associated with these drafts has been altered. Ex. 2031 ¶ 1. Mr. Kennedy testifies that Mr. Chang provided him with electronic copies of these drafts including Exhibit 2013. Ex. 2032 ¶ 1. He states that he “inspected the file name and metadata associated with editing the document[s],” and provided a table summarizing that information. *Id.* ¶ 3. The table indicates that Exhibit 2013 is entitled “mobile-printing-full version_10_21_00” and that the associated metadata indicates a last modification date of October 22, 2000. *Id.* Flexiworld also provides screen shots showing the metadata associated with each exhibit. Ex. 2030; *see* PO Resp. 10; PO Sur-reply 4.

In its Reply, Unified argues that Flexiworld’s only alleged corroboration comes from an inventor, and thus is not independent evidence of conception before October 24, 2000. *See* Pet. Reply 1–2 (citing *Apator Miitors ApS v. Kamstrup A/S*, 887 F.3d 1293, 1295 (Fed. Cir. 2018); *Kolcraft Enterprises, Inc. v. Graco Children’s Prod., Inc.*, 927 F.3d 1320, 1324 (Fed. Cir. 2019)). Unified also argues that the filenames and metadata are untrustworthy because they are generally in conflict with each other, and

uncorroborated because Flexiworld has produced no independent evidence that the inventors' naming convention reflects the date each document was finalized. *Id.* at 3–4 (citing Ex. 1015, 21:19–22:10, 52:21–22 (Mr. Cheng's deposition transcript); Ex. 2027; Ex. 2031 ¶ 6; *Apator*, 887 F.3d at 1296). According to Unified, Mr. Cheng's explanation for why the title dates do not often correspond with the metadata—that the documents might have been unintentionally saved when his computer was repeatedly crashing and files needed to be transferred by a network administrator—is not credible or corroborated. *Id.* at 4 (citing Ex. 1015, 53:4–55:22, 88:13–92:7, 62:3–18, 45:10–15, 35:20–36:10, 102:3–104:1; *Shu-Hui Chen v. Bouchard*, 347 F.3d 1299, 1311–12 (Fed. Cir. 2003)).

Unified also points out that the provisional application drafts are not “signed or witnessed by anyone other than Mr. Chang or his co-inventor,” and that Exhibit 2013 itself and some of the other drafts contain signature blocks with no signatures. Pet. Reply 4–5 (citing Ex. 1015, 69:15–19, 70:13–16; Exs. 2012–2015; *Procter & Gamble Co. v. Teva Pharms. USA, Inc.*, 566 F.3d 989, 998 (Fed. Cir. 2009)).

In its Sur-reply, Flexiworld argues that “last modified” metadata is a valid source of independent corroboration. PO Sur-reply 2–3 (citing *Dana-Farber Cancer Inst., Inc. v. Ono Pharm. Co.*, 379 F. Supp. 3d 53, 86 (D. Mass. 2019); *Cassidian Commc'ns, Inc. v. Microdata GIS, Inc.*, No. 12-cv-00162, 2014 U.S. Dist. LEXIS 110133, at *24–27 (E.D. Tex. Aug. 8, 2014); *Hurricane Shooters, LLC v. Emi Yoshi, Inc.*, No. 10-cv-762-T-30, 2011 U.S. Dist. LEXIS 101679, at *10 (M.D. Fla. Sept. 8, 2011)). Flexiworld also argues that the metadata dates are sufficiently similar to the filename dates to suggest their reliability. *Id.* at 3. Flexiworld also contends

that under a rule-of-reason analysis, the evidence as a whole, including the drafts leading to the filing of the provisional application on November 1, 2000, is sufficient corroboration of a conception date before October 24, 2000. *Id.* at 4.

The evidence as a whole supports Flexiworld's contention that the claimed inventions were conceived no later than October 22, 2000, and Unified has not shown to the contrary by a preponderance of the evidence. First, we find credible Mr. Chang's testimony that Exhibit 2013 and other related drafts, including their filenames and metadata, have not been altered. Ex. 2031 ¶ 1. We regard the metadata as the most reliable indicator of the latest date each draft was completed. Although the filename dates may differ from the metadata dates, these minor differences do not call into question the reliability of the metadata as the last date on which the drafts were modified. Most significantly, the "last modified" date for Exhibit 2013 is October 22, 2000. That the inventors produced at least three other drafts and then filed a provisional application just ten days later on November 1, 2000 further supports a conception date before October 24, 2000. Ex. 2031 ¶ 6; Ex. 2016; Ex. 2040.

We disagree with Unified that the metadata evidence is non-corroborative because it originated with the inventors. Because Exhibit 2013, itself, embodies the conception of claims 27 and 28, the metadata associated with Exhibit 2013 stands on its own as evidence of the conception date, and needs no further corroboration. *See Price v. Symsek*, 988 F.2d at 1195 ("'[C]orroboration' is not necessary to establish what a physical exhibit before the board includes. Only the inventor's testimony requires

corroboration before it can be considered.” (citing *Holmwood v. Sugavanam*, 948 F.2d 1236, 1239 (Fed. Cir. 1991)).

The metadata also independently corroborates Mr. Chang’s testimony that he and his co-inventor conceived the claimed invention before October 24, 2000. Ex. 2031. The metadata is independent of Mr. Chang’s testimony because the operating system created it automatically and contemporaneously to the time of conception. *See* Ex. 2030. Considering all the evidence under a rule-of-reason analysis, we determine that Unified has failed to show, by a preponderance of the evidence, that the conception date for claims 27 and 28 is on or later than October 24, 2000.

(b) Diligent Reduction to Constructive Practice

Flexiworld argues that, after Mr. Chang and his co-inventor conceived the claimed invention by October 22, 2000, they diligently reduced the invention to constructive practice by “continuously modifying the disclosures for his inventions in preparation for filing provisional applications related to them . . . until the inventors filed provisional number 60/262,764 on January 19, 2001, to which the ’257 patent claims priority.” PO Resp. 27–28 (citing Ex. 2031; Ex. 2031 ¶¶ 3–5).

Unified argues that “there are long gaps that are not accounted for, including a fourteen day gap between EX2017 and EX2018, a 21 day gap between EX2027 and EX2028, and a 20 day gap between EX2028 and the filing of the ’764 provisional (EX2029).” Pet. Reply 5 (citing Ex. 2031 ¶ 6). According to Unified, Flexiworld has produced no evidence that the inventors were working on the invention during these gaps, other than uncooperative and uncorroborated testimony by Mr. Chang. *Id.* at 6–7 (citing Ex. 1015, 28:14–29:14, 59:9–60:1, 83:15–84:17, 93:17–97:2, 98:6–99:4).

And Unified contends that the last two drafts, Exhibits 2028 and 2029, “contain almost identical language, with almost all of the changes being nonsubstantive, suggesting that Mr. Chang and his coinventor were not working much on this product during that time” (i.e., January 2001). *Id.* at 8.

Unified argues that, although the series of drafts including Exhibit 2013 led to three provisional applications, the ’257 patent only claims priority to the one filed January 19, 2001. Pet. Reply 8. Unified suggests that “the ’257 patent was not entitled to claim priority to the earlier two provisional applications because it was filed too late.” *Id.* at 8–9 (doubting Mr. Chang’s alternative explanation that “it was sufficient . . . under USPTO guidelines to claim priority to one” provisional application (quoting Ex. 1015, 86:4–87:2)); *see also* Ex. 1001, code (22) (indicating that the ’257 patent has a filing date of January 18, 2002, which is more than a year after the first two provisional applications). Unified characterizes Flexiworld’s reliance on the earlier drafts as effectively “claiming priority to these provisional applications and their drafts.” Pet. Reply 9.

In its Sur-reply, Flexiworld argues that its sequence of drafts between October 19, 2000 and January 19, 2001, including three provisional applications, show reasonably continuous diligence during that three-month period, which involved discussions between the co-inventors and the exchange of drafts. PO Sur-reply 5–7 (citing Ex. 1015, 15:11–20, 24:6–12, 33:19–36:15, 37:14–42:17, 48:3–52:11, 42:13–17, 52:6–11; Ex. 2016, Ex. 2022; Ex. 2029; Ex. 2031 ¶¶ 3–6). Flexiworld notes that the latter time period (November 20, 2000–January 19, 2001) between the final two provisional applications included Thanksgiving, Christmas and New Year holidays, but the inventors still produced at least six drafts during this

period. *Id.* at 7. Flexiworld also contends that Unified improperly focuses on the gaps between drafts without considering that reasonably continuous diligence occurred during this period. *Id.* at 7–9 (citing *Perfect Surgical Techniques, Inc. v. Olympus Am., Inc.*, 841 F.3d 1004, 1009 (Fed. Cir. 2016); *Monsanto Co. v. Mycogen Plant Sci., Inc.*, 261 F.3d 1356, 1369 (Fed. Cir. 2001)).

We find that the drafts the inventors prepared between approximately October 22, 2000 and January 19, 2001 show reasonably continuous diligence during that time period, including the holiday-filled period between the final two provisional application filings. *See* Ex. 2031 ¶ 6; Ex. 2032 ¶ 3.

In making this determination, we are mindful that “the point of the diligence analysis . . . is to assure that, in light of the evidence as a whole, ‘the invention was not abandoned or unreasonably delayed.’” *Perfect Surgical*, 841 F.3d at 1009 (quoting *Monsanto v. Mycogen*, 261 F.3d at 1379). Although the ’257 patent did not ultimately claim priority to the first two of these three provisional applications, the fact that the inventors were periodically updating their drafts and filing provisional applications during this period shows a reasonably continuous effort to provide their conception to the public without abandonment and without significant delay.

Indeed, the inventors filed the first provisional application that would support claims 27 and 28 just ten days after Exhibit 2013 was last modified. *See* Ex. 2031 ¶ 6. Then the inventors continued to prepare and file provisional applications until January 19, 2001, which is inconsistent with abandonment or unreasonable delay in reducing the claimed inventions to constructive practice during this period. *Id.* To the extent that the application

leading to the '257 patent was ultimately filed too late to take advantage of the first two provisional applications, this development occurred outside the critical period between October 24, 2000 and January 19, 2001 during which diligence was necessary, and does not constitute abandonment or delay of the claimed invention during the critical period. *See Perfect Surgical*, 841 F.3d at 1007 (the critical period “begins just prior to the competing reference’s effective date and ends on the date of the invention’s reduction to practice” (citing *Monsanto v. Mycogen*, 261 F.3d at 1363)).

2. *Conclusion as to Obviousness*

For the reasons above, we determine that evidence independent of inventor testimony corroborates (1) a conception date no later than October 22, 2000 and (2) reasonably continuous diligence in reducing the claimed invention to practice until January 19, 2001. Having considered the evidence as a whole under a rule-of-reason analysis, we determine that Unified has not shown that the conception date for the claimed invention was on or after October 24, 2000, or that the inventors did not exercise reasonably continuous diligence during the critical period between October 24, 2000 and January 19, 2001.

Unified relies on a priority date of October 24, 2000 for Olgaard and a priority date of December 22, 2000 for Acharya. *See* Pet. 1–2 & n.2; *see also* Ex. 1005, code (63); Ex. 1007, codes (22), (43). However, the corroborated conception date for claims 27 and 28 antedates the above priority dates for both Olgaard and Acharya. *See supra* Section III.C.1. Thus, Unified has not shown that either Olgaard or Acharya is prior art under 35 U.S.C. § 102(e) (2006). Unified provides no theory of obviousness that does not depend on either Olgaard or Acharya being prior art. *See* Pet. 2, 8–80.

For the above reasons, we determine that Unified has not shown, by a preponderance of the evidence, that the challenged claims are unpatentable under either ground in the Petition.

IV. CONCLUSION

For the reasons above, Unified has not shown that claims 27 or 28 of the '257 patent are unpatentable under § 103 as obvious over Olgaard in view of Moghadam or over Acharya in view of Griffiths.

Flexiworld's Revised Contingent Motion to Amend is "offered on a contingent basis, and should only be entered to the extent that any original claim is deemed unpatentable." Paper 31, 2. Thus, in light of our above determination, we dismiss Flexiworld's Revised Motion to Amend (Paper 31) as moot.

V. ORDER

In consideration of the foregoing, it is

ORDERED that Unified has not shown, by a preponderance of the evidence, that claims 27 and 28 are unpatentable;

FURTHER ORDERED that Flexiworld's Revised Contingent Motion to Amend (Paper 31) is *dismissed* as moot; and

FURTHER ORDERED that parties to this proceeding seeking judicial review of our decision must comply with the notice and service requirements of 37 C.F.R. § 90.2.

In summary:

Claim(s)	35 U.S.C. §	Reference(s)/Basis	Claims Shown Unpatentable	Claims Not Shown Unpatentable
27, 28	103(a)	Olgaard, Moghadam		27, 28
27, 28	103(a)	Acharya, Griffiths		27, 28
Overall Outcome				27, 28

The table below summarizes the outcome as to Flexiworld's Revised Contingent Motion to Amend (Paper 31), which is dismissed as moot:

Motion to Amend Outcome	Claim(s)
Original Claims Cancelled by Amendment	
Substitute Claims Proposed in the Amendment	41, 42
Substitute Claims: Motion to Amend Granted	
Substitute Claims: Motion to Amend Denied	
Substitute Claims: Not Reached	41, 42

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