UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

AMAZON.COM, INC.,
Petitioner,

v.

M2M SOLUTIONS LLC,
Patent Owner.

Case IPR2019-01205
Patent 10,038,989 B1

PATENT OWNER M2M SOLUTIONS LLC'S NOTICE OF APPEAL

Pursuant to 37 C.F.R. §§ 90.2(a) and 90.3(b)(1), and 35 U.S.C. §§ 141, 142, and 319, timely notice is hereby provided that Patent Owner M2M Solutions LLC ("M2M") hereby appeals to the United States Court of Appeals for the Federal Circuit from the Final Written Decision entered by the Patent Trial and Appeal Board (the "Board") on January 25, 2021 (Paper No. 43) in *Inter Partes* Review IPR2019-01205, and from all other underlying or supporting orders, decisions, rulings, and opinions rendered therein that are adverse to Patent Owner, specifically including without limitation the Board's Decision Denying Request for Rehearing entered on September 7, 2021 (Paper No. 50). Copies of said Final Written Decision and Decision Denying Request for Rehearing are attached hereto.

For the limited purpose of providing the information specified in 37 C.F.R. § 90.2(a)(3)(ii), M2M states that anticipated issues to be raised on appeal include, but are not limited to: (i) whether the Board erred in determining that claims 1-30 of U.S. Patent No. 10,038,989 (the "'989 patent") were shown by a preponderance of the evidence to be unpatentable under 35 U.S.C. § 103; (ii) whether the Board erred in its construction and/or application of claim language appearing in independent claims 1 and 20 of the '989 patent to prior art reference U.S. Patent No. 6,421,717 to Kloba ("Kloba"), and/or to Kloba in combination with prior art reference U.S. Patent No. 6,141,010 to Hoyle; (iii) whether the Board erred in its construction and/or application of claim language appearing in dependent claims 4,

5, 9, 10, 14, 16, 17, 19, 22, 23, 25, 27, and 28 of the ‘989 patent to Kloba; (iv) whether the Board erred in placing extensive *sua sponte* reliance on invalidity theories and ostensible supporting evidence that were never timely raised by Petitioner itself in the underlying IPR proceedings; (v) whether the Board erred in making any finding or determination supporting or relating to any of these aforesaid issues; and (vi) whether the Board erred by failing to properly consider and apply evidence of record, including based upon a misapplication of the doctrine of collateral estoppel.

In accordance with 37 C.F.R. § 90.2(a), M2M is concurrently filing this Notice of Appeal with the Board and with the Director of the United States Patent and Trademark Office, and also serving the same on Petitioner Amazon.com, Inc. In addition, M2M is concurrently filing this Notice of Appeal, along with the required docketing fees, with the Clerk’s Office for the United States Court of Appeals for the Federal Circuit.

Respectfully submitted,

Dated: November 5, 2021

By: /Andrew C. Ryan/

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CERTIFICATE OF FILING AND SERVICE

The undersigned certifies that on this November 5, 2021, a true and correct copy of the foregoing Notice of Appeal was filed electronically with the Board in IPR2019-01205 via the Patent Trial and Appeal Board's End to End (E2E) System.

The undersigned further certifies that on this November 5, 2021, the original version of the foregoing Notice of Appeal was filed via hand delivery with the Director of the United States Patent and Trademark Office at the following address:

Director of the United States Patent and Trademark Office
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The undersigned further certifies that on this November 5, 2021, a true and correct copy of the foregoing Notice of Appeal, along with the required docketing fees, were filed electronically via CM/ECF with the Clerk of Court for the United States Court of Appeals for the Federal Circuit.

The undersigned further certifies that on this November 5, 2021, a true and correct copy of the foregoing Notice of Appeal was served pursuant to 37 C.F.R. § 42.6(e) via electronic mail (by prior agreement of the parties) on counsel of record for Petitioner Amazon.com, at the following addresses:

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Paper 43
Date: January 25, 2021

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

AMAZON.COM, INC.,
Petitioner,

v.

M2M SOLUTIONS LLC,
Patent Owner.

IPR2019-01205
Patent 10,038,989 B1

Before KARL D. EASTHOM, DAVID C. MCKONE, and FREDERICK C. LANEY, *Administrative Patent Judges*.

LANEY, *Administrative Patent Judge*.

JUDGMENT
Final Written Decision
Determining All Challenged Claims Unpatentable
35 U.S.C. § 318(a)

I. INTRODUCTION

Amazon.com, Inc. ("Petitioner") filed a Petition to institute an *inter partes* review of claims 1–30 (the "challenged claims") of U.S. Patent No. 10,038,989 B1 (Ex. 1002, "the '989 patent"). Paper 2 ("Petition" or "Pet."). M2M Solutions LLC ("Patent Owner") filed a Preliminary Response. Paper 7 ("Prelim. Resp."). Prior to institution, the parties submitted preliminary briefing addressing the Board's discretion to deny institution. *See* Paper 11 ("Pet. Prelim. Reply Br."); Paper 13 ("PO Prelim. Sur-Reply").

The Board instituted an *inter partes* review of the challenged claims pursuant to 35 U.S.C. § 314. Paper 14 ("Inst. Dec."). After institution, Patent Owner filed a Patent Owner Response (Paper 22, "PO Resp."); Petitioner filed a Reply (Paper 25); and Patent Owner filed a (corrected) Sur-reply (Paper 31, "Sur-reply" or "PO Sur-reply").[1] The parties then presented oral arguments via a (video) Hearing (August 12, 2020), and the Board entered a Hearing transcript into the record. Paper 40 ("Tr.").

Subsequent to the Hearing, the Board ordered (Paper 37) supplemental briefing regarding a collateral estoppel issue premised on final written decisions on three related patents recently affirmed by the Federal Circuit in *M2M Solutions LLC v. Amazon.com, Inc.*, 825 F. App'x 893 (Fed. Cir. 2020) (Fed. Cir. R. 36) (nonprecedential), as discussed further below. Paper 38 ("PO Supp. Br."); Paper 39 ("Pet. Supp. Br."); Paper 41 ("PO Supp. Reply Br."); Paper 42 ("Pet. Supp. Reply Br.").

[1] *See* Ex. 2032 (Board email authorizing the filing of the corrected Sur-reply).

For the reasons set forth in this Final Written Decision pursuant to 35 U.S.C. § 318(a), we determine that Petitioner demonstrates by a preponderance of evidence that the challenged claims are unpatentable.

A. Real Party-In-Interest

Petitioner identifies Amazon.com, Inc., as the real party-in-interest. Pet. 2.

B. Related Proceedings

Patent Owner asserted the '989 patent and four related patents in *M2M Solutions LLC v. Amazon.com, Inc.*, Case No. 1:17-cv-00202-LPS-CJB (D. Del.) and *M2M Solutions LLC v. Amazon.com, Inc.*, No. 1:18-cv-01532-LPS-CJB (D. Del.). Pet. 2; Paper 4, 2. Related proceedings also include the following PTAB proceedings: *Amazon.com, Inc. v. M2M Solutions LLC*, IPR2017-01891, Paper 32 (PTAB Feb. 7, 2019) (Final Written Decision); *Amazon.com, Inc. v. M2M Solutions LLC*, IPR2017-01892, Paper 32 (PTAB Feb. 7, 2019) (Final Written Decision) (the "'1892 FWD" or the "'1892 IPR"); *Amazon.com, Inc. v. M2M Solutions LLC*, IPR2017-01893, Paper 32 (PTAB Feb. 7, 2019) (Final Written Decision); *Amazon.com, Inc. v. M2M Solutions LLC*, IPR2017-01894, Paper 8 (PTAB Feb. 8, 2018) (Denial of Institution); *Amazon.com, Inc. v. M2M Solutions LLC*, IPR2017-01895, Paper 30 (PTAB Feb. 7, 2019) (Final Written Decision); *Amazon.com, Inc. v. M2M Solutions LLC*, IPR2017-01896, Paper 35 (PTAB Feb. 7, 2019) (Final Written Decision); *Amazon.com, Inc. v. M2M Solutions LLC*, IPR2019-01204 (Final Written Decision). *See* Pet. 2–3; Paper 4, 2–3.

As indicated above, Patent Owner appealed three related final written decisions, the '1892 FWD and the final written decisions in IPR2017-01891

and IPR2017-01893. *See* Ex. 1024 (M2M's opening appeal brief before the Federal Circuit). The Federal Circuit affirmed the three final written decisions without issuing an opinion. *See M2M Solutions LLC v. Amazon.com, Inc.*, 825 F. App'x 893 (Fed. Cir. 2020) (Fed. Cir. R. 36) (nonprecedential) (the "M2M Federal Circuit Decision"). The '989 patent and the patent challenged in the '1892 IPR, U.S. Patent No. 8,577,358 B2 (the "'358 patent"), share a common specification.

C. The '989 Patent

The '989 patent, titled "System and Method for Remote Asset Management," describes "[a] remote asset management system" including "a network of programmable wireless modules, each having an antenna and an identification module and configured to communicate via a radio communication protocol" and "a plurality of assets each linked to one of the wireless modules and configured to be managed by the linked wireless module." Ex. 1002, code (54), (57). A remote system server service platform "receive[s] remote asset data from the wireless modules, pass[es] the remote asset data to and from the wireless modules, send[s] messages to at least one of the wireless modules, monitor[s] the wireless modules by requesting and receiving current mode information, and remotely program[s] the wireless modules." *Id.* at code (57). Figure 2, reproduced below, illustrates applications controlled by wireless modules in an asset management system.

FIG. 2

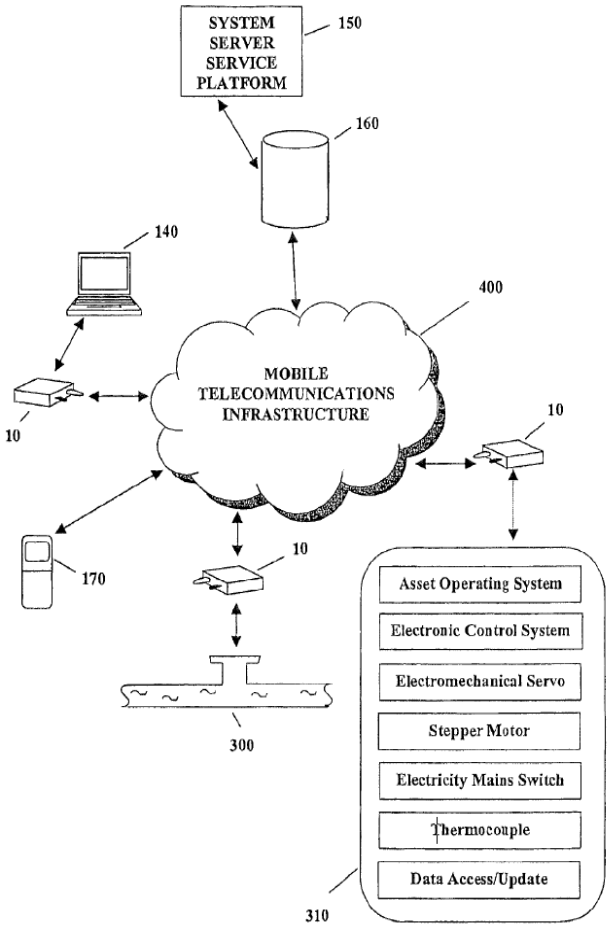


Figure 2 illustrates different applications 310 controlled by wireless module 10 in a mobile telecommunications network operating according to the GSM standard. *Id.* at 16:5–8.

In Figure 2, wireless modules 10 communicate via mobile telecommunications infrastructure 400. *Id.* at 16:16–18. Mobile phone or message-enabled wireless terminal 170 communicates with specific wireless module 10 or with system server service platform 150 via point of inter-connection 160 with the mobile telecommunications infrastructure 400. *Id.* at 16:18–22. In one example, laptop PC 140a manages a small number of wireless modules. *Id.* at 16:23–25. In other examples, "[t]he wireless module (10) is capable of controlling many system operation variables of the

associated asset such as an asset operating system, an electronic control system, an electromechanical servo, a stepper motor, an electricity mains switch, a thermocouple and a means to access or update data (310)." *Id.* at 16:26–31. In another example, "[t]he wireless module has the capability to be integrated with a utilities meter such as a water flow meter (300) wherein water usage data can be remotely accessed from the wireless module integrated with the utility meter and forwarded to the water board." *Id.* at 16:32–36. Other examples follow:

> the remote programming of consumer devices such as solid state video recorders and other household equipment including heating systems and the like wherein the remote server may monitor the scheduling of preferred television broadcasts according to stored user preferences and forward messages of upcoming programmes to the user and organise the programming of a home video recorder in response to receiving messages back from the user,

id. at 11:9–19;

> a mobile phone or similar PDA device such as for the activation or change of highway traffic speed indicators, wherein the wireless module receives data from authorised personnel or systems to change the display of the speed indicator to suit changing driving conditions due to an accident or change in weather,

id. at 11:26–31; and

> an improved remote asset management system, which gathers data according to the use of a particular asset and forwards this data to a remote server for the purpose of optimising the asset and for designing an appropriate range of services to support the said use of the asset wherein the wireless module may comprise a display having a range of options such as pull down menus for internet or dedicated service access and wherein these might be improved if the range of options were prioritised automatically

> according to the way the user preferred to use the device or in the order of access of mostly used features.

id. at 11:56–67.

D. The Challenged Claims

Petitioner challenges claims 1–30 of the '989 patent. Pet. 1. Claims 2–19 depend from independent claim 1. Claims 21–30 depend from independent claim 20. Independent claims 1 and 20 recite methods with similar limitations. Claim 1, reproduced below (including annotations added by Petitioner to identify each claim element), illustrates the subject matter of the challenged claims:

> 1. [Element 1[Preamble]] A method of operating a remote computer server platform to provide a range of consumer services by autonomously monitoring and managing a plurality of consumer device assets wirelessly connected to one or more communications networks, each asset having operating system and application software, nonvolatile memory for storing files of data content for display to a consumer user of the device, and a display apparatus for displaying the stored data content, said method comprising:
>
> [Element 1[a]] providing a remote computer server platform connected to the one or more communications networks, the remote computer server platform configured to execute software applications for monitoring and managing the plurality of consumer device assets, [Element 1[b]] each of said assets being registered with the remote computer server platform;
>
> [Element 1[c]] receiving at the remote computer server platform communications sent from each of the plurality of consumer device assets containing operational status information indicative of an operational status of the particular sending consumer device asset, said communications having automatically resulted from at least one selected from the group consisting of preprogrammed conditions and programming instructions generated by the remote computer server platform;

> [Element 1[d]] receiving at the remote computer server platform communications sent from each of the plurality of consumer device assets containing consumer usage information identifying a manner in which a consumer user has used a particular feature of the sending consumer device asset, said communications having automatically resulted from at least one selected from the group consisting of preprogrammed conditions and programming instructions generated by the remote computer server platform;
>
> [Element 1[e]] monitoring the plurality of consumer device assets by the remote computer server platform by automatically processing, according to preprogrammed conditions, the received operational status information and the received consumer usage information;
>
> [Element 1[f]] managing the plurality of consumer device assets by the remote computer server platform, based upon the results of having processed at least some of the received consumer usage information, by sending communications containing one or more management instructions that cause the stored display data content files of one or more assets to be automatically modified so as to provide a consumer service;
>
> [Element 1[g]] wherein the remote computer server platform provides said consumer service on an autonomous basis unprompted in whole or in part by receipt of any request or command initiated by a consumer user of one or more of the plurality of consumer device assets; and
>
> [Element 1[h]] wherein the aforesaid communications received by and sent from the remote computer server platform are transmitted over the one or more communications networks and comprise at least one selected from the group consisting of General Packet Radio Service (GPRS) data messages, Enhanced Data rates for GSM Evolution (EDGE) data messages, and other wireless packet switched data messages.

Ex. 1002, 26:18–27:12.

E. Asserted Grounds of Unpatentability

Petitioner asserts that claims 1–30 would have been unpatentable on the following grounds.

Claim(s) Challenged	35 U.S.C. §	References
1–6, 13	103(a)	Kloba,[2] Multer[3]
1–6, 13	103(a)	Kloba, Multer, Hoyle[4]
7, 14, 16, 17, 19–25	103(a)	Kloba, Multer, Loughran[5]
7, 14, 16, 17, 19–25	103(a)	Kloba, Multer, Hoyle, Loughran
8–12, 15, 18, 26–30	103(a)	Kloba, Multer, Loughran, Fong[6]
8–12, 15, 18, 26–30	103(a)	Kloba, Multer, Hoyle, Loughran, Fong

Pet. 5. Petitioner relies on the Declaration of George Kesidis, Ph.D. (Ex. 1005). Patent Owner relies on the Declarations of Brian A. Berg (Ex. 2002 (filed with the Preliminary Response)), (Ex. 2029 (filed with the Response)).

II. ANALYSIS

A. Collateral Estoppel Background

As indicated above, the Board ordered preliminary briefing to address Patent Owner's request to the Board to deny institution under 35 U.S.C. §§ 314(a) and 325(d) under the Board's discretionary authority. Patent Owner primarily grounded its request for the Board to deny institution on collateral estoppel assertions, citing the Board's final written decisions in three related cases, but primarily the '1892 FWD, which involved a related

[2] Kloba et al., US 6,421,717 B1, issued July 16, 2002 (Ex. 1006).
[3] Multer et al., US 6,671,757 B1, issued Dec. 30, 2003 (Ex. 1007).
[4] Hoyle et al., US 6,141,010, issued Oct. 31, 2000 (Ex. 1011).
[5] Loughran et al., US 2002/0129107 A1, published Sept. 12, 2002 (Ex. 1008).
[6] Fong, US 7,197,011 B2, issued Mar. 27, 2007 (Ex. 1010).

patent as indicated above. *Supra* § I.A. As also indicated above, after the M2M Federal Circuit Decision that affirmed the three final written decisions, the Board ordered additional briefing on the issue of collateral estoppel. *See* Paper 37.

Prior to the M2M Federal Circuit Decision, the Board denied Patent Owner's request to exercise the Board's discretion under 35 U.S.C. §§ 314(a) and 325(d) to deny institution, stating as follows:

> The '1892 IPR represents the primary basis for Patent Owner's discretionary denial arguments. [Prelim. Resp. 22–32]. In the '1892 IPR, the Board held claims 1–30 of U.S. Patent No. 8,577,358 B2 (the "'358 patent") unpatentable for obviousness based on the same prior art as involved here. *See* '1892 FWD 2–4. *The parties agree the '1892 FWD and the proceeding here involve the same material issues, as discussed further below*. As noted above, Patent Owner appealed the decision in the '1892 FWD to the Federal Circuit.

Inst. Dec. 9 (emphasis added).

In deciding not to exercise discretion to deny institution, we quoted Patent Owner as characterizing the instant trial as involving "*the same analysis and trial*" as involved in the '1892 IPR as follows:

> *Having the Board repeat the same analysis and trial [from the '1892 IPR challenging the '358 patent] directed to largely overlapping prior art and arguments is precisely the inefficient and wasteful burden that the Board has looked to prevent*. The Board should decline to institute a largely duplicative IPR here, and instead allow the parties to address the validity of the '989 patent in the pending District Court action aided by the Board's Final Written Decision on the '358 patent and on the Federal Circuit's pending resolution of the appeal.

Id. at 10 (quoting Prelim. Resp. 26) (emphases added).

We further noted that "Patent Owner has appealed the '1892 FWD to the Federal Circuit," and quoted Patent Owner's argument that "[r]equiring

the parties to litigate those issues simultaneously before the Federal Circuit and the Board would be overly burdensome to the Patent Owner." Inst. Dec. 10–11 (quoting Prelim. Resp. 26–27). Patent Owner stated that "[*t]he parties will address the overlapping issues*, particularly claim construction before the Federal Circuit that they would need to address in any new IPR here." Prelim. Resp. 27 (emphasis added).

Petitioner similarly contended that "the claims of the '989 patent challenged in this IPR recite nearly identical subject matter as claims that the Board has already invalidated in a prior IPR involving a related patent (IPR2017-01892, 'the '[1892] IPR')." Inst. Dec. 11 (quoting Pet. Prelim. Reply Br. 1). And "[a]ccording to Petitioner, Patent Owner 'attempts to capitalize on this similarity [to the '1892 IPR] by arguing that the Board should exercise its discretion to *deny* institution, thereby sparing claims that are invalid for precisely the same reasons as those the Board articulated in the '[1892] IPR.'" *Id.* (quoting Pet. Prelim. Reply Br. 1). We also noted that "Petitioner also contends Patent Owner 'asks the Board to hold that a patent owner can avoid adverse Board determinations simply by filing continuation applications *with claims that are insubstantially different from invalidated ones*. The Board should not allow [Patent Owner] to game the patent system in this way.'" *Id.* at 11–12 (quoting Pet. Prelim. Reply Br. 1) (emphasis added).

We determined that "the parties agree that the instant case and the '1892 IPR involve different patents albeit with materially similar issues, including the same prior art, materially similar claims, and materially similar arguments." *Id.* at 12. We further noted that "the '989 patent and the '358 patent share a common ancestor application." *Id.* at 13 (*comparing* Ex.

1002, code (63), *with* '01892 IPR, Ex. 1002, code (63)). We stated that "[a]s the parties argue, the preliminary record here shows that the two proceedings involve materially similar issues that the Federal Circuit likely will rule upon." *Id.* We determined that "it appears most likely the Federal Circuit will provide guidance (*if not serve as basis for collateral estoppel*) here (*based on the materially similar issues and claims*) before the *inter partes* trial ends and before the district court trial ends in a decision on the validity of one or more '989 patent claims," moreover, "[i]nstigating efforts anew in the district court as compared to pursuing a familiar path here with a controlling Federal Circuit decision probably forthcoming would foster inefficiency." *Id.* at 14 (emphasis added). Thus, "where both parties agree the two *inter partes* reviews present materially similar issues, and with a looming Federal Circuit decision potentially controlling the outcome here," we declined to exercise our discretion and deny institution. *Id.* at 14–15.

Given that the parties and the Board agreed prior to institution that a Federal Circuit decision probably would serve as a basis for collateral estoppel at some point in this *inter partes* trial, the stated position of the parties colors the findings as outlined below that collateral estoppel applies to materially similar claim limitations here. Nevertheless, as discussed further below, Patent Owner now argues, for various reasons, that collateral estoppel does not apply. *See* PO Supp. Br. 5–20. Petitioner argues that estoppel applies to various claim limitations and issues, and even where estoppel might not apply, the '1892 FWD provides guidance. *See* Pet. Supp. Br. 4–19.

As our reviewing court has explained, collateral estoppel precludes a party from re-litigating an issue if:

> (1) prior action presents an identical issue; (2) the prior action actually litigated and adjudged that issue; (3) the judgment in that prior action necessarily required determination of the identical . . . issue; and (4) the prior action featured full representation of the estopped party.

VirnetX Inc. v. Apple, Inc., 909 F.3d 1375, 1377 (Fed. Cir. 2018) (quoting *Stephen Slesinger, Inc. v. Disney Enters., Inc.*, 702 F.3d 640, 644 (Fed. Cir. 2012)).

B. Claim Construction

Petitioner filed the Petition after November 13, 2018. Accordingly, we apply the same claim construction standard used to construe the claim in a civil action under 35 U.S.C. § 282(b), as articulated in *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc). *See* 37 C.F.R. § 42.100(b) (2019).

1. Preambles of claims 1 and 20

The preamble of claim 1 recites:

> A method of operating a remote computer server platform to provide a range of consumer services by autonomously monitoring and managing a plurality of consumer device assets wirelessly connected to one or more communications networks, each asset having operating system and application software, nonvolatile memory for storing files of data content for display to a consumer user of the device, and a display apparatus for displaying the stored data content, said method comprising:

Ex. 1002, 26:18–26. The preamble of claim 20 includes materially similar recitations.

Citing the '1892 FWD, Petitioner contends that the preambles of claims 1 and 20 do not limit the claims. Pet. 21 (citing '1892 FWD 11–16), 60–61. Patent Owner argues the phrase "nonvolatile memory for storing

files of data content for display" in the preambles of claims 1 and 20 provides antecedent basis and recites essential structure for terms in the bodies of those claims and, thus, the "nonvolatile memory" in the preambles limits the claims. PO Resp. 15–16.

We expressly incorporate by reference our reasoning and analysis set forth in the '1892 FWD finding that the "nonvolatile memory" in the preamble is not limiting, which Patent Owner notably did not appeal in the M2M Federal Circuit Decision. *See* '1892 FWD 11–16. As noted above (Section II.A), the '989 patent and the '358 patent challenged in the '1892 IPR share a common specification. Patent Owner's arguments do not present a sufficient reason to deviate from the claim construction in the '1892 FWD. The different claim construction standards (i.e., the *Phillips* claim construction standard used here vs. the broadest reasonable interpretation standard used in the '1892 FWD), arguments, and evidence do not dictate a different outcome here for this issue. The prior panel's decision addresses the preamble issue by citing to the relevant factors applied in Federal Circuit precedent under the *Phillips* standard. '1892 FWD 11–16. And our decision turned on whether the necessary conditions existed to find the "nonvolatile memory" recited only in the preamble to be limiting, rather than interpreting the meaning of "nonvolatile memory" or its breadth.

Nevertheless, generally, as set forth in '1892 FWD, "the preamble does not limit the claims." '1892 FWD 12 (citing *Georgetown Rail Equip. Co. v. Holland L.P.*, 867 F.3d 1229, 1236 (Fed. Cir. 2017)).

> However, a preamble may be limiting if "it recites essential structure or steps"; claims "depend[] on a particular disputed preamble phrase for antecedent basis"; the preamble "is essential to understand the limitations or terms in the claim body"; the

> preamble "recit[es] additional structure or steps underscored as important by the specification"; or there was "clear reliance on the preamble during prosecution to distinguish the claimed invention from the prior art."

Id. (quoting *Catalina Mktg. Int'l, Inc. v. Coolsavings.com, Inc.*, 289 F.3d 801, 808 (citations omitted)). None of these considerations exist here.

The bodies of claims 1 and 20 affirmatively refer to "the stored data display content files," but not to nonvolatile memory. Ex. 1002, 26:63–64, 30:22. Also, nonvolatile memory does not represent essential structure for any of the recited steps of the method and does not represent an essential feature for understanding the limitations in the claim body. The type of memory that stores the files does not play any role in performing the general steps recited in the claims. *See* '1892 FWD 11–16. Notably, claims 1 and 20 recite methods *for operating a remote computer server platform* and its stated purpose is to provide a range of consumer services for a plurality of consumer device assets. The method claims do not require that any of the recited steps be performed by the nonvolatile memory on the consumer device asset; nor does any step of the claimed method refer to any specific operation being performed by the nonvolatile memory. Instead, each of the recited steps are performed by a remote computer server platform, which is separate and apart from the nonvolatile memory residing on the consumer device asset. The "stored display data content files" language in the body of the claim, while referring back to display data content files stored in the memory of the consumer asset, merely describes what the claimed "management instructions" are *for* (to cause a modification automatically to the display data content files in the preamble).

Just like the '358 patent involved in the '1892 FWD, the '989 patent does not describe the type of memory that stores data content files in the asset, let alone state that the memory may, should, or must be nonvolatile memory. *See id.* Figure 1 of the '989 patent illustrates wireless module 10, which may be integrated with an asset, as including memory module 70. Ex. 1002, 14:1–5. The '989 patent states that memory module 70 stores subscriber data and GPS data, but it does not provide any details regarding the structure or type of memory in the memory module. *Id.* at 14:25, 15:24–26 (stating GPS "data is stored in the memory module (70) for the purpose of creating a tracking log of the movement of the device"). The Specification does not identify nonvolatile memory or describe it as important to the invention. Neither party identifies or argues a clear reliance on nonvolatile memory in the preamble during prosecution to distinguish the claimed invention from the prior art. Rather, the Examiner found a nonvolatile memory feature for storing data files for display to be known in the prior art. *See* Ex. 1004, 101.

In sum, because "nonvolatile memory," as recited in the preambles of claims 1 and 20, does not represent essential structure, does not represent a necessary term for understanding the limitations of the claims, the Specification does not describe it as important, and Patent Owner did not rely upon it during prosecution to distinguish the claimed invention from the prior art, "nonvolatile memory" does not limit the claims. Therefore, even though a different claim construction standard applies here, Patent Owner's arguments do not present a sufficient reason to deviate from the claim construction in the '1892 FWD.

2. "Management Instructions"

Claims 1 and 20 recite "management instructions." Ex. 1002, 26:62–63, 30:21–23. Petitioner contends that "management instructions" means "commands for a device asset to perform particular actions." Pet. 10 (citing Ex. 1005 ¶¶ 100–103). "Patent Owner disagrees with Petitioner's proposed construction of the discrete term 'management instructions,' (Pet. 9–10), *but the Board need not construe the term because it is immaterial to the patentability determination here[]*." PO Resp. 2 n.1 (emphasis added).

Patent Owner notes that "[t]he parties likewise agree that as to those specification passages describing wireless 'data message' transmissions sent by the server for purposes of modifying device assets, [a person of skill in the art ("POSITA")] would understand such 'data' as comprising 'management instructions.'" *Id.* at 5 n.2 (citing Ex. 1005 ¶ 102; Pet. 9–10; Ex. 1002 10:46–52; Fig. 4, Box 7; 23:32–35; 23:4–10; 3:17–24; 6:23–56; 7:50–59; 9:15–34; 13:25–28; 23:24–28). This argument indicates that management instructions may include "data" as a "command" in some circumstances, for example when "sent by the server for purposes of modifying device assets." *See id.* Patent Owner also argues that "Patent Owner agrees with Petitioner's assessment that "the specification discloses a 'wide range' of 'various examples of instructions sent from a server that command devices to perform actions that result in a service to consumers." *Id.* at 4–5 (citing Ex. 1005 ¶ 102; Pet. 9).

In the '1892 FWD, Petitioner advanced the same construction it advances here, and Patent Owner contended that Petitioner's construction impermissibly *narrows* the term. '1892 FWD 10. Accordingly, "management instructions" includes Petitioner's construction wherein

"commands for a device asset to perform particular actions" may include what Patent Owner urges, namely data or other information sent by the server for purposes of modifying device assets.

No good reason exists to refine Petitioner's proposed construction explicitly given that Patent Owner characterizes the construction thereof as "immaterial to the patentability determination" here. PO Resp. 2 n.1; *see Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) ("we 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))).

> 3. *Limitation 1[f]: "Managing . . . consumer device assets by the remote computer server platform, based upon the results of having processed at least some of the received consumer usage information, by sending communications containing . . . management instructions that cause the stored display data content files of . . . assets to be automatically modified so as to provide a consumer service"*

Claim 1, limitation 1[f], materially tracks a similar "managing" limitation in independent claim 20. The Petition states that the "managing" limitation requires that "the *act* of managing/sending—not the content of the management instructions—is 'based upon the results of having processed at least some of the received consumer usage information,'" and does not require that "the server sends management instructions with *content* that is based upon the received consumer usage information"; that is, the claim limitation does not require that "the *content* of the management instructions

be based on that [consumer usage] information." Pet. 10–13 (citing Ex. 1005 ¶¶ 104–110).

In response, Patent Owner urges an alternative claim construction. Under its construction, Patent Owner contends that a skilled artisan "viewing the intrinsic record as a whole would understand these claim elements as requiring that the claimed 'management instructions' themselves need to be based upon the results of the server's processing of at least some of the received "consumer usage information." PO Resp. 2 (citing Ex. 2029 ¶¶ 50–51). Furthermore, according to Patent Owner, "[u]nder Petitioner's [contrary] reading, these claim elements ostensibly fail to require 'management instructions with content that is based upon the received consumer usage information.'" *Id.* at 2–3 (citing Pet. 10–11).

Patent Owner also argues that Petitioner's proposed construction for claim element 1[f] ignores the '989 patent's Specification, and contradicts Petitioner's admissions in related litigation and in the '1892 IPR. *Id.* at 10–12 & n.5 (citing Ex. 2006, 3–4; Ex. 2009, 9; Ex. 2010, 22 n.5, 23, 30; Ex. 2011, 11, 17; Ex. 2012, 33; Ex. 2020, 16; Ex. 2021, 101–02). None of the citations provided by Patent Owner shows that Petitioner ignores the '989 patent Specification or contradicts itself, however.

As one example, Patent Owner contends that "Petitioner argu[es] [in its reply brief in the '1892 IPR that] the claim element is met because 'Kloba discloses management instructions based in part on consumer usage information.'" *Id.* at 12 (citing Ex. 2011, 17). But arguing that Kloba meets the claim language does not contradict anything Petitioner advances by way of claim construction. In another example, Patent Owner argues that "[t]he [c]ourt itself consistently interpreted these claim elements as requiring that

the server's 'management instructions communicated back to the consumer device assets are based on the processing of at least some of the received consumer usage information.'" *Id.* at 11 n.6 (quoting Ex. 2010 (district court), 22 n.5; citing Ex. 2010, 23, 30). Here, however, the court simply draws a distinction between processing based on received consumer usage information and "not the operational status information," without particularly addressing the interpretation of the claim language at issue here. *See* Ex. 2010, 22 n.5.

Patent Owner relies, *inter alia*, on the alleged "sole claimed embodiment," which includes the "pull down menus" example. *See* PO Resp. 6 (quoting Ex. 1002, 4:40–50, 11:56–67). Arguing that a "sole claimed embodiment taught by the specification" governs the claim construction cuts against Patent Owner's other arguments that other embodiments "broadly" support its construction. *See id.* at 4–6 (citing several "managing" embodiments "central to these disputed claim elements"). In any event, we agree with Patent Owner that different passages in the Specification and the claim language informs the claim construction here as they do with "management instructions" in the previous section. However, the passages that Patent Owner relies upon for their broad teachings do not support the narrow construction urged by Patent Owner. *See id.* (relying on examples that relate to pre-programmed conditions or other operational conditions instead of consumer usage information).

As one example, Patent Owner contends that a server effectuates management instructions after processing "changes in [intruder alarm] data values" by sending a "'data message' for effectuating a system lockdown of

particular 'doors and barriers.'" *Id.* at 5–6 (citing Ex. 1002, 9:21–34; Ex. 2029 ¶ 47). But this example does not describe "consumer usage information" at the heart of the claim construction dispute, unless one considers the asset to be a building. For example, the passage describes monitoring "access to a building" including perhaps "the presence or movement of any persons within the monitored facilities." *See* Ex. 1002, 9:21–34. So it is unclear how this passage shows the relationship between "management instructions" and "consumer usage information" that Patent Owner argues exists. The other cited passages suffer from similar deficiencies. Mr. Berg's testimony tracks Patent Owner's arguments in that it relies on the same passages. *See, e.g.*, PO Resp. 5–6 (citing Ex. 2029 ¶ 47).

The description of the alleged sole claimed embodiment also does not mention management instructions. *See* '1892 FWD 20 n.4 (noting that Patent Owner admitted as much during the oral hearing of that case). This alleged sole claimed embodiment at column 4 generalizes "gather[ing] data" per "the use of a particular" asset and forwarding it to a server for the purpose of "optimising the asset" and "designing an appropriate range of services," without describing any particular management instruction or communication resulting from processing particular consumer usage information. *See* Ex. 1002, 4:40–45. None of the claims require optimizing. The passage is vague enough, on one hand, to include a server that simply sends an "improved" "pull down menu[]" "according to the way the user preferred to use the device or in the order of access of mostly used features" (*see id.* at 4:45–50), but on the other hand, vague enough to include (implicitly) some type of management instructions (without mentioning any)

wherein the server sends management instructions to the consumer asset to facilitate an improvement. The passage supports the former reading, because it describes "forward[ing] . . . data to a remote *server for the purpose of optimizing the asset and for designing an appropriate range of services to support the said use of said asset*." *Id.* at 4:42–45 (emphasis added). In other words, the server optimizes the asset and designs services for the asset, but it does not necessarily send instructions to the asset so that the asset optimizes the asset or alters the range of services or does anything other than display what the server sent it.

The passage does not even describe how the device or server determines "the way the user preferred to use the device" as set forth in the passage. *See* Ex. 1002, 4:48–50. For example, perhaps a local program monitors how the user uses the device and then sends data to the server, or perhaps the user informs the device or server as to how it prefers to use a device by selecting among various options and sends the selected preference to the server. The broad passage raises different possible outcomes.

Responding to the Decision on Institution, Patent Owner characterizes as "completely unsupported" and "not raised in the Petition" the notion that the sole embodiment passage does not state whether the server sends management instructions to the consumer asset to facilitate that improvement or whether it simply sends an improved menu ready for downloading. *See* PO Resp. 7 n.3. To the contrary, as noted above, the passage neither describes management instructions nor ties any management instructions to consumer usage information and it supports broad scenarios as outlined above. And Patent Owner raises the issue of what the passage

describes in its Preliminary Response and in its Patent Owner Response. *See* Prelim. Resp. 11 (quoting Ex. 1002, 4:40–50); PO Resp. 6–7 n.3.

Patent Owner also argues that dependent claims lend meaning to independent claims 1 (and the similar limitation in claim 20). PO Resp. 2. Patent Owner relies on dependent claim 5, which recites "wherein the automatic modifications of the stored display data content files of the one or more consumer device assets caused by the one or more management instructions that are based upon the results of having processed at least some of the consumer usage information *or* consumer preference information." *Id.* at 9 (emphasis added). Patent Owner contends that by referring back to the "management instructions" in claim 1, this "illuminating language" in claim 5 "expressly describe[s] them as being '**management instructions that are based upon the results of having processed at least some of the consumer usage information**.'" *Id.* (citing Pet. 47; Ex. 1002, 27:35–45).

Normally, "the presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim." *Phillips*, 415 F.3d at 1315 (citing *Liebel–Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 910 (Fed. Cir. 2004). Petitioner contends that "[t]he proper way to read claims 5 and 23 consistent with claims 1 and 20 is that 'based upon . . .' modifies the overall 'the automatic modifications' phrase." Reply 10–11 ("Claims 1 and 20 provide that these "automatic modifications" ultimately result from the claimed 'managing . . . by sending,' which is based upon the server processing consumer usage information. Thus, the 'automatic modifications' are indirectly based upon that processing.").

The language of claim 5, which depends from claims 4/3/2/1, supports Petitioner. Claim 5 follows:

> A method according to claim 4 wherein *the automatic modifications* of the stored display data content files of the one or more consumer device assets caused by the one or more management instructions *that are based upon* the results of having processed at least some of the consumer usage information or consumer preference information *are comprised of at least one selected from the group consisting of storing one or more new display data content files on said assets, updating one or more existing stored display data content files on said assets, and deleting one or more existing stored display data content files from said assets.*

Ex. 1002, 27:35–45 (emphases added). The "are comprised of . . . consisting of storing . . . files . . . , updating . . . files," etc., language in claim 5 clearly refers back to the "automatic modifications." It follows that the "that are based upon the results" language also refers back to "the automatic modifications," based on the parallel structure of "are comprised of" and "are based upon" language—i.e., both phrases refer to the same thing, "the automatic modifications." In addition, Petitioner's interpretation properly adds a narrowing limitation with respect to claim 4, because it defines three different ways (storing, updating, and deleting files) to render the automatic modifications.

Accordingly, claim 5 does not support a narrow construction. To the contrary, it supports the broad claim construction of claim 1 that Petitioner proposes.

Nevertheless, Patent Owner contends that the limitation in question does not narrow claim 1, and relies on case law to support its position. *See* Tr. 85:26–87:2 (arguing the language in question defines, but does not narrow, claim 1); PO Resp. 9 (citing *Spineology, Inc. v. Wright Med. Tech.,*

Inc., 739 Fed. App'x 633, 637–38 (Fed. Cir. 2018); *Pods, Inc., v. Porta Stor., Inc.*, 484 F.3d 1359, 1366 (Fed. Cir. 2007).

In *Spineology*, the issue was whether the "body" include the "barrel" in independent claims 15 and 33. *See Spineology*, 739 Fed. App'x at 634–37. The court noted that two dependent claims, claims 16 and 36 recited that "the 'body' must be a structure that can include a 'view port.'" *Id.* at 637. Then the court found that the specification clearly displayed the "view port" on the "barrel," so the court reasoned that dependent claims 16 and 36 showed that the body in the independent claims includes the barrel. *Id.* But the court did not read specific limitations as recited in dependent claims 16 and 36, namely the "view port" on the "barrel," into the "body" as recited in the independent claims. *See id.* In contrast, Patent Owner here seeks to narrow independent claim 1 by incorporating limitations specifically recited with respect to the "management instructions" in dependent claim 5, as opposed to shedding light on what the managing limitation as recited in claim 1 means. Also, here, unlike in *Spineology*, the Specification does not provide clear guidance.

In *Pods*, the court construed the same claim term in two independent claims to be the same. *See Pods*, 484 F.3d at 1366 ("PODS has pointed to no evidence in the specification or the prosecution history that the term 'carrier frame' in [independent] claim 29 has any meaning other than the uncontested meaning in [independent] claim 1."). In contrast, claim 5 is dependent upon claims 4/3/2/1, and for the reasons above, reading it under Patent Owner's theory does not clarify how to read claim 1.

For these reasons, and for reasons explained in the '1892 IPR, the alleged "lone claimed embodiment" and other intrinsic and extrinsic

evidence cited by Patent Owner does not alter the plain language of claims 1 and 20 in the manner urged by Patent Owner. *See* '1892 FWD 23–24; '1892 IPR, Paper 37 (rehearing decision), 8. Other embodiments, including the monitoring of computers embodiment described above (Ex. 1002, 3:17–29), lend meaning to the claim phrase as the panel determined in the '1892 FWD and in a subsequent rehearing decision. *See* '1892 FWD 23–24; '1892 IPR, Paper 37, 8 ("As we stated in the Final Written Decision, according to the plain language of claims 1 and 20, it is the communication of management instructions, not the management instructions themselves, that is based upon the results of processing at least some of the received consumer usage information.").

Patent Owner also argues that Petitioner's construction is improperly "detached from the essential function of the invention," which is that the server processes received "consumer usage information" to determine what resulting modifications to then make to an asset by way of effectuating "management instructions." PO Resp. 13–14 (quoting *Sophos Ltd. v. Iancu*, 727 Fed. Appx. 656, 661 (Fed. Cir. 2018)). Stated differently, Patent Owner contends that

> [b]y interpreting these claim elements as requiring *no relationship whatsoever* between the nature or content of the server's managing by way of effectuating "management instructions" on the one hand, and its processing of "consumer usage information" on the other hand, Petitioner clearly errs by construing these elements in an unreasonably broad fashion that effectively reads the crucial 'based upon the results of' limitation out of the claim language.

Id. at 13 (emphasis added). Under Patent Owner's narrow construction then as set forth above, the managing instructions require at least some "relationship . . . between the nature . . . of the . . . server's managing by way

of effectuating 'management instructions' . . . and its processing of 'consumer usage information.'" *See id.* As discussed further below, Petitioner shows that the prior art management instructions satisfies Patent Owner's narrow construction and also Petitioner's broader construction.

As determined below, this Final Written Decision applies collateral estoppel based on the '1892 FWD with respect to the issue of whether Kloba teaches the managing limitation under Petitioner's broad claim construction of the managing limitation, but not under Patent Owner's alternative claim construction. *See infra* § II.F.1.e. Because we determine below that Kloba teaches the limitation under both constructions, no need exists to choose one construction over the other. *See id.* However, based on the discussion above, we determine that under *Phillips*, Petitioner's claim construction more closely hews to the Specification, the plain language of claims 1 and 20, and the language in the dependent claims 5 and 22.

C. Level of Ordinary Skill in the Art

The level of ordinary skill in the art provides "a prism or lens" through which to view the prior art and the claimed invention. *Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001). The prior art at issue in the case often reflects the level of ordinary skill. *See Okajima*, 261 F.3d at 1355. Adding to the determination, the Court finds "[a] person of ordinary skill is . . . a person of ordinary creativity, not an automaton." *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 421 (2007).

The parties, relying on their respective experts, provide materially similar characterizations of the level of ordinary skill in the art. Pet. 20

(citing Ex. 1005 ¶ 53); Prelim. Resp. 4 (citing Ex. 2002 ¶ 28).[7] No material difference exits between the parties' proposals, and neither party argues any issue turns on any such difference. Based on virtually the same showings by the parties, the Board made materially the same finding in the '1892 FWD. '1892 FWD 25–26. Therefore, a person of ordinary skilled in the art

> would have had (a) a master's degree in electrical engineering, computer engineering, computer science or the equivalent, with coursework covering networked devices and servers, or (b) a bachelor's degree in one of those fields and at least two years of industry experience working with networked devices and servers; or (c) four years of industry experience working with networked devices and servers.

Id.

D. Principles of Law

If "the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains," 35 U.S.C. § 103 renders the claim obvious. *KSR*, 550 U.S. at 406. The question of obviousness involves resolving 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 ordinary skill in the art; and (4) when available, evidence such as commercial success, long felt but unsolved needs, and failure of others. *Graham v. John Deere Co*., 383 U.S. 1, 17–18 (1966); *see KSR*, 550 U.S. at 407 ("While the sequence of these

[7] Patent Owner's Response does not address the level of ordinary skill in the art. *See* PO Resp. ii–iii (Table of Contents).

questions might be reordered in any particular case, the [*Graham*] factors define the inquiry that controls.").

The Court sets forth "an expansive and flexible approach" to the question of obviousness. *KSR*, 550 U.S. at 415. Whether a patent claiming the combination of prior art elements would have been obvious involves determining whether any improvement amounts to more than the predictable use of prior art elements according to their established functions. *Id*. at 417. Reaching this determination, however, requires more than merely showing that the prior art includes separate references covering each separate limitation in a challenged claim. *Unigene Labs., Inc. v. Apotex, Inc*., 655 F.3d 1352, 1360 (Fed. Cir. 2011). Rather, obviousness additionally requires that a person of ordinary skill at the time of the invention "would have selected and combined those prior art elements in the normal course of research and development to yield the claimed invention." *Id*.

E. Overview of the Asserted References

1. Kloba (Ex. 1006)

Kloba, titled "System, Method, and Computer Program Product for Customizing Channels, Content, and Data for Mobile Devices," describes techniques for enabling Web content to be loaded onto mobile devices and for users of the mobile devices to interact with the Web content on their mobile devices during an off-line mode of the devices. Ex. 1006, code (54), code (57). Kloba's Figure 1A, reproduced below, illustrates an exemplary data processing environment 102 including server 104, one or more devices 106, one or more adapters 118, and one or more providers 128:

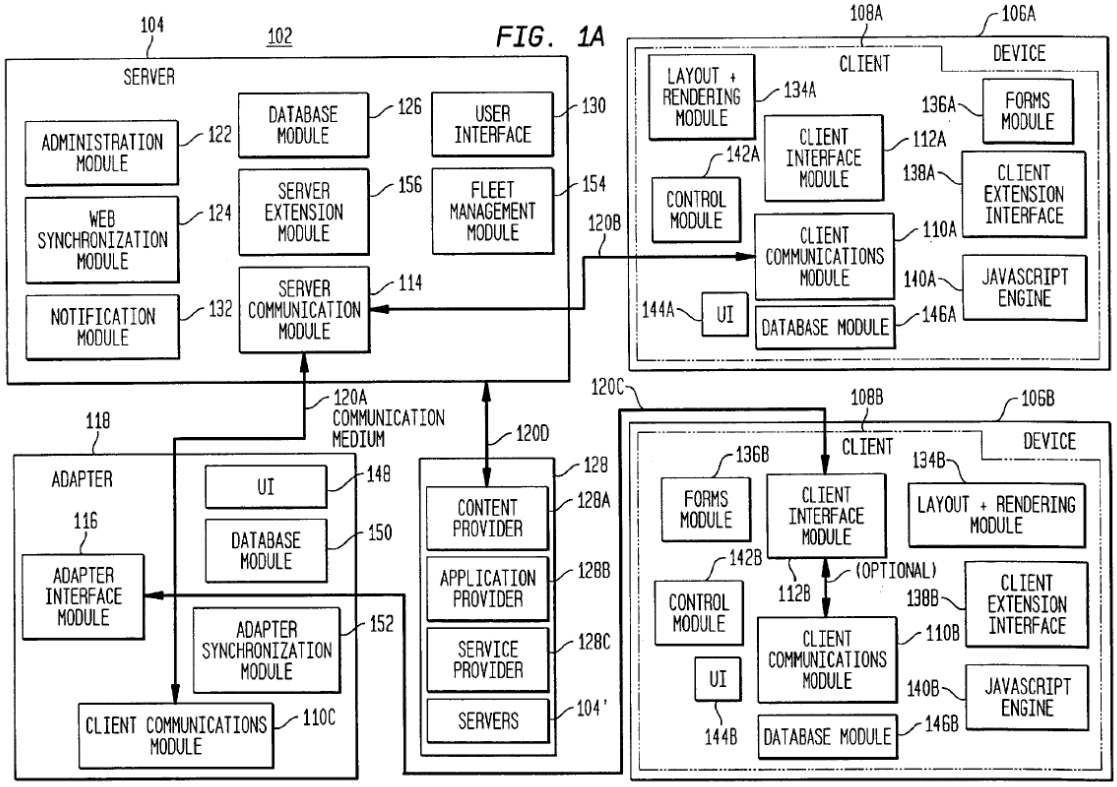


Figure 1A is a block diagram illustrating data processing environment 102 including server 104 and mobile computing devices 106. *Id.* at 7:21–27.

In Figure 1A, "devices 106 [(e.g., devices 106A, 106B)] may be any type of data processing device," such as mobile computing devices including handheld computers, cellular phones, Internet-enabled phones, pagers, radios, TVs, audio devices, car audio systems, recorders, text-to-speech devices, bar-code scanners, net appliances, mini-browsers, and personal data assistants (PDAs). *Id.* at 4:24–39 (Table 2), 10:41–50. Device 106 may include software, hardware, and/or combinations thereof related to client functionality (e.g., layout and rendering, control, user interface, client interface, database), rendering the device a client (e.g., clients 108A and 108B correspond to devices 106A, 106B, respectively). *Id.* at 10:51–65. "Client communications module 110 enables the client 108 to interact with

external entities, such as server 104. In embodiments, the client communications module 110 enables TCP/IP traffic." *Id.* at 12:13–16. Server 104 maintains channels of data, and adds selected channels to clients 108A, 108B. *See id.* at 8:4–6. A channel includes a collection of objects, such as applications, services, images, movies, music, and links that can be transferred to client 108. *Id.* at 7:27–31. According to Kloba,

> [t]he server 104 offers channels to clients 108. A client 108 may access the server 104 and view the collection of channels. The client 108 may then select any combination of the channels in the collection. The server 104 maintains a list of the channels associated with each of the clients 108.
>
> During a synchronization process, the server 104 loads a device 108 with the channels associated with the client 108. Generally, the server 104 does this by obtaining from providers 128 the objects defined by the channels, and causing those objects to be stored on the client 108. Thus, during the synchronization process, the server 104 will load the client 108 with the selected channels. More particularly, the server 104 will load the client 108 with the objects associated with the channels.
>
> The client 108 may process and use those objects when not connected to the server 104. The invention enables the client 108 to actively interact with the objects and channels.
>
> In one embodiment, the client 108A directly interacts with the server 104 via some transmission medium 120B, which may be any wired or wireless medium using any communication protocol.
>
> . . . .
>
> [A] web synchronization module 124 [of server 104] is an application/instance of server extension module 156 [of server 104], and controls synchronization of web content to client 108. The invention may include other synchronization modules (which are application/instances of server extension module 156) that control synchronization of other types of objects to clients 108. For example, the server 104 may administer a calendar that may be installed on clients 108. The synchronization of appointments, events and/or dates on this calendar between

clients 108 and the server 104 may be performed by a calendar synchronization module.

Id. at 8:7–26, 9:11–21. During a synchronization, control module 142 (of a client 108) identifies "deltas" (differences between versions of objects offered and those in the client) in the client databases identified by server 104 and sends the deltas to a synchronization module of server 104, or a synchronization module generated by third parties (as shown in Figure 1B). *Id.* at 10:35–40, 19:51–67. The synchronization modules synchronize the deltas with providers 128 and compile instructions to synchronize clients 108A, 108B with providers 128. *Id.* at 20:11–17. Control modules 142A, 142B on clients 108A, 108B then execute the instructions. *Id.* at 20:23–25.

Server 104 also optimizes the Web content to display the content within parameters of the client devices 108, for example, by scaling the content as shown in Figure 1AA, reproduced below. *Id.* at 6:35–41, 28:20–36.

FIG. 1AA

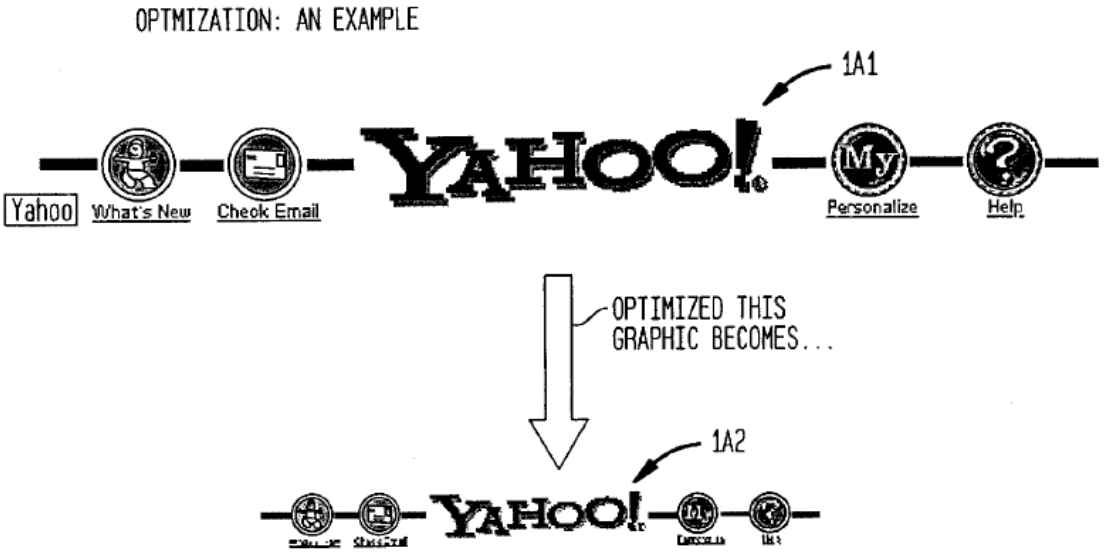


Figure 1AA illustrates a process that optimizes (via colors, size, etc.) Web site page 1A1 for display 1A2 on a handheld device.
Id. at 6:35–41, 21:55–60, 28:30–31.

In Figure 1AA, Web page graphic display 1A1 represents a large screen desktop display, and Web page graphic display 1A2 represents an optimized version 1A2 of Web page graphic display 1A1 optimized to fit on handheld device 106/client 108. *Id.* at 28:32–36. Optimization of Web content display by server 104 enables the display to fit within the client's parameters, such as the client's dynamic memory specifications, high memory specifications, protected memory, storage memory, database memory, available storage space, screen size, user profile(s), color depth, applications on the device, buttons on the device, data markers, preferences, fonts, font specifications, sync type, supported data types, supported mime types, and connection/network profile. *Id.* at 28:21–30.

A user of a device can subscribe to a channel through the use of a user interface, including that of Figure 12, reproduced below:

FIG. 12

Figure 12 illustrates a screen shot of a channel subscription page displayed on client 108. *Id.* at 34:49–50.

During a synchronization, the server loads channels (e.g., FOX SPORTS, BLOOMBERG) selected by client 108 using the interface of Figure 12. *Id.* at 34:49–54.

2. Multer (Ex. 1007)

Multer, titled "Data Transfer and Synchronization System," describes systems for transferring data between two devices that require information to be shared between them. Ex. 1007, code (54), code (57), 5:11–13. Figures 1 and 2, reproduced below, illustrate configuration examples for transferring data between two devices:

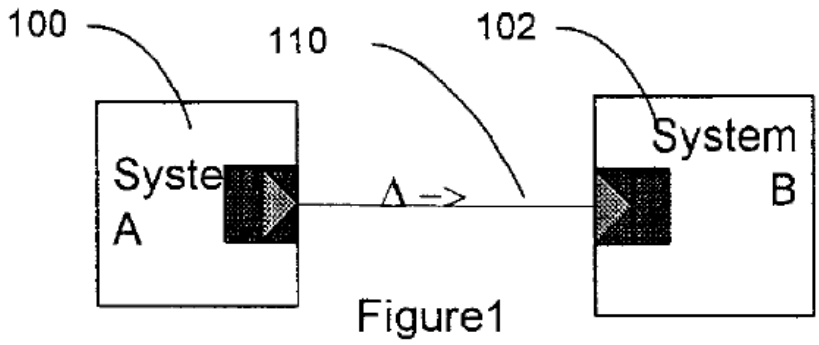
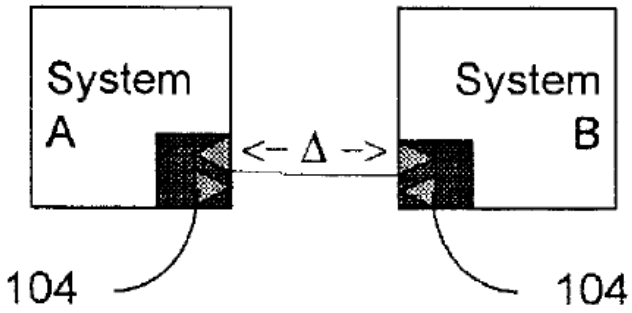


Figure1

Figure 2



Figures 1 and 2 illustrate block diagrams of systems using differencing routines. *Id.* at 4:45–47, 5:57–60, 6:31–34.

In Figure 1, differencing transmitter 100 of System A examines a data structure of information to be transmitted to differencing receiver 102 of System B, extracts the information from System A, and converts it to difference information Δ. *Id.* at 5:57–6:8. Difference information Δ comprises only the changes to System B's data that have occurred and instructions for implementing those changes on System B. *Id.* at 6:8–11. Differencing transmitter 100 transmits the difference information Δ to differencing receiver 102 via communication line 110. *See id.* at 5:60–65. "Difference information Δ received by differencing receiver 102 at System

B is reconstructed at System B, and the changes reflected therein are updated on System B." *Id.* at 6:16–19.

In Figure 2, both System A and System B include functional blocks 104, each representing a differencing synchronizer that will allow difference information Δ to be both transmitted and received. *Id.* at 6:31–37. For example, System A and System B represent a portable computer and a desktop computer, respectively, and differencing synchronizer 104 extracts changes to contact information on either System A or System B at predetermined times, transmits the information Δ between the systems, and reconstructs the data on the receiving system to update information from the sending system, thereby synchronizing contact information between Systems A and B. *Id.* at 6:37–46.

Multer describes a "pull" synchronization and a "push" synchronization. *Id.* at 35:4–18, 37:40–61, Fig. 15, Fig. 16. Synchronization can be triggered automatically:

> Each device has its own triggering mechanism for initiating synchronization. Some devices, such as Windows clients and Palm® pilots are triggered manually when the user presses a "sync" button. Other devices, such as a cellular telephone, may be triggered automatically after another device completes a sync. Regular, time-based triggers are supported as well.

Id. at 35:4–18, Fig. 15. In a "push" synchronization, a device uploads difference information (Δs) to a server. *Id.* at 37:40–61, Fig. 16.

3. Hoyle (Ex. 1011)

Hoyle, titled "Computer Interface Method and Apparatus with Targeted Advertising," discloses a system "for providing an automatically upgradeable software application that includes targeted advertising based

upon demographics and user interaction with the computer." Ex. 1011, code (54), code (57). Hoyle discloses a system for targeting advertisements on user computers, which have a software application with a graphical user interface that includes a banner region for advertisements. *Id.* at 7:30–31. These advertisements are stored in a database on the computer. *Id.* at 14:59–60. The application collects "computer usage information" relating to usage of the computer, "including such things as what programs [users] run, what information resources they access, what time of day or days of the week they use the computer, and so forth." *Id.* at 3:34–38. This usage information is periodically sent to an "Advertising and Data Management Server" (ADM), which is connected to computers via the Internet. *Id.* at 7:12–13, 7:41–42, 8:30–33. The ADM server uses the usage information to "better target[] future advertising to the end user." *Id.* at 7:43–44. New banner advertisements are sent as needed from the ADM server to computers. *Id.* at 7:38–41.

4. Loughran (Ex. 1008)

Loughran, titled "Method and Apparatus for Automatic Content Handling," describes a system for performing autonomous data transfer between an email server and a mobile device such as a notebook computer. Ex. 1008, code (54), code (57), Fig. 1. The mobile device connects to the email server via a wireless data connection and downloads the email. *Id.* at code (57). For example, the email server compiles an SMS message incorporating a digital signature and transmits the email to the mobile device using SMS messages sent in accordance with the GSM short messaging service. *Id.* ¶¶ 37–38, code (57). Loughran also notes

> it is usual for laptops and other mobile computing devices to be switched off when not in use. . . . The alert module [GSM transceiver] associated with the mobile device could be maintained in a low power consumption standby mode and on receipt of an SMS message containing an "EMAIL" header, power up the notebook.

Id. ¶ 40.

5. Fong (Ex. 1010)

Fong, titled "System, Computer Program Product and Method for Managing and Controlling a Local Network of Electronic Devices," describes "a main server including software for managing network resources from a single point of administration, wirelessly connecting a plurality of electronic devices to the main server to create a wireless local area network (LAN), and managing the electronic devices using the software." Ex. 1010, code (54), code (57). In Fong's system, "main server 200 monitors the management initiating parameters of all electronic devices 202–212 connected to the wireless LAN." *Id.* at 9:49–51. In one example,

> if the main server 200 is set up to monitor the battery power of mobile terminals 208 and 212 and send a message to all terminals indicating that a particular terminal battery must be charged, the management initiating parameter is the battery power and the action is sending a message to all terminals on the wireless network.

Id. at 10:10–16.

F. Alleged Obviousness Based on Kloba, Multer, and Hoyle—Claims 1–6 and 13

Petitioner argues that claims 1–6 and 13 would have been obvious in view of (i) the combined teachings of Kloba and Multer, and (ii) the combined teachings of Kloba, Multer, and Hoyle. Pet. 21–54; Reply 5–29.

Patent Owner opposes both. PO Resp. 17–65; PO Sur-Reply 7–27. For the reasons discussed below, Petitioner has shown persuasively that claims 1–6 and 13 would have been obvious and unpatentable in view of the combined teachings of Kloba, Multer, and Hoyle; as a result, we limit our decision to those grounds that Petitioner relies on Hoyle.

1. Independent Claim 1

a. Limitation 1[Preamble] (each consumer device asset having "nonvolatile memory for storing files of data content for display")

Petitioner asserts that in view of the "underlying rationale behind the doctrine" of collateral estoppel and "nearly identical records," "the Board should not depart from its prior holding that the 'nonvolatile memory' preamble elements are both non-limiting and disclosed." *See* Pet. Supp. Br. 10. Petitioner also asserts that Patent Owner "had a full and fair opportunity to litigate the issues of whether the nonvolatile memory elements are limiting and whether Kloba teaches nonvolatile memory as claimed." *Id.* at 9–10.

We agree with Petitioner. First, based on the claim construction adopted here (*supra* § II.B.1), the preamble portion of claim 1 that recites a nonvolatile memory does not limit the claims. As noted above, the Board reached the same determination in the '1892 FWD, which we adopt and incorporate by reference. '1892 FWD 33–34. Second, even if the "nonvolatile" preamble portion limits the challenged claims, similar to its showing in the '1892 IPR, Petitioner points to Kloba's disclosure of different types of memory, including nonvolatile memory, applicable to different types of generic mobile devices, not limited to cellular phones. *See* Pet. 23–24; '1892 FWD 34–38. We adopt and incorporate by reference the

Board's findings and determination that Kloba teaches a nonvolatile memory irrespective of whether the preamble is limiting. '1892 FWD 34–38.

Patent Owner asserts that Petitioner admits that collateral estoppel does not apply because "the prior [panel] made 'independently sufficient alternative holdings'" by "treating this limitation as both limiting and not limiting." PO Supp. Reply Br. 8; *see* PO Supp. Br. 4–5 (citing *TecSec, Inc. v. Int'l Bus. Mach. Corp.*, 731 F.3d 1336, 1343 (Fed. Cir. 2013) ("[W]here the court in the prior suit has determined two issues, either of which could independently support the result, then neither determination is considered essential to the judgment."). Patent Owner also asserts that it raises new arguments that the '1892 FWD does not address so that there is "no identity of issues." PO Supp. Br. 16–17.

Nevertheless, as quoted above, Petitioner shows, and Patent Owner does not dispute, that identical issues are involved, and Patent Owner had a full and fair opportunity to be heard, showing (as discussed further below) that collateral estoppel applies. *See* Pet. Supp. Br. 9–10. Also, Patent Owner's arguments fail to faithfully adhere to the precedent as outlined in the Order for Supplemental Briefing (Paper 37) ("Order"), as Patent Owner seeks to rely on other precedent that does not apply to the circumstances here. As we noted in the Order, "[i]f the differences between the unadjudicated patent claims and adjudicated patent claims do not materially alter the question of invalidity, collateral estoppel applies." Order 2 (quoting *Nestle USA v. Steuben Foods*, 884 F.3d 1350, 1352 (Fed. Cir. 2018).[8]

[8] As noted in the Order, the quote in *Nestle* originates from *Ohio Willow Wood Co. v. Alps Sl, LLC*, 735 F.3d 1333, 1342 (Fed. Cir. 2013)). *See* Order 2.

Here, Petitioner shows that no difference in the claim terms occurs with respect to the preamble, let alone a material difference, even though different claim construction standards apply. *See* Pet. Supp. Br. 9–10. Moreover, Patent Owner had the opportunity to, and did, fully and fairly litigate the issue of the claim construction of "nonvolatile memory" and whether Kloba teaches the nonvolatile memory even if the preamble limits the claims. '1892 FWD 33–38 (finding Kloba teaches materially the same limitation even if the preamble is limiting). Patent Owner did not raise any issue regarding the preamble and whether Kloba teaches it in its opening brief at the Federal Circuit. *See* Ex. 1024, 1–11 (table of contents and opening pages of Patent Owner's opening brief focusing on the "management instructions" in the "managing" limitation of related claims in related patents, including the '358 patent).

"A full and fair opportunity to litigate is the touchstone of any preclusion analysis." *Aspex Eyewear, Inc. v. Zenni Optical Inc.*, 713 F.3d 1377, 1382 (Fed. Cir. 2013) (citing *Taylor v. Sturgell*, 553 U.S. 880, 892, (2008)). "The 'desire not to deprive a litigant of an adequate day in court' is balanced against the 'desire to prevent repetitious litigation of what is essentially the same dispute.'" *Id.* (quoting *In re Freeman*, 30 F.3d 1459, 1465 (Fed. Cir. 1994)). "The court correctly found that Aspex had a full and fair opportunity to litigate this issue." *Id.*

In *Maxlinear, Inc. v. CF Crespe LLC*, 880 F.3d 1373 (Fed. Cir. 2018), which we also cited in our Order, the court stated that "[i]t is well established that collateral estoppel, also known as issue preclusion, applies in the administrative context," including Board final written decisions. *See Maxlinear*, 880 F.3d at 1376 (citing *B & B Hardware, Inc. v. Hargis Indus.,*

Inc., 575 U.S. 138, 148 (2015)). In *Maxlinear,* the court held that "the preclusive effect of the prior [Board] adjudications, and subsequent affirmations, has finally resolved the issue of the unpatentability of independent claims 1 and 17 and dependent claim 20 in this proceeding." *Id.* at 1377. The prior adjudications and subsequent affirmations involved Rule 36 judgments of *inter partes* Board decisions, as is the case here. *See id.* at 1375–76.

Moreover, the prior adjudications that served as the basis for collateral estoppel in *Maxlinear* involved *different prior art* (i.e., different issues) than the underlying Board decision on appeal in *Maxlinear*. *Id.* Nevertheless, *Maxlinear* vacated and remanded the Board's determination that the sole independent claims 1 and 17 were patentable based on the prior Board adjudications and subsequent Federal Circuit Rule 36 affirmations that these claims were unpatentable over that *different prior art*. The court also remanded for the Board to determine the "preclusive effect of the prior adjudications, and subsequent affirmations," on the validity of dependent claims "*not addressed in the earlier IPRs*." *Maxlinear*, 880 F.3d at 1377 ("[T]he sole remaining question at issue is whether the dependent claims 4, 6–9, and 21, not addressed in the earlier IPRs, are unpatentable.").

Accordingly, Patent Owner's argument that the '1892 FWD and subsequent affirmation by the Federal Circuit does not have preclusive effect because the Board entertained different issues or decided that Kloba teaches the nonvolatile memory under two alternate theories is misplaced. The question of preclusion involved here is not whether one of two alternatives in claim construction apply. Rather, the question is "whether the . . . claims present materially different issues that alter the question of patentablity,

making them patentably distinct from" the claims adjudicated in the '1892 IPR. *See Maxlinear*, 880 F.3d at 1377–78. As discussed above, Petitioner shows that the nonvolatile memory limitation is not patentably distinct in both sets of claims involved in the two proceedings and it raises the exact same issue of whether Kloba teaches the limitation, even if the preamble limits the claims. *See* Pet. Supp. Br. 9–10. That issue was actually litigated and necessary to the Board's determination in the '1892 FWD that the Federal Circuit affirmed in the M2M Federal Circuit Decision.[9] *See* '1892 FWD 33–38; *supra* § I.B.

In *Masco Corp. v. United States*, 303 F.3d 1316 (Fed. Cir. 2002), the court analyzed the "general rule" that Patent Owner urges here regarding "two [alternate] issues" for purposes of collateral estoppel: "If a judgment of a court of first instance is based on determinations of two issues, either of which standing independently would be sufficient to support the result, the judgment is not conclusive with respect to either issue standing alone." *Masco*, 903 F.3d at 1330 (quoting Restatement of Judgments, Second § 27,

[9] Patent Owner's reliance on *TecSec* is misplaced. *See* PO Supp. Br. 4–5. In *TecSec*, although the court held that the claim construction could not be given preclusive effect, it simply did not decide if the ultimate judgment of non-infringement would not have been given preclusive effect. *See TecSec* 731 F.3d at 1344 ("For collateral estoppel to apply to a court's claim construction, the construction 'had to be the reason for the loss,' *Jackson Jordan, Inc. v. Plasser Am. Corp.*, 747 F.2d 1567, 1577 (Fed. Cir. 1984), a conclusion that does not apply here."); *cf. Del Mar Avionics, Inc. v. Quinton Instrument Co.*, 836 F.2d 1320, 1323 (Fed. Cir. 1987) ("The prior determination of certain issues, including the issues of claim construction and of infringement by [one model] and non-infringement by [another model], bars judicial redetermination of those issues.").

Comment i). However, the court quoted with approval the Court of Claims as follows:

> when a lower court's *decision on a question of fact is challenged in a proper appeal*, and the appellate court does not pass upon that finding of fact in reaching its decision [because it reaches an alternative finding], the lower court's finding is not conclusive against the appellant in a subsequent suit on a different cause of action. *The doctrine of res judicata must be so limited since a factual issue cannot, consistent with the statutory right to appellate review, be said to have been finally adjudicated when the appellant has been precluded from obtaining the appellate review which he sought and to which he would have been entitled if the fact had been material*.

Id. (quoting *Hannahville Indian Community. v. United States*, 180 Ct. Cl. 477, 485 (Ct. Cl. 1967)) (emphasis added). In other words, assuming for the sake of argument that the "two [alternate] issues" rule otherwise might apply here, at a minimum, Patent Owner must have "challenged" the issue during "appellate review," and then been "*precluded from obtaining the appellate review which he sought.*" *See id.* As noted above, Patent Owner did not seek appellate review of the nonvolatile memory limitation at issue in the '1892 FWD. *See* Ex. 1024, 1–11, 55–73. Patent Owner verified this during the Oral (video) Hearing, noting that it only challenged "a single issue . . . related to the claim construction for the management instructions" at the Federal Circuit. Tr. 41:3–8.[10]

Moreover, Patent Owner acknowledges that in cases where the "'identity-of-issues' test factor cannot be satisfied due to 'the mere existence

[10] The reference to "management instructions" implicates the whole "managing" limitation 1[f] and the interplay between the processing of the consumer usage information and the management instructions central to the dispute here as discussed further below.

of different language,' . . . [Patent Owner] 'must show that the differences between the unadjudicated patent claims and the adjudicated patent claims . . . materially alter the question of invalidity.'" *See* PO Supp. Br. 3 (quoting *Ohio Willow*, 735 F.3d at 1342). Here, Petitioner shows that the preambles in the '1892 FWD and here are "identical" (Pet. Supp. Br. 9); therefore, "the Board should not depart from its prior holding that the 'nonvolatile memory' preamble elements are both nonlimiting and disclosed" (*id.* at 10). Patent Owner does not dispute Petitioner's showing that the terms are materially the same (identical). *See* PO Supp. Br. 6–7 (generally arguing that different claim construction standards preclude a finding of collateral estoppel), 9 (arguing the Board applied two alternate claim constructions so that issue preclusion does not apply); PO Resp. 15–16 (claim construction). The different claim construction standards in the two proceedings are irrelevant, because Patent Owner did not appeal the Board's holding in the '1892 FWD that Kloba teaches the nonvolatile memory limitation even if the preamble is limiting. *See* Pet. Supp. Br. 9–10.

In other words, the '1892 IPR "presents" the "identical issue" of whether Kloba satisfies the exact same nonvolatile memory language; (2) the '1892 IPR "actually litigated and adjudged that issue;" (3) the '1892 FWD judgment "necessarily required determination of the identical issue; and (4) the prior action featured full representation of the estopped party" by the same parties as involved here. *See VirnetX*, 909 F.3d at 1377 (quoting *Stephen Slesinger*, 702 F.3d at 644).

Based on collateral estoppel, Patent Owner is precluded from re-litigating whether Kloba teaches consumer device assets each having "nonvolatile memory for storing files of data content for display," as recited

in the preamble of claim 1. If the preamble is not afforded weight under *Phillips* as determined above in the claim construction section, no need exists to reach collateral estoppel, because no need exists to determine if Kloba teaches a nonvolatile memory.[11] *Supra* § I.B.1. Accordingly, Petitioner shows by a preponderance of evidence that Kloba teaches the limitation even if the preamble is afforded weight.

b. Limitations 1[a], 1[b], 1[h]

Petitioner contends correctly that limitations 1[a], 1[b], and 1[h] are "materially identical" to limitations that were addressed in the '1892 FWD for U.S. Patent No. 8,577,358 B2 ("the '358 patent"). Pet. Supp. Br. 7–8 (citing Ex. 1013 (a chart comparing claim 1 from the '358 patent and the '989 patent)). Relying on substantially the same evidence that Petitioner cites from Kloba in this case (*see* Pet. 28–29, 43–44), in the '1892 FWD we concluded that Kloba disclosed limitations 1[a], 1[b], and 1[h]. '1892 FWD 38. Moreover, we noted there that Patent Owner did not dispute Kloba teaches these limitations. *Id.* And, on appeal, Patent Owner did not challenge our determination that Kloba discloses limitations 1[a], 1[b], and 1[h]. *See* Ex. 1024. Similarly, Patent Owner again does not challenge Petitioner's contention that Kloba discloses these limitations in this proceeding. *See generally* PO Resp. 17–55.

Therefore, because the prior action presented the identical issues of whether Kloba discloses limitations 1[a], 1[b], and 1[h], which Patent Owner

[11] Nevertheless, as noted above (§ II.A.B.1) and in the Decision on Institution, during prosecution of the '477 patent, the Examiner found a nonvolatile memory feature for storing data files for display to be known in the prior art. *See* Ex. 1004, 101; Inst. Dec. 19 (citing Ex. 1004, 101).

had a full and fair opportunity to litigate, and because our finding that Kloba discloses limitations 1[a], 1[b], and 1[h] was necessary for the Board's determination of unpatentability for claim 1 of the related '358 patent, we find collateral estoppel prevents Patent Owner from re-litigating these specific claim limitations. Patent Owner notably does not contest Petitioner's contention that collateral estoppel applies to these claim limitations. *See* PO Supp. Br. 1 (arguing that collateral estoppel does not prevent it "from litigating any of the issues that have been raised in the instant proceedings").

Regardless, and in the alternative, after considering the evidence Petitioner cites from Kloba, we find Kloba's server 104, connected to clients 108A, 108B via communication medium 120, satisfies limitation 1[a]; Kloba's Figures 1S, 5A–5J, and 49–62, which are flowcharts and screen shots related to registering a client with a server, and the corresponding description in Kloba, shows that clients are registered with its server, as required by limitation 1[b]; and Kloba discloses limitation 1[h] by teaching that TCP/IP, which uses "packet switched data messages," is used as a means for the mobile devices to communicate with the server. *See* Ex. 1006, 3:12–14, 4:48–63, 5:29–32, 9:31–33, 9:57–67, 12:13–20, 21:67–22:1, 29:31–33:67, 36:51–54, Figs. 1S, 1V, 5D, 5F; Ex. 1005, ¶¶ 211, 212, 227, 228, 252, 253, 440; Pet. 28–29, 43–44. As a result, even without collateral estoppel, we are persuaded that Kloba discloses limitations 1[a], 1[b], and 1[h].

c. Limitations 1[c] and 1[d] ("automatically resulted from . . . preprogrammed conditions")

Limitation 1[d] recites:

> receiving at the remote computer server platform communications . . . containing consumer usage information . . ., said communications having automatically resulted from at least one selected from the group consisting of preprogrammed conditions and programming instructions generated by the remote computer server platform.

Ex. 1002, 26:43–52. And limitation 1[c] recites a similar limitation with respect to the "automatically resulted from . . . preprogrammed conditions" limitation, albeit requiring the automatic sending of "operational status information." *Id.* at 26:34–42. Regarding limitation 1[c], Petitioner cites the '1892 FWD as informative and contends that various state information disclosed by Kloba, including memory specifications, available storage space, screen size, profile types, and other information, constitute "operational status information." *See* Pet. 29–30 (citing '1892 FWD 39; Ex. 1006, 6:9–34, 21:34–47, 23:62–63, 24:18–45, 24:48–52, 25:38–39, 28:23–30). Petitioner contends that limitation [d] "is similar to Element 1[c]," except "[t]he tracked user behavior information is 'consumer usage information identifying the manner in which a consumer user has used a particular feature' of the user's device because it specifies how and in what ways the user has interacted with the displayed page and song content." *See id.* at 32–34 (citing Ex. 1006, 16:64–17:5, 17:19–23, 19:65–67, 20:18–21, 20:51–53, Figs. 1X, 1F1; Ex. 1005 ¶¶ 213–218, 239, 413, 415; '1892 FWD 42–49). Patent Owner does not dispute these facts and we find the evidence cited supports Petitioner's contentions by a preponderance of the evidence.

Petitioner contends that both "operational status information" and "consumer usage information" result automatically from pre-programmed conditions. *See id.* at 31 (citing Ex. 1006, 19:57–67, 20:50–53; Ex. 1005, ¶¶ 213–218, 232; '1892 FWD 42–49; Ex. 1007, 35:15–18), 34 (citing Ex. 1007, 35:15–18; Ex. 1005 ¶¶ 213–218, 239; '1892 FWD 42–49). Petitioner relies on the combined synchronization features of Kloba and Multer to arrive at the "automatically resulted from . . . pre-programmed conditions" feature as recited in limitations 1[c] and 1[d]. *See id.* at 31, 34.

Relying on its showing regarding the preamble (*id.*), Petitioner asserts that, although Kloba does not describe how synchronization would work or be initiated for each of the variety of disclosed non-PDA devices that typically lacked a manual 'sync' button, "Multer provides that detail by teaching that '[o]ther devices, such as a cellular telephone, may be triggered automatically' or based on 'regular, time-based' triggers." *Id.* at 26 (citing Ex. 1007, 35:17–18). Petitioner asserts that the artisan of ordinary skill "would have seen the benefit in incorporating this teaching from Multer into Kloba's system to provide an additional or alternative synchronization technique appropriate for devices like cellular telephones that lacked a manual 'sync' button." *Id.* (citing Ex. 1005 ¶ 214; '1892 FWD 43–44).

Petitioner generally contends "Multer teaches that synchronization may be triggered manually or automatically and can occur in both a 'pull direction' (i.e., sending information from the server to a device)" as shown in Figure 15 "as well as a 'push' direction (i.e., from device to server)" as shown in Figure 16. *Id.* at 18 (citing Ex. 1007, 35:4–22, Figs. 15, 16).

Patent Owner contests Petitioner's assertions regarding the "automatic[]" communications in limitation 1[d] of claim 1, arguing that

neither Kloba nor Multer, alone or in combination, teach or suggest automatically communicating information from a device/asset to a server. PO Resp. 48–55. In particular, Patent Owner argues Kloba merely discloses *manual*, not *automatic* synchronization. *Id.* at 49. Patent Owner contends that Multer's synchronization "does not disclose automatically communicating particular information from the device [asset] to the server (i.e., uploading) as required by the claims." *Id.* at 49–50 (citing Ex. 2029 ¶¶ 79–92). Patent Owner argues that Multer merely discloses "automatically sending a request for synchronization in the reverse direction (i.e., from the server to the device [i.e., Multer's 'pull' direction])," which "is completely opposite of what is claimed (i.e., from the device to the server)." *Id.* at. 50 (citing Ex. 2029 ¶ 80).

Many of Patent Owner's arguments materially track arguments the Board dismissed in the '1892 FWD. Toward that end, we adopt and incorporate by reference the findings and reasoning set forth in the '1892 FWD. *See* '1892 FWD 42–49; Reply 21–25 (noting similarities with arguments in the '1892 FWD). Although Patent Owner raises some new arguments and evidence here, none give rise to a reason to deviate from the Boards' prior holding on the same issue. For example, citing Mr. Berg's testimony, Patent Owner argues that periodic synchronization would not be optimal for a user, because "she would know the optimal time to initiate a manual synchronization with the server." *See* PO Resp. 53 (citing Ex. 2029 ¶ 89). Petitioner persuasively replies that "POSITAs would have seen value in periodic synchronization in addition to manual synchronization." Reply 24 (showing that "Mr. Berg admitted that he had not considered scenarios in

which periodic device-to-server communications was among several options" (citing Ex. 1021, 169:14–170:25) (Berg Deposition)).

Moreover, collateral estoppel prevents Patent Owner from re-litigating the issue of whether the combined teachings of Kloba and Multer render limitations 1[c] and 1[d] obvious, as Petitioner argues. Reply 21–25; Pet. Supp. Reply 4–7. As Petitioner argues, element [1c] of the '989 patent contains "identical limitations" to elements 1[c] and 1[d] of the '358 patent previously litigated in the '1892 proceeding. Nothing in the respective elements relates to other claim elements in a manner that raises a materially different issue with respect to the previous determination by the Board that the combination of Kloba and Multer renders this limitation obvious. *See* '1892 FWD 39–49.

As Petitioner also argues, Patent Owner "cannot argue that the intervening change in claim construction standard bars collateral estoppel because [Patent Owner's] arguments regarding Multer do not implicate any disputed claim constructions." Reply 22. Patent Owner does not advance a claim construction argument that implicates the "automatically resulted from" limitation at issue here, let alone an argument that turns on the claim construction standard. *See* PO Resp. 1–17 (no claim construction for "automatically resulted from" proffered).

Notwithstanding Patent Owner's arguments that Patent Owner "raised new issues" here "[f]or the first time in any forum" (PO Supp. Br. 17), Patent Owner had a full and fair opportunity to litigate, and did litigate, the issue of whether the combination of Kloba and Multer renders this limitation obvious, which was necessary to the judgment. *See* '1892 FWD 39–49. Also, the record shows, as Petitioner argues, that Patent Owner did not

appeal the Board's holding in the '1892 FWD that Kloba and Multer teach the materially same "automatically resulting from" limitation at issue here. *See* Ex. 1204, 1–5, 47–61; Pet. Supp. Br. 5–6 (Patent Owner "chose not to appeal these findings, rendering the Board's decision final with respect to those issues for purposes of collateral estoppel.") (citing *Smith Int'l, Inc. v. Hughes Tool Co.*, 718 F.2d 1573, 1580 (Fed. Cir. 1983) (recognizing that the district court's adjudication of infringement was final and conclusive because "[n]o issue relating to infringement was appealed"); *Power Integrations, Inc. v. Semiconductor Components Indus., LLC*, 926 F.3d 1306, 1312 (Fed. Cir. 2019) (collateral estoppel would have applied to non-appealed decision but for lack of incentive to litigate exception); *Daniels v. Merit Sys. Prot. Bd.*, 306 F. App'x 567, 569 (Fed. Cir. 2009) (recognizing that collateral estoppel applied because the Merit Systems Protection Board decision "became final by operation of law" when petitioner did not appeal the Board's decision to the Federal Circuit)).

Accordingly, Patent Owner is precluded from relitigating the materially identical issue of whether Kloba and Multer teach the "automatically result[ing] from . . . preprogrammed conditions" as recited in limitations 1[c] and 1[d] of claim 1. Based on the foregoing discussion, Petitioner shows by a preponderance of evidence that the combination of Kloba and Multer would have rendered obvious the subject matter of claim 1 involving the communications "automatically result[ing] from . . . preprogrammed conditions" as recited in limitations 1[c] and 1[d] of claim 1.

d. Limitations 1[e] ("monitoring . . . by automatically processing . . . the received consumer information")

Limitation 1[e] of claim 1 recites

> monitoring the plurality of consumer device assets by the remote computer server platform by automatically processing, according to preprogrammed conditions, the received operational status information and the received consumer usage information.

Ex. 1002, 26:53–57. Petitioner contends, "[a]fter receiving operational status and consumer usage information from a mobile device, Kloba's server automatically processes that information." Pet. 34. In particular, Petitioner asserts that the server in Kloba must be pre-programmed to process the operational status information and the consumer usage information to perform the described tasks of optimizing objects for use by a user and forwarding the tracked information received from a client to a third-party provider. *Id.* at 34–35 (citing Ex. 1006, 2:59–61, 6:4–41, 8:16–19, 17:20–21, 24:10–45; Ex. 1005, ¶¶ 243, 419). Patent Owner only disputes Petitioner's contention that the server in Kloba processes the consumer usage information; it does not dispute the server in Kloba receives the tracked information and automatically forwards it to a particular destination. *See* PO Resp. 18–20.

Patent Owner argues that "merely forwarding the [tracked client behavior information ("TCBI")] to the provider cannot qualify as the type of 'processing' of 'consumer usage information' that is contemplated and required by the claims." *Id.* at 19 (citing Ex. 2029, ¶¶ 124–125). What is contemplated and required by the claims, according to Patent Owner, is "substantively processing the content of 'consumer usage information' in a manner that would allow the server to then make informed and intelligent decisions based thereon." *Id.* at 20. Patent Owner argues that this is so

because limitation [f] recites "managing . . . consumer device assets . . . based upon the results of having processed at least some of the received consumer usage information" and "processed" in that limitation is allegedly "referencing the same antecedent 'processing' of [limitation 1[e]." *Id.* at 19.

Patent Owner argues that "the results" recited in limitation 1[f] are derived from having "processed" the consumer usage information "in the sense of critically examining" it and that managing the consumer device assets occurs by intelligently acting upon those results. *Id.* at 20. When limitations 1[e] and 1[f] are viewed together, Patent Owner argues that "they serve to clarify that the server's 'managing' [recited in limitation 1[f]] needs to be substantively predicated on the outcome of that 'processing' [recited in limitation 1[e]]." *Id.* at 19–20. In other words, Patent Owner argues that "the entire claim clearly conveys that the processing that has occurred in [limitation 1[f]] is the same processing required by [limitation 1[e]]." PO Sur-reply 7. Thus, Patent Owner concludes, "the claims are indisputably using the term 'processing' to refer to substantively processing the content of 'consumer usage information' in a manner that would allow the server to then make informed and intelligent decisions based thereon." *Id.* at 20 (citing Ex. 2029, ¶¶ 124–125).

In response, Petitioner argues persuasively that the meaning of "processing" in limitation 1[e] is not limited by the subsequent limitation 1[f]. Reply 6–7. As Petitioner argues, the "processing" in limitation 1[e] describes the step of "monitoring," whereas "processed" in limitation 1[f] describes how "the results" are derived for "managing" a consumer device asset, and limitation 1[f] does not use any of the normal identifiers, such as "said processing," "aforesaid processing," or "the processing," to indicate

that the processing for monitoring and managing are the same. *See id.* Contrary to Patent Owner's argument, we find also that the context of limitations 1[e] and 1[f] suggests the scope of "processing" is not co-extensive with "processed."

Limitation 1[e] is directed to the recited step of "monitoring," which is recited to occur "by automatically processing, according to preprogrammed conditions, the received operational status information *and* the received consumer usage information." Ex. 1002, 26:53–57 (emphasis added). Limitation 1[e] clearly recites processing *both* types of information. Patent Owner's argument would require "operational status information" to be "substantively processed" in the same manner as "consumer usage information," which is a result that is neither supported by the claims nor the Specification. Additionally, there is no evidence of record that even suggests it is necessary to *substantively analyze the content* of either "consumer usage information" or "operational status information" in order to watch for or keep track of this information. Limitation 1[e] notably also does not recite monitoring "based upon the results" of processing the information received, as limitation 1[f] does. Rather, in context, a skilled artisan would understand that "monitoring" is the result achieved by the processing in limitation 1[e].

Limitation 1[f], in contrast, is directed to the recited step of "managing," which is "based on the results of having processed *at least some of* the received consumer user information." Ex. 1002, 26:58–61 (emphasis added). Several points are evident from this claim language that demonstrate "processed" in this limitation is not necessarily co-extensive with the "processing" recited in limitation 1[e]. First, the process of

limitation 1[f] serves a different purpose—i.e., to affect the management of consumer device assets. Second, limitation 1[f] recites that only "some of the received consumer user information" needs to be processed, rather than both the "consumer usage information" and the "operational status information." Third, the processed information must provide a result, which in turn affects the server's management of a consumer device asset.

Because we disagree the '989 patent supports the contention that a skilled artisan would understand the "processing" in limitation 1[e] to be limited to the same operations required by "processed" in limitation 1[f], we disagree also with Patent Owner's argument that it was incumbent upon Petitioner to demonstrate Kloba substantively analyzed the *content* of the consumer usage information to show it performs the monitoring step of limitation 1[e]. Petitioner has shown persuasively that Kloba teaches a server that, according to preprogrammed conditions, automatically looks for the consumer user information received from a consumer device asset and forwards it to a particular destination, which we find to be within the scope of what is required by limitation 1[e]. Therefore, Petitioner has shown by a preponderance of evidence that Kloba discloses limitation 1[e].

> *e. Limitation 1[f] ("managing the plurality of consumer device assets by the remote computer server platform, based upon the results of having processed at least some of the received consumer usage information, by sending communications containing one or more management instructions that cause the stored display data content files of one or more assets to be automatically modified so as to provide a consumer service")*

For limitation 1[f], Petitioner relies on Kloba alone and the combined teachings of Kloba and Hoyle. Pet. 36–42. Petitioner summarizes these arguments as follows:

> First, after processing [tracked client behavior information ("TCBI")] and other information sent by a client in a combined "one-up" synchronization transmission, the server sends instructions to the client in a combined "one-down" transmission. Second, it would have been obvious to incorporate Hoyle's teaching of targeted advertisements based on "computer usage information" into Kloba so that Kloba's server would send instructions for clients to load advertisements based on the server having processed TCBI.

Reply 8 (citing Pet. 36–42). We address each argument in turn.

Before we do, however, it is worth repeating that Petitioner contends, and Patent Owner does not dispute, that the "consumer usage information" from Kloba in this proceeding is the tracked client behavior information (*see* Pet. 33–34), which is different than the channels or preferences information associated with Kloba's Figures 12 and 17 that Petitioner relied upon in the '1892 FWD. '1892 FWD 40.

Addressing Kloba alone first, Petitioner argues that (i) Kloba's server provides "instructions . . . [that] are 'management instructions' [as claimed] because they command mobile devices [('consumer device assets')] to perform a particular action: to synchronize their content with the content of

outside providers" (Pet. 36–37 (citations omitted)); (ii) Kloba teaches that "the server sends the instructions to the mobile devices and . . . the instructions cause the stored display data content files of the [mobile] devices to be automatically modified" (*id.* at 37 (citations omitted)); and (iii) Kloba's "one-down" synchronization transmission (which includes synchronization instructions and objects/files sent from server to mobile device) "is based upon the results of the server having processed the information it received in the 'one-up' [synchronization] transmission (which includes consumer usage information relating to tracked user behavior)" (*id.* at 37–39 (citations omitted)).

Patent Owner contests that Kloba alone supports Petitioner's assertions regarding claim limitation 1[f]. PO Resp. 21–27. Patent Owner asserts that Kloba fails to disclose any "management instructions" that the server determines to send to mobile devices/assets based upon results of having processed "consumer usage information." *Id.* Patent Owner argues first that Petitioner fails to show Kloba alone discloses limitation 1[f] because Kloba's teachings regarding "deltas" do not have any correlation to the results of having processed the tracked client behavior information. *Id.* at 21–25. However, Patent Owner does not identify anywhere within the Petition that Petitioner actually makes this argument; nor do we find this argument in the Petition. *See id.* Although Petitioner refers to "deltas" as part of the information exchanged during the synchronization process, Petitioner is not relying solely on the "deltas" in this case to be the "management instructions," as Patent Owner argues. Instead, for the recited "management instructions," Petitioner relies on the synchronization process more generally, which includes modules that compile instructions to

synchronize (*see* Pet. 36–39), which Kloba states "is meant to refer to the specific process of copying, adding, filtering, removing, updating and merging the information between a client and a server" (Ex. 1006, 5:46–50).

Patent Owner argues additionally that the particular synchronization process Petitioner identifies in this Petition fails to show the process is *based on the results* of having processed the TCBI relied upon for consumer usage information. PO Resp. 26–27. Patent Owner argues, "[i]ndeed, far from teaching that the server processes TCBI as part of its basis for determining whether to send a one-down sync transmission, Kloba's *only* express disclosure about what the server does with TCBI is that it "sends the information to the appropriate [third party] provider 128." *Id.* at 26 (citing Ex., 1006, 17:19–22; Ex. 2029, ¶¶ 129–132). Patent Owner argues that "Kloba fails to explain anything about what happens to the TCBI thereafter." *Id.* Patent Owner argues that, while "Kloba teaches that the server's purpose for sending such transmissions is to cause modifications to occur to the mobile devices," Kloba provides no teaching "that TCBI would ever be used for altering mobile devices." *Id.* at 26–27.

We need not reach Petitioner's argument that Kloba alone discloses limitation 1[f] because Petitioner relies on the combination of Kloba and Hoyle under an alternative contention. *See SAS Inst. Inc. v. Iancu*, 138 S. Ct. 1348, 1359 (2018) (holding a petitioner "is entitled to a final written decision addressing all of the claims it has challenged"); *Boston Sci. Scimed, Inc. v. Cook Grp. Inc.*, 809 Fed. Appx. 984, 990 (Fed. Cir. Apr. 30, 2020) (non-precedential) (recognizing that the "Board need not address issues that are not necessary to the resolution of the proceeding" and, thus, agreeing that the Board has "discretion to decline to decide additional instituted

grounds once the petitioner has prevailed on all its challenged claims"). In particular, Petitioner contends that Kloba and Hoyle demonstrate that a skilled artisan would have known Kloba's server may send synchronization instructions to automatically modify the stored display data content files on a client's device based upon the results of having processed the TCBI received. Pet. 39–42. Petitioner contends "Kloba renders [limitation 1[f]] obvious in combination with Hoyle's teachings relating to using a central server to target advertisements to users." *Id.* at 39. Petitioner contends,

> [a person of ordinary skill in the art] would have been motivated to incorporate Hoyle's teaching of targeting advertisements to users based on information about how users used their devices into the Kloba-Multer system, such that Kloba's server would send instructions for loading context-sensitive advertisements onto user devices in the one-down transmission specifically in response to the server having processed tracked user behavior information received from the devices in the one-up transmission.

Id. at 40 (citing Ex. 1005, ¶ 433). As support, Petitioner identifies that Kloba teaches that the server is able to load "context sensitive objects," such as advertisements, onto a user's device and Hoyle's teachings that a server can also be used to customize the selection of advertisements sent to a user's device based on TCBI. *Id.* at 39–40 (citing Ex. 1006, 17:19–23, 17:25–29, 17:36–45, 18:11–15; Ex. 1011, 3:34–38, 7:12–13, 7:38–44, 8:37–52, 14:46–60, 18:65–19:2, Fig. 10; Ex. 1005, ¶ 432).

At the time of the invention, Petitioner contends "[i]t was well-known that targeted advertisements were more effective at engaging users than non-targeted advertisements," and a skilled artisan would have been motivated to combine these teachings of Kloba and Hoyle to improve the effectiveness of the advertisements Kloba's server provides a user. *Id.* at 40–41 (citing

Ex. 1005, ¶ 433 ("[The proposed modification] would allow the operator of Kloba's server and/or content providers to better 'profil[e] the end user' and to 'better target' advertising to the user."); Ex. 1011, 7:41–44). Petitioner contends further that "[l]oading advertisements based on tracked user behavior information would have simply been a variant of, and completely consistent with, Kloba's existing operation" and a skilled artisan would have had "a reasonable expectation of success in modifying the Kloba-Multer system to incorporate Hoyle's teachings in this way because Kloba already discloses loading channels and other objects onto user devices based on the server processing consumer usage information." *Id.* at 41 (citing Ex. 1006, 34:52–54; Ex. 1005, ¶ 434).

Patent Owner makes two arguments disputing Petitioner's contention that the combined teachings of Kloba and Hoyle disclose limitation 1[f]. First, Patent Owner asserts that Petitioner has not established that a skilled artisan would have been motivated to combine these references in the manner claimed. PO Resp. 30–36. Second, Patent Owner asserts that, even in combination, Kloba and Hoyle fail to disclose that the synchronization instructions "are themselves based upon the results of the server's processing of Petitioner's alleged TCBI . . . , at least in the sense that the Kloba server's ultimate determination to include those particular instructions . . . [to] caus[e] modifications to a mobile device would . . . be predicated upon such processing." *Id.* at 37–43.

First, Patent Owner contends that Petitioner failed to prove that a POSITA would have been motivated to combine Kloba and Hoyle because "[t]here would have been no motivation to modify Kloba in view of Hoyle because Kloba already provides an effective and beneficial way to direct

suitable advertisements to its mobile devices." PO Resp. 27. Patent Owner contends that Kloba already "discloses [a] complete method for displaying advertisements on its mobile devices, and for collecting TCBI, and for deriving monetary benefits for doing so" and "Petitioner's sole alleged motivation to combine Kloba and Hoyle is unsupported speculation that the combination '*could have* allowed the operator of Kloba's server to charge providers more money.'" *Id.* at 28 (citing Ex. 1006, 17:20–23, 17:25–29, 17:36–45, 18:11–15; Pet. 41). Patent Owner argues that the motivation to have more effective advertisement is "one and the same" to the motivation to "gain some economic benefit." *See id.* at 29. And because Petitioner's declarant, Dr. Kesidis, "admitted that he has no expertise, experience, employment history, or education in advertising, and no experience in determining relative fees that an advertiser would pay for different types of advertising," Patent Owner argues that his testimony should be afforded no weight because it is conclusory. *Id.* (citing Ex 2028, 113:22–114:14; 115:16–22 (Kesidis deposition)).

Patent Owner argues further that Petitioner's alleged motivation is deficient because it would require substantial reconstruction and redesign of Kloba's server and the client device. *Id.* at 30. Patent Owner contends that "Kloba's server and Hoyle's ADM server function very differently with respect to tracked user information." *Id.* at 31 (citing 2029, ¶¶ 134–135). Patent Owner contends that "Kloba's server simply receives tracked user information and exports it to a third-party provider," whereas "[w]hen the ADM server receives and processes computer usage information, 'the server us[es] the data to select and download an appropriate advertisement' from an Ad Database [to the client's device]." *Id.* (citing Ex. 1011, 16:44–48, Ex.

2029, ¶ 135). Patent Owner contends that it is undisputed that the ADM server of Hoyle "performs the complex task of analyzing computer usage information and, based on that analysis, selecting appropriately targeted advertisements—even 'the best advertisement'—from among a larger collection of potential advertisements" to provide to the client device. *Id.* at 32 (citing Ex. 2028, 80:9–15; 83:19–84:3).

Additionally, Patent Owner contends that Petitioner "ignores that Hoyle's selection of new advertisements is performed by the interaction of Hoyle's ADM server and a separate ADM module which is a client software application located on Hoyle's computer clients." *Id.* at 32–35 (citing Ex. 1011, 6:62–7:4; Ex. 2029, ¶¶ 136–139). As support for this contention, Patent Owner relies on Hoyle's teachings associated with a "critical and prevalent role" that the ADM module plays to govern the operations of the advertisements stored on the client's device. *Id.* at 32–35 (citing Ex. 1011, 4:35–37, 6:62–7:4, 8:14–17, 8:25–29, 11:41–43, 11:50–63, 15:10–14, 15:17–24, 15:29–63; Ex. 2028, 63:15–24, 64:20–35:19, 69:24–70:23, 71:22–72:1, 108:9–14; Ex. 2029, ¶¶ 136–139).

We find that Petitioner's argument and evidence persuasively show that combining the teachings of Kloba and Hoyle in the manner limitation 1[f] recites would have been an obvious adaptation of the disclosed technology at the time of the invention. The Supreme Court has held that "when a patent simply arranges old elements with each performing the same function it had been known to perform and yields no more than one would expect from such an arrangement, the combination is obvious." *KSR*, 550 U.S. at 417. We "must ask whether the improvement is more than the predicable use of prior art elements according to their established functions"

because "if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill." *Id.* And when making this analysis, we are not confined to "seek[ing] out precise teachings directed to the specific subject matter of the challenged claims;" instead we look more broadly to what the evidence as a whole shows was known and "take account of the inferences and creative steps that a person of ordinary skill in the art would employ." *Id.* Notably, here, that skilled artisan is someone who has a substantial amount of education and training in the relatively complex technology at issue. *See* § II.C.

Having considered the evidence and arguments from both sides, we are persuaded it would have been obvious to one of ordinary skill in the art to modify the server of Kloba to perform an analysis of the tracked client behavior information and, based on that analysis, to send a communication to the client's device to either copy, add, remove, and/or update information from the server into the stored display data content files on the device, which causes the stored display data content files on the device to be automatically modified so as to provide a consumer service. We find that Petitioner has persuasively shown that Kloba teaches a server that already receives tracked client behavior information and the server is able to send synchronization commands that cause the client device to automatically copy, add, remove, and/or update information stored on the client device so as to cause the stored information to be automatically modified. *See* Ex. 1006, 17:6–23, 20:13–17. We find also that Petitioner has persuasively shown Hoyle to teach that skilled artisans knew a server may be used to perform an analysis

of the tracked client behavior information to make determinations about what information should be either copied, added, removed, and/or updated in the stored display data content files on the client's device. *See id.* at 7:41–44, 8:37–52, 8:60–63, 14:46–58, 16:26–23, 16:44–52. Hoyle additionally teaches that this functionality is beneficial because it allows the server more accurately to target the information to the interests of the user of the client device. *Id.* at 7:41–44.

In view of these facts, we are persuaded that a skilled artisan would have been motivated to combine these teachings of Kloba and Hoyle in the manner claimed by limitation 1[f] to improve the effectiveness of the advertisements Kloba's server provides a user. Pet. 40–41 (citing Ex. 1005, ¶¶ 433–434). We find that the evidence persuasively shows that the improvement is nothing more than the predicable use of prior art elements according to their established functions. Hoyle provides a technique that has been used to improve another similar server that a skilled artisan would recognize would improve Kloba's server in the same way by processing the tracked behavior information to determine whether to automatically add, remove or update advertising stored in the display data content files on the device through the Kloba's disclosed synchronization process.

As evidenced by the general nature of the descriptions used by all of the prior art references to teach these server techniques to a skilled artisan, such a modification would have been well within the abilities of such a highly educated and experienced person because it would have simply involved programming the server to have the functionalities that Kloba and Hoyle demonstrate a skilled artisan knew the server could be programmed to perform. Patent Owner's argument regarding the "substantial reconstruction

and redesign" lacks substantial weight because, as Petitioner argues, and we agree, "the test for obviousness . . . 'is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference, . . . but rather whether a skilled artisan would have been motivated to combine the teachings of the prior art references to achieve the claimed invention.'" Reply 20 (quoting *Allied Erecting & Dismantling Co. v. Genesis Attachments, LLC*, 825 F.3d 1373, 1381 (Fed. Cir. 2016)).

Likewise, we do not give much weight to Patent Owner's argument that Petitioner failed to establish a motivation to modify Kloba's server in the manner recited because Patent Owner concedes that Kloba "discloses a complete method for displaying advertisements on its mobile devices, and for collecting TCBI, and for deriving monetary benefits for doing so." *See* PO Resp. 28. Simply because Kloba describes benefits associated with a disclosed embodiment does not undermine Petitioner's contention that a skilled artisan would have also recognized Kloba's server may include additional benefits by incorporating Hoyle's teaching of having the server process the tracked client behavior information to control the display data content (i.e., the advertising display content) stored on the client device to better target that information to the particular user of the device. The benefits taught by Hoyle and Kloba are not necessarily mutually exclusive or counter-productive; moreover, Kloba makes clear that the server it teaches is intended to be versatile with many different features and benefits available. *See generally* Ex. 1006, 3:55–37:44. Petitioner has shown persuasively that "[l]oading advertisements based on tracked user behavior information would have simply been a variant of, and completely consistent with, Kloba's existing operation" and a skilled artisan would have had "a reasonable

expectation of success in modifying the Kloba-Multer system [in the manner claimed] to incorporate Hoyle's teachings . . . because Kloba already discloses loading channels and other objects onto user devices based on the server processing consumer usage information." Pet. 41 (citing Ex. 1006, 34:52–54; Ex. 1005, ¶ 434).

Patent Owner's second argument that the combination of Kloba and Hoyle fails to disclose all of the elements of limitation 1[f] (*see* PO Resp. 37–43) likewise fails to overcome Petitioner's persuasive showing. In short, Patent Owner argues that the combined teaching of Kloba and Hoyle fail to disclose communicating a "management instruction" from the server to the client device based on having processed tracked client behavior information. PO Resp. 37–43. We disagree, regardless of whether that term is interpreted as proposed by Petitioner or Patent Owner.

As Patent Owner concedes, Hoyle teaches having a server "perform[] the complex task of analyzing computer usage information and, based on that analysis, selecting appropriately targeted advertisements—even 'the best advertisement'—from among a larger collection of potential advertisements" to provide to the client device. *Id.* at 31; *see also* Ex. 1011, 16:44–52. What is clear from this teaching is that a server was known to be used to process a user's tracked behavioral information to control what display data content is stored in the related files of a client's device and, as such, the server determines two things: (1) the relevant information for a particular client; and (2) whether to add, remove or update the information stored in a display data content file in the client's device. Kloba teaches that its synchronization module receives information that allows it to "compile instructions to synchronize the client" and "sends such instructions to [the]

client." Ex. 1006, 20:13–17. We find, therefore, that a skilled artisan would have understood from the combined teachings of Kloba and Hoyle that Kloba's server may be used to process the received client behavior information to select the appropriate display content data for adding, removal, or updating in the stored display content files of client's device and, based on this process, communicate using a synchronization module the relevant synchronization instructions to the client's device to cause the stored display data content files on the client's device to be automatically modified by adding, removing, or updating the selected data. Regardless of whether limitation 1[f] is interpreted as proposed by Petitioner or Patent Owner, we find the combined teachings of Kloba and Hoyle disclose each and every element required by this limitation.

Therefore, for the foregoing reasons, we find that Petitioner has shown by a preponderance of the evidence that the subject matter of claim limitation 1[f] would have been obvious in view of Kloba and Hoyle.

> *f. Limitations 1[g] ("wherein the remote computer server platform provides said consumer service on an autonomous basis unprompted . . . by a consumer user . . . of consumer device assets")*

Petitioner contends that the combined teachings of Kloba and Multer disclose limitation 1[g]. Pet. 42. Petitioner contends that the Kloba system modified with Multer's teaching of automatic synchronization would result in "the Kloba's devices synchroniz[ing] with the server automatically based on the occurrence of an event or at regular intervals." *Id.* (citing Ex. 1006, 35:15-18; Ex. 1005, ¶¶ 213-218, 438). Petitioner notes that "Multer contrasts event- or time-based synchronization with synchronizations that are 'triggered manually when the user presses a 'sync' button'" and teaches

that the event- or time-based synchronization is on an "autonomous basis unprompted in whole or in part by the receipt of any request or command initiated by a consumer user" of the device being synchronized. *Id.* (citing Ex. 1006, 35:13–15; Ex. 1006, ¶ 438). Patent Owner does not contest these contentions by Petitioner for limitation 1[g]. Petitioner's evidence is persuasive and we find that Petitioner has shown by a preponderance of the evidence that limitation 1[g] would have been obvious in view of the combined teachings of Kloba and Multer.

g. Summary, Claim 1

Based on the foregoing discussion, and after all of the evidence and argument have been considered as a whole, we find that Petitioner has shown by a preponderance of evidence that claim 1 would have been obvious in view of Kloba, Multer, and Hoyle.

2. Dependent Claims 2–6, 13

Petitioner asserts that the proposed combination of Kloba, Multer, and Hoyle teaches each of the additional limitations of dependent claims 2–3, which depend from claim 1. Pet. 44–54. Petitioner primarily relies on teachings in Kloba and supports these assertions with citations to the record and the testimony of Dr. Kesidis. *Id.* (citing Ex. 1005). Except for claim 13, Petitioner also cites the '1892 FWD to support its showing, noting that the '1892 FWD addresses materially similar claim limitations in dependent claims. *Id.* (citing '1892 FWD 55, 57–59); Pet. 44–46 & n.9 ("Patent Owner's alterations to the dependent claims are minor and do not save them."). We adopt and incorporate by reference the cited portions of the '1892 FWD. Aside from limitation 1[f] discussed above, collateral estoppel also applies to the added limitations of claims 2–3, because Patent Owner

had a full and fair opportunity to address materially similar limitations in similar claims 2 and 9 of the '358 patent, as Petitioner shows. *See* Pet. 44–45 & n.9 (citing Ex. 1005, Ex. AB); Pet Supp. Br. 1–2 & n.1; Ex. 1013 (claim chart showing materially similar claim limitations).

Patent Owner does not address claims 2–3 separately from its arguments that address claim 1. *See* PO Resp. 65 n.15. Claim 2 requires one or more of the claimed networks to include "at least one selected from the group consisting of a cellular mobile network and the Internet." Ex. 1002, 27:13–16. Claim 3 requires the server to store "information indicative of preferences . . . for particular display date content files" on computer assets. *Id.* at 27:18–22. Based on a review of the record, Petitioner also persuasively shows that the combination of Kloba, Multer, and Hoyle renders claims 2 and 3 obvious.

Claim 4 depends from claim 3 and requires that the server "manages . . . consumer device assets, based upon the results of having processed at least some of the consumer preference information, . . . by sending one or more additional management instructions that cause the stored display data content files for one or more assets to be automatically modified . . . wherein said communications comprise at least one selected from the group consisting of GPRS data messages, EDGE messages, or other wireless packet switched data messages." *Id.* at 2723–34. Claims 5 and 6 depend from claim 4. *Id.* at 27:35–51.

To reach claim 4, Petitioner relies on similar server "instructions" that it relies on for limitation 1[f] during a "first synchronization," and adds Kloba's teachings related to "another synchronization" including a "future

synchronization" to reach "additional management instructions" as recited in claim 4:

> As discussed above for Element 1[f], during synchronization the server sends "instructions" that cause devices to store or update objects and channels. Kloba, 20:13–17. The server sends these instructions based upon the results of having processed the information about objects requested in advance or the user's preferred channels (*i.e.*, "consumer preference information"). Kesidis ¶¶ 266, 447. The synchronization (and accompanying instructions) that causes storage of information based on the user's preferences may be in addition to another synchronization. Kesidis ¶¶ 269, 477. For example, during a first synchronization, the server may load a device with channels actually selected by the user. Kloba, 8:16–17 ("[D]uring the synchronization process, the server 104 will load the client 108 with the selected channels."). "[A]t some other future synchronization," the server "might send channels to clients 108 when such channels are identified to be similar to those already selected by the clients 108." *Id.* 10:15–24. Providing and updating channels and other objects for display to a consumer's device provides a service to the consumer. Kesidis ¶¶ 267, 477.

Pet. 46–47.

Regarding the "wireless packet switched data messages" that claim 4 recites, Petitioner contends the following:

> As discussed above in connection with Element 1[h], the communications between that the server and mobile devices may include wireless packet switched data messages. Kloba, 4:59–63, 9:57–67, 12:13–20, 21:67–22:1; Kesidis ¶¶ 270, 477. Alternatively, for the reasons discussed above in connection with Element 1[h], PHOSITAs would have found it obvious to use the packet-switched TCP/IP protocol for communications involving the Kloba's wireless consumer device assets. Kesidis ¶¶ 270, 477.

Id. at 47.

In response, Patent Owner argues that a

> POSITA would understand claims 4/22 as requiring their recited "management instructions" themselves be based upon the results of the server's processing of "consumer preference information," in at least the sense that the server's ultimate determination to include those particular instructions in a transmission it sends for purposes of causing resulting modifications to a "consumer device asset" is what needs to be predicated upon such processing.

PO Resp. 56.

Patent Owner also argues that "the 'management instructions' limitations of Claims 4/22 have the same linguistic structure as those recited in claim elements 1[f]/20[g], merely swapping 'consumer preference information' in place of 'consumer usage information.'" *Id.* Then, Patent Owner relies "on the same reasoning previously discussed above," namely, a "POSITA would analogously appreciate here that the server could only possibly perform its recited type of managing by determining what particular 'management instructions' would need to be sent to an asset based upon its claimed processing of 'consumer preference information.'" *Id.*

Patent Owner characterizes Petitioner as postulating that "Kloba's server stores two alternative types of 'consumer preference information'":

> First, the server stores information about "objects…requested by client 108 in advance," which can result in the server sending new notification data files to the mobile device "when an event happens, such as when a stock reaches a target price." [(Pet. 42 (citing Ex. 1006, 10:7–10)]. Second, the server stores a "list of channels associated with each of clients 108," which can result in the server's unprompted sending of new data files to the mobile device relating to other unlisted channels "identified to be similar" by the server to those already contained on the list. [(*Id*. (citing Ex. 1006, 8:9–11, 10:12–17)].

Id. at 57–58.

Patent Owner contends that Petitioner relies upon "deltas" instructions (*see* PO Resp. 58–59) and that for the same reasons as argued with respect to claim 1, these "'deltas' instructions, and the server's determinations to include them in transmissions sent to mobile devices, are *completely unrelated to* – and in no sense 'based upon' – its processing of Petitioner's alleged examples of 'consumer preference information'" (*id.*).

Tracking its arguments with respect to limitation 1[f], according to Patent Owner, Petitioner relies on downloading "deltas" instructions for "new data files." *Id.* (citing Ex. 1005 ¶¶ 266, 269, 447). Still tracking its arguments with respect to limitation 1[f], Patent Owner argues that "Kloba explicitly teaches instead that its server compiles and sends 'deltas' instructions based exclusively upon processing of 'deltas' information." *Id.*

Petitioner responds that Patent Owner's arguments "mirror its 'management instructions' arguments" for claim 1. Reply 29. Petitioner is correct. Patent Owner explicitly states that

> Patent Owner *has already demonstrated above in the context of claim elements 1[f]/20[g*], Petitioner's arguments must fail because Kloba indisputably and admittedly teaches instead that its "deltas" instructions are not *downloading* instructions used for storing new data files on mobile devices, but rather *updating* instructions for modifying existing files already residing on mobile devices. . . . Moreover, Kloba explicitly teaches instead that its server compiles and sends "deltas" instructions based exclusively upon processing of "deltas" information.

PO Resp. 58 (citations by Patent Owner to its previous analysis of limitation 1[f] omitted) (emphasis added).

With respect to the specific consumer usage information advanced by Petitioner, Patent Owner does not challenge it. Rather, as quoted above, Patent Owner essentially characterizes it without pointing to any deficiency.

See PO Resp. 58 (quoted above). The record supports Petitioner. As quoted above, similar to its persuasive showing connection with limitation 1[f], according to Petitioner, at least some future synchronizations with respect to consumer preference information in Kloba pertain to existing files and hence delta instructions. *See* Pet. 47 (citing Ex. 1006, 10:15–24). As also noted above, Patent Owner does not dispute that deltas instructions constitute management instructions. *See* PO Resp. 21–22. In other words, Petitioner persuasively relies on deltas instructions here to be sent with channels "at some other future synchronization." *See* Pet. 47 (citing Ex. 1006, 10:15–24). And similar to its showing with respect to limitation 1[f], Petitioner persuasively relies on instructions disclosed in Kloba "that cause devices to store or update objects and channels" with respect to newly requested objects. *Se id.* 46–47 (citing Ex. 1006, 20:13–17; Ex. 1005 ¶¶ 266, 447).

In its Sur-reply, Patent Owner does not address Petitioner's Reply argument that Patent Owner's arguments "mirror its 'management instructions' arguments" for claim 1. Reply 29. Patent Owner largely repeats its arguments directed to limitation 1[f]. PO Sur-reply 22–23. In addition, Patent Owner adds the wholly new argument "that examples of 'consumer preference information' already residing on the server are not contemporaneously sent in a one-up sync transmission like [consumer user information], and [Petitioner] has provided no evidence that they are processed as a basis for the server's determination to send a one-down sync transmission or to include any 'deltas' instructions therein." *Id.* at 24.

We decline to address this new improper argument at this late stage. To the extent an analysis of the untimely argument is warranted, as summarized above, Petitioner shows that at a future synchronization and

based on a previous client request during a previous synchronization, Kloba's server sends channel or object information related to the previously requested consumer usage information (object or channel) from a previous synchronization. *See* Pet. 46–47 (citing Ex. 1005 ¶¶266–270, 447; Ex. 1006, 8:16–17, 10:15–24). Based on Petitioner's showing with respect to limitation 1[f], which Petitioner relies upon with respect to claim 4, Figure 1X and the discussion at columns 20–21 teach that Kloba's server sends such requested information with instructions during a synchronization request. *See supra* § II.F.1e. Also, with respect to the broad claim construction of limitation 1[f], Petitioner shows that "[c]laim 4 is similar to claim 10 of the '358 patent, which the Board found that Kloba discloses." Pet. 46 (citing '1892 FWD 57–59). We adopt and incorporate by reference the cited rationale and findings in the '1892 FWD.

Accordingly, Petitioner persuasively shows that Kloba teaches the limitations of claim 4.

Claim 5 depends from claim 4, and claim 6 depends from claim 5. Tracking its showing with respect to claim 1, Petitioner presents reasons supported by the record to show that the proposed combination of Kloba, Multer, and Hoyle teaches each of the additional limitations of dependent claims 5–6, and renders those claims obvious. Pet. 47–53. Petitioner supports these assertions with citations to the record and the testimony of Dr. Kesidis. *Id.* (citing Ex. 1005). Petitioner also cites the '1892 FWD to support its showing to the extent claims 5 and 6 present similar limitations to those present in the '1892 FWD. *Id.* at 47–48 (citing '1892 FWD 55, 59). We adopt and incorporate by reference the cited portions of the '1892 FWD.

Patent Owner relies on the same arguments it presented with respect to claims 1 and 4 to address claim 5. PO Resp. 59–60. For the reasons noted above with respect to claims 1 and 4, and based on the record evidence and arguments, Petitioner's showing is persuasive.

Claim 6 depends from claim 5 and requires "the . . . wireless packet switched data message communications . . . are encrypted according to a key pair encryption scheme." Ex. 1002, 27:46–51. Petitioner contends that claim 6 tracks "claim 5 of the '358 patent, which the Board found that Kloba discloses" in the '1892 FWD. Pet. 48–49 (contending that the "primary differences" include that claim 5 of the '358 patent requires encrypted communications (citing '1892 FWD 55)).

Petitioner cites Kloba to teach or suggest a key encryption scheme. First, Petitioner cites Kloba's disclosure of "secure socket layer stack" (SSL) and cites the testimony of Dr. Kesidis to support its argument that 1) SSL "is a set of cryptographic protocols designed to provide communications security over a computer network," 2) "[b]y the mid-1990s, SSL was widely used to encrypt client/server-based Internet communications," and 3) "SSL [protocols] included symmetric and asymmetric encryption algorithms, both of which used key pairs to encrypt and decrypt communications." *Id.* (citing Ex. 1006, 9:57–67; Ex. 1005 ¶ 278.

Second, Petitioner contends that Kloba's Figure 28 discloses an asymmetric encryption algorithm, specifically, a "Genuine RSA Encryption Engine." Pet. 49 (quoting Ex. 1006, Fig. 28). Citing the testimony of Dr. Kesidis, Petitioner contends that "[i]n 2002, RSA was a widely-used public-key algorithm for encrypting data transmissions over computer networks,"

and "RSA used a pair of 'public' and 'private' keys to encrypt and decrypt communications." *Id.* at 50 (citing Ex. 1005 ¶¶ 279–282).

Third, Petitioner relies on other "security" teachings as disclosed in Kloba's Figure 30. Pet. 50–51 (citing Ex. 1006, 35:48–49, Fig. 30; Ex. 1005 ¶¶ 283–284). Fourth, Petitioner also points to Kloba's Figure 34, which provides mobile device menu options for a user to "connect securely" to a server. *Id.* at 51–52 (citing Ex. 1006, 34:65, Fig. 34; Ex. 1005 ¶¶ 285–286).

Finally, Petitioner contends that an artisan of ordinary skill would have understood that Kloba's disclosure of SSL and the RSA algorithm of Figure 28 in conjunction with the selectable security features of Figures 30 and 34 teaches "that the server and mobile devices can encrypt all network communications—including wireless packet-switched cellular and/or Internet communications received by and sent from the server (. . . Element 1[h])—using the RSA algorithm, which utilizes a key-pair encryption scheme." Pet. 52 (citing Ex. 1005 ¶¶ 287, 451; '1892 FWD 55).

Alternatively, Petitioner maintains that even if Kloba does not expressly disclose "encrypt[ing] wireless packet-switched cellular and/or Internet communications using a key-pair scheme, doing so would have been obvious." Pet. 52–53 (citing Ex. 1005 ¶¶ 289, 451). According to Petitioner:

> In 2002, SSL and RSA were commonly used in electronic communications to encrypt messages, and RSA Data Security, Inc. was a well-known provider of RSA encryption software. [Ex. 1005 ¶¶ 289, 451]. In view of Kloba's disclosure that the server communicates with user devices using SSL and uses an "RSA Encryption Engine" and "encryption software" by RSA Security, Inc. and that provides "security" and mobile devices that can "connect securely" to the server, it would have been obvious to PHOSITAs that wireless packet-switched cellular

> and/or Internet communications between Kloba's server and mobile devices could have been encrypted according to SSL and the RSA key-pair encryption algorithm. *Id.* Furthermore, because key-pair encryption schemes were commonplace by 2002, PHOSITAs would have had more than a reasonable expectation of success in adding key-pair encrypted communications to Kloba's system. *Id.*

Pet. 53.

According to Patent Owner,

> none of the Kloba passages cited by Petitioner teach or suggest the use of key pair encryption to secure such "wireless packet switched data message communications" as the claim language requires. *See* (Pet. 48–52) (citing EX1006 7:57–67, 34:65, 35:48–49, 36:45–46, FIGS. 28, 30, 65 34). Accordingly, Petitioner is left to rely only upon [Dr.] Kesidis' conclusory and unsupported assertion that it would have been obvious to POSITA to use SSL/RSA to encrypt Kloba's alleged wireless packet switched data message communications. (Pet. 52–53; EX1005 ¶ 289). This naked assertion provides no credible explanation for why this would be true, no evidence that it was actually being done prior to the invention of the '989 patent, and no proof of how or why it would have been technically feasible. An expert's conclusory and unsupported assertions are legally insufficient to prove obviousness. *TQ Delta*, 942 F.3d at 1359, 1361.

PO Resp. 64–65 (citing *TQ Delta, LLC, v. Cisco Sys*., 942 F.3d 1352, 1359, 1361 (Fed. Cir. 2019)).

Contrary to Patent Owner's arguments, Petitioner's showing is persuasive and supported by the record. Petitioner generally shows that it would have been obvious in view of Kloba's express disclosures of SSL and RSA to encrypt all manner of communications, including wireless packet-switched messages over a cellular network or the Internet, in order to provide communications security using a well-known key pair encryption

scheme. *See* Pet. 52–53. As Petitioner shows, Kloba, filed April 2000 and issued in 2002, supports Petitioner and Dr. Kesidis as showing the common use of SSL/RSA to securely encrypt well-known networks, including wireless packet switching and the Internet at least by early 2002. *See* Ex. 1006, codes (22), (56).[12]

Kloba and record evidence show that artisans of ordinary skill would have had a reasonable expectation of success and been motivated to employ "key-pair encryption" via well-known SSL/RSA techniques to securely encrypt well-known networks including the Internet and cellular wireless packet-switched networks. *See* Ex. 1005 ¶ 289 (citing Ex. 1006, Figs. 28, 30, 34; App'x S; App'x T). Dr. Kesidis relies on Kloba's express teachings and the background knowledge of artisans of ordinary skill prior to the invention (*see supra* note 28), citing to documentary evidence (e.g., textbook Chapter 7.2, Principles of Cryptography, Ex. 1005, 657, 669, App'x S) that shows that skilled artisans would have known how to implement RSA and other algorithms using dual encryption keys (public and private). *See id.* ¶ 289 (testifying that "[b]y 2002, RSA was so widely used that it had 'become almost synonymous with public key cryptography'" (quoting Ex. 1005, 669 (App'x S, 493)) and "RSA Data Security, Inc., meanwhile, was a well-known provider of RSA encryption software that was founded by the inventors of RSA." (citing App'x T)); Ex. 1005, 687 (App'x T) ("MIT was granted U.S. Patent 4,405,829 . . . for a 'Cryptographic communications system and method' that used the algorithm, on September 20, 1983. Though the patent was going to expire on September 21, 2000 . . . the

[12] The earliest possible effective filing date of the '477 patent is May 21, 2003. *See* Ex. 1001, code (63).

algorithm was released to the public domain by RSA Security on September 6, 2000, two weeks earlier.").[13]

Claim 13 depends from claim 1 and further recites that the operational status information "comprises information indicative of whether or in what manner a setting or a feature on the particular sending consumer device asset has been enabled or actuated." Ex. 1002, 28:35–37. Petitioner identifies Kloba's disclosure of sending "state" information from devices to the server relating to the devices' "font specifications," "supported data types," "supported mime types," and "connection/network profile," moreover, that Kloba teaches that "[t]he synchronization process may 'include only kinds of content 414 supported by various devices/clients.'" Pet. 53 (citing Ex. 1006, 24:42–45, 24:50–53). Petitioner contends that this "state" information satisfies claim 13 "because the information indicates to the server what fonts, data types, mime (Multipurpose Internet Mail Extensions), and network connections are supported by the device." *Id.* at 53–54 (citing Ex. 1005, ¶ 453). Patent Owner does not dispute Petitioner's contentions, other than stating that claim 13 is non-obvious because it depends from claim 1. *See* PO Resp. 65. Petitioner's evidence is persuasive and we find that Kloba discloses the recited elements of claim 13.

Therefore, based on the foregoing discussion, Petitioner has shown by a preponderance of evidence that claims 2–6 and 13 would have been obvious over Kloba, Multer, and Hoyle.

[13] Citations refer to both the page numbers of Ex. 1005 for App'x S and App'x T, and to the original page numbers of the textbook (App'x S).

G. Alleged Obviousness Based on Kloba, Multer, Hoyle, and Loughran—Claims 7, 14, 16, 17, and 19–25

Claims 7, 14, 16, 17, and 19 depend, directly or indirectly, from independent claim 1. Claim 20 is independent and claims 21–25 depend therefrom either directly or indirectly. We address independent claim first and then address the dependent claims.

Petitioner contends that claims 7, 14, 16, 17, and 19–25 would have been obvious in view of (i) the combined teachings of Kloba, Multer, and Loughran and (ii) the combined teachings of Kloba, Multer, Hoyle, and Loughran. Pet. 5, 54–66. For the reasons discussed above (*see supra* § II.F.1e), we need not decide if claims 7, 14, 16, 17, and 19–25 would have been obvious in view of the combined teachings of Kloba, Multer, and Loughran.

Therefore, our discussion below focuses on Petitioner's contentions regarding the combined teachings of Kloba, Multer, Hoyle, and Loughran.

1. Independent Claim 20

Petitioner asserts that the combination of Kloba, Multer, Hoyle, and Loughran renders obvious the subject matter of independent claim 20. Pet. 60–65. Independent claim 20 includes limitations materially similar to limitations in independent claim 1. *See id.* at 64–65 (mapping similar claims elements of claim 20 to those in claim 1 and claim 7). Petitioner primarily adds the teachings of Loughran for its wireless cellular phone teachings. *See id.* at 63. Petitioner supports its showing with citations to the record, the testimony of Dr. Kesidis, and citations to the '1892 FWD. *Id.* 62–64 (citing Ex. 1005 ¶¶ 319–322, 328–343, 466–86; Ex. 1006; Ex. 1007; Ex. 1008; '1892 FWD 64). Patent Owner argues claims 1 and 20 together. *See* PO Resp. 1–55.

For the similar reasons as those discussed in connection with claim 1, including a finding of collateral estoppel with respect to most of the claim limitations, and further considering the teachings of Loughran as advanced by Petitioner, Petitioner shows that the combination of Kloba, Multer, Hoyle, and Loughran renders obvious the subject matter of claim 20. *See* Pet. 60–65.

Based on the foregoing discussion, including the discussion of claim 1, and the determination of collateral estoppel with respect to the materially similar limitations of claim 20 as compared to claim 1, Petitioner shows by a preponderance of evidence that claim 20 would have been obvious over Kloba, Multer, Hoyle, and Loughran.

2. Dependent Claims 7, 14, 16, 17, 19, and 21–25

Petitioner asserts that the combination of Kloba, Multer, Hoyle, and Loughran renders obvious the subject matter of dependent claims 7, 14, 16, 17, 19, and 21–25, which ultimately depend respectively from claims 1 and 20. Pet. 54–60, 65–66. Petitioner supports these assertions with citations to the record and the testimony of Dr. Kesidis. *Id.* (citing Ex. 1005). Petitioner also cites the '1892 FWD in addressing claims 7 and 16. *Id.* at 54–56, 58–59 (citing '1892 FWD 55–56, 63). We adopt and incorporate by reference the cited portions of the '1892 FWD.

Patent Owner groups claims 4 and 22 together. PO Resp. 55–59. Patent Owner groups claims 5, 10, 14, 17, 23, and 25 together. *Id.* at 59–60. Patent Owner groups claims 6 and 24 together. *Id.* at 64–65. Patent Owner does not address claims 7 and 21 separately from its arguments that address claims 1, 6, and 20. *See id.* at 65 n.18. Based on our determination above, Petitioner establishes the obviousness of claims 1, 4–6, and 20 by a

preponderance of evidence. Accordingly, based on the materially same reasons and findings with respect to claims 1, 4–6, and 20 above, Petitioner shows the obviousness of claims 7, 10, 14, 17, and 21–25 by a preponderance of evidence.

Patent Owner groups claims 16 and 19 together. PO Resp. 60. These claims require that management instructions sent to a consumer device asset include "a unique identifier of the particular receiving consumer device asset" and that "said unique identifier comprises in whole or in part an identification code specific to that receiving consumer device asset." Ex. 1002, 28:57–65, 29:18–26.

In summary, Petitioner contends that Kloba's teaching of a server sending messages to mobile devices using TCP/IP teaches the sending of the claimed unique identifier. Pet. 58–59 (Ex. 1005 ¶¶ 305, 459).

Patent Owner responds that "Petitioner's argument is false as a factual matter." PO Resp. 61 (citing Ex. 2029 ¶¶ 112–114). Patent Owner contends that a "POSITA would understand the mobile devices of Kloba were typically wirelessly connected to the Internet *through a wireless router*, in which case the server would communicate directly with the wireless router and the wireless router would then, in turn, communicate with each of the mobile devices." *Id.* (citing Ex. 2029 ¶ 113; Ex. 2028, 115:23–116:22, 117:10–14). "Therefore," according to Patent Owner, "the IP address in the server's communications would be the public IP address *of the wireless router*, NOT an IP address belonging to a mobile device wirelessly connected to the wireless router." *Id.* (citing Ex. 2029 ¶ 113; Ex. 2028, 115:23–116:22, 117:10–14).

Quoting Dr. Kesidis's deposition testimony, Patent Owner further contends that Dr. Kesidis admits that

> when the server is sending a message "[i]t's sending a message actually to the wireless router, and what's in that -- the way that message is addressed, it goes -- the destination IP address of the message is the wireless router's destination IP address[]. . . [.]" (Ex. 2028[,] 162:22–163:4; *see also* 154:6–16). He further admitted that when the router forwards the message to the mobile device, it "swaps out" its own IP address and inserts the IP address of the mobile device. (*Id*. at 163:12–24).

PO Resp. 61.

Under Patent Owner's view, even if the wireless router (which includes a public address for itself further shared by all the mobile devices connected thereto) assigns individual private IP addresses, the claimed server does not. *See id.* at 62. "Accordingly, given that the Petitioner's only alleged 'unique identifiers' are the IP addresses of Kloba's mobile devices, Petitioner has failed to prove dependent claims 9/16/19/27/28 are obvious." *Id.*

Petitioner replies that Kloba discloses connections without using routers in several embodiments. In particular, Petitioner provides evidence that Kloba's Figure 1V, Figure 30, and Figure 36 portray direct access between mobile devices and a server over the internet (using IP/HTTP for example in Figure 30) without using a router. Reply 25–27. Petitioner also shows that Mr. Berg admits that "devices *can* directly connect to a server through the Internet." *Id.* at 25 (citing Ex. 1021, 147:13–20. And Petitioner also shows that Mr. Berg "also concede[s] that Kloba does not discuss routers." *Id.* at 26 (citing Ex. 1021, 156:16–20). In other words, a reading of Mr. Berg's cited deposition testimony and testimony surrounding it shows that Petitioner fairly and accurately characterizes it.

In its Sur-reply, Patent Owner does not directly address Petitioner's showing and evidence that Kloba employs a direct connection between a server and mobile devices that involve a unique IP address sent by the server. PO Sur-reply 25–26. Patent Owner also does not address Petitioner's reliance on and characterization of Mr. Berg's deposition testimony. Instead, Patent Owner simply contends that Petitioner "does not dispute that Kloba's server sends no unique identifier for a particular device *when that device is connected to a router*." *Id.* at 26 (emphasis added). According to Patent Owner, Petitioner "admits that the unique identifier for a particular device is *only sometimes* sent by the server [(i.e., in the absence of a router). Petitioner's] inherency argument therefore fails as a matter of law." *See id.*

We find that Petitioner has shown that Kloba teaches the disputed limitations of claims 16 and 19. As discussed above, Kloba discloses implementing networks without connecting mobile devices to a router. Patent Owner and Mr. Berg do not dispute this showing by Petitioner. Therefore, based on Petitioner's undisputed showing, Kloba discloses a unique IP address sent by the claimed server that satisfies the "unique identifier" limitation at dispute in claims 16 and 19. Contrary to Patent Owner's arguments, inherency is not at issue here.

Therefore, based on the foregoing discussion, Petitioner shows by a preponderance of evidence that claims 7, 14, 16, 17, 19, and 21–25 would have been obvious over Kloba, Multer, Hoyle, and Loughran.

H. Alleged Obviousness Based on Kloba, Multer, Hoyle, Loughran, and Fong, Dependent Claims 8–12, 15, 18, and 26–30

Claims 8–12, 15, 18 depend from claim 1 and claims 26–30 depend claim 20. We again point out that Petitioner contends that claims 8–12, 15,

18, and 26–30 would have been obvious in view of (i) the combined teachings of Kloba, Multer, Loughran, and Fong and (ii) the combined teachings of Kloba, Multer, Hoyle, Loughran, and Fong. Pet. 5, 67–72. Our discussion below addresses only Petitioner's contentions regarding the combined teachings of Kloba, Multer, Hoyle, Loughran, and Fong.

Petitioner contends that claims 8–12, 15, 18, and 26–30, which ultimately depend respectively from claims 1 and 20, would have been obvious over Kloba, Multer, Hoyle, Loughran, and Fong. Pet. 67–72. Petitioner supports these assertions with citations to the record and the testimony of Dr. Kesidis. *Id.* (citing Ex. 1005). Petitioner also cites the '1892 FWD in addressing claims 8, 11, 12. *Id.* at 67, 69, 70 (citing '1892 FWD 56, 62, 70–71). We adopt and incorporate by reference the cited portions of the '1892 FWD. Patent Owner does not address claims 8–12, 15, 18, and 26–30 separately from its arguments that address claims 1, 4–6, 16, 19, and 20. *See* PO Resp. 65 n.15.[14]

Therefore, based on the foregoing discussion, Petitioner has shown by a preponderance of evidence that claims 8–12, 15, 18, and 26–30 would have been obvious over Kloba, Multer, Hoyle, Loughran, and Fong.

III. CONCLUSION

The outcome for the challenged claims of this Final Written Decision follows.[15] In summary:

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[14] As noted above, for example, Patent Owner groups claims 9, 16, 19, 27, and 28 together in its arguments. *See* PO Resp. 60–64; PO Sur-reply 25–26.

[15] Should Patent Owner wish to pursue amendment of the challenged claims in a reissue or reexamination proceeding subsequent to the issuance of this decision, we draw Patent Owner's attention to the April 2019 Notice Regarding Options for Amendments by Patent Owner Through Reissue or

Claims	35 U.S.C. §	References/ Basis	Claims Shown Unpatent-able	Claims Not shown Unpatent-able
1–6, 13	103(a)	Kloba, Multer, Hoyle	1–6, 13	
7, 14, 16, 17. 19–25	103(a)	Kloba, Multer, Hoyle, Loughran	7, 14, 16, 17, 19–25	
8–12, 15, 18, 26–30	103(a)	Kloba, Multer, Loughran, Hoyle, Fong	8–12, 15, 18, 26–30	
Overall Outcome			1–30	

IV. ORDER

In consideration of the foregoing, it is hereby

ORDERED that claims 1–30 of the '989 patent are unpatentable; and

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

Reexamination During a Pending AIA Trial Proceeding. *See* 84 Fed. Reg. 16,654 (Apr. 22, 2019). If Patent Owner chooses to file a reissue application or a request for reexamination of the challenged patent, we remind Patent Owner of its continuing obligation to notify the Board of any such related matters in updated mandatory notices. *See* 37 C.F.R. § 42.8(a)(3), (b)(2).

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Paper 50
Entered: September 7, 2021

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

AMAZON.COM, INC.,
Petitioner,

v.

M2M SOLUTIONS LLC,
Patent Owner.

Case IPR2019-01205
Patent 10,038,989 B1

Before KARL D. EASTHOM, DAVID C. MCKONE, and FREDERICK C. LANEY, *Administrative Patent Judges*.

LANEY, *Administrative Patent Judge*.

DECISION
Denying Patent Owner's Request for Rehearing of Final Written Decision
37 C.F.R. § 42.71(d)

I. INTRODUCTION

Patent Owner, M2M Solutions LLC, filed a Request for Rehearing (Paper 45, "Reh'g Req." or "Rehearing Request") asserting that the Final Written Decision (Paper 43, "FWD") lacks "evidence," is "conclusory," "violat[es] statutory obligations," "badly misunderst[ands] and conflate[s] the separate and distinct legal doctrines of 'claim preclusion' and 'issue preclusion'," and "mint[s] a novel legal theory." Reh'g Req. 2, 12–15. Petitioner, Amazon.com, Inc., filed a Response to the Rehearing Request ("Pet. Resp. Reh'g Req.," Paper 46) and Patent Owner filed a Reply ("PO Reply Reh'g Req.," Paper 47). *See* Ex. 1027 (Board's email authorizing the Response to the Rehearing Request); Ex. 2032 (Board's email authorizing the Response to the Rehearing Request).[1]

The Final Written Decision determines that Petitioner persuasively showed during trial that claims 1–30 (the "challenged claims") of U.S. Patent No. 10,038,989 B1 (Ex. 1001, the '989 patent) are unpatentable. Before the Final Written Decision issued, the Federal Circuit affirmed at least one final written decision in which the Board invalidated materially similar claims to the claims at issue here. *See M2M Solutions LLC v. Amazon.com, Inc.*, 825 F. App'x 893 (Fed. Cir. 2020) (Fed. Cir. R. 36)

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[1] Other Papers of note follow: Papers 11 and 13 (briefing by parties addressing collateral estoppel prior to the Institution Decision (Paper 14)); Paper 2 ("Petition" or "Pet."); Paper 22 (Patent Owner "Response" or "PO Resp."); Paper 25 (Petitioner "Reply"); Paper 31 (Patent Owner "Sur-reply"); Paper 37 (Order authorizing additional briefing on collateral estoppel); Paper 38 ("PO Supp. Br." addressing collateral estoppel); Paper 39 ("Pet. Supp. Br." addressing same); Paper 41 ("PO Supp. Reply Br." addressing same); Paper 42 ("Pet. Supp. Reply Br." addressing same); *see* FWD 2 & nn.1–2 (describing Papers authorized and filed).

(nonprecedential) (the "M2M Federal Circuit Decision") (affirming *Amazon.com, Inc. v. M2M Solutions LLC*, IPR2017-01892, Paper 32 (PTAB Feb. 7, 2019) (final written decision) (the "'1892 FWD" or the "'1892 IPR")).[2] The '989 patent challenged here and the patent challenged in the '1892 IPR, U.S. Patent No. 8,577,358 B2 (the "'358 patent"), share a common specification and materially similar claims.

The applicable standard for a rehearing request is set forth in 37 C.F.R. § 42.71(d), which provides the following:

> A party dissatisfied with a decision may file a request for rehearing, without prior authorization from the Board. The burden of showing a decision should be modified lies with the party challenging the decision. The request must specifically identify all matters the party believes the Board misapprehended or overlooked, and the place where each matter was previously addressed in a motion, opposition, or a reply.

For the reasons provided below, we *deny* Patent Owner's request to modify the Final Written Decision in the manner argued by Patent Owner.

II. ANALYSIS

Urging the Board to deny institution in the instant case, Patent Owner initially characterized the Petition as "asking the Board *to repeat the analysis and trial*" culminating in the '1892 FWD affirmed in the M2M Federal Circuit Decision under Fed. Cir. R. 36 ("Rule 36"). *See* Paper 7 ("Prelim. Resp.") 26 (emphasis added); FWD 10 (quoting Prelim. Resp. 26); FWD 9–13 (describing the collateral estoppel background involving the '1892 FWD and the M2M Federal Circuit Decision and noting that even

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[2] The M2M Federal Circuit Decision affirmed three related Board final written decisions, but this trial focuses on the '1892 IPR's relationship to the instant trial in terms of collateral estoppel principles.

though "the Board agreed prior to institution that a Federal Circuit decision probably would serve as a basis for collateral estoppel at some point in this *inter partes* trial . . . . Patent Owner now argues, for various reasons, that collateral estoppel does not apply."). In addition to asserting that collateral estoppel does not apply to materially the same claim limitations as involved in the '1892 IPR that the court affirmed in the M2M Federal Circuit Decision, Patent Owner advances other arguments, as addressed below.

A. Claims 10, 14, 17, and 25

Patent Owner asserts that the Board's analysis of claims 10, 14, 17, and 25 in the Final Written Decision is conclusory. Patent Owner explains that "[c]laims 10/14/17/25 of the '989 patent each contain a contested limitation requiring 'one or more management instructions generated by the . . . server . . . based upon the results of having processed at least some of the consumer preference information.'" Reh'g Req. 1. Then, Patent Owner asserts that the Board's "bare citation to its prior analyses of claims 1, 4–6, and 20 does *not* clearly explain nor factually support its finding that Kloba[3] ostensibly satisfies the key contested limitation of claims 10/14/17/25 -- *i.e.*, 'management instructions' generated based on the processing of 'consumer preference information.'" *Id.* at 3. Patent Owner also argues that "the Board's analyses" of independent claims 1 and 20 "do[es] not even address or implicate 'consumer preference information' at all, much less the specific requirement of 'management instructions' generated by the server's processing thereof." *Id.* at 3.

[3] Kloba et al., US 6,421,717 B1, issued July 16, 2002 (Ex. 1006).

Patent Owner also argues regarding claim 5 that the Board "has neglected to provide its own substantive analysis or any reasoned explanation for adopting Petitioner's analysis." Reh'g Req. 3. Patent Owner also argues regarding claim 6 that the Board's "analysis [] is completely irrelevant to assessing limitations pertaining to 'consumer preference information' or to any related 'management instructions.'" *Id.* (citing FWD 76–80).

Petitioner responds that the Board permissibly relied on its analysis of materially similar language in claim 4 to address the "contested limitation" (Reh'g Req. 1) in claims 10, 14, 17, and 25. *See* Pet. Resp. Reh'g Req. 11–13. Petitioner provides the following chart to illustrate that "[t]he relevant language of claims 10, 14, 17, and 25 is materially similar to language recited by claim 4, as the color-coding illustrates." *Id.* at 11.

Claim 14 (representative)	Claim 4
wherein said **further communications** comprise … one or more **management instructions generated by the remote server platform based upon the results of having processed at least some of the consumer preference information**	the **remote computer server platform further manages** the plurality of consumer device assets, **based upon the results of having processed at least some of the consumer preference information**, by **sending … communications** containing one or more additional **management instructions**

The chart above persuasively illustrates that claims 4 and 14 include materially similar language.

Petitioner explains as follows:

> In evaluating claim 4, the Board found that Kloba disclosed "further manag[ing] the plurality of consumer device assets, based upon the results of having processed at least some of the consumer preference information, by sending . . . communications," because "at a future synchronization and

> based on a previous client request during a previous synchronization, Kloba's server sen[t] channel or object information *related to the previously requested* consumer usage information (object or channel) from a previous synchronization." FWD 74–75 (citing Pet. 46–47 (citing Kesidis ¶¶ 266–270, 447; Kloba, 8:16–17, 10:15–24)) (emphasis added). The Board found that such "previously requested" objects or channels were examples of "consumer preference information." FWD 74 (citing Pet. 47); *id*. 71 (citing Pet. 46–47 ("information about objects requested in advance or the user's preferred channels" are examples of "consumer preference information"). The Board further found, based on Petitioner's showing for claim 1[f], that the "further" communications from Kloba's server "contain[ed] one or more additional management instructions." Specifically, "[Kloba's] Figure 1X and the discussion at columns 20–21 teach that Kloba's server sends such requested information with instructions during a synchronization request." *Id*. 75 (citing analysis of 1[f]); *id*. 71 (citing Pet. 46 ("As discussed above for Element 1[f], during synchronization the server sends 'instructions' that cause devices to store or update objects and channels. Kloba, 20:13–17.")).

Pet. Resp. Reh'g Req. 12.

In reply, Patent Owner asserts that Petitioner's explanation rests on *communications* that Kloba's server sends, instead of "management instructions." PO Reply Reh'g Req. 1. And Patent Owner contends that Petitioner's explanation unhelpfully focuses on "'consumer usage information' in the claim 4 analysis, the examples of which asserted in the Petition are completely different from and unrelated to the recited 'consumer preference information' needed to satisfy claims 10/14/17/25." *Id.* at 1–2.

Contrary to Patent Owner's Rehearing arguments, Petitioner specifically and persuasively refers to Kloba's synchronizations as management instructions based on consumer preference information in the block quote above, and in its briefing that the Final Written Decision

determines is persuasive as quoted above. *See* FWD 70–75 (citing Pet. 46–47 and addressing "consumer preference information"); Pet. 46 (persuasively addressing claim 4 in terms of Kloba's multiple synchronizations and persuasively showing that "[a]s discussed above for Element 1[f], during synchronization the server sends 'instructions' that cause devices to store or update objects and channels," and "[t]he server sends these instructions based upon the results of having processed the information about objects requested in advance or the user's preferred channels (*i.e.*, 'consumer preference information')"), 47–48 (persuasively noting that claim 5 recites "*either* the 'consumer usage information' recited in Element 1[f] *or* the 'consumer preference information' recited in claims 3–4" and showing persuasively that with respect to prior versions of objects on a consumer asset, "the object sent by the server is an update to an existing stored display data content file").

Further regarding Patent Owner's argument that Petitioner relies on "communications" instead of "management instructions" (*see* PO Reply Reh'g Req. 1), claim 4 specifically recites that the "communications contain[] . . . additional management instructions," and Petitioner simply employs "communications" as short-hand for the claim phrase (Pet. Resp. Reh'g Req. 12). Also, Patent Owner's Response specifically includes "communicated data" and "data message[s]" (as disclosed in the '989 patent's "Summary of Invention" and elsewhere) as within the scope of the claimed "management instructions" (PO Resp. 10 & n.5).

Further, Patent Owner's arguments fail to address the Board's finding, cited by Petitioner in the above block quotation (Pet. Resp. Reh'g Req. 12), that Kloba's "Figure 1X and the discussion at columns 20–21 teach that

Kloba's server sends such requested information *with instructions during a synchronization request*." Pet. Resp. Reh'g Req. 12 (citing FWD 75) (emphasis added). And the Final Written Decision states that "Patent Owner does not challenge" "the specific consumer usage information advanced by Petitioner," where "Patent Owner essentially characterizes it without pointing to any deficiency." FWD 73.

The Final Written Decision also agrees with, and characterizes, Petitioner's showing as relying on "at least some future synchronizations with respect to *consumer preference information* in Kloba[, which] pertain[] to existing files and hence delta instructions." FWD 74 (emphasis added). The Final Written Decision further explains that "Petitioner persuasively relies on deltas instructions here to be sent with similar channels 'at some other future synchronization,'" and "Petitioner persuasively relies on instructions disclosed in Kloba 'that cause devices to store or update objects and channels' with respect to newly requested objects." *Id.*[4]

In other words, contrary to Patent Owner's arguments, the Final Written Decision includes detailed findings regarding claim 4's "management instructions" and "consumer preference information." *See* FWD 70–75. These findings apply to the materially similar limitations in claims 10, 14, 17, and 25. *See* FWD 81–86.

In addition to these specific findings, the Final Written Decision also notes that Patent Owner specifically relies on its arguments with respect to claim 1's "consumer usage information" to address the similar management

[4] Kloba refers to the singular term "delta" and its plural form "deltas." Ex. 1004, 19:51–67.

instruction limitation pertaining to "consumer preference information" as recited in claim 4. *See* FWD 72–73 (citing PO Resp. 56–58). That is, Patent Owner's Response signifies that some overlap exists in the analysis of "management instructions" and the claimed "consumer usage information" as recited in claim 1, "the consumer preference information" as recited in dependent claim 4, and "the consumer usage information or consumer preference information" as recited in claim 5. *See* PO Resp. 56–57 ("Indeed, the 'management instructions' limitations of Claims 4/22 *have the same linguistic structure as those recited in claim elements* 1[f]/20[g], *merely swapping 'consumer preference information' in place of 'consumer usage information.*'") (emphasis added).

Dependent claims 3 and 4 (which ultimately depend from claim 1) support Patent Owner's characterization regarding the "same linguistic structure" for management instructions and the two types of consumer information. *See* PO Resp. 56–57. Claim 3 recites "wherein the remote computer server platform stores information indicative of preferences that one or more individual consumer users . . . have for particular display data content files." Claim 4 depends from claim 3 and recites "*the* consumer preference information," apparently referring to the antecedent "preferences" of the "consumer users" as introduced in claim 3. Tracking the language of claim 1, claim 4 recites "further manages" with respect to the "consumer preference information." Therefore, the claims do not preclude reading the recited "consumer preference information" as related to, and in some cases overlapping with, the recited "consumer usage information," so that, in any event, managing assets based on both types of information involves the same type of managing, as Patent Owner notes.

See PO Resp. 56 (noting "the same linguistic structure" and using the "same reasoning" to address "management instructions" of "consumer usage information" and "consumer preference information").

Therefore, in addition to not addressing the Board's finding and Petitioner's particular showing regarding "consumer preference information," Patent Owner's argument that "the Board's analyses [] do not even address or implicate 'consumer preference information' at all, much less the specific requirement of 'management instructions' generated by the server's processing thereof," and similar arguments, fail to show that "the Board misapprehended or overlooked" a "matter." *See* Reh'g. Req. 3; 37 C.F.R. § 42.71(d). In summary, Petitioner persuasively relies on Kloba's teachings regarding objects and channels, synchronization and future synchronizations, as applicable to Kloba's Figures 12 and 17 and other examples, its related showing with respect to synchronization instructions and limitation 1[f], and specific future synchronizations with respect to claims 4, 5, and other claims dependent therefrom, to show that Kloba's synchronization instructions cause updates of files for channels or objects, which include consumer usage information and consumer preference information. *See, e.g.*, Pet. 46–48 (citing Ex. 1006, 4:59–63, 5:29–32, 8:16–17, 10:12–17, 20–24; '1892 FWD 57–59; Ex. 1005 ¶¶ 266–269, 477); Ex. 1005 ¶¶ 266–268.

The Final Written Decision also addresses and dismisses Patent Owner's Response argument, repackaged here in the Rehearing Request, that characterizes Petitioner's showing as improperly conflating Kloba's management instructions as synchronization descriptions for storing new files, where according to Patent Owner, Kloba teaches "*updating*

instructions used *only* for modifying existing files already residing on mobile devices" instead of "*downloading* instructions used for storing new data files." *See* Reh'g Req. 5 (citing Ex. 1005 ¶ 266; PO Resp. 21–25, 58–59); FWD 70–75. This line of argument does not address the Board's findings or Petitioner's showing.

Patent Owner's sole argument prior to the Rehearing Request for "claims 10/14/17/25" is a mere denial—i.e., Patent Owner alleges that the "management instructions" analysis of claim 4 "fails because Patent Owner has demonstrated *Kloba's 'deltas' instructions are not based upon the server's processing* of Petitioner's ostensible 'consumer preference information'." PO Resp. 60 (emphasis added) (citing PO Resp. 56–58). Immediately above this argument, on pages 59–60 of the Response, in addressing claim 5 and grouping claims 5, 10, 14, 17, and 25 together under a section heading, Patent Owner argues that it "has previously shown, such reliance must fail because *Kloba's 'deltas' instructions are in no sense based upon the server's processing* of Petitioner's alleged TCBI example of 'consumer usage information'." *Id.* at 59 (emphasis added) (section heading: "**Petitioner Fails To Prove Kloba Satisfies Dependent Claims 5, 10, 14, 17, 23 and 25**"). So Patent Owner's arguments about "claims 10/14/17/25" and "consumer usage information" mimic the same argument Patent Owner advances for claim 5 and "consumer usage information," especially where Patent Owner specifically points the Board to its arguments at pages 21–27 of the Response——arguments which address "consumer usage information" as recited in claim 1 and other arguments which relate those arguments to "consumer preference information" as recited in claim 4–

–e.g., "based on the same reasoning previously discussed above" in connection with claim 1. *See* PO Resp. 56; *see also id.* at 45–55, 57–59.

Patent Owner's original line of argument, which Patent Owner applies to both types of consumer information, appears to turn on the narrow claim construction of "management instructions" and Patent Owner's unsupported "uploading" versus "downloading" distinction in Kloba as quoted above and addressed at length in the Final Written Decision. *See* PO Resp. 55–60; FWD 70–75 (discussing how Kloba's successive synchronizations satisfy the claim 4 limitation "manages . . . consumer device assets, *based upon the results of having processed at least some of the consumer preference information . . . by sending one or more additional management instructions* that cause the stored display data content files for one or more assets to be automatically modified") (emphasis added), 86 (noting, for example, that "Patent Owner does not address claims 8–12, 15, 18, and 26–30 separately from its arguments that address claims 1, 4–6, 16, 19, and 20") (citing PO Resp. 65 n.15).

Patent Owner also argues that "the Board's citation to an analysis from the [']1892 FWD premised on the finding that 'management instructions' need *not* be based on the processing of 'consumer preference information' is inapposite here where claims 10/14/17/25 expressly require precisely the opposite." Reh'g Req. 7 (citing FWD 75; '1892 FWD 59). Again, this is simply the same type of denial argument based on the narrow claim construction argument regarding "management instructions" addressed in the Final Written Decision at length.

Also, at the page cited by Patent Owner (Reh'g Req. 7 (citing FWD 75)) as evidencing an improper reliance on the '1892 FWD, the Final

Written Decision only adopts these particular '1892 FWD findings to the extent that the "broad claim construction of limitation 1[f]" applies. *See* FWD 75. Regarding this broad claim construction, Patent Owner's arguments fail to address the Board's rationale that claim 5 supports it. *See id.* at 24. In particular, claim 5 reveals that "the 'that are based upon the results' language refers back to 'the automatic modifications,' based on the parallel structure of 'are comprised of' and 'are based upon' language—i.e., both phrases refer to the same thing, 'the automatic modifications'"—not the management instructions. *Id.*; *see id.* at 23–27.

Patent Owner also cites page 45 of the Petition in addressing "consumer preference information." Reh'g Req. 4. But that cited page addresses claim 3 (which provides antecedent basis for "consumer preference information" as discussed above). Patent Owner did not challenge Petitioner's contentions as to claim 3 prior to its Rehearing Request as noted in the Final Written Decision. *See* FWD 70. In any event, the Petition addresses the antecedent to consumer preference information introduced in claim 3, and it quotes Kloba as stating, for example, that "a channel *comprises a collection of objects*." Pet. 45 (quoting Ex. 1006, 7:28–29) (emphasis added). The cited Petition page also describes objects requested from the server as consumer preference information, including "when an event happens, such as when a stock reaches a target price." *See id.* (quoting Ex. 1006, 10:7–10). Dr. Kesidas explains that "Kloba's 'objects' are 'particular display data content files,' and data related to the user's request for those objects are 'indicative of preferences' that the user has for them." Ex. 1005 ¶ 260. Dr. Kesidas also relies on a list of channels maintained by a server as indicative of consumer preferences. *See id.* ¶ 262.

Therefore, Petitioner's persuasive claim 3 showing provides further support with respect to claims 4 and 5 (which ultimately depend from claim 3) that Kloba's channels include objects (which involve display content files) that Kloba's server synchronizes based on a particular channel's attributes per user requests (in advance or otherwise) including by providing updates to the existing channels/objects.

Further regarding "consumer preference information," Patent Owner also asserts in its Rehearing Request that

> the lone Kloba passage at 10:15–24 cited by the Board is indisputably *not* describing the server processing alleged "consumer preference information" as a predicate for modifying "existing files" stored on a mobile device, but rather as a predicate for selecting new "objects" (*i.e.*, new display data content files) for downloading to the mobile device that are components of a new and different channel not yet stored on that mobile device which the server has determined to be "similar" to a user's historically preferred channels.

Reh'g Req. 6. Contrary to this argument, however, as explained above, Kloba's system updates existing files by exploiting changes in similar channel or object information relative to such information existing on the consumer asset, and the Final Written Decision also adopts similar findings in the '1892 FWD as to how Kloba's system operates in terms of synchronization changes to new or existing files or objects (with the '1892 FWD not specifically reaching the narrow claim construction of management instructions at issue here), including with respect to consumer preference information as Petitioner notes with respect to claims 3–5. *See* Pet. 45, 47; FWD 69–70 (citing Ex. 1013 (claim chart showing materially similar limitations involved in the '1892 FWD); adopting findings at '1892

FWD 57–59 addressing "user preference information" including based on Kloba's examples of stock price and channel list information as objects or files), 75 (adopting findings at '1892 FWD 57–59).

Patent Owner concedes that Kloba's "'deltas instructions . . . would be used to modify 'existing files' on a mobile device." *See* Reh'g Req. 6. Nevertheless, as the block quote above shows, Patent Owner contends that "Petitioner's two alleged examples of 'consumer preference information' clearly do not qualify as" "'deltas' information." *Id.* Contrary to the requirements of 37 C.F.R. § 42.71(d), Patent Owner does not inform the Board where it made this argument about the alleged "lone Kloba passage at 10:15–24" and the "two alleged examples" prior to the Rehearing Request. *See id.*; *see also* '1892 FWD 57–59 (described above, relating to two examples of user preference information). Patent Owner's argument appears to repackage Patent Owner's primary argument seeking to cabin Kloba as only synchronizing what Patent Owner refers to as updating instructions to modify existing files versus downloading instructions for storing new files even though Kloba makes no such distinction. *See, e.g.*, Reh'g Req. 5–6. In any event, in dismissing this argument, the Final Written Decision does not rely on the sole passage of Kloba at column 10 and instead addresses Petitioner's showing and Patent Owner's arguments in analyzing Kloba's synchronization teachings, providing extensive findings based on the testimony of Dr. Kesidis and Kloba.

The Final Written Decision also finds that "Patent Owner groups claims 5, 10, 14, 17, 23, and 25 together." FWD 82 (citing PO Resp. 59–60); *see also* Pet. Resp. Reh'g Req. 13 (noting the same grouping); Sur-reply 24–25 (same grouping and relying on the "[s]imilar[]" argument regarding

"management instructions that are based upon" processing "consumer usage information" for claims 5/23 and "consumer preference information" for claims "4/22" and "14, 17, 23, and 25"). In any event, contrary to Patent Owner's arguments regarding claims 5 and 6, the Final Written Decision specifically outlines what rationale it adopts as persuasive from the Petition and other briefing and record evidence (by citing thereto), including as follows:

> Claim 5 depends from claim 4, and claim 6 depends from claim 5. Tracking its showing with respect to claim 1, Petitioner *presents reasons supported by the record* to show that the proposed combination of Kloba, Multer, and Hoyle teaches each of the additional limitations of dependent claims 5–6, and renders those claims obvious. Pet. 47–53. *Petitioner supports these assertions with citations to the record and the testimony of Dr. Kesidis*. *Id.* (citing Ex. 1005). Petitioner also cites the '1892 FWD to support its showing *to the extent* claims 5 and 6 present similar limitations to those present in the '1892 FWD. *Id.* at 47–48 (citing '1892 FWD 55, 59). We adopt and incorporate by reference the cited portions of the '1892 FWD.

FWD 75 (emphases added).[5] The Final Written Decision similarly addresses claim 6 and Patent Owner's arguments further over several pages, with specific citations to the record to highlight how the record supports Petitioner's persuasive showing. *See* FWD 75–80.

The Final Written Decision also notes that "Patent Owner relies *on the same arguments it presented with respect to claims 1 and 4* to address claim 5." FWD 76 (citing PO Resp. 59–60) (emphasis added). The Final Written Decision then states that "[f]or the reasons noted above with respect to claims 1 and 4, *and based on the record evidence and arguments*, *Petitioner's showing [with respect to claim 5] is persuasive*." *Id.* (emphasis added).

With respect to claims 4 and 5, Patent Owner's Response relies on the same argument it relies upon with respect to limitation 1[f], the argument mentioned above that "Kloba indisputably and admittedly teaches instead that its 'deltas' instructions are not *downloading* instructions used for storing new data files on mobile devices, but rather *updating* instructions for modifying existing files already residing on mobile devices." PO Resp. 58;

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[5] Patent Owner also argues that any analysis that adopts limitations of challenged claim 5 here added to the Board's analysis of claim 11 of the '358 patent in the '1892 IPR "miss[es] the mark" as being "completely irrelevant to assessing limitations pertaining to 'consumer preference information' or to any related 'management instructions.'" Reh'g Req. 3. However, as the block quotation immediately above shows, the Final Written Decision adopts and incorporates the limitations "*to the extent* claims 5 and 6 present similar limitations to those present in the '1892 FWD." Also, claim 5 (and claim 6 which depends therefrom), recites "consumer usage information *or* consumer preference information"—i.e., in the alternative, so that satisfying the latter alternative is not necessary to show the obviousness of claims 5 and 6.

accord id. at 59–60 (addressing claims 5, 10, 14, 17, 23, and 25 and referring back to its arguments with respect to limitation 1[f] and claim 4). Despite facially grouping claims 10, 14, 17, and 25 together on page 60 of the Response, as indicated above, Patent Owner's arguments effectively grouped claims 4, 5, 10, 14, 17, 23, and 25 together by arguing that Kloba does not teach the narrow claim construction of "management instructions." *See* PO Resp. 56–60 (presenting the materially similar argument for claims 4, 5, 10, 14, 17, 22, 23, and 25). In essence, Patent Owner's argument for all of these claims rests on its unsupported characterizations of Kloba and Petitioner's showing and reliance on Kloba, namely that Kloba's synchronizations allegedly only update existing files, but Petitioner allegedly and mistakenly relies on Kloba's downloading of new data files. *See* PO Resp. 56–60; Pet. Resp. Reh'g Req. 13 ("Noting that [Patent Owner] had grouped claims 10, 14, 17, and 25 together in the PO Response (along with additional dependent claims 5 and 23), the Board determined that Petitioner had established the obviousness of these claims 'based on the materially same reasons and findings [the Board made] with respect to claims 1, 4–6, and 20 above.'" (citing FWD 82, 83)); PO Reply Reh'g Req. 1–2 (not disputing the grouping). To the extent differences exist in the claims, the Final Written Decision addresses those differences by citing to the Petition as persuasive and other briefing and addressing the arguments, as indicated above.

Contrary to Patent Owner's arguments that the Final Written Decision does not provide a clear showing as to its findings and rationale (*see* Reh'g Req. 1–2) with respect to certain dependent claims, as indicated above, the Final Written Decision relies on Petitioner's showing as to all claim

limitations, citing to the Petition's persuasive showing, and including citations to Kloba, the analysis of claim 1, the '1892 FWD, the testimony of Dr. Kesidis, and other briefing. *See* FWD 69–80 (addressing claims 2–6 and 13, citing Pet. 44–54; Pet. Supp. Br. 1–2 & n.1; Ex. 1005, 8:16–17, 10:15–24, 20:13–17, columns 20–21 generally; '1892 FWD 55, 57–59; Reply 18, 21), 81–82 (addressing claim 20 with similar citations to the record), 82–85 (addressing claims 7, 14, 16, 17, 19, and 21–25 with similar citations to the record), 85–86 (addressing claims 8–12, 15, 18, and 26–30 with similar citations to the record). Relative to the other challenged claims, the Final Written Decision generally addresses claims 1–6 in more detail because the other challenged claims largely track the limitations of claims 1–6, and the Final Written Decision attempts to direct its focus to issues and limitations in dispute based on the parties' briefing. *See, e.g.*, FWD 38–86. After pages of analysis and findings, which build on the analysis of claim 1, the Final Written Decision cites to the persuasive portions of Petitioner's briefing and evidence, and ultimately determines that "[b]ased on the foregoing discussion, Petitioner shows by a preponderance of evidence that claims 2–6

and 13 would have been obvious over Kloba, Multer, and Hoyle."[6] *See id.* at 80; *see id.* at 69–80 (citing Pet. 44–54; '1892 FWD 55, 57–59; Reply 21; Ex. 1005 ¶ 289). To the extent any doubt exists, the Final Written Decision adopts and incorporates Petitioner's persuasive showing at these cited pages and evidence as its own.

Based on the foregoing discussion, Patent Owner fails to show that the Final Written Decision misapprehends or overlooks a matter.

B. Claims 9, 16, 19, 27, and 28

Alleging evidentiary deficiencies in the Board's determination of obviousness with respect to claims 9, 16, 19, 27, and 28, Patent Owner contends that "a device that is communicating wirelessly cannot 'directly connect' to a hardwired network such as the Internet except through a wireless access point device (*i.e.*, a wireless router)." Reh'g Req. 12. Patent Owner also contends that "any contention that Patent Owner's expert witness admitted to the contrary is simply frivolous," because "[t]he

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[6] Similarly, after citing to the Petition's assertions and noting that "Petitioner supports these assertions with citations to the record and the testimony of Dr. Kesidis" with respect to claims 7, 14, 16, 17, 19, and 21–25 (FWD 82 (citing Pet. 54–60, 65–66; '1892 FWD 55–56, 63)), the Final Written Decision states that "[b]ased on the foregoing discussion, Petitioner shows by a preponderance of evidence that claims 7, 14, 16, 17, 19, and 21–25 would have been obvious over Kloba, Multer, Hoyle, and Loughran." *Id.* at 85. The Final Written Decision employs similar language to summarize the portions of the Petition and the record that support obviousness by a preponderance of evidence for claims 8–12, 15, 18, and 26–30. *Id.* at 85–86 (citing Pet. 67–72; '1892 FWD 56, 62, 70–71). To the extent any doubt exists, we adopt and incorporate by reference as our own the cited portions of the Petition and '1892 FWD as persuasive with respect to these dependent claims.

deposition question posed to Mr. Berg was *not* addressed to Kloba's wireless mobile devices nor in any way restricted to wireless devices at all." *Id.* at 12 (citing FWD 84; Ex. 1021, 147). Rather, according to Patent Owner, "Mr. Berg was asked whether 'you can have devices that are directly connected to the Internet,' which encompasses the conventional possibility of hardwire connections to the Internet." *Id.* (no citation by Patent Owner).

Patent Owner's Rehearing Request improperly raises a new issue, including its new characterization of Mr. Berg's testimony and its router arguments, and it fails to identify where Patent Owner raised the matters prior to the Rehearing Request. *See* Reh'g Req. 12; 37 C.F.R. § 42.71(d) ("The request must specifically identify all matters the party believes the Board misapprehended or overlooked, *and the place where each matter was previously addressed in a motion, opposition, or a reply*." (emphasis added)). The Final Written Decision specifically finds that "Patent Owner [] does not address Petitioner's reliance on and characterization of Mr. Berg's deposition testimony" in its Sur-reply. FWD 85 (citing Sur-reply 25–26). It also states that "Patent Owner simply contends that Petitioner 'does not dispute that Kloba's server sends no unique identifier for a particular device *when that device is connected to a router*.'" *Id.* (quoting Sur-reply 26) (emphasis added). Patent Owner simply did not challenge Petitioner's assertion that Kloba teaches wirelessly connecting to an Internet without a router prior to its Rehearing Request. *See* PO Resp. 60–64 (describing router connections as *typical*); Sur-reply 25–26.

Even considering Patent Owner's new characterization of Mr. Berg's deposition testimony and related router arguments in the Rehearing Request, Patent Owner's argument that Petitioner's deposition question embraces

responses about a direct hardwire connection (instead of a wireless connection) does not account for the full context of the colloquy during Mr. Berg's testimony. The challenged claims all depend from claims 1 or 20, which recite "*wireless* packet switched data messages." Ex. 1001, 27:11–12, 30:37–38 (emphasis added). The Final Written Decision finds that "a reading of Mr. Berg's cited deposition testimony *and testimony surrounding it* shows that Petitioner fairly and accurately characterizes it." FWD 84 (emphasis added). At one of the cited deposition testimony pages (Reply 25–26 (citing Ex. 1021, 147:13–20; 156:16–20); FWD 84 (citing same)), Mr. Berg testifies that he "doesn't recall specifically" in answer to a question of whether "Kloba talk[s] about routers anywhere?" *See* Ex. 1021, 156:16–20.

That question, in context, flows from questions and testimony on the same deposition transcript page about a "*direct connection* between the wireless module and *the Internet*"—i.e., no router:[7]

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[7] Citing this deposition page, Petitioner's Reply states that "[Patent Owner's] expert also conceded that Kloba does not disclose using routers. [Ex. 1021], 156:16–20. Instead, as illustrated in the figures annotated below, Kloba's 'mobile devices . . . interact with the Internet' to directly communicate with the server." Reply 26 (quoting Ex. 1006, 4:45–63). At the cited passage, Kloba describes how "[t]he invention enables[] devices to operate in conjunction with a Web server, even when the mobile devices are not coupled directly to the PC using portable on-device servers . . . . Mobile devices to operate . . . *with the Web, Internet, or intranet . . . in wireless mode* with a continuous or a discontinuous connection mechanism." Ex. 1006, 4:45–63 (emphasis added). Kloba then refers to "[a]n example mobile device/server environment [a]s shown in FIG. 1V." *Id.* at 5:9–10. Therefore, as Petitioner contends, Figure 1V shows a direct wireless connection (i.e., no router) between a wireless device and a server. *See* Reply 26–27.

> Q. The next part of this Column 14 [of Kloba], or directly connected with the Internet, so at least is a *direct connection between the wireless module and the Internet, right*?
>
> A. Yes.
>
> Q. Okay. So in that situation *where the wireless module is directly connected to the Internet, it would have its own unique IP address, right, unique public IP address*?
>
> A. *I believe that's correct*.

Ex. 1021, 156:6–14 (emphases added). In context, questions by Petitioner to Mr. Berg centered around a "wireless module," with no rational reason for Mr. Berg to include a response about a hypothetical hardwire connection, contrary to Patent Owner's argument. Moreover, this particular colloquy begins with cross-examination of Mr. Berg about his testimony at paragraph 113 of his declaration in support of Patent Owner's Response (Ex. 2029 ¶ 113). *See, e.g.*, Ex. 1021, 153:25–154:13 ("Why do you use the phrase 'typically connected through the Internet through a wireless router,' but why typically"?). Throughout the deposition testimony and exchange, it is clear that Mr. Berg's and Petitioner's counsel's discussions presume a "wireless module" in Kloba. At paragraph 113, for example, Mr. Berg testifies that Dr. Kesidis "*has also shown* that Kloba's *wireless* mobile devices *were typically connected to the Internet through a wireless router* (EX2028 115:23–116:22), that the server would communicate directly with the wireless router (EX2028 117:10–14), and that the wireless router would communicate with each of the mobile devices under its control (*id.*)."

Petitioner's Reply persuasively reproduces and annotates three figures in Kloba showing direct connections (i.e., wireless connections with no router) between a server and a wireless module or telephone. *See* Reply 26–27 (annotating Ex. 1006, Fig. 1V, Fig. 30, Fig. 36); *supra* note 8; FWD 84 (finding that "Petitioner provides evidence that Kloba's Figure 1V, Figure

30, and Figure 36 portray direct access between mobile devices and a server over the internet (using IP/HTTP for example in Figure 30) without using a router."). In context to Patent Owner's assertion that Petitioner's showing rests on an "inherency" theory and therefore must fail (Reh'g Req. 11), the Petition states that Kloba "discloses or *renders obvious* the requirement that the server and the mobile devices *wirelessly communicate* messages including management instructions to user devices pursuant to the packet-switched 'TCP/IP stack.'" Pet. 58 (quoting Ex. 1006, 9:57–67 ("server communication module 114 is a TCP/IP stack")) (emphasis added); *id.* at 12:13–16 ("the client communications module 110 enables TCP/IP traffic"), 21:67–22:1 ("the transmission protocol is TCP/IP")) (emphasis added); *see also supra* note 7. Prior to this obviousness challenge, addressing claim 1, Petitioner persuasively states that "Kloba's mobile devices operate '*with the Web, Internet, or intranet in wireless mode*.' Kloba, 4:59–63. The server and the mobile devices may communicate using 'any type of wireless or wired communication using any protocol,' including the 'TCP/IP stack.' Kloba, 9:57–67, 12:13–20, 21:67–22:1)." *Id.* at 43 (quoting Ex. 1006) (emphasis added).

Then, from these facts showing wireless mobile phone Internet connectivity in Kloba, the Petition states that "PHOSITAs *would have understood* that messages sent to remote target devices via TCP/IP necessarily included unique identifiers for the intended target devices known as 'IP addresses.'" Pet. 58 (citing Ex. 1005 ¶ 305, 459; '1892 FWD 56) (emphasis added). In addition, with respect to claim 2, Petitioner persuasively shows that Kloba discloses wireless connections to the Internet. As Petitioner notes, Kloba states that "[t]he invention includes technology

for using applications on mobile devices that interact with the Internet," and "[t]he sync operation of the invention includes various synchronization processes that can collect information from the Internet to a server, and to the client." Pet. 44–45 (quoting Ex. 1006, 4:45–63, 5:30–32; citing Ex. 1005 ¶¶ 254–257, 443). Petitioner also shows persuasively with respect to claims 1 and 20, from which the challenged claims ultimately depend, that

> PHOSITAs would have been motivated to incorporate *wireless* packet-switched data messages into Kloba's system to allow it to be used by more people and on more types of devices. [] Because TCP/IP was routinely used in wireless communications by 2002, PHOSITAs would have found this modification to Kloba's system trivial.

Pet. 44 (citing Ex. 1006, 9:57–67, 12:13–20, 21:67–22:1; Ex. 1005 ¶¶ 252–253, 440) (emphasis added).

In other words, the Petition persuasively advances the obviousness of a TCP/IP protocol *wireless* connection to the Internet using IP addresses. Petitioner's use of the word "necessarily" refers to identifying the mobile asset using the IP address under the showing that it would have been obvious to connect wirelessly without a router to the Internet. *See* Pet. 43–44, 58–59; Reply 25–28.

Patent Owner does not dispute that in the absence of a router connection, Kloba teaches the claims at issue here. Rather, as indicated above, Patent Owner now contends that "a device that is communicating wirelessly cannot 'directly connect' to a hardwired network such as the Internet except through a wireless access point device (*i.e.*, a wireless router)." Reh'g Req. 12. Patent Owner provides no evidentiary support for this statement. *See id.* And similar to its other arguments noted above, it is

an improper new argument not advanced in the Patent Owner Response or Sur-reply.

On the other hand, in addition to Kloba's wireless Internet teachings summarized above, as noted above, Petitioner relies on and reproduces three figures in Kloba that show wireless connections to networks, including the Internet, without a router. *See* FWD 84 (citing Reply 25–27 as "produc[ing] evidence" to show direct wireless Internet connections); Reply 26–27 (annotating Ex. 1006, Fig. 1V ("WIRELESS" "MOBILE DEVICE" connected to "COMPOSITE SERVER" connected to "WEB TO DEVICE SERVER" without a router), Fig. 30 ("IP/HTTP" "WIRELESS" "ONLINE" "INTER/INTRANET APPLICATIONS" and "MOBILE DEVICES" without a router), Fig. 36 ("WIRELESS" "CLIENT" directly connected to "SERVER" at a "NETWORK" without a router)).

Nevertheless, Patent Owner now contends that "[t]wo of these Figures reference 'dial-in' connections which clearly would *not* involve the claimed packet switched messaging, and if anything Figure 36 appears to depict mobile devices that are connected to the network rather than to the server." Reh'g Req. 12. Assuming Patent Owner refers to Figures 30 and 36, they show "WIRELESS *and* "DIRECT DIAL" or "DIAL-IN" connections, respectively. Contrary to Patent Owner's other argument, Figure 36 shows a direct connection between "WIRELESS" mobile phones and a "SERVER." In any event, Patent Owner did not advance these arguments prior to its Rehearing Request. Rather, Patent Owner's Sur-reply *assumes that Petitioner relies on a router* (Sur-reply 25–26), even though the Reply specifically and persuasively relies on the fact that "Kloba *does not discuss routers*," but shows mobile devices "directly communicat[ing] with the

server" (Reply 26 (emphasis added)). Therefore, Patent Owner's Rehearing Request arguments are untimely. Even if timely, as discussed, Petitioner shows that Kloba teaches direct wireless connections (i.e., no router) between a server and *wireless* device over the Internet with packet switching. *See* Reply 25–27 (annotating Ex. 1006, Fig. 1V, Fig. 30, Fig. 36).

Finally, similar to Mr. Berg's declaration testimony, Patent Owner's Response states that a "POSITA would understand the mobile devices of Kloba *were typically wirelessly connected to the Internet through a wireless router*, in which case the server would communicate directly with the wireless router and the wireless router would then, in turn, communicate with each of the mobile devices." PO Resp. 61 (citing Ex. 2029 ¶ 113 (citing the deposition testimony of Dr. Kesidis)); Ex. 2028, 115:23–116:22, 117:10–14) (emphasis added in part). Asserting that a person of ordinary skill would have recognized in Kloba *typical wireless* connections through a router acknowledges that an artisan of ordinary skill also would have recognized in Kloba the use of non-typical wireless connections—i.e., one without a router, especially where Kloba's figures and descriptions reveal wireless Internet connections without routers, as Petitioner shows. *Cf.* Ex. 2028, 116:10–113 (Dr. Kesidis testifying "there could be a number of different ways [mobile devices] could be connected to the Internet, either by packet switching over cellular or through WiFi"). In addition, Kloba discloses "Internet-enabled phones," and cellular phones, with all mobile devices wirelessly connected to the Internet, which Petitioner relies upon. *See, e.g.*, Pet. 14 (citing Ex. 1006, 4:24–39, 10:51–65), 22–23 (reproducing Ex. 1006, Table 2; citing Ex. 1006, 4:20–39, 10:41–50, 13:11–23).

Therefore, Patent Owner's argument and record evidence support Petitioner's showing. Based on the foregoing discussion, Patent Owner fails to show that the panel misapprehends or overlooks a matter in the Final Written Decision.

C. Collateral Estoppel and Other Arguments

The Final Written Decision applies the well-established collateral estoppel four-factor test throughout its analysis of applicable claim terms: "[C]ollateral estoppel precludes a party from relitigating an issue if '(1) a prior action presents an identical issue; (2) the prior action actually litigated and adjudged that issue; (3) the judgment in that prior action necessarily required determination of the identical . . . issue; and (4) the prior action featured full representation of the estopped party.'" FWD 12–13 (citing *VirnetX Inc. v. Apple, Inc.*, 909 F.3d 1375, 1377 (Fed. Cir. 2018) (quoting *Stephen Slesinger, Inc. v. Disney Enters., Inc.*, 702 F.3d 640, 644 (Fed. Cir. 2012)); *see also, e.g.*, FWD 45 (applying the test).[8]

Patent Owner argues that collateral estoppel does not apply to the "'nonvolatile memory' preamble limitation of claims 1/20," because Patent Owner "raised herein new legal and factual issues, supported by new Berg expert testimony." Reh'g Req. 13. The Federal Circuit recently dismissed this line of argument and held that "collateral estoppel applies 'even if new evidence exists.'" *Synqor, Inc. v. Vicor Corp.*, 988 F.3d 1341, 1355 (Fed.

[8] Other circuits frame essentially the same four-factor test as a five-factor test. *See Phil-Insul Corp. v. Airlite Plastics Co.*, 854 F.3d 1344, 1353 (Fed. Cir. 2017) (noting that "[i]n the Eighth Circuit . . . . [c]ollateral estoppel requires five elements").

Cir. 2021) (quoting *Black v. Off. of Pers. Mgmt.*, 641 F. App'x 1007, 1009 (Fed. Cir. 2016)).

Synqor also reasons that

> [a] losing party does not get a second bite at the apple simply because they can find a new and arguably more persuasive witness to present their evidence; this is precisely the type of rematch that collateral estoppel is intended to foreclose to serve the interests of repose and finality.

Synqor, 988 F.3d at 1355 (citing *Astoria Fed. Sav. & Loan Ass'n v. Solimino*, 501 U.S. 104, 107 (1991) ("[A] losing litigant deserves no rematch after a defeat fairly suffered, in adversarial proceedings, on an issue identical in substance to the one he subsequently seeks to raise."); *Allen v. McCurry*, 449 U.S. 90, 94 (1980) ("[C]ollateral estoppel relieve[s] parties of the cost and vexation of multiple lawsuits, conserve[s] judicial resources, and, by preventing inconsistent decisions, encourage[s] reliance on adjudication.")).

Patent Owner also argues that "Petitioner has cited to no case in history supporting the Board's *unprecedented legal theory* that because Patent Owner chose not to appeal issues relating to certain claim elements of the '358 patent from the [']1892 FWD, collateral estoppel now automatically precludes Patent Owner from litigating any issues herein -- including previously unlitigated issues -- pertaining to purportedly analogous elements of the '989 patent." PO Reply Reh'g Req. 5. This argument mischaracterizes the Final Written Decision—it does not reason that "collateral estoppel now automatically precludes Patent Owner from litigating any issues herein." Patent Owner also states that "*collateral estoppel* can arise from the Rule 36 judgment only as to those issues being raised by Patent Owner in these proceedings for which the governing four-

factor test would be met." Reh'g Req. 15 (citing *VirnetX*, 909 F.3d at 1378).[9]

As Patent Owner argues, the four-factor test applies, including to non-appealed claim limitations litigated in the underlying '1892 IPR that are materially similar to claim limitations at issue here. However, Patent Owner's arguments asserting a lack of cited authority regarding nonappealed issues in Rule 36 judgments ignores that the case Patent Owner relies upon, *VirnetX*, cites *Phil-Insul,* 854 F.3d at 1356, which provides contrary guidance with respect to this issue. *VirnetX*, 909 F.3d at 1378. After noting that the losing party, IntegraSpec, "*did not raise on appeal issues* adjudicated in the district court's noninfringement decisions," *Phil-Insul* states that the district court's "determinations . . . *are final for collateral estoppel purposes by virtue of IntegraSpec's failure to appeal them*." *See Phil-Insul*, 854 F.3d at 1356 (emphasis added) ("An issue that falls within the scope of the judgment appealed from *but is not raised by the appellant in its opening brief on appeal is necessarily waived*. Unless remanded by this court, *all issues within the scope of the appealed judgment are deemed incorporated within the mandate and thus are precluded from further adjudication*." (quoting *Engel Indus., Inc. v. Lockformer Co.*, 166 F.3d 1379, 1383 (Fed. Cir. 1999) (emphasis added)); *see also Papst Licensing GMBH & Co. KG v. Samsung Elecs. Am., Inc.*, 924 F.3d 1243, 1250–51 (Fed. Cir. 2019) ("[T]he issue preclusion doctrine can apply in this court to the Patent Trial and Appeal Board's decision in an IPR once it becomes

[9] Under Rule 36, "[t]he court may enter a judgment of affirmance without opinion." Fed. Cir. R. 36.

final.") (noting that losing party Pabst dismissed its appeals to the Federal Circuit and applying collateral estoppel where "Papst has advanced no persuasive reason for an exception to applying the [four-factor test outlined in *B&B Hardware*] for issue preclusion") (citing *Martin v. Dep't of Justice*, 488 F.3d 446, 451–52, 454–55 (D.C. Cir. 2007) ("voluntary dismissal of appeal creates preclusion based on the predicate opinion")). And as indicated in the Final Written Decision, *Maxlinear* remanded the Board to consider the application of collateral estoppel based on prior IPR decisions including those affirmed via Rule 36 judgments even though the prior judgments involved *different* prior art and dependent claims *not considered in the prior judgments*. *See* FWD 41–42 (discussing and quoting *MaxLinear Inc. v. CF CRESPE LLC*, 880 F.3d 1373, 1377 (Fed. Cir. 2018) ("[T]he sole remaining question at issue is whether the dependent claims 4, 6–9, and 21, *not addressed in the earlier IPRs*, are unpatentable.") (emphasis added)).

Hence, the Rule 36 judgment involved here renders the '1892 FWD judgment final and forecloses new arguments about the materially similar non-appealed claim limitations at issue in the '1892 FWD that meet the four-factor test. In *VirnetX*, our reviewing court applied the four-factor test at the prior judgment appellate level (i.e., in "*VirnetX 1*") to determine if collateral estoppel applies where VirnetX *appealed the issue* leading to the prior judgments in that case about the prior art status of an "RFC 2401" document. *See VirnetX*, 909 F.3d at 1378 ("Indeed, in three of the seven final written decisions appealed in *VirnetX 1*, the *only* issue raised was whether RFC 2401 was a printed publication. Accordingly, by affirming all seven of the Board's decisions, this court in *VirnetX 1* necessarily found that RFC 2401 was a printed publication. Therefore, VirnetX is collaterally

estopped by our Rule 36 judgment in *VirnetX 1* from relitigating the issue in this appeal."). Here, as Petitioner argues, and the Final Written Decision notes, Patent Owner did not appeal the nonvolatile memory issue from the '1892 FWD, unlike the patent owner in *VinetX 1*.

Further regarding the "nonvolatile memory issue," Patent Owner argues it never "actually litigated" it, and also, that the issue was not "necessary" to the judgment, because the "[']1892 FWD made two alternative findings relating thereto." Reh'g Req. 14. Assuming for the sake of argument that the failure to appeal the issue from the '1892 FWD does not foreclose the argument under *Phil-Insul*, the Final Written Decision addresses these arguments. In summary, the Final Written Decision finds that in the '1892 IPR, the parties actually litigated and the Board necessarily determined that the nonvolatile memory limitation, which is the same limitation at issue here, does not patentably distinguish the challenged claims in the '1892 IPR over Kloba. *See* FWD 39–46. For example, referring to the '1892 FWD, the Final Written Decision here finds that "Patent Owner had the opportunity to, and did, fully and fairly litigate the issue of the claim construction of 'nonvolatile memory' and whether Kloba teaches the nonvolatile memory even if the preamble limits the claims." *Id.* at 41 (citing '1892 FWD 33–38 (finding Kloba teaches materially the same limitation even if the preamble is limiting)). The Final Written Decision also finds that the non-volatile memory "issue was actually litigated and necessary to the Board's determination in the '1892 FWD that the Federal Circuit affirmed in the M2M Federal Circuit Decision." *Id.* at 43 (citing '1892 FWD 33–38). The Final Written Decision also determines that the preamble is not limiting even under the claim construction standard applied

in the instant trial under *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc) and 37 C.F.R. § 42.100(b) (2019). *Id.* at 13–16.

The Final Written Decision reasons that "the question is 'whether the . . . claims present materially different issues that alter the question of patentability, making them patentably distinct from' the claims adjudicated in the '1892 IPR." FWD 42–43 (quoting *MaxLinear*, 880 F.3d at 1377–78). The Final Written Decision specifically states that "Petitioner shows that the nonvolatile memory limitation is not patentably distinct in both sets of claims involved in the two proceedings and it raises the exact same issue of whether Kloba teaches the limitation, even if the preamble limits the claims." *Id.* at 43 (citing Pet. Supp. Br. 9–10).

At the cited pages of the '1892 FWD, the Board states that "even if nonvolatile memory is a limitation, Petitioner's evidence shows this, as we now explain." '1892 FWD 34. The '1892 FWD explains over several pages how Kloba discloses the preamble (assuming it carries weight as a limitation) in response to several of Patent Owner's arguments. *See, e.g.*, *id.* at 34 ("Patent Owner argues that claim 1 requires a specific type of memory (nonvolatile) for storing specific files (files of data content for display) and that, in Kloba, files of data content for display are stored only in volatile memory. . . . Patent Owner argues that this disclosure merely teaches that a mobile device can include both nonvolatile and volatile memory, but does not teach that files of data content for display would have been stored in nonvolatile memory.").

Then, the '1892 FWD specifically "find[s] that Kloba broadly describes storing both objects (including files for display) and control logic on any of the available memories, including secondary storage devices and

computer program products, which can be nonvolatile." '1892 FWD 37–38. Based on the foregoing discussion, Patent Owner's assertion that "Factor 2" (i.e., "actually litigated") "is not met," and similar assertions regarding "Factor 3," do not address the Final Written Decision's findings and reliance upon the '1892 FWD. *See* Reh'g Req. 14.

Patent Owner's assertion with respect to "Factor 3" and the "nonvolatile memory" recitation that "neither of [two alternative findings] can [] be deemed 'necessary'," fails to address the Board's reliance on *Masco Corp. v. U.S.*, 303 F.3d 1316, 1329–32 (Fed. Cir. 2002) (applying the four factors for issue preclusion) in more than a conclusory fashion. *See* Reh'g Req. 14. Patent Owner similarly asserts that the Board here "displace[d] . . . the governing four-factor test for collateral estoppel" and instead

> minted a novel legal theory that because Patent Owner chose not to appeal issues that it could have relating to certain claim elements of the prior '358 patent [in the '1892 FWD], collateral estoppel now automatically precludes Patent Owner from litigating any issues herein pertaining to purportedly analogous elements of the '989 patent.

Id. As Petitioner persuasively explains, however, "the Board correctly stated and applied the four-factor test." Pet. Resp. Reh'g Req. 7 (citing FWD 45; *VirnetX,* 909 F.3d at 1377). As Petitioner also explains with respect to factor 3, "where 'there are alternative bases for a determination that is essential to the judgment,' and the losing party fails to appeal that determination, 'relitigation of the issue so determined is properly precluded.'" *Id.* at 8 (quoting Rest. (Second) of Judgments § 27, cmt. i

(1982)). This is a rationale the Final Written Decision applies, as Petitioner persuasively argues. *See id.* at 8–9 (citing FWD 43–44).[10]

Patent Owner fails to explain how analyzing and following *Masco*, 303 F.3d at 1316 (FWD 43–44), when Patent Owner admits that it "chose not to appeal issues that it could have," "mint[s] a new legal theory" (Reh'g Req. 14). As Petitioner persuasively explains, *Masco* is a collateral estoppel case. Pet. Resp. Reh'g Req. 7–8. As Petitioner also persuasively explains, "where, as here, there are alternative bases for a determination essential to a judgment and the losing party fails to appeal that determination, 'relitigation of the issue so determined is properly precluded.'" *Id.* at 9 (quoting Rest. (Second) of Judgments § 27, cmt. i (1982)).

In other words, as Petitioner argues, the Final Written Decision applies *Masco's* reasoning to address Patent Owner's argument that alternative determinations in the '1892 FWD preclude application of collateral estoppel to the nonvolatile memory recitation in the challenged claims. *See* FWD 42–45. As indicated above, Patent Owner does not

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[10] Patent Owner asserts that "**the parties both agree** that Factor 3 is *not* met as to any 'nonvolatile memory' issues because the [']1892 FWD made two alternative findings relating thereto, neither of which can thus be deemed 'necessary.'" Reh'g Req. 14 (citing (Pet. Supp. Br. 8–9)). Based on this assertion, Patent Owner argues that "the Board outright contradicts both parties by asserting in conclusory fashion that Factor 3 *is* satisfied without providing any explanation or evidence." *Id.* These arguments ignore the findings in the Final Written Decision and assume that the Board must adopt agreements by the parties even if adopting them amounts to legal error. And these arguments downplay Petitioner's argument that Patent Owner cannot relitigate the same material non-volatile memory issue because the Board "should still be guided by the underlying rationale behind the doctrine" of "collateral estoppel." Pet. Supp. Br. 10.

address the Board's reliance on *Masco* in more than a conclusory fashion. Rather, in arguing that the Board "minted a novel legal theory" (Reh'g Req. 14), Patent Owner explains that "*collateral estoppel* can arise from the Rule 36 judgment only as to those issues being raised by Patent Owner in these proceedings for which the governing four-factor test would be met" (*id.* at 15). Here, however, as explained above, the four-factor test applies to the underlying '1892 FWD as a final judgment after the Rule 36 affirmance.

Setting aside the lack of appeal for a moment, with further respect to *Masco's* reasoning regarding alternative determinations and factor 3 (i.e., "the judgment in that prior action necessarily required determination of the identical . . . issue"), Petitioner's reliance on *Intellectual Ventures I LLC v. Capital One Financial Corp.*, 937 F.3d 1359, 1375 (Fed. Cir. 2019), *reh'g denied*, 943 F.3d 1383 (Fed. Cir. 2019), is also persuasive. *See* Pet. Resp. Reh'g Req. 9–10 & n.1.

Like *Masco, Intellectual Ventures* notes that

> the Second Restatement adopted, as a general rule, the position that "[i]f a judgment of a court of first instance is based on determinations of two issues, either of which standing independently would be sufficient to support the result, the judgment is not conclusive with respect to either issue standing alone."

Intellectual Ventures, 937 F.3d at 1375 (quoting Restatement (Second) of Judgments § 27 cmt. i & reporter's note, at 270 (1982)); *Masco*, 303 F.3d at 1330 (quoting same—cmt. i).[11] *Intellectual Ventures* then states that the

[11] *Intellectual Ventures* generally employs persuasive authority, policy considerations, and Fourth Circuit precedent, to decide the issue of whether collateral estoppel applies to independent alternative determinations in the Fourth Circuit. *See* 937 F.3d at 1373–77.

general rule "is not the end of the story." *See Intellectual Ventures*, 937 F.3d at 1376.

Intellectual Ventures assumes that collateral estoppel may apply (under the four-factor test) to alternative determinations in a prior judgment if "they are not integrally related." *See id.* at 1372 ("Even assuming, as Capital One argues, that the two issues decided by Judge Trenga *are not integrally related*, but instead should be treated as independent and alternative grounds for decision, we still conclude that Judge Grimm was correct in applying collateral estoppel to Judge Trenga's relevant market ruling, although our analysis differs somewhat from Judge Grimm's.") (emphasis added).

In other words, like *Masco*, *Intellectual Ventures* indicates that alternative determinations should not foreclose application of collateral estoppel in the case at hand. *See* FWD 44 (citing and analyzing *Masco*). And as explained above, *Intellectual Ventures* indicates that collateral estoppel may apply not only to "integrally related" alternative determinations, 937 F.3d at 1372–73, but also when "all of the alternative determinations would be pertinent" to both cases:

> [T]he case for applying collateral estoppel to alternative determinations is much stronger when all of the alternative determinations in the first case would be independently sufficient to dispose of the second case. In such a case, since all the alternative determinations would be pertinent to the second case, the losing party in the first case would not be discouraged from taking an appeal because of the presence of a strong alternative determination that is irrelevant to the second case. Likewise, a party would be less likely in such a setting to take an otherwise improvident appeal simply out of a desire to avoid preclusion on one of multiple adverse rulings.

Intellectual Ventures, 937 F.3d at 1375; *see* Pet. Reply Reh'g Req. 9 n.1 (citing *Intellectual Ventures*, 937 F.3d at 1375).

Both determinations, i.e., whether the preamble is limiting and if so whether Kloba teaches it, are not "irrelevant to the second case." *See Intellectual Ventures*, 937 F.3d at 1375. From the perspective of Petitioner, each of the determinations independently disposes of the nonvolatile memory limitation issue in the '1892 FWD and in this case. *See id.* ("In some cases, however, any one of the alternative grounds that were independently sufficient to dispose of the first action would also be independently sufficient to decide the second. In that circumstance, the policies underlying the non-preclusion rule adopted in the Second Restatement are significantly diluted.").

From the perspective of Patent Owner as the "the losing party," it "would not be discouraged from taking an appeal" of the '1892 FWD because of an "irrelevant" "alternative determination." *See Intellectual Ventures*, 937 F.3d at 1375. In an appeal of the '1892 FWD, Patent Owner reasonably would not have appealed only the first issue (whether the preamble is limiting) without also appealing the second issue (whether Kloba teaches it) and vice versa. For example, if Patent Owner successfully had appealed the first issue such that our reviewing court were to have held the preamble is limiting, it would not have disposed of the case without our reviewing court also having resolved the second issue of whether Kloba

teaches it.[12] And if Patent Owner successfully had appealed the second issue such that our reviewing court were to have held that Kloba does not teach the preamble, it would not have disposed of the case without our reviewing court also having resolved the first issue of whether the preamble is limiting.[13] So these alternative determinations in the '1892 FWD are "integrally related" and/or neither one is an "irrelevant" "alternative determination" to the instant case. *See Intellectual Ventures*, 937 F.3d at 1371, 1375. A tribunal must first determine or assume the preamble is limiting before reaching the issue of whether Kloba teaches it, as the Board did in both trials.

In any case, whether integrally related or independently sufficient, the two determinations were necessary to the '1892 FWD because the Board determined that Petitioner showed persuasively that the nonvolatile memory limitation did not patentably distinguish the claims challenged there over Kloba. And the Board reached the Kloba determination only after assuming the preamble is limiting. *See Intellectual Ventures*, 937 F.3d at 1371 ("The two issues on which Judge Trenga based his dismissal order are not

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[12] On the other hand, if Patent Owner were to have appealed and lost on either the preamble determination or the Kloba determination in a hypothetical appeal of the '1892 FWD, and the reviewing court only reached one determination but not the other, either determination would have disposed of the case in terms of the nonvolatile memory recitation (i.e., not in terms of any other claim limitations argued). It would have been unnecessary for our reviewing court to reach the other determination involved in the nonvolatile memory recitation.

[13] Of course, if Patent Owner were to have lost on the Kloba issue, it would have disposed of the case (in terms of the nonvolatile memory recitation) and it would have been unnecessary for our reviewing court to reach the first issue.

independent and alternative grounds of decision, but are integrally related. . . . Judge Trenga's finding on the relevant market issue therefore satisfied the requirement, for collateral estoppel purposes, that an issue of fact decided in the prior proceeding be critical and necessary to the judgment in that proceeding."), 1380 ("And even if the two issues are regarded as alternative grounds for decision, each was independently sufficient to dispose of the first action and therefore would be independently sufficient to dispose of the second."). Also, as noted above, Patent Owner did not appeal the issue from the '1892 Final Written Decision, as the reasoning of *Masco* requires.

In summary, Patent Owner argues that because the Board in the '1892 FWD reached alternative determinations as to why the nonvolatile memory recitation is not patentable over Kloba, collateral estoppel does not prevent it from relitigating the same exact issue here, even though Patent Owner did not appeal the issue in the '1892 FWD. *See* Reh'g Req. 13–15. In essence, Patent Owner argues that the Rule 36 judgment affirming the '1892 FWD erases any collateral estoppel effects of that decision as to materially the same claim limitations even though Patent Owner did not appeal the consumer usage information issue or the alternative determinations involved in the preamble. *See id.* at 15 ("**The type of res judicata that attaches to the Rule 36 judgment relative to unappealed issues is 'claim preclusion' and *not* collateral estoppel,** merely resulting in Patent Owner being precluded from bringing future actions *on the '358 patent* asserting any validity positions that it raised or could have raised on appeal.").

Patent Owner's restriction of Rule 36 judgments as merely preventing a losing patent owner from asserting *the same patent* undermines the

Supreme Court's holding in *B & B Hardware* that "'issue preclusion should apply' to the final written decision of the . . . Board." *MaxLinea*r, 880 F.3d at 1376 (quoting *B & B Hardware*, 575 U.S. at 148). Holding as Patent Owner argues here would encourage patent owners not to appeal or at most to appeal from the Board on a single issue so that even if a patent owner loses the appealed issue in a Rule 36 judgment (which occurred here with respect to the '1892 FWD), all effects of collateral estoppel would disappear from the Board's final written decision as to all unappealed claim limitations, thereby allowing the patent owner to obtain materially the same patent claims in different patents and assert them against market participants.

Patent Owner also argues that in applying collateral estoppel, the Final Written Decision "ignored" Patent Owner's new arguments in this trial (relative to the '1892 FWD) that the claims do not cover external secondary storage devices. *See* Reh'g Req. 14. But as Petitioner explains, the Final Written Decision adopts the findings in the '1892 FWD, including that Kloba's "data processing unit 103A *can include* secondary storage devices, such as *hard drives*" and that Kloba discloses different types of memory, including nonvolatile memory, as applicable to different types of generic mobile devices, thereby satisfying the nonvolatile memory limitation. *See* Pet. Resp. Reh'g Req. 5 (quoting '1892 FWD 36; FWD 39–40); FWD 39 (citing '1892 FWD 34–38).

Regarding Patent Owner's related argument that the claim term "having" in the preamble precludes hardware (like memory) from merely being "connected to" a mobile device (PO Resp. 44; Reh'g Req. 13 (citing PO Resp. 44–47; PO Sur-reply 20–21)), even if that is correct, Kloba states that "[d]ata processing unit 103A *may include* secondary storage devices

103E, such as but not limited to hard drives 103F or computer program product interfaces 103G," and it "includes . . . main memory 103D . . . [which] may be RAM, ROM, or any other memory type." Ex. 1006, 13:27–33. Computer product interfaces 103G include "floppy drives, ZIP™ drives, . . . optical storage devices, etc." *Id.* at 13:38–39. And data processing unit 103A includes all "the entities shown in FIGS 1A and 1B" (*id.* at 13:14–15), i.e., device 106 and/or client 108, which in turn include all the computer assets relied upon by Petitioner, including "mobile computing devices . . . cellular phones, internet-enabled phones," and so on (*id.* at 10:41–50). The '1892 FWD makes the same findings, which the Final Written Decision adopts. *See* FWD 39–40 (adopting and incorporating the finding that Kloba teaches the nonvolatile memory limitation at '1892 FWD 34–38). Moreover, the '1892 FWD notes, *inter alia*, that Patent Owner "argues that [Kloba] merely teaches that a mobile device *can include both nonvolatile and volatile memory*." '1893 FWD 34 (emphasis added) (citing Paper 19 (Patent Owner Response) at 11) (Patent Owner admitting that "Kloba's disclosure of various types of memory merely establishes that the mobile device included both nonvolatile memory (e.g., ROM) and volatile memory (e.g., RAM).").

The Final Written Decision also finds that the '989 patent specification describes *external* wireless modules 10 (which according to Patent Owner's arguments in the '1892 FWD, contain non-volatile memory in memory module 70 ('1892 FWD 13)), as merely *communicating with* a mobile phone: "Mobile phone or message-enabled wireless terminal 170 communicates with specific wireless module 10 . . . ." FWD 5 (citing Ex. 1001, 16:18–22); *see also* '1892 FWD 17 (citing '1892 FWD 11–16).

In addition, the Final Written Decision notes that during prosecution of the application that led to the '989 patent (and a related continuation patent), the examiner found that the nonvolatile memory limitation was known in the art. *See* FWD 16 (citing Ex. 1004, 101), 46 n.11 (citing Ex. 1004 (prosecution history of the '989 patent), 101). So even though the Final Written Decision applies collateral estoppel, the Board did not ignore new arguments by Patent Owner here relative to the '1892 IPR.

Based on the foregoing discussion, Patent Owner fails to show that the panel misapprehended or overlooked a matter in the Final Written Decision.

III. CONCLUSION

Based on the foregoing discussion, we deny Patent Owner's request to modify the Final Written Decision in the manner advanced by Patent Owner. Final Outcome of Final Written Decision after Rehearing follows:

Claims	**35 U.S.C. §**	**Reference(s)/Basis**	**Claims Shown Unpatentable**	**Claims Not Shown Unpatentable**
1–6, 13	103(a)	Kloba, Multer, Hoyle	1–6, 13	
7, 14, 16, 17, 19–25	103(a)	Kloba, Multer, Hoyle, Loughran	7, 14, 16, 17, 19–25	
8–12, 15, 18, 26–30	103(a)	Kloba, Multer, Loughran, Hoyle, Fong	8–12, 15, 18, 26–30	
Overall Outcome			1–30	

IV. ORDER

For the reasons given, it is ORDERED that the Patent Owner's Rehearing Request is *denied*.

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