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Paper 11
Entered: June 11, 2024

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

META PLATFORMS, INC.,
Petitioner,

v.

MOBILE DATA TECHNOLOGIES LLC,
Patent Owner.

IPR2024-00251
Patent 10,839,427 B2

Before CHRISTOPHER M. KAISER, KEVIN C. TROCK, and SCOTT B. HOWARD, *Administrative Patent Judges*.

TROCK, *Administrative Patent Judge.*

DECISION
Granting Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

Meta Platforms, Inc. ("Petitioner") filed a Petition (Paper 2, "Pet.") requesting *inter partes* review of claims 1–9 (the "challenged claims") of U.S. Patent No. 10,839,427 B2 (Ex. 1001, "the '427 patent"). Mobile Data Technologies LLC ("Patent Owner") (Paper 5, 2) filed a Preliminary Response (Paper 6, "Prelim. Resp."). With our authorization, Petitioner filed a Preliminary Reply (Paper 8, "Prelim. Reply") and Patent Owner filed a Preliminary Sur-Reply (Paper 10, "Prelim. Sur-reply").

The Board has authority to determine whether to institute *inter partes* review. *See* 35 U.S.C. § 314; 37 C.F.R. § 42.4(a). Under 35 U.S.C. § 314(a), we may not authorize an *inter partes* review unless the information in the petition and the preliminary response "shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition."

For the reasons stated below, we determine that Petitioner has established a reasonable likelihood that it would prevail with respect to at least one claim. We therefore institute *inter partes* review as to all of the challenged claims of the '427 patent and all of the asserted grounds of unpatentability in the Petition.

II. BACKGROUND

A. Related Matters

Petitioner identifies the following district court proceeding involving the '427 patent:

> *Mobile Data Technologies LLC v. Meta Platforms, Inc.*, Case No. 7:22-cv-00244-ADA-DTG (W.D. Tex.)(Petitioner served Dec. 6, 2022).

Pet. 1.

Patent Owner identifies the same related matter. Paper 5, 2–3.

B. Real Parties-in-Interest

Petitioner identifies Meta Platforms, Inc. as the real party-in-interest. Pet. 1.

Patent Owner identifies Mobile Data Technologies LLC as the real party-in-interest. Paper 5, 2.

Based on the current record, we determine that Petitioner has established compliance with the statutory requirement under 35 U.S.C. § 312(a)(2) to identify all real parties in interest.

C. The '427 Patent

The '427 patent is entitled "Method, Apparatus and System for Management of Information Content for Enhanced Accessibility over Wireless Communication Networks." Ex. 1001, code (54) (capitalization and bold omitted). The patent "relates generally to network-based communication systems, and more particularly to techniques for information content management in such systems." *Id.* at 1:31–33.

The '427 patent explains:

> Many users, for example, may wish to make specific personalized information content available via mobile devices to their friends, colleagues, subscribers or other entities. However, conventional techniques have been unable to meet this need in a satisfactory manner. . . . As a result, it is generally not possible for different mobile device users to link to and take further action on a persistent version of a given set of shared information content.

Id. at 1:47–2:1.

Figure 1A, reproduced below, is a block diagram of a network-based communication system configured in accordance with an embodiment of the '427 invention. *Id.* at 3:10–12.

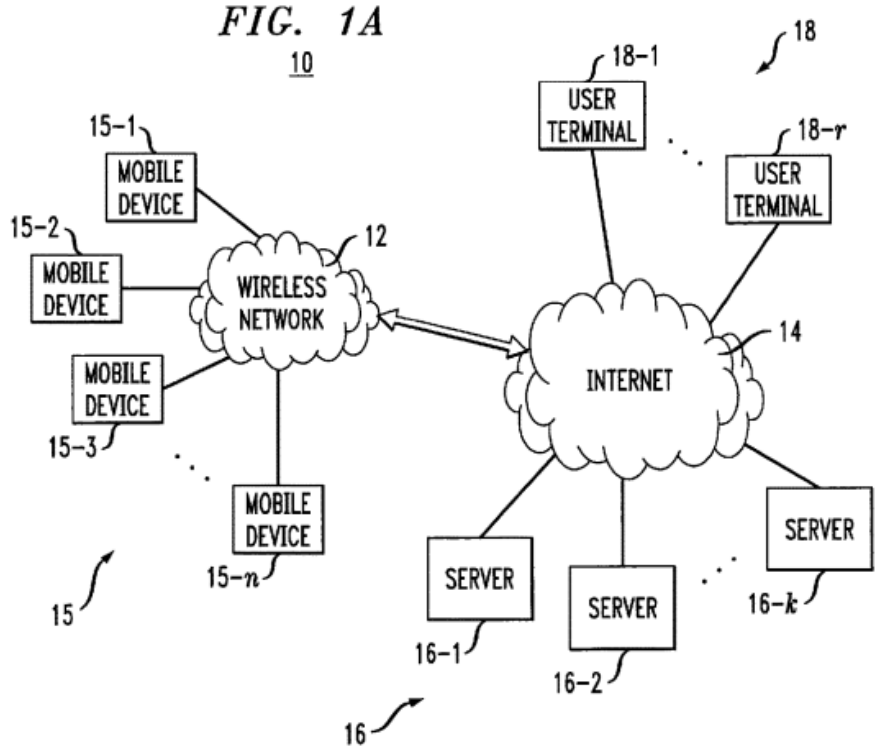


Figure 1A, above, shows a network-based communication system 10, including wireless network 12 coupled to Internet 14, mobile devices 15, set of servers 16, and set of user terminals 18. *Id.* at 3:62–4:12. The '427 patent states "[t]he mobile devices 15 and user terminals 18 may be more generally referred to herein as user devices." *Id.*

The system 10 provides a content management site accessible to a system user. *Id.* at 5:31–54. The content management site may be supported by server(s) 16 and may be accessed by the user over Internet 14 via user terminal(s) 18. *Id.* The '427 patent explains that

> [t]he content management site permits the user to enter information in accordance with a specified format comprising a plurality of selectable mobile information channels each corresponding to an information category. The mobile information channels are also referred to as "M-channels" herein . . . The entered information is processed to generate a mobile web site comprising information content that is

> accessible via one or more of the mobile devices **15** over the wireless network **12** of the system **10**. The information content of the mobile site is preferably configured such that a persistent version thereof is accessible via the one or more mobile devices **15** over the wireless network **12**. . . . The content management site can also be accessed via one of the mobile devices **15**, and used to create a mobile site also accessible via that mobile device and one or more other mobile devices.

Id.

The '427 patent describes the following advantages:

> [T]he M-channels allow unsophisticated users to easily and efficiently author message data or other types of information content to be made accessible via a collaborative workspace, a data mailbox, a collaborative community, or other type of mobile site or portion thereof generated or otherwise managed in the system **10**.

Id. at 8:29–43.

D. Illustrative Claim

The '427 patent has 22 claims. Claims 1–9 are challenged in the Petition. Pet. 2–3. Claim 1 is the only independent claim challenged. Claim 1 is illustrative and is reproduced below, with bracketed annotations added for convenience.

> 1. [preamble] A method for managing information content in a data communication network, the method comprising the steps of:
>
> [1[a]] providing content management resources at a first uniform resource locator hosted at a first set of one or more servers and accessible to a user of the data communication network, the content management resources being configured to permit the user to designate data from one or more data sources external to the first set of one or more servers;

[1[b]] uploading external data to a second set of one or more servers for use in the data communication network;

[1[c]] reformatting the external data for mobile device use; and

[1[d]] automatically generating mobile resources at a location different from the first uniform resource locator, the mobile resources being accessible independent of the content management resources via one or more mobile devices, the mobile resources automatically including the reformatted external data from a third set of one or more servers in the data communication network.

Ex. 1001, 19:25–44.

E. Prior Art References and Other Evidence

Petitioner relies on the following references:

1. *How to Do Everything with Yahoo!*, Alan Neibauer (Petitioner contends "Exhibit 1003 was published and accessible to the public on or shortly after October 11, 2000" (Ex. 1026 ¶ 45)) (Ex. 1003, "Neibauer").

2. Cheng, U.S. Patent No. 7,574,486 B1 (August 11, 2009) (Ex. 1005, "Cheng").

3. Balabine, U.S. Patent No. 5,937,406 (August 10, 1999) (Ex. 1015, "Balabine").

4. Yates, U.S. Patent No. 6,167,438 (December 26, 2000) (Ex. 1016, "Yates").

In addition to these references, Petitioner relies on the Declaration of Vijay K. Madisetti, Ph.D. (Ex. 1002, "Madisetti Decl.") and the Declaration of Sylvia D. Hall-Ellis, Ph.D. (Ex. 1026, "Hall-Ellis Decl.").

Patent Owner relies on the Declaration of Kevin C. Almeroth, Ph.D. (Ex. 2001, "Almeroth Decl.").

F. Asserted Grounds of Unpatentability

Petitioner asserts the following grounds of unpatentability. Pet. 2–3, 10.

Ground	Claim(s) Challenged	Basis 35 U.S.C. §	Reference(s)
1	1–3, 5–9	103(a)[1]	Neibauer, Cheng
2	4	103(a)	Neibauer, Cheng, Balabine
3[2]	1–3, 5–9	103(a)	Neibauer, Cheng, Yates
4	4	103(a)	Neibauer, Cheng, Balabine, Yates

III. ANALYSIS OF THE CHALLENGED CLAIMS

A. Applicable Legal Standards

A claim is unpatentable as obvious under 35 U.S.C. § 103 "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

[1] The '427 patent claims priority to several applications filed before the March 16, 2013 effective date of the §§ 102, 103 provisions in the Leahy-Smith America Invents Act ("AIA"), Pub. L. No. 112-29. Ex. 1001, codes (60), (63). Petitioner contends pre-AIA law applies to the challenged claims. Pet. 10. Patent Owner does not contest Petitioner's contention that pre-AIA law applies. *See* Prelim. Resp. Accordingly, we cite to pre-AIA § 103(a).

[2] The table on page 3 of the Petition incorrectly numbers the third ground as "Ground 4" and the fourth ground as "Ground 5." Consistent with the description of the third and fourth grounds in the Petition, we consider the third ground to be "Ground 3" and the fourth ground to be "Ground 4." *See* Pet. 51–57.

which said subject matter pertains." 35 U.S.C. § 103(a) (2006). 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) so-called "secondary considerations," including commercial success, long-felt but unsolved needs, failure of others, and unexpected results. *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). At this stage, neither party has presented any evidence on the fourth *Graham* factor.

B. Level of Ordinary Skill in the Art

> According to Petitioner, a person of ordinary skill in the pertinent art would have possessed a bachelor's degree in electrical engineering, computer science, or similar field, with two years of experience in developing and implementing network-based computer systems that interact with mobile devices, such as systems for storing and retrieving information over the Internet or communicating using the Web using wireless mobile devices.

Pet. 5–6 (citing Ex. 1002 ¶¶ 14–18).

Patent Owner states "[f]or purposes of this Response, [Patent Owner] applies Petitioner's characterization of a POSITA." Prelim. Resp. 17.

Petitioner's description of a person of ordinary skill in the art is consistent with the '427 patent and the prior art before us and is supported by the testimonial evidence. Therefore, for the purpose of this Decision, we adopt Petitioner's description.

C. Claim Construction

For this *inter partes* review, the Board applies the same claim construction standard as that applied in federal courts. *See* 37 C.F.R. § 42.100(b) (2023). Under this standard, claim terms "are generally given

their ordinary and customary meaning" as understood by a person of ordinary skill in the art in question at the time of the invention. *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–13 (Fed. Cir. 2005) (en banc) (citations omitted). "In determining the meaning of the disputed claim limitation, we look principally to the intrinsic evidence of record, examining the claim language itself, the written description, and the prosecution history, if in evidence." *DePuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.*, 469 F.3d 1005, 1014 (Fed. Cir. 2006) (citing *Phillips*, 415 F.3d at 1312–17).

Because the meaning of a claim term as understood by persons of skill in the art may not be immediately apparent, we may look to "those sources available to the public that show what a person of skill in the art would have understood disputed claim language to mean." *Innova/Pure Water, Inc. v. Safari Water Filtration Systems, Inc.*. 381 F.3d 1111, 1116 (Fed. Cir. 2004). These sources may include extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art. However, such extrinsic evidence is "less significant than the intrinsic record in determining 'the legally operative meaning of claim language.'" *Phillips*, 415 F.3d at 1317 (citation omitted).

Only those terms that are in controversy need be construed, and only to the extent necessary to resolve the controversy. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017); *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999). Petitioner states that it "does not believe express claim construction is necessary at this time." Pet. 8. Patent Owner states "[f]or purposes of this Response, [Patent Owner] submits no express constructions are required." Prelim. Resp. 17.

However, in its discussion of the merits, Patent Owner asserts that "[i]n applying the cited art, Petitioner without comment deviates from the well-understood meaning of 'uploading': sending data from a client to a server." Prelim. Resp. 22–23 (citing Ex. 2001 ¶ 99). Patent Owner asserts that "when discussing Cheng, Petitioner turns this well-understood meaning on its head in an attempt to make its Neibauer-Cheng combination read on the claims." *Id.* at 23.

Specifically, Patent Owner argues that the "data flow" relied on by Petitioner in Cheng, i.e. sending web page 104 from origin web server 102 to proxy server 110, and sending reformatted web page 122 to mobile device 108, would be understood by a person of ordinary skill in the art to be "downloading," and not "uploading" as recited in limitation 1[b]. *Id.* at 24 (citing Ex. 2001 ¶ 103). Patent Owner asserts that "the '427 Patent's disclosure . . . describe[es] data sent from a server to a client as a 'download' and data sent from a client to a server as an 'upload.'" Prelim. Resp. 25 (citing Ex. 2001 ¶ 102). Indeed, Dr. Almeroth testifies that a person of ordinary skill in the art would understand that "a 'download' is data returned by a server in response to a requesting client, while an 'upload' is unrequested data sent by a client to a server." Ex. 2001 ¶ 103.

Given this apparent dispute over the claim term "uploading," it is necessary to determine the ordinary and customary meaning of "uploading" as it would have been understood by a person of ordinary skill in the art at the time of the claimed invention.[3] *Phillips v. AWH Corp.*, 415 F.3d 1303,

[3] In their subsequent papers, the parties should address the effective filing date of the '427 patent for purposes of determining the relevant date for the

1312–13 (Fed. Cir. 2005) (en banc) (citations omitted). The inquiry into the meaning that claim terms would have to a person of ordinary skill in the art at the time of the invention is an objective one. This being the case, a court looks to those sources available to the public that show what a person of skill in the art would have understood the disputed claim language to mean. Those sources include the words of the claims themselves, the remainder of the specification, the prosecution history, and extrinsic evidence concerning relevant scientific principles, the meaning of technical terms, and the state of the art. *Innova/Pure Water, Inc. v. Safari Water Filtration Systems, Inc.*. 381 F.3d 1111, 1116 (Fed. Cir. 2004).

Looking first at the claim language, claim 1 recites:

1. [preamble] A method for managing information content in a data communication network, the method comprising the steps of:

[1[a]] providing content management resources at a first uniform resource locator hosted at a first set of one or more servers and accessible to a user of the data communication network, the *content management resources being configured to permit the user to designate data from one or more data sources external to the first set of one or more servers*;

[1[b]] *uploading external data to a second set of one or more servers for use in the data communication network*;

[1[c]] reformatting the external data for mobile device use; and

[1[d]] automatically generating mobile resources at a location different from the first uniform resource locator, the mobile resources being accessible independent of the content management resources via one or

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ordinary and customary meaning of term "uploading." *See Phillips*, 415 F.3d at 1313.

more mobile devices, the mobile resources automatically including the reformatted external data from a third set of one or more servers in the data communication network.

Ex. 1001, 19:25–44 (alphanumeric designations and emphasis added).

Limitation 1[a] provides for content management resources that "*permit the user to designate data from one or more data sources external to the first set of one or more servers*." This language indicates that the "*data sources*" are "*external to the first set of . . . servers*." Limitation 1[b] recites "*uploading external data to a second set of one or more servers for use in the data communication network*." This language indicates that the "*external data*" is sent to "*a second set of . . . servers*." Read together, our preliminary determination is that claim 1 provides for "*content management resources*" that permit a user to "*designate data*" from a "*data source*" that is "*external*" to a "*first set of . . . servers*" wherein the "*external data*" is "*upload[ed]*" to a "*second set of . . . servers*." Pursuant to limitations 1[a] and 1[b] then, the recited "*uploading*" encompasses a data path from an "*external data source*" to a "*second set of . . . servers*."

With respect to the '427 specification, neither party identifies an express definition for the term "uploading." Patent Owner does, however, point to several passages from the '427 specification that it argues are consistent with the use of "upload" to refer to data sent ***from*** a client ***to*** a server, and "download" to refer to data returned ***from*** a server ***to*** a client. *See* Ex. 2001 ¶ 102. Dr. Almeroth also testifies that a person of ordinary skill in the art would understand that "a 'download' is data returned by a server in response to a requesting client, while an 'upload' is unrequested data sent by a client to a server." *Id.* ¶ 103. Neither party directs us to any

portions of the '427 prosecution history that would aid in understanding the scope of the term "*uploading*" as it is used in the patent.

Given this preliminary record, we do not see a basis for adopting Patent Owner's proposed meaning of "*uploading*" as "*data sent from a client to a server*." We do not discern a rationale in the claims or the intrinsic record to include the term "client" within the meaning of "uploading." Rather, given the current record, we preliminarily determine that the ordinary and customary meaning of the term "uploading" as it is used in the '427 patent and would have been understood by someone of ordinary skill in the art at the time of the claimed invention is "*transferring data from an external data source to a set of servers*."

This preliminary determination does not preclude the parties from proposing, presenting evidence, or arguing a different meaning for the term "uploading" during trial. To the extent the parties disagree with this preliminary determination, the parties should present their evidence and arguments as permitted by our rules.[4] A final determination as to the ordinary and customary meaning of the term "uploading" as it is used in the '427 patent will be made after the close of all the evidence and after any oral hearing in this matter.

[4] "If a trial is instituted, the parties also will have opportunities to cross-examine any opposing declarants, and to submit additional arguments and evidence, addressing the Board's initial claim construction determination and the opposing party's arguments and evidence before oral hearing." CPTG 49 (Available at https://www.uspto.gov/TrialPracticeGuideConsolidated).

D. Discretionary Denial

Patent Owner argues that we should exercise our discretion to deny institution of trial under 35 U.S.C. § 325(d). Prelim. Resp. 5–14. Patent Owner asserts that "the Petition is grounded in art that was already before the Examiner, and thus institution should be denied under § 325(d)." Prelim. Resp. 5 (bold and capitalization omitted); *see also id.* at 5–8. Patent Owner also asserts that "all petitioned art was previously presented, substantially similar, or cumulative." *Id.* at 8 (bold and capitalization omitted); *see also id.* at 8–11. Patent Owner additionally asserts that the "Petitioner does not show the Examiner materially erred." *Id.* at 11 (bold and capitalization omitted); *see also id.* at 11–14.

1. Legal Standard

Under § 325(d), we have discretion to deny a petition that presents the same or substantially the same prior art or arguments as previously presented to the Office. In evaluating whether the factual predicate under § 325(d) is met, we consider a number of non-exclusive factors, as set forth in *Becton, Dickinson & Co. v. B. Braun Melsungen AG*, IPR2017-01586, Paper 8 at 17–18 (PTAB Dec. 15, 2017) (Institution Decision) (precedential as to Section III.C.5, first paragraph) ("*Becton Dickinson* factors"):

(a) the similarities and material differences between the asserted art and the prior art involved during examination;

(b) the cumulative nature of the asserted art and the prior art evaluated during examination;

(c) the extent to which the asserted art was evaluated during examination, including whether the prior art was the basis for rejection;

(d) the extent of the overlap between the arguments made during examination and the manner in which Petitioner relies on the prior art or Patent Owner distinguishes the prior art;

(e) whether Petitioner has pointed out sufficiently how the Examiner erred in its evaluation of the asserted prior art; and

(f) the extent to which additional evidence and facts presented in the Petition warrant reconsideration of the prior art or arguments.

Becton, Dickinson, IPR2017-01586, Paper 8 at 17–18.

In performing an analysis under § 325(d), the Board uses the following framework:

> (1) whether the same or substantially the same art previously was presented to the Office or whether the same or substantially the same arguments previously were presented to the Office; and (2) if either condition of first part of the framework is satisfied, whether the petitioner has demonstrated that the Office erred in a manner material to the patentability of challenged claims. . . . If, after review of [*Becton Dickinson*] factors (a), (b), and (d), it is determined that the same or substantially the same art or arguments previously were presented to the Office, then factors (c), (e), and (f) relate to whether the petitioner has demonstrated a material error by the Office.

Advanced Bionics, LLC v. MED-EL Elektromedizinische Geräte GmbH, IPR2019-01469, Paper 6 at 8, 10 (PTAB Feb. 13, 2020) (Institution Decision) (precedential) (footnote omitted).

2. Analysis

Patent Owner asserts that "Petitioner correctly acknowledges that [Neibauer and Cheng] were considered and made of record by the Examiner." Prelim. Resp. 8. Patent Owner also asserts that "[t] rest of the references" were cited by Petitioner "primarily for ancillary features or to account for potential claim construction positions that may arise." *Id.* at 9.

With respect to Balabine, Patent Owner argues that

> Petitioner relies on Balabine in a single dependent claim, for the straightforward notion of an external data source comprising a database. Pet. 46. Petitioner does not allege that the Examiner would not have allowed the claims had he considered Balabine, and in any event relying on Balabine's disclosure of a database system cannot cure the deficiencies in Neibauer and Cheng described herein.

Id. at 10.

With respect to Yates, Patent Owner argues that "Yates is added to a second, parallel set of grounds 'solely to account for a potential narrow construction of a limitation recited in limitation [d] of claim 1,'" and that "the Board need not consider Petitioner's parallel grounds 3-4 relying on Yates" because "Petitioner's anticipated construction is not required at this stage." *Id.* at 10–11 (citing Ex. 1002 ¶¶ 74, 143).

Petitioner argues that although Neibauer and Cheng "were considered during prosecution . . . the sole mention of these references during prosecution was their inclusion on Information Disclosure Statements filed by the Applicants that were considered by the Examiner. Pet. 4 (citing Ex. 1022, 289, 302, 325). Petitioner asserts that "[t]hese references were cited along with hundreds of other prior art references cited during prosecution." Pet. 4. Petitioner also asserts that "[t]he record on Neibauer and Cheng is entirely 'silent' because the Examiner never addressed them." Prelim. Reply 1.

Petitioner argues that

> the Examiner's consideration of Neibauer and Cheng does not raise § 325(d) issues in light of the uneventful prosecution history. An initial Office Action issued on February 3, 2020, rejecting claims 1-20 based on double-patenting grounds based on an earlier patent in the same family, U.S. Patent No. 9,922,348

> B2. (EX1022, 00268-00270.) No rejections were entered based on prior art. The applicants responded by cancelling all original claims proposing new claims 21-42. (EX1022, 00341-00347.)
>
> The Examiner subsequently issued a Notice of Allowance. (EX1022, 00348-00354.) In his statement of reasons for allowance, the Examiner identified U.S. Patent Application Pub. No. 2013/0254314 A1 to Edmond Chow as the closest prior art, but stated that it did not disclose the "**uploading**," "**reformatting**," and "**automatically generating**" limitations in the independent claims. (EX1022, 00357.) Chow was not otherwise mentioned during prosecution.

Pet. 4–5.

> Petitioner also argues that Neibauer and Cheng
>
> confirm that all limitations of the challenged claims were disclosed by and rendered obvious in view of the prior art – including the uploading, reformatting, and automatically generating limitations that the Examiner found missing from Chow. (EX1002, ¶¶97-125.) In fact, the PTO actually cited and relied on both Neibauer and Cheng in the reexamination of U.S. Patent No. 8,135,801 B2, a parent in the same family as the '427 patent, which resulted in cancellation of all claims of that patent. (EX1024, 004 (PTAB decision affirming prior art rejections based on Cheng and Neibauer), 0018-0019 (Federal Circuit affirmance).)

Pet. 5.

With respect to Balabine and Yates, Petitioner asserts that these references were "indisputably not considered" by the Examiner and that Patent Owner does not "identify any other reference that is allegedly 'substantially similar' to them." Prelim. Reply, 2 (citing Prelim. Resp. 10–11).

Although Neibauer and Cheng were listed on Information Disclosure Statements during prosecution of the '427 patent, these references were included along with dozens of other references disclosed during prosecution.

See, e.g., Ex. 1022, 289, 302, 325. Other than the IDS listings, the record is silent as to the Office's consideration of Neibauer and Cheng during prosecution. There is no clear evidence in the record that Neibauer and Cheng were considered substantively during prosecution of the '427 patent.

With respect to Balabine and Yates, there is no dispute that these references were not previously presented to the Office, and Patent Owner does not identify any prior art previously presented that is substantially similar to these references.

Moreover, Petitioner has sufficiently shown that the Office materially erred when it allowed the challenged claims. As *Advanced Bionics* explains, the record developed by the Office informs what the petitioner must show to demonstrate material error. *Advanced Bionics,* Paper 6 at 10.

Here, the record developed by the Office with respect to Neibauer and Cheng is sparse. Neibauer and Cheng were among dozens of other references identified on information disclosure sheets submitted during prosecution, and there is no clear evidence of record that Neibauer and Cheng were ever discussed substantively. *See generally* Ex. 1022. Petitioner argues that "the Examiner erred by overlooking [Neibauer and Cheng] and the compelling grounds of unpatentability they provided." Prelim. Reply 1. "Neibauer and Cheng were stronger prior art because they disclosed the limitations the Examiner thought were missing from Chow, including the "uploading," "**reformatting**," and "**automatically generating**" limitations that he highlighted in the Notice of Allowance." *Id.*

In light of this sparse record, Petitioner's showing on the merits with respect to Neibauer and Cheng is sufficient to demonstrate that the Office erred with respect to its consideration of these references during prosecution

of the '427 patent. To the extent the Office substantively considered Neibauer and Cheng and concluded that their combination does not teach claim 1, this was material error. It is also notable that the Office cited and relied on both Neibauer and Cheng in the reexamination of U.S. Patent No. 8,135,801 B2, a parent in the same family as the '427 patent, which resulted in cancellation of all claims of that patent.

For the reasons discussed below with respect to the merits, the asserted combination of Neibauer and Cheng sufficiently teaches claim 1. Given the Petition's detailed analysis, including the supporting testimony of Dr. Madisetti, and the sparse record developed by the Office addressing Neibauer and Cheng during prosecution of the '427 patent, Petitioner has shown sufficiently that the Office materially erred when it found that the prior art does not teach claim 1.

For these reasons, we decline to exercise our discretion to deny institution based on 35 U.S.C. § 325(d).

E. Prior Art References

1. Neibauer (Ex. 1003)

Neibauer is a book titled "How to Do *Everything* with Yahoo!" Ex. 1003, 2.[5] Neibauer provides a description, tutorial, and reference guide for various Yahoo features. *Id.* at 17.

Neibauer describes Yahoo! Clubs, which is for Yahoo! members who share a common interest. *Id.* at 157. Yahoo! Clubs is accessed by clicking on Clubs on the Yahoo! home page or by entering an address. *Id.* Neibauer describes:

[5] We refer to the page numbering of Exhibit 1003 as opposed to the original page numbering in the book itself.

> Each club has its own message board and chat room, as well as places to share photographs, news, addresses, and links. You can create your own club and use it to share information about any topic that interests you or as a home page where friends and family can stay in touch.

Id.

Neibauer describes how photographs may be shared. *Id.* at 161. A list of albums that a club maintains can be seen by clicking Photos and a list of photos in an album can be seen by clicking the album name. *Id.* Neibauer further describes how to add a photograph to an album. *Id.* at 161–62. Neibauer additionally describes how a user may create their own club, including adding a photograph to the club's home page. *Id.* at 164–67.

Neibauer describes that Yahoo! Mobile lets you get many Yahoo! services on mobile devices, including cell phones, web phones, and personal digital assistants. *Id.* at 111.

2. Cheng (Ex. 1005)

Cheng is a U.S. patent titled "Web Page Content Translator." Ex. 1005, code (54) (capitalization and bold omitted). Cheng describes that "[b]ecause of the explosion of mobile enterprise solutions, users of wireless devices now demand that businesses deliver web content for viewing on desktop, or mobile/portable (e.g., handheld) devices." *Id.* at 1:19–22.

Cheng describes "[a] system, method, and computer readable medium for reformatting web content into a format readable on one or more mobile devices." *Id.* at code (57); *see also id.* at 2:19–32, 3:21–26.

Figure 1, reproduced below, is a block diagram of a mobile device, a proxy server, and a content server which illustrates an overview of a method according to the Cheng invention. *Id.* at 2:57–60.

FIG. 1

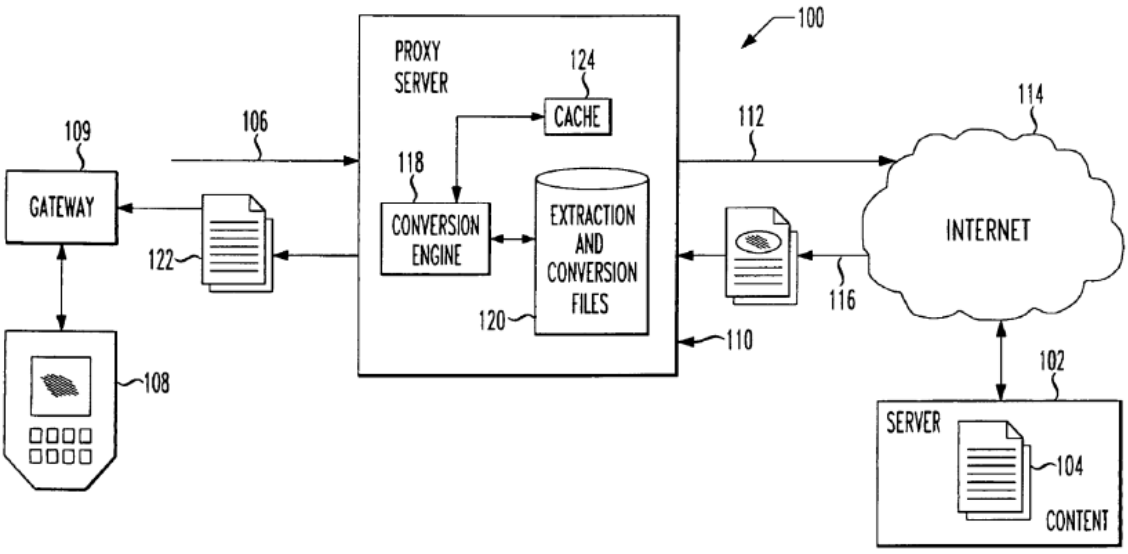


Figure 1, above, illustrates architecture 100, including proxy server 110 which reformats/converts web content 104 on origin web server 102 into a format 122 readable on mobile device 108 (which can be any number of different mobile device types). *Id.* at 3:21–30.

3. Balabine (Ex. 1015)

Balabine is a U.S. patent titled "File System Interface to a Database." Ex. 1015, code (54) (capitalization and bold omitted). Balabine describes how "[i]nformation in a database is accessed with a computer system by transforming a file system request from an application into a database query and retrieving information corresponding to the database query from the database." *Id.* at code (57). In more detail, Balabine describes how most application programs are database-unaware, meaning that they cannot access information stored in a database and that database-unaware applications rely on file systems. *Id.* at 2:15–20. Balabine explains that

> In one aspect of the [Balabine] invention, information in a database is accessed with a computer system by making one or more database objects (e.g., a table or a row) available as one or

> more file system objects (e.g., directories, files or links) to an application, for example, a database-unaware application.

Id. at 2:51–55; *see also id.* at 5:5–22.

4. Yates (Ex. 1016)

Yates is a U.S. patent titled "Method and System for Distributed Caching, Prefetching and Replication." Ex. 1016, code (54) (capitalization and bold omitted).

Figure 1, reproduced below, illustrates a computer network showing a request path for a single document and the location of cache servers along the path according to the invention. *Id.* at 5:32–34.

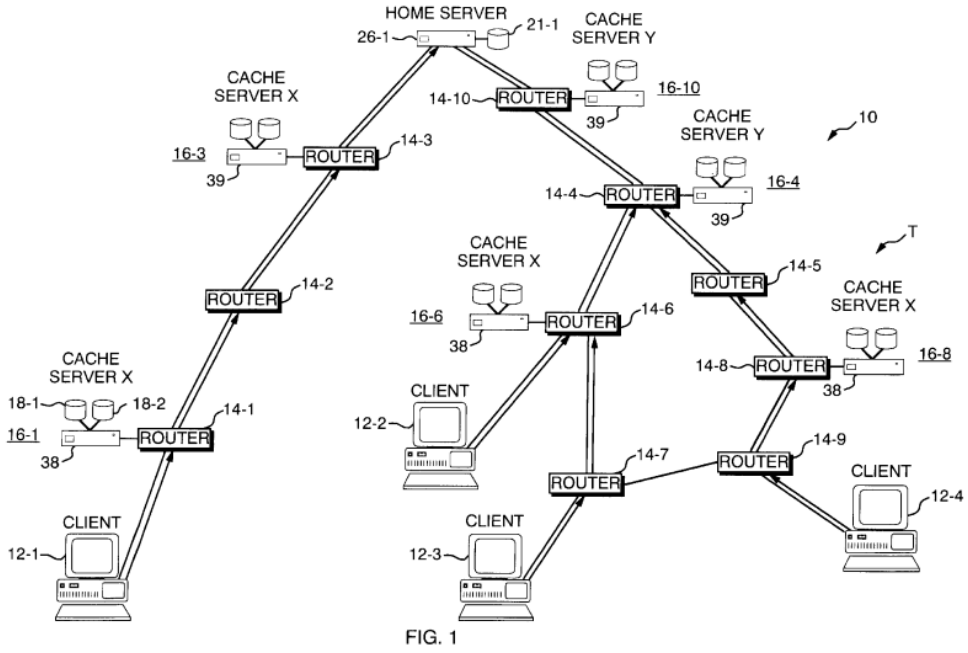


FIG. 1

Figure 1, above, illustrates computer network 10, client computers 12-1, 12-2, 12-3, 12-4; routers 14-1, 14-2, . . . , 14-10; cache servers 16-1, 16-3, 16-4, 16-6, 16-8, and 16-10; and a home server. *Id.* at 5:59–6:2. In accordance with the Yates invention, copies of documents are located in the network at cache servers 16. *Id.* at 7:9–10. Document request messages travel up a tree T, from a client at which it originated, such as client 12-3, towards the home

server. *Id.* at 7:28–45. "If a cache copy is encountered at cache server 16-6, then that copy is returned to the client 12, and the request message is not permitted to continue on its way to the home server." *Id.*

F. Obviousness Based on Neibauer and Cheng (Ground 1)

Petitioner contends claims 1–3 and 5–9 would have been obvious over the combined teachings of Neibauer and Cheng. Pet. 11–46. Petitioner provides a detailed analysis of its position, supported by the testimony of Dr. Madisetti. *See* Pet. 11–46; Ex. 1002 ¶¶ 38–132.

Patent Owner contends that Petitioner's combination of Neibauer and Cheng does not disclose limitation 1[b] (directed to uploading) and that Petitioner's rationale to combine Neibauer and Cheng is deficient. Prelim. Resp. 22–38; *see also* Prelim. Resp. 17–22. Patent Owner's position is supported by the testimony of Dr. Almeroth. *See* Ex. 2001 ¶¶ 45–110.

1. Rationale to Combine

Petitioner contends that "[i]t would have been obvious to combine Neibauer with Cheng, predictably resulting in the club [features of Neibauer] being delivered to mobile devices over the Internet." Pet. 26–27. Petitioner asserts that "[u]nder the proposed combination . . . the club home page in Neibauer . . . would have been reformatted and delivered to users with mobile devices, via the proxy server conversion techniques disclosed in Cheng." *Id.* at 27 (citing Ex. 1002 ¶ 105).

Petitioner argues that "[t]he proposed combination would have been exceedingly straightforward as Cheng provides 'bolt-on' functionality, with the proxy server capable of converting and reformatting any existing HTML-based web page into a format suitable for display on a mobile device." Pet. 29 (citing Ex. 1002 ¶¶ 108, 110–111; Ex. 1005, 2:30–32).

Petitioner argues that "the proposed combination would not have required changing the underlying functionality in Neibauer – a feature that provides a further motivation to combine." Pet. 30 (citing Ex. 1002 ¶¶ 108, 110–111).

Petitioner asserts that "Neibauer is an analogous reference that discloses similar functionality for managing information content accessible and the ability to exchange messages and collaborate among users in a web-based system, and would have been reasonably pertinent to problems facing the inventors including how to implement such a system." Pet. 30 (citing Ex. 1002 ¶ 109). Petitioner asserts that "Cheng is also an analogous reference in the field of network-based communications systems, including the ability to make web-based information content available on mobile devices, and would have been reasonably pertinent to problems facing the inventors." *Id.*

Petitioner argues that "Neibauer itself suggests the proposed combination by disclosing services such as 'Yahoo! Mobile' and 'Yahoo! To Go' that enable content from Yahoo! services to be provided to mobile devices such as pagers, cell phones, web phones, and personal digital assistants (PDAs)." Pet. 30 (citing Ex. 1003, 166–174). Petitioner points out that "[f]or example, one option referred to as 'Yahoo! On Your PDA' allowed users of browser-enabled PDAs, such as Palm, Windows CE and smartphone devices, to select particular types of Yahoo! content accessible from their PDA." Pet. 30–31 (citing Ex. 1003, 171–174). Petitioner argues that "[i]t would have been obvious, based on Neibauer in further view of Cheng, to also make the Yahoo! Clubs features . . . available to users through mobile devices," and that "[t]his would have been viewed as a

logical (and obvious) extension of the existing Yahoo! mobile features and capabilities described in Neibauer." Pet. 31 (citing Ex. 1002 ¶ 110).

Petitioner argues that

> [a]skilled artisan would also have been motivated to make the club features available to mobile devices to take advantage of growing popularity of mobile computing and mobile devices. (EX1002, ¶¶111-112.) Cheng explains that "users of wireless devices now demand that businesses deliver web content for viewing on desktop, or mobile/portable (e.g., handheld) devices." (Cheng, 1:18-22.) The '427 patent itself admits that "[o]ne of the most rapidly expanding aspects of wireless networking involves the accessing of information content over wireless networks via web-enabled mobile devices," such as "mobile telephones, personal digital assistants (PDAs), palmtop computers, etc." ('427, 1:37-41.) Market forces would thus have motivated a skilled artisan to combine Neibauer with Cheng in order to provide the club functionalities described above to users of mobile devices. (EX1002, ¶111.)

Pet. 31.

Petitioner also argues that

> Cheng provides a further express motivation to combine by explaining that the proxy server conversion method provides a "create-once, deliver anywhere approach" that eliminates the need to build and maintain separate web pages for different types of mobile devices and browsers. (Cheng, 2:8-19.) This would have provided a clear technological advantage by obviating the need to generate multiple different mobile versions of club-related pages, thus simplifying the implementation. (EX1002, ¶112.) As a further motivation to combine, the proxy server transcoding techniques in Cheng were already well-known and had already been deployed for the very purpose of converting web page content into formats suitable for mobile devices. (EX1002, ¶¶112-113.) An ordinarily skilled artisan would also have had a reasonable expectation of success, as Cheng relies on known and industry-standard and well-known technologies. (EX1002, ¶114.)

Pet. 31–32.

Patent Owner argues that "Petitioner's motivations to combine are conclusory, internally inconsistent, and contradicted by record evidence." Prelim. Resp. 31. Patent Owner asserts that "the primitive Yahoo! services available on a PDA via Yahoo! Mobile and Yahoo! To Go reflected the 'limited memory, slow data transmission, and small screens' the experts agree were available on mobile devices at the time," and that "Neibauer's Yahoo! Mobile and Yahoo! To Go examples do not show any comparable functionality." Prelim. Resp. 31, 33 (citing Ex. 2001 ¶¶ 64–70; Ex. 1002 ¶ 113; Ex. 1003, 171). Patent Owner argues that "the story told by the record evidence is that Yahoo! did not already provide Clubs functionality through Yahoo! Mobile and Yahoo! To Go . . . because contemporaneous mobile devices were incapable of supporting it." Prelim. Resp. 33 (citing Ex. 2001 ¶¶ 58, 61–66).

With respect to Cheng, Patent Owner argues that "there is no record evidence if and how Cheng's translation tool could have been successfully applied to the Clubs webpages for any mobile devices available at the time, and, if so, whether the functionalities Petitioner relies on still would have worked." Prelim. Resp. 34. Patent Owner also argues that "[i]f such transcoding proxy servers were already in commercial use, there would have been no need and thus no motivation for a POSITA to start over with Cheng rather than just using an already available proxy—if indeed a POSITA would have seen a transcoding proxy server as a viable solution at all." *Id.* at 34–35. Patent Owner points out that "Cheng acknowledges only two ways for a mobile device to route requests through its proxy server," and that "[e]ither possibility would be awkward for a mobile device user wanting

to view a website of an enterprise that employed Petitioner's Neibauer-Cheng combination." *Id.* at 35–36. Patent Owner contends that "[t]hese unnecessary contortions would be unacceptable to a user, and would discourage a POSITA from designing a mobile-capable website by crudely 'bolting on' a Neibauer web server and Cheng proxy server as Petitioner suggests." *Id.*

Patent Owner also contends that a person of ordinary skill in the art "would have no idea whether [Cheng's] disclosed system would work at all to translate the Clubs web pages to [a] form viewable on a mobile device available at the time—much less with all of the functionality usable that Petitioner relies on—and would have to engage in undue experimentation to determine which of Cheng's SW-Transforms might work." Prelim. Resp. 37.

An obviousness determination, however, "does not require that a particular combination must be the preferred, or the most desirable, combination described in the prior art in order to provide motivation for the current invention." *In re Fulton*, 391 F.3d 1195, 1200 (Fed. Cir. 2004). Oftentimes, the strongest rationale for combining references is a recognition, expressly or impliedly in the prior art or drawn from a convincing line of reasoning based on established scientific principles or legal precedent, that some advantage or expected beneficial result would have been produced by their combination. *In re Sernaker,* 702 F.2d 989, 994–995 (Fed. Cir. 1983). Indeed, the Federal Circuit has repeatedly held that

> an implicit motivation to combine exists not only when a suggestion may be gleaned from the prior art as a whole, but when the "improvement" is technology-independent and the combination of references results in a product or process that is

> more desirable, for example because it is stronger, cheaper, cleaner, faster, lighter, smaller, more durable, or more efficient. Because the desire to enhance commercial opportunities by improving a product or process is universal—and even common-sensical—we have held that there exists in these situations a motivation to combine prior art references even absent any hint of suggestion in the references themselves. In such situations, the proper question is whether the ordinary artisan possesses knowledge and skills rendering him *capable* of combining the prior art references.

Dystar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick, 464 F.3d 1356, 1368 (Fed. Cir. 2006).

Here, Dr. Madisetti articulates this very rationale where he testifies that

> [t]he techniques of Cheng would have provided a distinct technological advantage by allowing the club system described in Neibauer to be delivered to mobile devices by converting web pages provided via Neibauer, thus obviating the need for the Yahoo! server to generate multiple different versions of those web pages (including potentially multiple mobile versions based on different mobile device and browser types), thus making it considerably simpler to provide club functionality to the web browsers of mobile devices.

Ex. 1002 ¶ 112.

Dr. Almeroth, however, testifies that "Yahoo! Clubs requires two-way interaction and transfer of content . . . while Cheng's proxy server is only configured to handle content delivery in a single, downstream direction." Ex. 2001 ¶ 94. But, as Dr. Madisetti explains, and as Cheng makes clear, there is *two-way* communication occurring between mobile device 108 and proxy server 110 in Cheng. As shown in Cheng's Figure 1, mobile device 108 can send a request 106 to proxy server 110 for an original web page 104 using standard HyperText Transport Protocol (HTTP), as was well-known in

the art, with the request 106 being received by proxy server 110. Ex. 1002 ¶¶ 65, 103 (citing Ex. 1005, Fig. 1, 2:19–21, 3:58–67, 7:65–8:2). Proxy server 110 then converts and/or reformats original web page 104 into reformatted web page 122 (shown in Figure 1), which is transmitted back to mobile device 108. Ex. 1005, 2:24–29, 5:46–49, 4:56–60. As Cheng explains, "[t]he designated HTML content of the retrieved web page 104 is extracted, subsequently and/or converted, and transmitted as a reformatted web page 122 to the mobile device 108." *Id.* at 5:46–49; *see also id.*, 3:22–26.

While Dr. Almeroth acknowledges that Cheng discloses "two ways for a mobile device to route requests through its proxy server," Dr. Almeroth criticizes Cheng's teachings because "both of these options would be unacceptable to a user, because they make unnecessary work just to access the desired website." Ex. 2001 ¶¶ 89–90. However, as we previously noted, an obviousness determination "does not require that a particular combination must be the preferred, or the most desirable, combination described in the prior art in order to provide motivation for the current invention." *In re Fulton*, 391 F.3d at 1200.

Dr. Almeroth also testifies that a person of ordinary skill in the art "would have had to engage in an undue level of experimentation to determine whether . . . Neibauer's web pages might be converted through some combination of Cheng's SW-Transforms . . . in a way that the web pages could be viewed on the mobile device at all." Ex. 2001 ¶ 93. Yet, Cheng teaches just such a methodology for converting web pages so that they may be viewed on mobile devices. Cheng explains that "[b]ecause of the explosion of mobile enterprise solutions, users of wireless devices now

demand that businesses deliver web content for viewing on desktop, or mobile/portable (e.g., handheld) devices." Ex. 1005, 1:19–22.

As Patent Owner and Dr. Almeroth acknowledge, Cheng accomplishes this by using "SW-Transforms" to convert "conventional websites into a format viewable on mobile devices." Prelim. Resp. 21 (citing Ex. 2001 ¶¶ 70, 72, 75; *see also id.* ¶ 71). Patent Owner acknowledges that Cheng discloses SW-Transforms that can be applied on a device-specific basis (based on a recipient's specific mobile device) or on a global basis (for all recipients). Prelim. Resp. 21 (citing Ex. 1005, 4:56–5:10; Ex. 2001 ¶ 71).

On this preliminary record, we credit Dr. Madisetti's testimony, which aligns with the teachings of Neibauer and Cheng. Here, Dr. Madisetti testifies that combining the Yahoo! Clubs features described in Neibauer with the teachings of Cheng, would

> involve nothing more than straightforward web programming techniques relying on standard technologies such as HTTP, HTML, and could have been implemented using off-the-shelf web browser and web server software. With respect to Cheng, it discloses known techniques for converting HTML documents into formats suitable for wireless mobile devices. Wireless web browsing was well-known as evidenced by the existence of industry-standard technologies such as Wireless Application Protocol (WAP) and the Wireless Markup Language (WML), an XML-based markup language for describing pages for viewing on mobile devices. Proxy server techniques, as explained previously, were also well-known and commercially available. An ordinarily skilled artisan would have found the disclosures of Neibauer and Cheng sufficiently detailed to implement the techniques on which I rely, without undue experimentation.

Ex. 1002 ¶ 114.

The web programming techniques described by Dr. Madisetti would have been well within the command of a person of ordinary skill in the art at the time of the invention given the qualifications agreed upon by the parties in this proceeding, which include "a bachelor's degree in electrical engineering, computer science, or similar field, with two years of experience in developing and implementing network-based computer systems that interact with mobile devices, such as systems for storing and retrieving information over the Internet or communicating using the Web using wireless mobile devices." *See* Section III.B *supra*; Pet. 5–6; Prelim. Resp. 17.

Based upon the present record, we determine that Petitioner has made a sufficient showing that one of ordinary skill in the art would have had a reason to combine the asserted art in the manner described by Petitioner. We, therefore, find that Petitioner has shown sufficiently for purposes of institution that a person of ordinary skill in the art at the time of the claimed invention would have had reason to combine the teachings Neibauer and Cheng in the manner described in the Petition, and would have had a reasonable expectation of success in so doing.

2. Independent Claim 1

Patent Owner contends that Petitioner's proposed combination of Neibauer and Cheng does not disclose limitation 1[b], "*uploading external data to a second set of one or more servers for use in the data communication network*." Prelim Resp. 22–30. Patent Owner does not contest any of Petitioner's evidence or arguments with respect to the other limitations of claim 1. *Id.* We consider the parties' evidence and arguments with respect to the contested limitation first.

a) Contested Limitation 1[b]: uploading external data to a second set of one or more servers for use in the data communication network;

Petitioner explains that "Neibauer discloses features of a Yahoo! service known as Yahoo! Clubs." Pet. 11 (citing Ex. 1003, 473–483). According to Petitioner, "Neibauer explains that '[a] *club* is a group of Yahoo! members who share a common interest. Each club has its own message board, chat room, as well as places to share photographs, news, addresses, and links." Pet. 11 (citing Ex. 1003, 473) (italics in original). Petitioner explains that in Neibauer, "a club founder can create and manage the information on a club such as messages and photos shared with other members of the club. For example, the club founder can 'control the contents of photo albums, and customize the photo and messages on the club's home page,' among other capabilities." Pet. 12 (citing Ex. 1003, 480; *see also id.*, 478–479.)

With respect to claim 1's recited "*content management resources*," Petitioner asserts that in Neibauer, this "takes the form of a web-based user interface for creating a new Yahoo! club and managing content on the club, including adding a club picture to it. The club founder ("*a user of the data communication network*") can cause a web form to be displayed that solicits options for creating a new club." Pet. 13–14 (emphasis altered) (citing Ex. 1003, Fig. 21-12, 480–481). Petitioner explains that "[t]he claimed '*first set of one or more servers accessible to a user of the data communication network*' thus corresponds to one or more Yahoo! servers accessible to users via the Internet that provide the content management resources described above, *i.e.*, the web-based resources for creating a new club and adding content to it." Pet. 17 (emphasis altered).

Petitioner also explains that

> Neibauer further discloses that "*the content management resources* [are] *configured to permit the user to designate data from one or more data sources external to the first set of one or more servers*." As discussed, the content management resources allow the club founder ("*the user*") to identify a club picture ("*to designate data*"). That club picture, as discussed above, is "*external to the first set of one or more servers*," because at the time of designation, it is located on the club founder's local computer and not on the Yahoo! server.

Pet. 18 (emphasis altered).

According to Petitioner, "[t]he claimed '*data source*' therefore corresponds to a photo file located on the club founder's local computer." *Id.* at 19 (emphasis altered). Petitioner explains that "after the club founder designates a club picture from its local computer, that picture will be added to the club home page, an example of which is shown in [Exhibit 1003] Figure 21-13." Pet. 21–22.

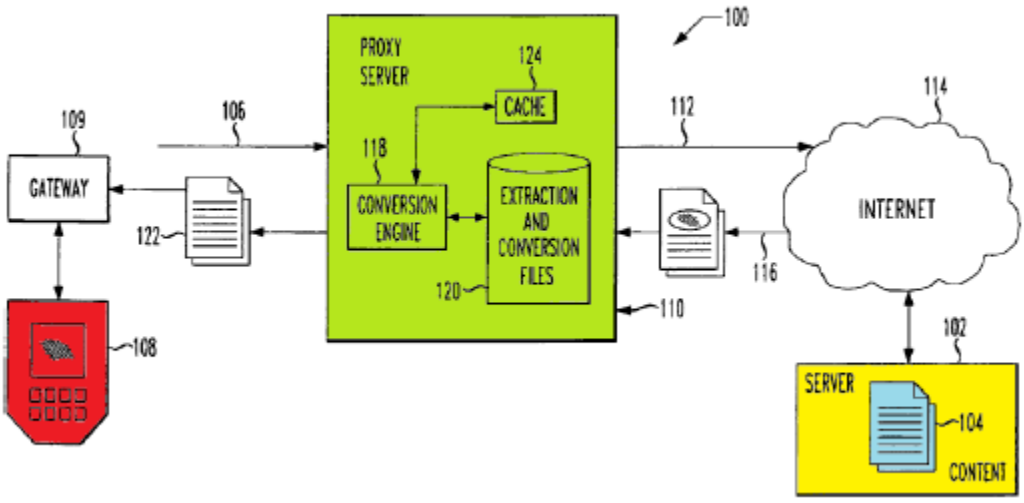
Petitioner, however, acknowledges that

> Neibauer does not expressly disclose "*uploading external data to a second set of one or more servers for use in the data communication network*," and then "*reformatting the external data for mobile device use*," but this would have been obvious in further view of Cheng, which discloses a technique for translating the pages of existing websites into a format suitable for display on a mobile device.

Pet. 22–23 (emphasis altered) (citing Ex. 1005, 2:19–32, 3:21–26).

Cheng's Figure 1, color annotated by Petitioner, is shown below.

FIG. 1



Petitioner explains that

> [t]he right side of Figure 1 above shows an origin web server 102 [in yellow] that contains original web page 104. (Cheng, 3:36-37.) "The web page 104 is typically an HTML file with references to any component .wav, .mov, and/or Joint Photographic Experts Group (JPEG) files, which together comprise the web page 104." (Cheng, 4:10-13.) "It is envisioned that each instance of web content 104 each have associated therewith a URL." (Cheng, 3:56-57.) Web page 104 in Cheng could have been any web page in HTML format reachable via the Internet, such as any web page from the Yahoo! website as described in Neibauer. Origin web server 102, therefore, would have represented the "*first set of one or more servers*" for limitation 1[a], *i.e.*, the server(s) providing the features of Neibauer.

Pet. 24 (emphasis altered) (citing Ex. 1002 ¶ 100). Petitioner continues describing Cheng's Figure 1, explaining that

> [t]he left shows a mobile device 108 [in red] connected to proxy server 110, optionally through gateway 109. (Cheng, 3:33-36.) "Mobile devices 108 generally come in a variety of different sizes and have a variety of different screen interfaces… [T]he present invention provides the ability to uniquely tailor web page 104 content for specific mobile devices 108." (Cheng, 5:11-15.) Cheng explains that, in one example, mobile device 108 could be

> a mobile device with a Palm operating system that includes a web browser.

Pet. 24–25 (emphasis altered) (citing Ex. 1005, 5:17–23, 2:8–15).

Petitioner further explains that

> [t]he middle of Figure 1 shows proxy server 110 [in green] – the key feature of Cheng here. Proxy server 110 "'sits' between the clients (e.g., the mobile device(s) 108) and the origin web server(s) 102 that provide Web content 104." (Cheng, 3:31-33.) Cheng explains that proxy server 110 "obtains the code (e.g., HTML) of the user requested web page 104, and modifies it at the proxy server 110 (once obtained)," which can include "reformatting and/or converting an entire web site or request specific Web content that is needed from the origin web server 102." (Cheng, 3:41- 48.) Proxy server 110 can also store a device profile for mobile device 108 based on the device and web browser types.

Pet. 25 (emphasis altered) (citing Ex. 1005, 5:20–23).

Petitioner asserts that

> "[t]he general operation of proxy server 110 in Cheng is straightforward. As shown in Figure 1, mobile device 108 can issue a request 106 for an original web page 104 using standard HyperText Transport Protocol (HTTP), as was well-known in the art, with the request 106 being received by proxy server 110. (Cheng, Fig. 1, 2:19-21, 3:58-67, 7:65-8:2; EX1002, ¶65.) "Upon determining that the requested page 104 resides at the server 102, the proxy server 110 makes a request 112 for the page. As shown, the proxy server 110 and the server 102 are connected via a network 114 such as the Internet."

Pet. 25–26 (emphasis altered) (citing Ex. 1005, 3:65–4:2; *see also id.* at 2:21–24.)

Petitioner explains that

> Proxy server 110 then converts and/or reformats original web page 104 into reformatted web page 122 (shown in Figure 1), which is transmitted to mobile device 108. (Cheng, *e.g.*, 2:24-29, 5:46-49, 4:56-60.) "The designated HTML content of the

> retrieved web page 104 is extracted, subsequently and/or converted, and transmitted as a reformatted web page 122 to the mobile device 108." (Cheng, 5:46- 49; *see also id.*, 3:22-26 ("Referring now to FIG. 1, it is envisioned that a proxy server 110 reformats/converts web content 104 on an origin web server 102 into a format 122 readable on any mobile device 108 (which can be any number of different mobile device types).").) The proxy server can also reformat images on the web page to enable viewing on mobile device 108, for example, by scaling the images and reducing their colors and resolution. (Cheng, Fig. 7 (704, 706, 708), 10:60- 11:8.) The images can also be reformatted into a specific image file format, such as JPEG or GIF. (Cheng, 11:10-12 ("In step 712, the file format of images can be selected (e.g., .gif or JPEG). In step 714, the quality of JPEG conversion is specified."), 12:60-62 ("Potential conversions include, for example… encoding images as GIF, and converting any color header images to gray scale.").)

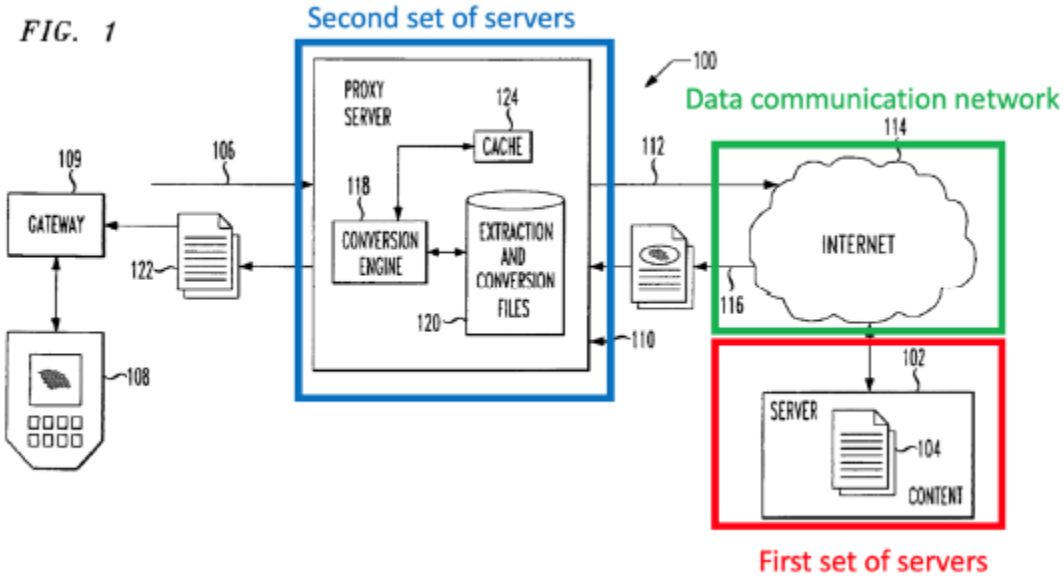
Pet. 26 (emphasis altered).

Patent Owner contends that "Petitioner's obviousness arguments . . . depend upon combining functionality of Yahoo! Clubs and related services discussed by Neibauer, which were not possible on mobile devices at the time, with the functionality of a proxy server as disclosed by Cheng. Prelim. Resp. 18.

Patent Owner also contends that "[i]n applying the cited art, Petitioner without comment deviates from the well-understood meaning of 'uploading': sending data from a client to a server." Prelim. Resp. 22–23 (citing Ex. 2001 ¶ 99). Patent Owner argues that "when discussing Cheng, Petitioner turns this well-understood meaning on its head in an attempt to make its Neibauer-Cheng combination read on the claims." Prelim. Resp. 23. Specifically, Patent Owner argues that "Petitioner characterizes Cheng's origin web server 102, ***in response to a request*** from proxy server 110, ***uploading*** web page 104 to proxy server 110." Prelim. Resp. 25 (citing

Pet. 27–28). According to Patent Owner, a person of ordinary skill in the art "would understand the delivery of ***requested*** data ***from*** a remote server to be ***downloading***." Prelim. Resp. 25 (citing Ex. 2001 ¶ 103).

Patent Owner also argues that "***data external to the data communications network*** must be uploaded to a second set of one or more servers ***for use in the data communication network***." Prelim. Resp. 25–26 (citing Ex. 2001 ¶ 105). To illustrate this argument, Patent Owner provides an annotated version of Cheng's Figure 1, shown below. Prelim. Resp. 26.



Patent Owner explains that

> First, Petitioner states in its mapping of the preamble that the "data communications network" is simply the Internet (annotated in green above). Pet. 12; EX2001, ¶¶95-96.
>
> For limitation 1[a], Petitioner states that the "first set of one or more servers accessible to a user of the data communication network" corresponds in Neibauer to certain "Yahoo! servers accessible to users via the Internet." Pet. 17. And in the Neibauer-Cheng combination, Petitioner states that web pages providing the services of Neibauer correspond to Chang's origin web server 102 (annotated in red above). Pet 24; EX2001, ¶97.

> Petitioner next maps the claim limitation "uploading external data to a second set of one or more servers for use in the data communication network" to the act of origin web server 102 transferring a requested Yahoo! web page over the Internet to proxy server 110 (annotated in blue above).

Prelim. Resp. 26–27 (citing Pet. 27–28; Ex. 2001 ¶ 98).

Patent Owner argues that

> Petitioner declares the data to be "external" simply because it is not yet in the second set of servers. But under Petitioner's interpretation, that is by definition true for ***any*** data uploaded to the second set of severs: it is being uploaded precisely because it is not yet there. EX2001, ¶109. Petitioner's interpretation thus effectively reads "external" out of the claim, which is presumptively improper and Petitioner offers no reason to overcome that presumption.

Prelim. Resp. 27 (citing *Innova/Pure Water, Inc. v. Safari Water Filtration Sys., Inc.*, 381 F.3d 1111, 1119 (Fed. Cir. 2004)).

Patent Owner also argues that

> the claim requires the external data to be uploaded "for use in the data communication network," which, again, Petitioner has mapped to the Internet. But that is not what Cheng discloses. In Cheng, requested data is returned from origin web server 102 over the Internet 114 to proxy server 110 for conversion, but after conversion Cheng only discloses the translated data being returned directly from proxy server 110 to requesting mobile device 108, or returned via gateway 109. Cheng at 5:42-49; 3:32-36. Cheng thus does not disclose that the data sent to proxy server 110—uploaded or no—is sent "for use in the data communication network" (mapped by Petitioner to the Internet).

Prelim. Resp. 28. According to Patent Owner, a person of ordinary skill in the art "would understand '*for use in the data communication network*' to refer to the external data, not the second set of servers." *Id.* at 29 (emphasis added) (citing Ex. 2001 ¶ 110).

With respect to claim construction, our preliminary determination is that claim 1 provides for "*content management resources*" that permit a user to "*designate data*" from a "*data source*" that is "*external*" to a "*first set of . . . servers*" wherein the "*external data*" is "*upload[ed]*" to a "*second set of . . . servers*." *See* Section III.C, *supra*. We also determine preliminarily that "uploading," as it is used in the '427 patent claims and would have been understood by someone of ordinary skill in the art at the time of the invention, is "*transferring data from an external data source to a set of servers*." *Id.* Given these preliminary determinations, we do not agree with Patent Owner's arguments.

First, Patent Owner argues that "the well-understood meaning of 'uploading' [is] sending data from a client to a server." Prelim. Resp. 22–23. However, in the context of claim 1, we determine preliminarily that "uploading," is "*transferring data from an external data source to a set of servers*," and we see no basis in the intrinsic evidence to include the term "client" as Patent Owner proposes. *See* Section III.C, *supra*.

Dr. Madisetti testifies that "it would have been obvious to combine Neibauer with Cheng, such that the club home page including the club picture ("*external data*") is uploaded to a second set of servers where it is reformatted for mobile device use." Ex. 1002 ¶ 99 (emphasis altered) (citing Ex. 1005, Fig. 1). With respect to Cheng's Figure 1, Dr. Madisetti explains that Cheng's "[o]rigin web server 102, therefore, would have represented the "*first set of one or more servers*" for claim 1[a], *i.e.*, the server(s) providing the features of Neibauer." Ex. 1002 ¶ 100 (emphasis altered). Dr. Madisetti continues, explaining that

> [a]s shown in [Cheng's] Figure 1, mobile device **108** can issue a request **106** for an original web page **104** using standard HyperText Transport Protocol (HTTP), as was well-known in the art, with the request **106** being received by proxy server **110**. (Cheng, Fig. 1, 2:19-21, 3:58-67, 7:65-8:2.) "Upon determining that the requested page **104** resides at the server **102**, the proxy server **110** makes a request **112** for the page. As shown, the proxy server **110** and the server **102** are connected via a network **114** such as the Internet." (Cheng, 3:65-4:2; *see also id.*, 2:21-24.)
>
> Proxy server **110** then converts and/or reformats original web page **104** into reformatted web page **122** (shown in Figure 1), which is transmitted to mobile device **108**. (Cheng, *e.g.*, 2:24-29, 5:46-49, 4:56-60.)

Ex. 1002 ¶¶ 103–104.

Given this testimony and evidence, we determine that Petitioner's proposed combination of Neibauer and Cheng, wherein web server 102 sends web page 104 (the club home page including the club picture ("*external data*")) to proxy server 110, meets the limitation "*uploading external data to a second set of one or more servers*" as we preliminarily determine that "*uploading*" is "*transferring data from an external data source to a set of servers*."

We find Patent Owner's argument unavailing that "Cheng does not disclose that the data sent to proxy server 110 . . . is sent "*for use in the data communication network*." Prelim. Resp. 28. One cannot show non-obviousness by attacking references individually where, as here, the rejections are based on combinations of references, namely Neibauer and Cheng. *In re Keller*, 642 F.2d 413, 425 (CCPA 1981).

Petitioner maps the recited "*data communication network*" to the Internet as disclosed in Neibauer. *See* Pet. 12 (citing Ex. 1002, 4, 64, 473).

Petitioner explains that "[t]he claimed "*first set of one or more servers accessible to a user of the data communication network*" thus corresponds to one or more Yahoo! servers accessible to users via the Internet that provide the content management resources described above, *i.e.*, the web-based resources for creating a new club and adding content to it." Pet. 17 (emphasis altered). Petitioner explains that a Yahoo! "club founder" is one such "*user*." *Id.* at 18. Petitioner then combines the teachings of Neibauer with Cheng because "it would have been obvious to combine Neibauer with Cheng, such that the club home page including the club picture ("*external data*") would have been uploaded to a second set of servers [proxy server 110] where it would have been reformatted for mobile device use." Pet. 23 (emphasis altered). Petitioner's mapping and combination shows that the data sent to proxy server 110 is "*for use in the data communication network,*" i.e. the Internet, because that is how Yahoo! users, e.g. club members, access its functionality, as explained in Neibauer.

We also disagree with Patent Owner's argument that the "functionality of Yahoo! Clubs and related services discussed by Neibauer . . . were not possible on mobile devices at the time." Prelim. Resp. 18. Patent Owner appears to ignore the '427 patent's description of the recited "mobile device" as "any type of portable information processing device capable of being configured for communication over a network," including, for example, "a laptop computer." Ex. 1001, 4: 48–58.

Based on this preliminary record, we are persuaded that Petitioner has demonstrated sufficiently for purposes of institution that the combined teachings of Neibauer and Cheng meet the recited "*uploading external data*

to a second set of one or more servers for use in the data communication network, of limitation 1[b].

b) Uncontested Limitations

Patent Owner does not expressly contest the remaining portions of independent claim 1. *See* Prelim. Resp. 15–39. The uncontested portions of claim 1 include:

> 1. [preamble] *A method for managing information content in a data communication network, the method comprising the steps of:*
>
> [1[a]] *providing content management resources at a first uniform resource locator hosted at a first set of one or more servers and accessible to a user of the data communication network, the content management resources being configured to permit the user to designate data from one or more data sources external to the first set of one or more servers;*
>
> [1[c]] *reformatting the external data for mobile device use; and*
>
> [1[d]] *automatically generating mobile resources at a location different from the first uniform resource locator, the mobile resources being accessible independent of the content management resources via one or more mobile devices, the mobile resources automatically including the reformatted external data from a third set of one or more servers in the data communication network.*

Id.; Ex. 1001, 19:25–44.

Petitioner provides evidence and argument, supported by the testimony of Dr. Madisetti, that these uncontested portions of claim 1 are met by Petitioner's proposed combination of Neibauer and Cheng, and that at the time of the claimed invention, claim 1 would have been obvious to a person of ordinary skill in the art. *See* Pet. 11–41; Ex. 1002 ¶¶ 81–125.

After reviewing Petitioner's arguments and evidence concerning these portions of claim 1, which are not contested by Patent Owner at this stage of the proceeding (*see* Prelim. Resp.), we are persuaded that Petitioner has demonstrated sufficiently for purposes of institution that the combined teachings of Neibauer Cheng meet the uncontested portions of claim 1.

c) Conclusion on Independent Claim 1

We have considered Petitioner's evidence and arguments that the limitations of independent claim 1 are met by the combined teachings of Neibauer and Cheng. Based on this preliminary record, and for the reasons given by Petitioner and those summarized above, we are persuaded that Petitioner has demonstrated sufficiently for purposes of institution that the combined teachings of Neibauer and Cheng meet the limitations of independent claim 1, and that a person of ordinary skill in the art at the time of the claimed invention would have had reason to combine their teachings in the manner described, and would have had a reasonable expectation of success in so doing.

3. Dependent Claims 2, 3, and 5–9

Petitioner contends that dependent claims 2, 3, and 5–9 would have been obvious over the combined teachings of Neibauer and Cheng. Pet. 41–46. Petitioner provides a detailed claim analysis, supported by the testimony of Dr. Madisetti. *See* Pet. 41–46; Ex. 1002 ¶¶ 126–132.

Patent Owner does not specifically address Petitioner's evidence and arguments directed to these claims at this stage of the proceeding. *See* Prelim. Resp. 15–39; Ex. 2001 ¶¶ 77–110.

We have considered Petitioner's evidence and arguments with respect to these claims. Because we determine that Petitioner demonstrates a

reasonable likelihood of prevailing in its challenge to independent claim 1 under 35 U.S.C. § 103(a) as obvious over Neibauer and Cheng, we institute *inter partes* review as to all other challenges in the Petition, including Petitioner's challenges to remaining claims 2, 3, and 5–9. *See PGS Geophysical AS v. Iancu*, 891 F.3d 1354, 1360 (Fed. Cir. 2018).

G. Remaining Grounds 2–4

Petitioner contends claim 4 is obvious over the combined teachings of Neibauer, Cheng, and Balabine (Ground 2); claims 1–3 and 5–9 are obvious over the combined teachings of Neibauer, Cheng, and Yates (Ground 3); and that claim 4 is obvious over the combined teachings of Neibauer, Cheng, and Yates (Ground 4). *See* Pet. 46–57. Patent Owner contends that "the question of institution for all petitioned claims and grounds rises and falls with the Neibauer-Cheng deficiencies identified for claim 1." Prelim. Resp. 38–39.

We have considered Petitioner's evidence and arguments with respect to these other grounds. Because we determine that Petitioner demonstrates a reasonable likelihood of prevailing in its challenge to independent claim 1 under 35 U.S.C. § 103(a) as obvious over Neibauer and Cheng (Ground 1), we institute *inter partes* review as to all other challenges in the Petition, including Petitioner's challenges under Grounds 2–4. *See PGS Geophysical AS v. Iancu*, 891 F.3d 1354, 1360 (Fed. Cir. 2018).

IV. CONCLUSION

For the foregoing reasons, we have determined that there is a reasonable likelihood that Petitioner would prevail with respect to at least one of the claims challenged in the Petition. We therefore institute trial as to all challenged claims on all grounds asserted in the Petition.

At this preliminary stage of the proceeding, we have not made a final determination as to the patentability of any challenged claim or any factual or legal issue underlying the patentability inquiry. Any final determination will be based on the complete record developed during trial. We place Patent Owner on express notice that any argument not asserted in a timely-filed Response to the Petition, or in another manner permitted during trial, shall be deemed waived, even if that argument was presented in the Preliminary Response.

V. ORDER

Upon consideration of the record before us, it is

ORDERED that *inter partes* review of claims 1–9 of the '427 patent is instituted on all grounds in the Petition;

FURTHER ORDERED that pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4, notice is hereby given of the institution of a trial; the trial will commence on the entry date of this decision.

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