

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

AMAZON.COM, INC.,
Petitioner,

v.

M2M SOLUTIONS LLC,
Patent Owner.

IPR2022-00260
Patent 10,791,442 B2

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

MCKONE, *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 of U.S. Patent No. 10,791,442 B2 (Ex. 1002, “the ’442 patent”). Paper 1 (“Petition” or “Pet.”). M2M Solutions LLC (“Patent Owner”) elected to waive its right to file a preliminary response. Paper 7, 1 (Patent Owner’s Notice of Waiving Preliminary Response).

The Board instituted an *inter partes* review of the challenged claims pursuant to 35 U.S.C. § 314. Paper 8 (“Inst. Dec.”). After institution, Patent Owner filed a Patent Owner Response (Paper 12, “PO Resp.”); Petitioner filed a Reply (Paper 15); and Patent Owner filed a Sur-reply (Paper 16, “Sur-reply”). Pursuant to our authorization (Paper 18), Petitioner and Patent Owner filed supplemental briefs addressing collateral estoppel and res judicata in light of the related matters discussed below. Paper 22 (“PO Supp. Br.”); Paper 23 (“Pet. Supp. Br.”). The parties then presented oral arguments via a (video) Hearing (May 2, 2023), and the Board entered a Hearing transcript into the record. Paper 25 (“Tr.”).

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. *Related Proceedings*

Patent Owner asserted the ’442 patent and five related patents in *M2M Solutions LLC v. Amazon.com, Inc.*, Case No. 1:17-cv-00202-LPS-CJB (D. Del.); *M2M Solutions LLC v. Amazon.com, Inc.*, No. 1:18-cv-01532-LPS-CJB (D. Del.); and *M2M Solutions LLC v. Amazon.com, Inc.*, No. 1:20-cv-01781-LPS (D. Del.). Pet. 2; Paper 3, 2–3.

Related proceedings also include the following PTAB proceedings (Pet. 2–3; Paper 3, 2–4):

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)
(Ex. 2009, 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,
Paper 43 (Final Written Decision) (the “’1204 FWD” or
the “’1204 IPR”);

Amazon.com, Inc. v. M2M Solutions LLC, IPR2019-01205,
Paper 43 (Final Written Decision) (Ex. 2011, the “’1205
FWD” or the “’1205 IPR”).

Patent Owner appealed the related ’1204 and ’1205 FWDs, and the Federal Circuit affirmed the ’1204 and ’1205 FWDs. *See M2M Solutions LLC v. Amazon.com, Inc.*, 2022-1122, slip op. (Fed. Cir. Feb. 22, 2023) (Ex. 2026). Patent Owner appealed related final written decisions, the ’1892 FWD and the final written decisions in IPR2017-01891 and IPR2017-01893, which the Federal Circuit affirmed 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 '442 patent, the patent challenged in the '1205 IPR (US 10,038,989 B2, the "'989 patent"), and the patent challenged in the '1892 IPR (US 8,577,358 B2, the "'358 patent"), share a common specification.

A. Evidence Relied Upon

Petitioner relies on the following prior art:

Reference		Date	Exhibit No.
Kloba	US 6,421,717 B1	July 16, 2002 (filed Apr. 28, 2000)	1004
Multer	US 6,671,757 B1	Dec. 30, 2003 (filed Jan. 26, 2000)	1005
Loughran	US 2002/0129107 A1	pub. Sept. 12, 2002 (filed Mar. 12, 2001)	1006
Davis	US 5,796,952	Aug. 18, 1998	1007
Fong	US 7,197,011 B2	Mar. 27, 2007 (filed Aug. 6, 2001)	1008
Hoyle	US 6,141,010	Oct. 31, 2000	1009

Petitioner relies on the Declaration of Peter Rysavy (Ex. 1003).

Patent Owner relies on the Declaration of Brian A. Berg (Ex. 2013).

B. Asserted Grounds of Unpatentability

Petitioner (Pet. 4–5) 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, Multer, Hoyle
1–6, 13	103(a)	Kloba, Multer, Davis
7, 14, 16, 17, 19–25	103(a)	Kloba, Multer, Hoyle, Loughran
7, 14, 16, 17, 19–25	103(a)	Kloba, Multer, Davis, Loughran

Claim(s) Challenged	35 U.S.C. §	References
8–12, 15, 18, 26–30	103(a)	Kloba, Multer, Hoyle, Loughran, Fong
8–12, 15, 18, 26–30	103(a)	Kloba, Multer, Davis, Loughran, Fong

C. The '442 Patent

The '442 patent is directed to “[a] system for autonomously monitoring and managing consumer device assets.” Ex. 1001, code (57).

Figure 2, reproduced below, illustrates an example:

FIG. 2

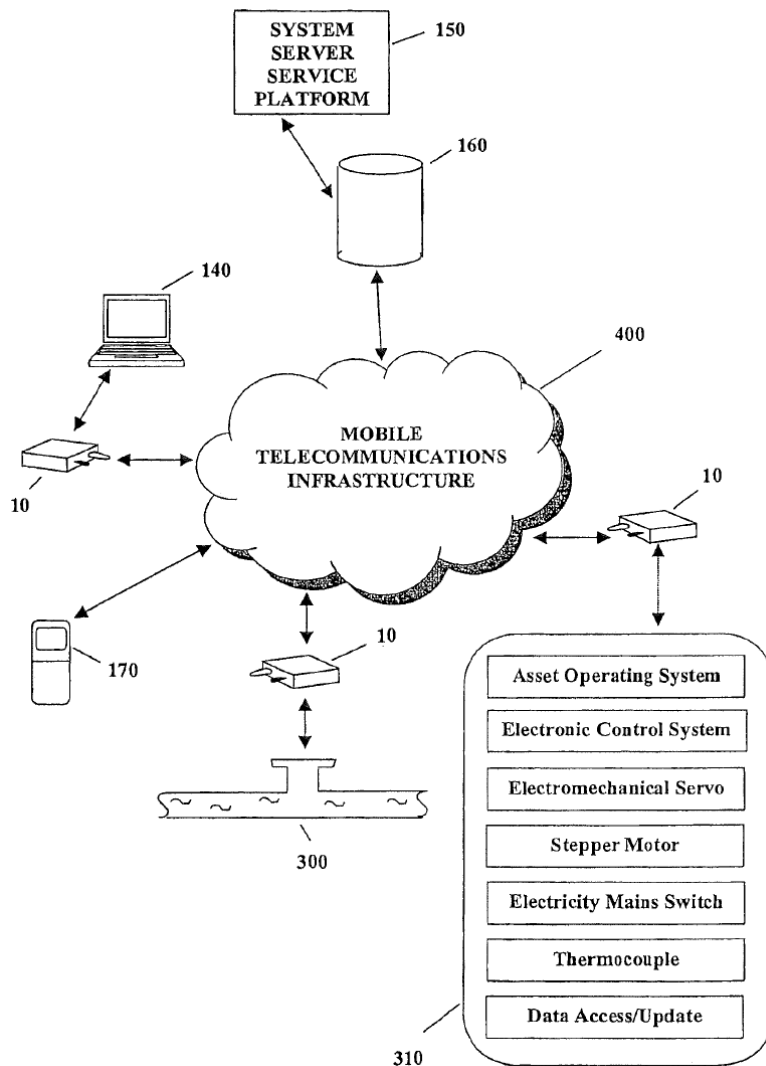


Figure 2 is a diagram of applications controlled by wireless modules 10. Ex. 1001, 14:3–5. Wireless modules 10 communicate via mobile telecommunications infrastructure 400. *Id.* at 16:39–41. Mobile phone or message-enabled wireless terminal 170 communicates with a specific wireless module or with system server service platform 150 via point of interconnection 160 of mobile telecommunications infrastructure 400. *Id.* at 16:41–45.

In some 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 16:49–54. 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 16:55–59. 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 11:37–44;

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 11:51–56; 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 12:15–26.

Claim 1, reproduced below (with additional formatting and bracketed numbering that tracks the presentation in the Petition), is illustrative of the claimed subject matter:

1 [Pre]. 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 as on-device components 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:

[1a] 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,

[1b] each of said assets being registered with the remote computer server platform;

- [1c] 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;
- [1d] receiving at the remote computer server platform communications sent from each of the plurality of consumer device assets containing consumer usage information identifying the particular manner in which a consumer user has used a particular feature 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;
- [1e] 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;
- [1f] managing the plurality of consumer device assets by the remote computer server platform, by sending communications to one or more assets containing one or more management instructions that are based upon the results of having processed at least some of the received consumer usage information, said management instructions causing the display data content files stored in non-volatile memory on one or more of the assets to be automatically modified so as to provide a consumer service;

- [1g] wherein the remote computer server platform provides said consumer service on an autonomous basis unprompted in whole or in part by the receipt of any request or command initiated by a consumer user of one or more of the plurality of consumer device assets; and
- [1h] 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.

II. ANALYSIS

A. *Collateral Estoppel Background*

In our Institution Decision, we observed, that, “without the benefit of Patent Owner’s input, we find at this stage of the proceeding that Petitioner’s contention is persuasive that claims 1–30 of the ’442 patent are insubstantially different than the ones we have already determined are unpatentable in the ’989 FWD,” and that “[h]aving studied the claims recited in both ’989 patent and ’442 patent, it is not evident that the ’442 claims present materially different issues that alter the question of patentability.” Inst. Dec. 21.

As noted above, after institution, we invited the parties to submit supplemental briefing on the impact of collateral estoppel and res judicata on this proceeding in light of our final written decisions in previous proceedings (e.g., the ’1205 FWD and ’1892 FWD). Paper 18. Patent Owner and

Petitioner each filed a supplemental brief addressing these issues. PO Supp. Br.; Pet. Supp. Br.

As the Federal Circuit has explained, collateral estoppel precludes a party from re-litigating 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.

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)).

“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)). In *Aspex*, “[t]he court correctly found that [the plaintiff] 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), 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. 880 F.3d at 1376 (citing *B & B Hardware, Inc. v. Hargis Indus., Inc.*, 575 U.S. 138, 148 (2015)). The court further 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* review Board decisions. *See id.* at 1375–76.

The prior adjudications that served as the basis for collateral estoppel in *MaxLinear* involved different prior art (i.e., different issues) but some of the same claims as the underlying Board decision on appeal. *Id.* The Federal Circuit vacated and remanded the Board’s determination that the sole independent claims 1 and 17 challenged in *MaxLinear* were patentable due to the prior Board adjudications and subsequent Federal Circuit Rule 36 affirmations that these same claims were unpatentable over different prior art. The court also remanded for the Board to determine the “preclusive effect of the prior adjudications, and subsequent affirmations,” on the patentability of the dependent claims challenged in *MaxLinear* that were “*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.”).

Moreover,

[Federal Circuit] precedent does not limit collateral estoppel to patent claims that are identical. Rather, it is the identity of the issues that were litigated that determines whether collateral estoppel should apply. If the differences between the unadjudicated patent claims and adjudicated patent claims do not materially alter the question of invalidity, collateral estoppel applies.

Ohio Willow Wood Co. v. Alps South, LLC, 735 F.3d 1333, 1342 (Fed. Cir. 2013) (internal citations omitted); *accord Nestle USA v. Steuben Foods*, 884 F.3d 1350, 1352 (Fed. Cir. 2018) (quoting *Ohio Willow*).

B. Claim Construction

We construe a claim

using the same claim construction standard that would be used to construe the claim in a civil action under 35 U.S.C. 282(b), including construing the claim in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.

37 C.F.R. § 42.100(b); *see also Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc).

“Petitioner does not believe that any term of the ’442 patent need be construed; the claims should be given their plain meaning.” Pet. 8.

Patent Owner concurs with that approach for present purposes, but expressly reserves its future rights to offer counter arguments and evidence in any instances where Petitioner or the Board may act to expressly or implicitly construe any claim term in a manner inconsistent with its plain and ordinary meaning, and/or where they may elect to propose or adopt specific claim constructions of any claim terms.

PO Resp. 2–3.

No explicit construction of any claim term is required for the purposes of this Decision. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (citing *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)).

C. Level of Ordinary Skill in the Art

Petitioner contends that a person of ordinary skill in the art would have had a master’s degree in electrical engineering, computer engineering, computer science or the equivalent, with coursework covering networked devices and servers; a bachelor’s degree in one of those fields and at least two years of

industry experience working with networked devices and servers; or four years of industry experience working with networked devices and servers.

Pet. 16 (citing Ex. 1003 ¶ 46). In the Institution Decision, we noted that Petitioner’s proposed level of skill is substantially the same as the level of skill we found in the ’1205 FWD and adopted that level of skill for purposes of institution. Inst. Dec. 9–10. In the ’1205 FWD, the panel noted that “[b]ased on virtually the same showings by the parties, the Board made materially the same finding in the ’1892 FWD.” ’1205 FWD 28 (citing ’1892 FWD 25–26).

In the Response, Patent Owner argues that a skilled artisan would have had

(1) a bachelor’s degree in computer engineering, electrical engineering, mathematics, computer science or a closely related field, and (2) a minimum of 2–3 years of industry experience with consumer electronics and related software and firmware, and networked electronic devices. However, an individual with an advanced degree in a relevant field, such as computer or electrical engineering, would require less industry experience (e.g., 1–2 years).

PO Resp. 18–19 (citing Ex. 2013 ¶ 27). Patent Owner’s proposed level of skill is not materially different from that proposed by Petitioner, and Patent Owner does not argue that the level of skill we adopted in the Institution Decision is erroneous. The parties do not argue that any issue in the case turns on any difference between the proposals.

We maintain our finding that Petitioner’s proposal reflects the correct level of skill in the art. However, our findings and conclusions in this proceeding would be the same under Patent Owner’s proposal.

D. Obviousness over Kloba, Multer, and Hoyle; and over Kloba, Multer, and Davis

Petitioner contends that claims 1–6 and 13 would have been obvious over Kloba, Multer, and Hoyle or over Kloba, Multer, and Davis. Pet. 19–55. 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 in which Petitioner relies on Hoyle and need not determine whether the claims also would have been obvious over Kloba, Multer, and Davis. *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”). Moreover, Petitioner agrees that Davis is cumulative of Hoyle:

JUDGE MCKONE: So, and we’ve considered in previous cases the combination of Kloba, Multer, and Hoyle and that’s been all the way through the Federal Circuit in those cases. Is there anything, now that we have a full record in this case, is there anything about the Davis reference that’s not cumulative of the Hoyle reference such that, you know, if Kloba Multer, and Davis combination would be somehow different or better than the Kloba, Multer, Hoyle combination?

MS. MCCULLOUGH: So, the short answer, Your Honor, I think is no. Because in view of the Patent Owner’s arguments in its response, there’s nothing that is specific

to the nature of the consumer usage information that is processed by the server. In both of the secondary, Hoyle and Davis references that would affect kind of the primacy of the combinations over the other.

Tr. 7:1–14.

A claim is unpatentable under 35 U.S.C. § 103 “if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.” We resolve the question of obviousness on the basis of underlying factual determinations, including (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of skill in the art; and (4) objective evidence of nonobviousness, i.e., secondary considerations.¹ *See Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

1. Scope and Content of the Prior Art

a) Overview of Kloba (Ex. 1004)

Kloba 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. 1004, 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:

¹ The record does not include allegations or evidence of objective indicia of nonobviousness.

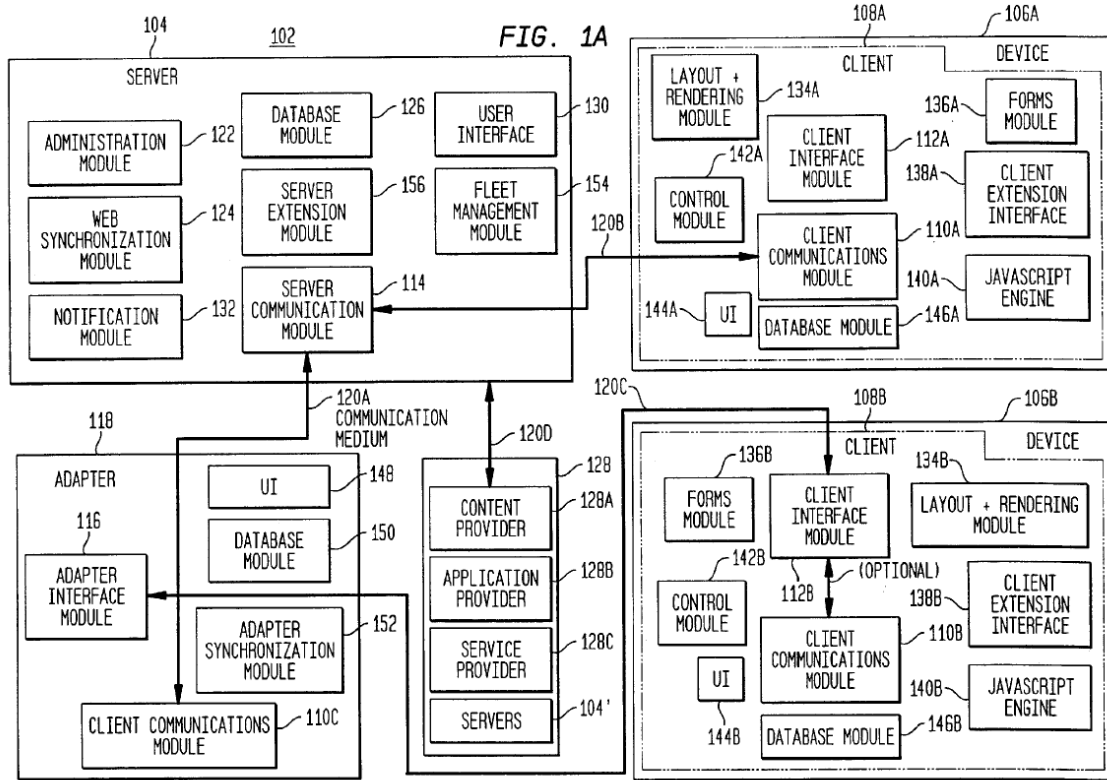


Figure 1A is a block diagram illustrating data processing environment 102 including server 104 and mobile computing devices 106. *Id.* at 7:21–27.

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.

Synchronization modules 155 synchronize the deltas from client 108 with providers 128 (step 172C). Based on the information from provider(s) 128, synchronization modules 155 compile instructions to synchronize the client 108 with providers 128 (step 172D). Synchronization module 155 sends such instructions to client 108, plus updated data marker (step 172E).

Note this is the only transmission from the server 104 to the client 108 during the synchronization process. Thus, the invention achieves a one-up/one-down synchronization process, thereby improving performance. The instructions are transmitted via any reliable transport medium.

Id. at 20:11–22. 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

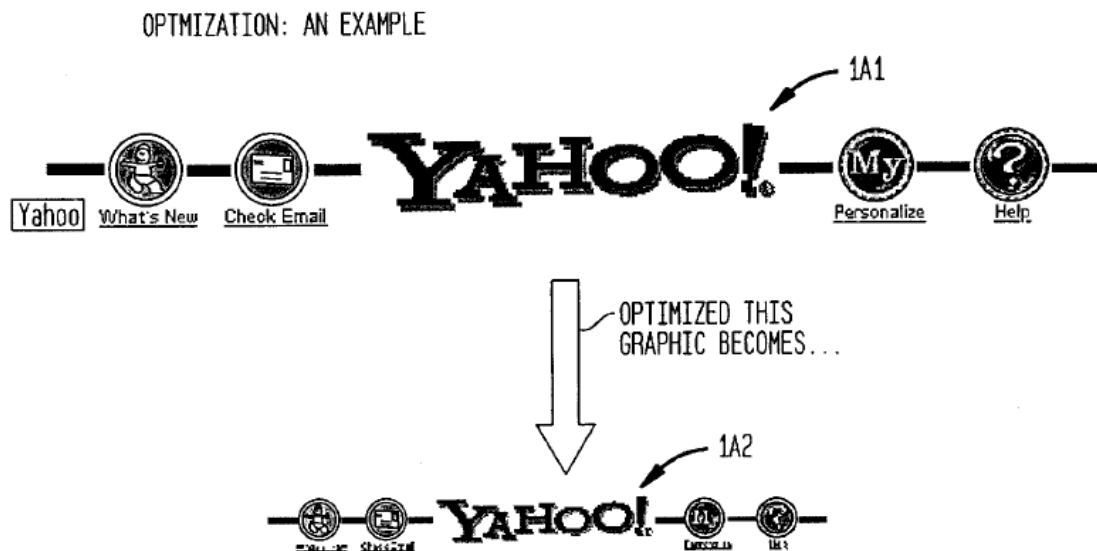


Figure 1AA illustrates a process that optimizes (via colors, size, etc.) web site page 1A1 for display 1A2 on a handheld device. *Id.* at 6:35–41, 21:55–60, 28:30–31.

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:

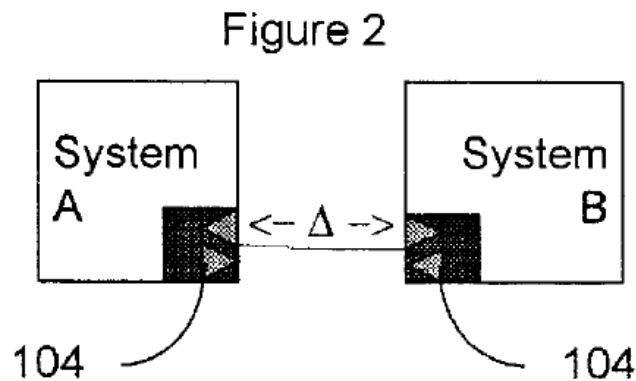
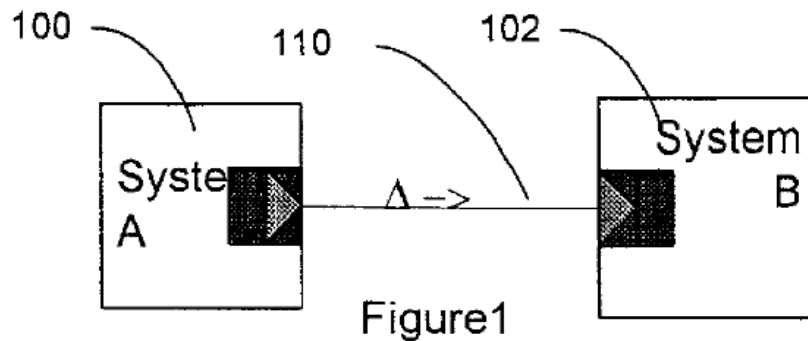
FIG. 12



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.

b) Overview of Multer (Ex. 1005)

Multer describes systems for transferring data between two devices that require information to be shared between them. Ex. 1005, code (57), 5:11–13. Figures 1 and 2, reproduced below, illustrate configuration examples for transferring data between two devices:



Figures 1 and 2 are block diagrams of systems illustrating the use of 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 on System B and instructions for implementing those changes. *Id.* at 6:8–11. Differencing transmitter 100 transmits difference information Δ to differencing receiver 102 via communication line 110. *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 difference 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 (Δ s) to a server. *Id.* at 37:40–61, Fig. 16.

c) Overview of Hoyle (Ex. 1009)

Hoyle describes a system “for providing an automatically upgradeable software application that includes targeted advertising based upon demographics and user interaction with the computer.” Ex. 1009, 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.

2. *Claim 1 – Differences between the prior art and the claim; reasons to modify or combine*
 - a) *Limitation 1[Pre] (each consumer device asset having “as on-device components . . . nonvolatile memory for storing files of data content for display”)*

Petitioner argues that the preamble of claim 1 “is not limiting except as to the ‘nonvolatile memory’ term, which appears in the claim body.” Pet. 19 (citing to the ’1205 FWD, 14 (determining that the preamble to claim 1 of the ’989 patent is not limiting)). We do not reach whether the preamble of claim 1 is limiting because we find that Kloba teaches the preamble even if it is limiting.

As to “[a] method of operating a remote computer server platform to provide a range of consumer services” as recited in the preamble, Petitioner contends that Kloba describes operating a remote server to manage consumer client devices such as cellular phones, handheld computers, and PDAs; that the server is remotely connected to the client devices via a network such as the Internet; and that synchronizing files, updating calendars, and upgrading software on the client devices are a range of consumer services. *Id.* at 19–20 (citing Ex. 1004, 3:63–66, 4:20–39, 4:48–58, 5:29–35, 8:49–53, 9:17–21, 9:24–29, 26:13–46, Fig. 1V).

As to “autonomously monitoring and managing a plurality of consumer device assets wirelessly connected to one or more communications networks” as recited in the preamble, Petitioner contends that Kloba teaches autonomously monitoring cellular phones, laptop computers, handheld computers, Internet-enabled phones, and personal data assistants (PDAs), which it contends are consumer device assets. *Id.* at 20–22 (citing Ex. 1004, 4:20–39, 5:30–35, 9:17–21, 10:41–50, 13:11–23, 13:25–33, 16:37–45, 20:51–56, 26:42–46, 31:28–32, Figs. 2, 52). Petitioner further cites to Multer’s description of a triggering mechanism for initiating synchronization automatically. *Id.* at 22 (citing Ex. 1005, 35:12–18). Petitioner contends that Multer supplies details, missing from Kloba, as to how a device such as a cellular phone could be triggered automatically and, therefore, provides a predictable alternative to manual triggering. *Id.* at 22–24 (citing Ex. 1003 ¶ 215). Petitioner further contends that automation would have made the client devices easier to use, would have kept devices up-to-date, would have ensured that client devices had the latest content when offline, and was one of a limited number of known solutions (either

automatic or manual synchronization). *Id.* at 24–25 (citing Ex. 1003 ¶¶ 216–220).

As to “a display apparatus for displaying the stored data content” as recited in the preamble, Petitioner points to Kloba’s description of client devices with display screens and software for rendering information on the display screens. *Id.* at 25 (citing Ex. 1004, 10:51–11:11, 12:29–33, Figs. 1U, 1V, 3B, 4B).

We agree with Petitioner and find that Kloba and Multer teach “[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” and “a display apparatus for displaying the stored data content,” and that a person of ordinary skill in the art would have had reasons, with rational underpinning, to combine the teachings of Kloba and Multer. We credit Mr. Rysavy’s uncontroverted testimony on these points. Ex. 1003 ¶¶ 207–220. Patent Owner does not contest that Kloba and Multer teach these aspects of claim 1. We note further that the ’1892 FWD found that Kloba teaches each of these aspects of the preamble of claim 1 of the ’358 patent, which appear identically in the preamble of claim 1 of the ’442 patent. ’1892 FWD, 32–33. We adopt and incorporate by reference

the Board’s findings and determination from the ’1892 FWD that Kloba teaches these aspects of the preamble of claim 1.²

The parties dispute whether Kloba teaches “[e]ach asset having as on-device components operating system and application software, [and] nonvolatile memory for storing files of data content for display to a consumer user of the device,” as recited in the preamble. Petitioner (Pet. 26–28) relies on Kloba’s Figure 1B1, reproduced below:

² Petitioner argues that Patent Owner is collaterally estopped from arguing that “all elements of the preambles of claims 1 and 20 except ‘on-device components’” are taught by Kloba, Multer, and Hoyle (and additionally Loughran for claim 20). Pet. Supp. Br. 9–10. We do not reach this collateral estoppel argument, as we find that Kloba and Multer teach these aspects of the preambles of claim 1 and 20.

FIG. 1B1

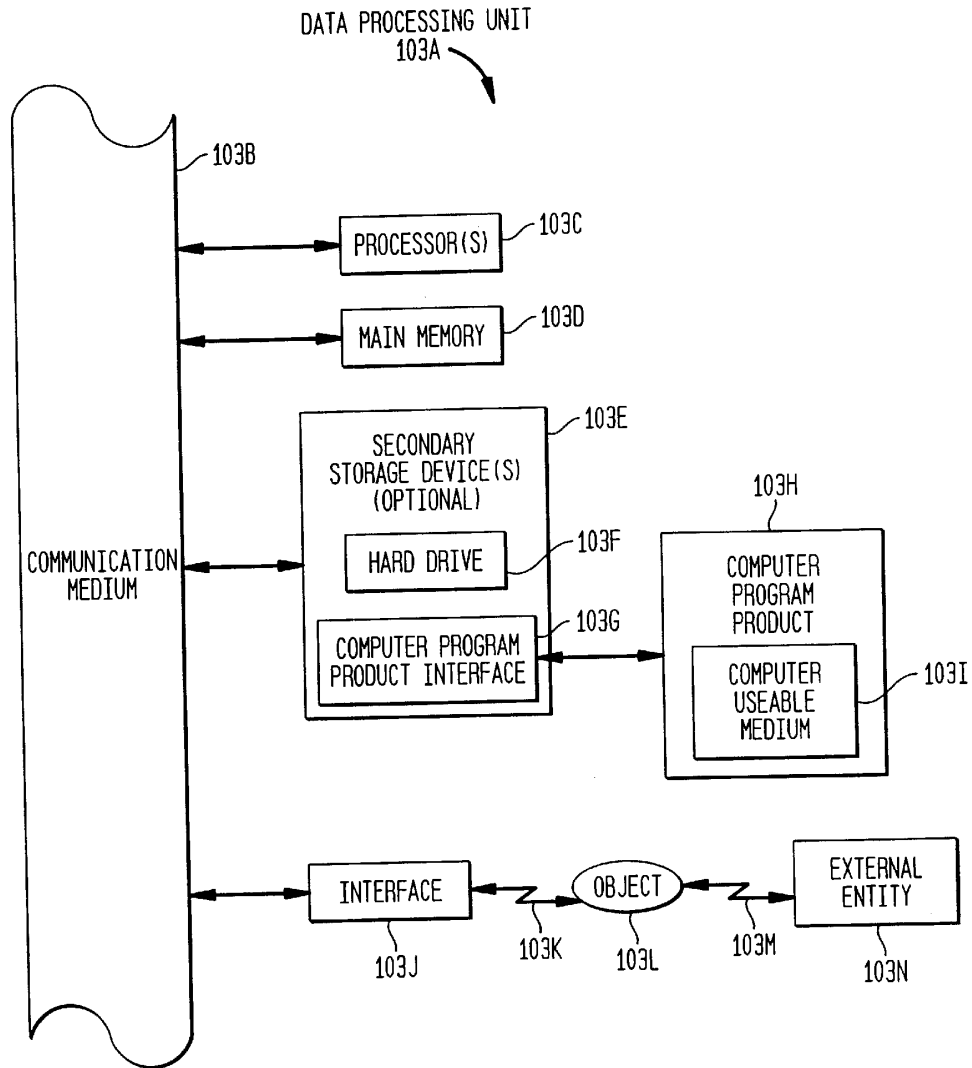


Figure 1B1 of Kloba is a block diagram of data processing unit 103A. Ex. 1004, 13:12–14. In discussing Figure 1B1, Kloba describes several examples of computer memory:

Data processing unit 103A includes one or more processor(s) 103C, and a main memory 103D. Main memory 103D may be RAM, ROM, or any other memory type, or combinations thereof.

Data processing unit 103A may include secondary storage devices 103E, such as but not limited to hard drives 103F or computer program product interfaces 103G. Computer program product interfaces 103G are devices that access objects (such as information and/or software) stored in computer program products 103. Examples of computer program product interfaces 103G include, but are not limited to, floppy drives, ZIPTM drives, JAZTM drives, optical storage devices, etc. Examples of computer program products 103H include, but are not limited to, floppy disks, ZIPTM and JAZTM disks, memory sticks, memory cards, or any other medium on which objects may be stored.

The computer program products 103H include computer useable mediums in which objects may be stored, such as but not limited to optical mediums, magnetic mediums, etc.

Id. at 13:26–45.

Petitioner focuses on two categories of Kloba's memories:

1) computer program products 103H, which interface with data processing unit 103A via computer program product interfaces 103G; and 2) hard drives 103F. Pet. 26–28. Patent Owner states that “it is undisputed that computer program products 103H and hard drives 103F are types of nonvolatile memory.” PO Resp. 49. According to Patent Owner, however, “Petitioner has failed to carry its burden of proving that either category satisfies the dual requirements of both being ‘on-device components’ of Kloba's mobile device *and* being used for storing display data content files on said devices under any of the theories presented in the Petition.” *Id.*

i. Computer program products 103H

Petitioner contends that computer program products 103H are “on-device” when they are inserted into computer program interfaces 103G.

Id. at 27.

Patent Owner argues that computer program products 103H are removable and external in relation to Kloba's host mobile devices and, thus, not "on-device components." PO Resp. 50–52. Patent Owner contends that a skilled artisan "would have understood the plain and ordinary meaning of the term 'component' to be 'a constituent element' of some broader system or structure," and that computer program products 103H would not be "components" under that meaning. *Id.* at 50 (citing Ex. 2015 (American Heritage Dictionary definition of "component")). In light of this definition, Mr. Berg testifies that a skilled artisan "would *not* have considered Kloba's mobile devices to 'have' any of the computer program products 103H as an 'on-device component' as the claim language requires because each of those program products is in fact an *external removable storage medium* rather than being a constituent element of any mobile device." Ex. 2013 ¶ 38. Mr. Berg further testifies that "no [person of ordinary skill in the art] would have viewed a floppy disk or a memory stick as being a 'constituent element' of a laptop computer, much less of a cell phone or PDA device," because they "were *all* examples of *external removable storage media*." *Id.* ¶ 42. Neither Mr. Berg nor Patent Owner explains why a constituent element would exclude an external removable storage medium. Mr. Berg's testimony on this point is conclusory and without stated basis and, thus, entitled to little weight. *See* 37 C.F.R. § 42.65(a).

Petitioner offers its own definition of "component," namely "a discrete part of a larger system." Reply 7 (citing Ex. 1014, 116 (Microsoft Computer Dictionary)). Petitioner further notes that Patent Owner's proposed dictionary defines "constituent" as "serving as part of a whole." *Id.* at 8 (citing Ex. 1016 (American Heritage Dictionary)). Patent Owner

argues that Petitioner’s dictionary definitions are “not materially different from Patent Owner’s ‘constituent element’ of some broader system or structure,” and that Petitioner’s definitions “reinforce rather than contradict Patent Owner’s proposed construction.” Sur-reply 18.

Under either party’s dictionary definition of “component,” an external memory that is inserted in or interfaces with a broader system is a constituent element or discrete part of that system. Nothing in any of the proposed definitions suggests that external removable storage media would not be a component of a system when those media are inserted in or interfacing with other components of the system. Thus, we agree with Petitioner and find that “computer program products 103H are on-device constituent elements of Kloba’s client devices *when they are inserted into or connected to* those devices.” Reply 8.

Petitioner argues that the intrinsic evidence does not support excluding removable or externally-connected non-volatile memory from the claims and, instead, describes examples in which a memory is connected to, but external to, the device asset. Reply 5–6 (citing Ex. 1001, 2:64–3:3, 6:42–7:33, 14:27, 15:47–48, Fig. 1). Patent Owner responds with additional examples it argues show a memory module as an internal integrated component. Sur-reply 18–19 (citing Ex. 1001, 5:21–27, 7:44–55, 10:8–15, 10:50–54, 12:27–34, 16:55–59). From these citations, Patent Owner argues that “Petitioner badly misreads the specification which actually discloses numerous embodiments in which wireless module 10 (and its memory module 70) would be an *internal integrated component* of the device asset itself.” *Id.* at 18. Patent Owner’s citations, however, discuss only high-level examples of device assets, without detail as to the implementation of

memory. Thus, they do not support Patent Owner’s attorney argument. Indeed, neither party’s citations discuss or even mention non-volatile memory.³ We also observe that none of the parties’ citations expressly discuss “on-device components” either. The intrinsic evidence is not particularly helpful in understanding the meaning of “having as on-device components . . . nonvolatile memory.” In any case, Patent Owner cites to nothing in Kloba that would exclude removable or externally-connected non-volatile memory from being “on-device components.”

Patent Owner focuses its arguments on whether Kloba’s computer program products 103H are “components” of Kloba’s data processing unit 103A, and does not argue that computer program products 103H are not “on-device.” PO Resp. 49–52; Sur-reply 17–20. Nevertheless, we agree with Petitioner, and find that Kloba’s computer program products, “when inserted into clients via ‘computer program interfaces 103G’ ([Ex. 1004,] 13:33–37) are ‘on device’ nonvolatile memory.” Pet. 27. By the plain meaning of “on-device component,” when a computer program product 103H (e.g., memory card) is inserted into data processing unit 103A (e.g., a hand-held computer) via computer program interface 103G, the computer program product is a component of data processing unit 103A and “on” that device.

³ In the ’1892 FWD, “Petitioner contend[ed] that Patent Owner ‘point[ed] to nothing in the specification to indicate that ‘nonvolatile’ memory is important to the claimed techniques,’ and that ‘[t]he word ‘nonvolatile’ does not even appear in the specification.” ’1892 FWD 13. In evaluating that argument, “[w]e . . . reviewed each of the passages to which Patent Owner cite[d] and [found] no reference to nonvolatile memory, and, accordingly, no discussion of the importance of nonvolatile memory.” *Id.*

As to whether Kloba's computer program products 103H are "for storing files of data content for display to a consumer user of the device," Petitioner (Pet. 27) points to Kloba's statement that "[t]he computer program products 103H include computer usable mediums in which objects may be stored." Ex. 1004, 13:36–42. Petitioner contends that these objects include data to be displayed on the client, such as multimedia files, image files, and video files. Pet. 27 (citing Ex. 1004, 3:63–4:19). Patent Owner does not contest that Kloba's computer program products 103H are for storing files of data content for display to a consumer user of the device.⁴

We agree with Petitioner and find that Kloba's computer program products 103H store objects, such as multimedia, video, and image files, and, thus, data content for display to a consumer user of the device. Ex. 1004, 3:63–4:19, 13:36–44. The '1892 FWD made substantially the same finding for the '358 patent:

[W]e find that Kloba expressly describes storing files for display in nonvolatile memory. Kloba describes the use of a "data processing unit 103A that can be used to implement the entities shown in FIGS. 1A and 1B," which "may be implemented using any number of data processing units 103A, and the configuration actually used is implementation specific." Ex. [1004], 13:12–17. The data processing unit, in turn, includes main memory 103D, secondary storage devices 103E, and computer program product interfaces 103G. *Id.* at 13:27–36. As Petitioner explains (Pet. 23–24; Reply 4–6), Kloba expressly discloses storing objects in floppy disks, ZIP disks, JAZ disks, memory sticks, and memory cards, Ex. [1004], 13:31–43, which are examples of nonvolatile memory. Specifically, data processing unit 103A can include secondary

⁴ Patent Owner does contest whether Kloba's hard drives 103F store files of data content for display to a consumer user of the device. PO Resp. 52–55. We note that argument below.

storage devices, such as hard drives or computer program products, wherein “[e]xamples of computer program products 103H include, but are not limited to, floppy disks, ZIP™ and JAZ™ disks, memory sticks, memory cards, or any other medium on which objects may be stored.” Ex. [1004], 13:31–42 (emphasis added); *accord id.* at 13:43–44 (“The computer program products 103H include computer usable mediums in which objects may be stored.”). The objects stored in this nonvolatile memory include data to be displayed, such as multimedia files, image files, and video files. Ex. [1004], 3:63–4:19.

Ex. 2009, 36. That finding is equally applicable to this proceeding. In the ’1205 FWD, the panel concluded that Patent Owner was collaterally estopped, in light of the ’1892 FWD, “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” of the ’989 patent. Ex. 2011, 45–46. Because Patent Owner does not contest that Kloba’s computer program products 103H are “nonvolatile memory for storing files of data content for display,” we need not determine whether Patent Owner is collaterally estopped from doing so.

Thus, by virtue of its description of computer program products 103H, we find that Kloba teaches “[e]ach asset having as on-device components operating system and application software, [and] nonvolatile memory for storing files of data content for display to a consumer user of the device.”

ii. Hard drives 103F

As noted above, Petitioner also contends that a skilled artisan would have found it obvious to use hard drive 103F, a non-volatile memory and an on-device component, for storing files of data content for display. Pet. 27–28 (citing Ex. 1004, 13:31–33; Ex. 1003 ¶¶ 223, 225; Ex. 1013 (transcript of

Berg deposition), 120:3–8). Petitioner contends that a skilled artisan would have recognized that, for laptops and handheld computers, internal hard drives would have provided the benefit of storing (and not losing) objects when the device is powered down. *Id.* at 28 (citing Ex. 1003 ¶ 225). Patent Owner does not contest that Kloba’s hard drive 103F is an “on-device component” of a laptop or hand-held computer, but argues that hard drive 103F does not store files for display.⁵ Because we decide that Kloba’s description of computer program products 103H teaches this claim limitation, we need not determine whether Kloba’s description of hard drive 103F also would have rendered this limitation obvious.

b) Limitations 1[a]–1[e], 1[g], 1[h]

Petitioner contends correctly that limitations 1[a], 1[b], 1[c], 1[e], 1[g], and 1[h] are “materially identical” to limitations that were addressed in the ’1205 FWD for the ’989 patent. Pet. 29–32, 35–36, 47–49; Ex. 1011 (chart comparing claim 1 from the ’442 patent and the ’989 patent). Petitioner additionally argues that limitation 1[d] is “materially similar” to limitation 1[d] of the ’989 patent. *Id.* at 32; Ex. 1011.

Relying on substantially the same evidence that Petitioner cites from Kloba in this case (*see* Pet. 29–36, 47–49), in the ’1205 FWD we concluded that Kloba disclosed limitations 1[a]–1[e], 1[g], and 1[h]. Ex. 2011, 46–56, 68–69. For claim limitations 1[a], 1[b], and 1[h], the ’1205 FWD applied collateral estoppel based on the panel’s findings in the ’1892 FWD for identical limitations for claim 1 of the ’358 patent and, in the alternative,

⁵ As explained above, Patent Owner contests whether Kloba’s computer program products 103H are “on-device components.” PO Resp. 49–52.

found, based on the evidence from Petitioner and lack of dispute from Patent Owner, that Kloba teaches claim limitations 1[a], 1[b], and 1[h] of the '989 patent. *Id.* at 46–47 (citing Ex. 2009, 38).

Here, Patent Owner does not challenge Petitioner's contentions that Kloba discloses limitations 1[a]–1[e], 1[g], and 1[h] of the '442 patent. *See generally* PO Resp. 19–55.

Therefore, because the '1205 IPR presented the identical (or substantially identical) issues of whether Kloba discloses limitations 1[a]–1[e], 1[g], and 1[h], which Patent Owner had a full and fair opportunity to litigate, and because the panel's findings that Kloba discloses limitations 1[a]–1[e], 1[g], and 1[h] were necessary for the Board's determination of unpatentability for claim 1 of the related '989 patent, we find that collateral estoppel prevents Patent Owner from re-litigating these specific claim limitations. Similarly, because the '1892 IPR presented the identical issues of whether Kloba discloses limitations 1[a], 1[b], and 1[h], which Patent Owner had a full and fair opportunity to litigate, and because the panel's findings that Kloba discloses limitations 1[a], 1[b], and 1[h] were necessary for the Board's determination of unpatentability for claim 1 of the related '358 patent, we find that collateral estoppel prevents Patent Owner from re-litigating these specific claim limitations. Patent Owner does not contest that collateral estoppel applies to limitations 1[a]–1[e], 1[g], and 1[h]. *See generally* PO Supp. Br.

Regardless, and in the alternative, after considering the evidence Petitioner cites from Kloba, we find that 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]; Kloba's memory specifications, available storage space, screen size, etc., sent to Kloba's server during synchronization constitute operational status information and, in light of Multer's teachings, would have been communicated automatically from consumer device assets, satisfying limitation 1[c]; the tracked client behavior information sent from Kloba's clients to the server identify the particular manner in which the consumer device asset is used, satisfying limitation 1[d]; Kloba's collation of information and optimization of web content satisfy limitation 1[e]; Multer's teachings, combined with Kloba's teachings, would have resulted in consumer services, such as providing users with advertisements, and would have been on an autonomous basis, satisfying limitation 1[g]; 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. 1004, 3:12–14, 4:48–63, 5:29–32, 5:53–61, 6:4–41, 9:31–33, 9:57–67, 12:13–20, 16:63–17:5, 17:9–21, 18:42–44, 19:65–67, 20:18–21, 20:51–53, 21:34–48, 21:55–60, 21:67–22:1, 23:62–63, 24:10–45, 24:48–52, 25:38–39, 28:3–36, 29:31–33:67, 36:51–54, Figs. 1AA, 1F1, 1S, 1V, 1X, 5D, 5F; Ex. 1005, 35:13–18; Ex. 1003 ¶¶ 214–219, 228, 230–235, 237–238, 240–241, 244–245, 258, 265, 269; Pet. 29–36, 47–49. As a result, even without collateral estoppel, we are persuaded that Kloba discloses limitations 1[a]–1[e], 1[g], and 1[h].

Limitation 1[f] (“managing the plurality of consumer device assets by the remote computer server platform, by sending communications to one or more assets containing one or more management instructions that are based upon the results of having processed at least some of the received consumer usage information, said management instructions causing the display data content files stored in non-volatile memory on one or more of the assets to be automatically modified so as to provide a consumer service”)

For limitation 1[f], Petitioner relies on the combined teachings of Kloba and Hoyle. Pet. 36–42, 45–47.⁶ Kloba describes a “sync operation” with “various synchronization processes that can collect information from the Internet to a server, and to the client.” Ex. 1004, 5:29–31. According to Kloba, “the term sync is meant to refer to the overall operation of linking a client to a server” and “[s]ynchronization is meant to refer to the specific process of copying, adding, filtering, removing, updating and merging the information between a client and a server.” *Id.* at 5:46–50.

Figure 1X of Kloba is reproduced below:

⁶ Petitioner relies, in the alternative, on the combined teachings of Kloba and Davis. Pet. 42–45. Because we find that claim limitation 1[f] is taught by Kloba and Hoyle, we do not reach whether it also is taught by Kloba and Davis.

FIG. 1X

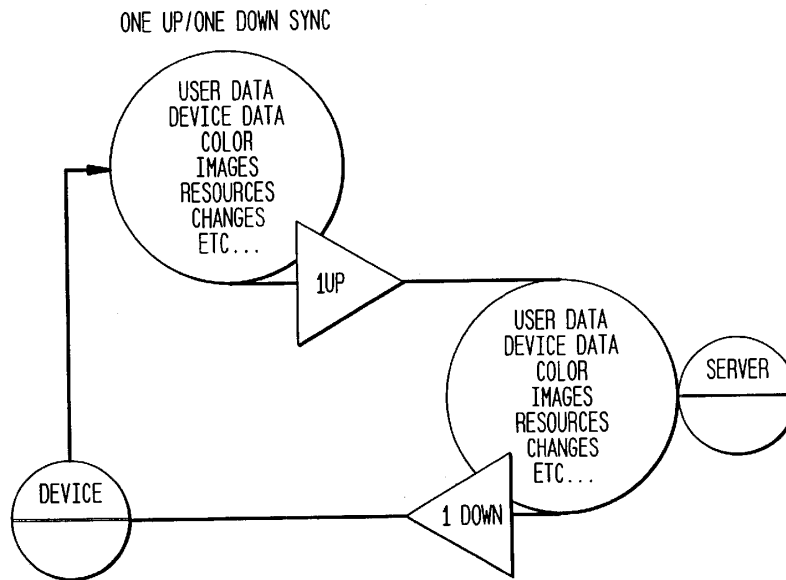


Figure 1X is a flowchart of a synchronization process. *Id.* at 20:50. In this process, “the device 106 or client 108 provides information about itself and the content it wishes to receive in a single ‘up’ transmission, and the server 104, upon identifying the device 106 or client 108, returns the desired information along with new synchronization changes in a single ‘down’ transmission.” *Id.* at 20:51–56. “Before being sent downstream the data is compared to the data that is known to be on the client and then the client is updated all at once in a one-up/one-down synchronization method, which is represented in FIG.1X.” *Id.* at 5:53–56. During the sync process, “[t]he server collates the information and sends the information in a one-down fashion,” which “optimizes the sync’s efficiency and speed.” *Id.* at 5:59–61.

In one aspect of the sync process, a control module of the client device identifies deltas, or sets of differences in the states of objects currently being offered and in the client device, and sends the deltas to a synchronization module of the server. *Id.* at 19:51–67. The synchronization

module synchronizes the deltas from the client with content, application, and service providers. *Id.* at 20:1–13.

Based on the information from provider(s) 128, synchronization modules 155 compile instructions to synchronize the client 108 with providers 128 (step 172D). Synchronization module 155 sends such instructions to client 108, plus updated data marker (step 172E).

Note this is the only transmission from the server 104 to the client 108 during the synchronization process. Thus, the invention achieves a one-up/one-down synchronization process, thereby improving performance. The instructions are transmitted via any reliable transport medium. . . . Control module 142 on client 108 then executes the instructions.

Id. at 20:13–22.

Petitioner contends that the sync process of Figure 1X is an example of “managing the plurality of consumer device assets by the remote computer server platform, by sending communications to one or more assets,” as recited in limitation 1[f]. Pet. 37 (citing Ex. 1004, 5:48–50, 5:59–61, 20:18–22, 20:42–48, 20:53–56, 34:52–54, Fig. 1X; Ex. 1003 ¶ 248).

As to “containing one or more management instructions that are based upon the results of having processed at least some of the received consumer usage information,” as recited in limitation 1[f], Petitioner relies on the combined teachings of Kloba and Hoyle. Petitioner contends that the instructions discussed above are management instructions because they manage clients by copying, adding, filtering, removing, updating, and merging information onto a client to synchronize the client with objects from providers. Pet. 37–38 (citing Ex. 1004, 5:48–52, 19:22–30, 20:13–22, Figs. 1H1, 1H2, 1I1; Ex. 1003 ¶ 248).

In addition, Kloba's "invention enables client 108 to record user/client behavior," examples of which include "tracking page impressions, such as tracking the number of times that a particular user has viewed a particular page or listened to a particular song, the amount of time a user spends viewing a page, or any other client activity." Ex. 1004, 16:64–17:3. This tracked information is transmitted by the client to the server upon synchronization. *Id.* at 17:18–19. The server sends the tracked information to an appropriate provider, who might pay compensation for this service. *Id.* at 17:19–22. Kloba also describes content sensitive objects that can be displayed on the client, such as advertisements, for which sources of the advertisements might pay the server to load them onto the client. *Id.* at 18:15.

Citing to examples shown in Figures 1H1, 1H2, and 1I1, Petitioner argues that Kloba's server compiles and sends client devices instructions for synchronizing clients with objects from content providers. Pet. 38 (citing Ex. 1004, 19:22–30, 20:16–17). Kloba states that "FIGS. 1H1 and 1H2 collectively illustrate a synchronization process that occurs subsequent to the initialization process of FIG. 1G." Ex. 1004, 18:35–37. "The full normal synchronization step discussed at step 170E in FIG. 1H1 is shown in FIG. 1I1. This process applies to a case where the client 108 communicates directly with the server 104." *Id.* at 19:46–49. In the example of Figures 1H1 and 1H2, Kloba states as follows:

In steps 170G, 170H, and 170I, the server 104 determines what instructions are needed to cause the client 108 to roll back to the known state associated with data marker C2 identified in step 170F, and what instructions are needed to cause the client 108 to move forward from the previous state associated with data marker C2 to the current state associated with data marker C3.

In steps 170J, the instructions determined from steps 170G, 170H, and 170I are sent to client 108, along with the new data marker C3 (6332 in FIG. 63B).

Id. at 19:22–31. This example includes “instructions . . . needed to cause the client 108 to roll back to [a] known state” and “instructions . . . needed to cause the client 108 to move forward from the previous state.” *Id.* In the example of Figure 11I, Kloba states that

[s]ynchronization modules 155 synchronize the deltas from client 108 with providers 128 (step 172C). Based on the information from provider(s) 128, synchronization modules 155 compile instructions to synchronize the client 108 with providers 128 (step 172D). Synchronization module 155 sends such instructions to client 108, plus updated data marker (step 172E).

Id. at 20:11–17.

In Petitioner’s asserted combination of Kloba and Hoyle, skilled artisans

would have been motivated to modify Kloba’s server based on Hoyle’s teaching that the server selects advertisements to send to users based on received computer usage information, such that Kloba’s server would select certain advertisements or context-sensitive objects to be added, removed, or updated in the stored display content files of client devices based on processing the received tracked client behavior information; and would include instructions in the one-down synchronization transmission that cause the client’s files to be automatically added, removed, or updated with these selected advertisements and objects.

Pet. 39–41 (citing Ex. 1009, 3:34–38, 6:1–5, 7:9–13, 7:38–44, 8:37–52, 8:60–63, 14:46–60, 16:14–16, 16:24–37, 16:44–52, 18:65–19:2, Fig. 10; Ex. 1003 ¶¶ 252–253). Petitioner argues that a skilled artisan would have combined these teachings to take advantage of the greater effectiveness of

targeted advertisements, compared to un-targeted advertisements. *Id.* at 41 (citing Ex. 1003 ¶ 253). Mr. Rysavy testifies that “[t]he combination of Kloba’s synchronization transmission with instructions for loading objects onto mobile devices and Hoyle’s analysis of consumer usage information and responsive advertisements would have been a predictable use of prior art elements according to their established functions,” and that Hoyle’s technique would have “improve[d] Kloba’s server in a similar way, by allowing the server to use tracked client behavior information to select advertising and context-sensitive objects to be added to or updated on mobile devices by way of Kloba’s one-up/one-down synchronization process.” Ex. 1003 ¶ 254.

As to reasonable expectation of success, Mr. Rysavy testifies that a skilled artisan “could easily have modified Kloba’s system by programming the server to additionally compile instructions to synchronize targeted advertisements onto the user devices based on consumer usage information related to tracked user/client behavior instead of or in addition to other usage information,” and that “[t]he operation resulting from this simple modification would have been a simple variant of Kloba’s existing operation of causing a mobile device to be loaded with selected objects such as advertisements.” *Id.*

As to “[s]aid management instructions causing the display data content files stored in non-volatile memory on one or more of the assets to be automatically modified so as to provide a consumer service,” as recited in limitation 1[f], Petitioner argues that Kloba describes the control module executing the instructions, resulting in advertisements being loaded onto and processed by clients, which would display the advertisements to a user.

Pet. 45–47 (citing Ex. 1004, 5:48–50, 18:11–15, 19:35–36, 20:23–25, Figs. 1H1, 1I1; Ex. 1003 ¶¶ 248, 258, 262).

Patent Owner argues that the instructions discussed at Kloba, Ex. 1004, 20:11–17, are limited to “special limited purpose *updating* instructions used *only* for modifying existing data files already residing on mobile devices with incremental ‘deltas’ changes.” PO Resp. 21–22. Patent Owner characterizes this as “its own discrete ‘sub-process’ within Kloba’s overall sync operation.” *Id.* at 6 (citing Ex. 2004, 34). According to Patent Owner, “Petitioner has expressly conceded that Kloba’s ‘deltas’ instructions therefore do *not* actually operate as *downloading* instructions for causing new data files to be stored onto mobile devices.” *Id.* at 22 (citing Ex. 2003, 14–15); *see also id.* at 10 (“Petitioner has previously made extensive additional admissions that these Kloba ‘instructions’ disclosed at 20:11–17 are special limited purpose ‘deltas’ instructions used *only* as part of the discrete ‘deltas’ synchronization process, and *only* for effectuating the sole function carried out by that process of making ‘deltas’ changes to *update* existing data files already residing on mobile devices.” (bold emphasis omitted)). Patent Owner continues that Kloba does not teach that its “‘instructions’ disclosed at 20:11–17 are somehow generic multipurpose synchronization instructions that perform a variety of different types of synchronization functions.” *Id.* at 23; *see also id.* at 24 (“Kloba also lacks any teaching that the ‘instructions’ disclosed at 20:11–17 are employed outside the confines of the ‘deltas’ synchronization process to perform other types of synchronization functions within other types of synchronization processes.”).

Patent Owner appears to argue that Kloba’s synchronization of anything other than “deltas” takes place without instructions: “Kloba contains *no teaching or suggestion whatsoever* that the server performs these other types of synchronization processes by employing any sort of putative management instructions, much less the particular ‘instructions’ disclosed at 20:11–17.” *Id.* at 24; *see also id.* at 25 (“[T]he Petition also repeatedly invokes key Kloba passages that address the particular synchronization process used for downloading (i.e., ‘adding’) new data file objects onto mobile devices. But once again, Kloba *lacks even a scintilla of disclosure* indicating that this downloading synchronization process involves any use of the 20:11–17 ‘instructions’ or any other ostensible management instructions.” (internal citations omitted)); Sur-reply 4 (“But the insurmountable hurdle that Petitioner’s obviousness combinations have faced is that Kloba does *not* actually disclose any ‘management instructions’ used by its server to *download new data files* onto mobile devices.”).

Patent Owner argues that Petitioner’s theory of obviousness is limited to selecting and downloading new targeted advertisements to a mobile device, rather than updating an existing advertisement on the mobile device. *Id.* at 20–21; *see also* Sur-reply 2 (“Under the combined teachings of Kloba/Hoyle . . . , the *only* synchronization process that would result from the server’s processing of [tracked client behavior information, TCBI] is the downloading of new data files onto mobile devices.”). Thus, Patent Owner argues, the “deltas” instructions at Ex. 1004, 20:11–17, are not applicable to the new advertisements in Petitioner’s combination and Kloba includes no teaching of using instructions for downloading new files that would be applicable to the new advertisements in Petitioner’s combination. *Id.* at 21–

22; *see also* Sur-reply 1 (Petitioner “fail[s] to demonstrate that Kloba/Hoyle . . . satisf[ies] the express requirement of claim elements 1[f]/20[g] calling for ‘management instructions’ that are based upon the results of the server’s processing of alleged TCBI ‘consumer usage information,’” “principally because Petitioner cannot make the underlying showing that these obviousness theories effectively depend upon -- i.e., that Kloba teaches ‘management instructions’ used by its server for *downloading new data files* onto mobile devices.”).

Patent Owner mischaracterizes Petitioner’s arguments and Kloba’s disclosure. First, we have reviewed the instances in which Patent Owner argues that Petitioner admitted that Kloba, at 20:11–17, limits its discussion of instructions to deltas, to the exclusion of other aspects of synchronization. PO Resp. 5–9, 20–32; Sur-reply 1–9. At most, Petitioner acknowledges that Kloba’s discussion of “deltas” provides context for its discussion of “instructions” and confirms that instructions related to “deltas” are included in the synchronization. Ex. 2002⁷, 110–11, 115–17, 119, 131–32, 134–36, 149, 152–56, 200–01; Ex. 2003, 13–19, 40–43; Ex. 2004⁸, 29, 34, 37, 63–64; Ex. 2006, 95–96.

Upon review of the evidence, we find that Kloba teaches that its server sends instructions that cause the client to download new files or

⁷ For Exhibit 2002, Patent Owner refers to page numbering that it added to the lower right of each page, rather than the page numbering of the original deposition transcript. For consistency, we use Patent Owner’s page numbering.

⁸ For Exhibit 2004, Patent Owner refers to page numbering that it added to the lower right of each page, rather than the page numbering of the original Federal Circuit brief. For consistency, we use Patent Owner’s page numbering.

objects. As shown in Figure 1X, reproduced above, Kloba describes a synchronization process in which a client provides information about itself and the content it wants to receive in a single “up” transmission and the server returns the desired information along with new synchronization changes in a single ‘down’ transmission. Ex. 1004, 20:50–56. By “synchronization,” Kloba “refer[s] to the specific process of copying, adding, filtering, removing, updating and merging the information between a client and a server.” *Id.* at 5:48–50. In this context, the process of Figure 1I1, characterized as a “full normal synchronization step” (*id.* at 19:46–47), includes both adding new files/objects and updating existing files/objects. This process includes “[s]ynchronization modules 155 synchroniz[ing] the deltas from client 108 with providers 128 (step 172C).” *Id.* at 20:11–13. When Kloba describes “[b]ased on the information from provider(s) 128, synchronization modules 155 compile instructions to synchronize the client 108 with providers 128 (step 172D)” and “[s]ynchronization module 155 sends such instructions to client 108,” *id.* at 20:13–17, this includes sending instructions to synchronize files/objects already on the client. This passage does not purport to limit the instructions to those relating to deltas. Moreover, even if this passage is in the context of deltas expressly, we do not interpret it to mean that the server sends no instructions related to other aspects of synchronization, such as adding new files to the client. As Kloba states, “this is the only transmission from the server 104 to the client 108 during the synchronization process. Thus, the invention achieves a one-up/one-down synchronization process, thereby improving performance. The instructions are transmitted via any reliable transport medium.” *Id.* at 20:18–22.

The Board made a similar finding in the '1205 FWD in light of Patent Owner's similar mischaracterization of Petitioner's position in that proceeding:

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. . . . 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, 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. 1004, 5:46–50).

Ex. 2011, 58–59 (internal citations omitted).⁹ We agree with the prior panel and find that Kloba teaches modules that compile instructions for adding files and objects as well as updating them.

Moreover, Figures 1H1 and 1H2 of Kloba discuss additional express examples of instructions for advancing or rolling back the client to a previous or current state. Ex. 1004, 19:22–31. Patent Owner argues that, in this example, "Kloba teaches that 'data marker' instructions instead function as *updating* instructions used for modifying existing data files already residing on mobile devices (EX 1004 19:35–37)," and that Petitioner cannot "attempt to characterize these 'data marker' instructions as being generic

⁹ Petitioner asks us to collaterally estop Patent Owner from contesting this claim limitation. Pet. Supp. Br. 5–7. Because we find Petitioner's showing persuasive, we do not address whether Patent Owner is estopped from arguing that this limitation is not met.

multipurpose synchronization instructions that can be employed in a variety of different synchronization processes to perform a variety of different synchronization functions, including for downloading new data files onto mobile devices,” because “Kloba discloses the use of its ‘data marker’ instructions only in the limited context of carrying out one special type of synchronization process needed for correcting a prior unsuccessful sync attempt, within which their synchronization function is restricted to updating existing stored data files on a mobile device based upon the server’s processing of ‘data markers.’ (EX 1004 18:63–19:37).” PO Resp. 31–32. Patent Owner misunderstands Kloba. What Patent Owner refers to as “data marker” instructions are not limited to synchronizing “deltas,” and include instructions to add or delete files/objects to or from the client, as a state change in the client logically could include files in one state not present in another. This is additional evidence that Kloba’s synchronization process sends from the server to the client instructions not just to update existing files but to add new files.

We find that Petitioner’s argument and evidence persuasively shows 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* § I.C above.

Having considered the evidence and arguments from both parties, we are persuaded that 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. Ex. 1004, 17:6–23, 19:22–31, 20:13–17. We find also that Petitioner has persuasively shown Hoyle to teach that skilled artisans knew that 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.

Ex. 1009, 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 to target the information to the interests of the user of the client device more accurately. *Id.* at 7:41–44.

In view of these facts, we are persuaded that a skilled artisan would have had reasons, having a rational underpinning, 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. 40–42 (citing Ex. 1003 ¶¶ 252–256). We determine 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, and a skilled artisan would have recognized that the technique would have improved 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 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.

We note that the Board made similar findings based on similar evidence in the '1205 FWD. Ex. 2011, 63–65.

3. Dependent Claims 2, 3, 5, 6, and 13

Petitioner contends correctly that the additional limitations recited in claims 2, 3, 5, and 13 are “identical” to the additional limitations recited in claims 2, 3, 5, and 13 of the '989 patent, which were addressed in the '1205 FWD. Pet. 49–51, 55; Ex. 1011 (chart comparing claims 2, 3, 5, and 13 from the '442 patent and the '989 patent). Claim 6 of the '442 patent is nearly identical to claim 6 of the '989 patent, changing an “or” to an “and,” which the parties have not indicated is relevant to this proceeding. Ex. 1011 (chart comparing claim 6 of the '442 patent and the '989 patent). Relying on substantially the same evidence that Petitioner cites from Kloba in this case (*see* Pet. 49–51, 53–55), in the '1205 FWD we concluded that Kloba teaches the additional limitations of claims 2, 3, 5, 6, and 13. Ex. 2011, 69–70, 75–80.

Collateral estoppel applies to the added limitations of claims 2, 3, 5, 6, and 13, because Patent Owner had a full and fair opportunity to address materially similar limitations in similar/identical claims 2, 3, 5, 6, and 13 of the '989 patent. Patent Owner does not address claims 2, 3, 5, 6, and 13 of the '442 patent in this proceeding separately from its arguments that address claims 1 and 4 (discussed in detail below).

Regardless, and in the alternative, we find that the additional limitations are taught by Kloba for the reasons stated in the Petition (at 49–51, 53–55) and based on the findings made in the '1205 FWD, which found, based on similar evidence, that Kloba teaches identical or nearly identical

claim limitations of the '989 patent. Ex. 2011, 69–70, 75–80. We adopt and incorporate by reference the cited portions of the '1205 FWD.

4. *Dependent claim 4*

Claim 4 depends on claim 3 and adds

wherein the remote computer server platform further manages the plurality of consumer device assets, by sending communications to one or more assets containing one or more *additional management instructions that are based upon the results of having processed at least some of the stored consumer preference information*, said additional management instructions causing the display data content files stored in non-volatile memory on one or more of the assets to be automatically modified so as to provide a consumer service, and wherein said communications comprise at least one selected from the group consisting of GPRS data messages, EDGE data messages, or other wireless packet switched data messages.

Patent Owner contends that claim 4 requires “‘management instructions’ that are themselves predicated on the outcome of the server’s processing of its stored ‘consumer preference information.’” PO Resp. 41 (emphasis omitted). Although Petitioner does not expressly state that it agrees with this construction, Petitioner’s allegations are consistent with Patent Owner’s reading of claim 4. Pet. 51–52.

Claim 3, for its part, depends from claim 2 and adds “wherein the remote computer server platform stores information indicative of preferences that one or more individual consumer users of the plurality of consumer device assets have for particular display data content files.” For claim 3, Petitioner (Pet. 50) identifies several alleged examples of consumer preference information stored by Kloba’s server, including the following:

The notification module 132 sends objects to clients 108 beyond objects related to channels associated with clients 108. Such objects could be requested by client 108 in advance. For example, a client 108 could ask for a notification when an event happens, such as when a stock reaches a target price. When the event occurs, the notification module 132 would cause an appropriate notification(s)/object(s) to be sent to the client 108.

Ex. 1004, 10:5–12;

Alternatively, the notification module 132 may send objects to clients 108 without any prior explicit request from the client 108. For example, the notification module 132 might send channels to clients 108 when such channels are identified to be similar to those already selected by the clients.

Ex. 1004, 10:12–17;

The 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.

Id. at 8:7–11;

FIG. 12 is an example screen shot representing a channel subscription page displayed on the client 108. When in the off-line mode, a user of the client 108 can elect to subscribe to channels listed in the channel subscription page. In an embodiment, the selected channels are loaded on the client 108 during the next synchronization operation.

Id. at 34:49–54. Patent Owner does not appear to contest that these are examples of consumer preference information. We find that they are. For example, a notice generated when a selected stock reaches a certain price reflects that the user of the client device, a consumer, prefers information about that stock. Likewise, a selection of channels by the user indicates that the user/consumer prefers information related to those channels.

For claim 4, Petitioner points to its discussion for claim limitation 1[f] that Kloba's server compiles and sends instructions to clients as part of the one-down synchronization transmission that causes objects to be loaded onto clients. Pet. 51 (citing Ex. 1004, 5:54–56, 20:13–17, 20:53–56). Petitioner argues that skilled artisans

would have found it obvious that the server's instructions that cause clients to load objects requested in advance or channels similar to a client's previously-selected channels would be [“]based upon the results of having processed at least some of the stored consumer preference information,” such as stored information relating to the client's requested objects or previously-selected channels.

Id. at 51–52 (citing Ex. 1003 ¶ 284). According to Petitioner, Kloba describes a server, during a first synchronization, loading a client with channels selected by the user and, during a future synchronization, sending channels to the client that are similar to those selected by the user, making the instructions of the future synchronization “additional management instructions.” *Id.* at 52 (citing Ex. 1004, 8:16–17, 10:15–24).

In arguments that track those it presents for claim limitation 1[f], Patent Owner argues that Petitioner relies on “deltas” instructions that “would ostensibly serve as *downloading* instructions for causing the new ‘notification object’ and ‘similar channel’ data files that respectively result from such processing to be stored onto mobile devices.” PO Resp. 42–43 (citing Ex. 1004, 20:11–17). Patent Owner argues that Petitioner's position is unsupportable for the reasons given for claim limitation 1[f]. *Id.* at 44. *See id.* (“[D]eltas’ instructions are based exclusively upon the server's processing of ‘deltas’ information received from mobile devices and providers 128, and thus would *never* be predicated upon processing

Petitioner’s alleged examples of stored ‘consumer preference information.’”); Sur-reply 13 (“Patent Owner has demonstrated that the *only* synchronization process that would result from the Kloba server’s processing of Petitioner’s two examples of ‘consumer preference information’ is the downloading of new data files onto mobile devices.”), 14 (“Petitioner confesses that here it is advancing ‘essentially similar reasons’ for how Kloba supposedly discloses putative *downloading* ‘management instructions’ as it did for claim elements 1[f]/20[g]. (Reply 21). Accordingly, these reasons fail on the same grounds Patent Owner has already established above.”).

As explained for claim limitation 1[f], above, Petitioner does not limit its arguments and evidence to “deltas” instructions.¹⁰ For the reasons we give for limitation 1[f], we find that Kloba teaches that its server sends instructions that cause the client to download new files or objects and we are not persuaded by Patent Owner’s arguments to the contrary. Those new files or objects could include the stock quotes and additional similar channels described in Kloba. Ex. 1004, 8:7–11, 10:5–17, 34. Such objects can be

¹⁰ The Federal Circuit addressed similar arguments presented by Patent Owner in the ’1205 IPR for similar claim language in claim 4 of the ’989 patent, and concluded that

[t]he Board further explained that “Petitioner is not relying solely on the ‘deltas’ in this case to be the ‘management instructions,’” but rather that, “Petitioner relie[d] on the synchronization process more generally.” It is that synchronization process, taken together with the teachings of Hoyle, not the delta information, that the Board found satisfied the limitations. This synchronization process theory was presented by Amazon in its Petitions.

Ex. 2026, 10 (internal citations omitted).

sent “during the next synchronization with the client 108.” *Id.* at 10:20–24. Kloba explains that its server transmits all objects to the client in a single transmission during a one-up/one down synchronization process. *Id.* at 5:29–31, 5:48–50, 5:53–61, 20:18–22, 20:50–56, Fig. 1X. Thus, the instructions to synchronize the client with providers sent during the synchronization process would include instructions to synchronize the client with the stock quote notification objects and similar channels. *Id.* at 5:53–61, 10:5–24, 20:13–22, Fig. 1X. Because the instructions to synchronize the client with the notification objects and similar channels relate to the processor analyzing user requests or currently selected channels and determining that the user desires the notifications and similar channels, those instructions are “based upon the results of having processed at least some of the stored consumer preference information.” Ex. 1003 ¶ 284.

Regarding

said additional management instructions causing the display data content files stored in non-volatile memory on one or more of the assets to be automatically modified so as to provide a consumer service, and wherein said communications comprise at least one selected from the group consisting of GPRS data messages, EDGE data messages, or other wireless packet switched data messages,

as recited in claim 4, Petitioner refers to the evidence and argument it presents for the preamble of claim 1 and claim limitation 1[f]. Patent Owner does not separately contest that Kloba teaches these aspects of claim 4. For the reasons given for claim 1, above, we find that Kloba teaches these aspects of claim 4.

Accordingly, Petitioner persuasively shows that Kloba teaches the limitations of claim 4.¹¹

5. Conclusion of Obviousness

In sum, as detailed above, a combination of Kloba, Multer, and Hoyle teaches each limitation of claims 1–6 and 13. A skilled artisan would have had reasons, with rational underpinning, to combine the teachings of Kloba, Multer, and Hoyle. Patent Owner does not argue or introduce evidence of objective indicia of nonobviousness. Upon consideration of all the evidence, we conclude that Petitioner has proved by a preponderance of the evidence that claims 1–6 and 13 would have been obvious over Kloba, Multer, and Hoyle.

E. Obviousness of claims 7, 14, 16, 17, and 19–25 over Kloba, Multer, Hoyle, and Loughran; and over Kloba, Multer, Davis, and Loughran

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

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, Hoyle, and Loughran; and (ii) the combined teachings of Kloba, Multer, Davis, and Loughran. Pet. 4–5, 55–68. For the reasons discussed in Section I.D above, we need not decide if claims 7, 14, 16, 17, and 19–25 would have been

¹¹ Petitioner asks us to collaterally estop Patent Owner from contesting this claim limitation. Pet. Supp. Br. 8–9. Because we find Petitioner’s showing persuasive, we do not address whether Patent Owner is estopped from arguing that this limitation is not met.

obvious in view of the combined teachings of Kloba, Multer, Davis, and Loughran.

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

1. Scope and content of the prior art – overview of Loughran (Ex. 1006)

Loughran describes a system for performing autonomous data transfer between an email server and a mobile device such as a notebook computer. Ex. 1006, 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.

2. Dependent Claims 7, 14, and 17

Petitioner asserts that the combination of Kloba, Multer, Hoyle, and Loughran renders obvious the subject matter of dependent claims 7, 14, and 17, which ultimately depend respectively from claim 4. Pet. 55–59. Petitioner supports these assertions with citations to the record and the

testimony of Mr. Rysavy. *Id.* (citing Ex. 1003 ¶¶ 268–269, 311–314, 318, 329). For the reasons given above, we conclude that claim 4 is unpatentable over the combination of Kloba, Multer, and Hoyle.

Patent Owner does not address claim 7 separately. Patent Owner includes claims 14 and 17 in its discussion of “consumer preference information,” but does not otherwise separately contest Petitioner’s allegations for claims 7, 14, and 17. PO Resp. 41–48.

As to the additional limitations of claims 7, 14, and 17, we have analyzed Mr. Rysavy’s uncontroverted testimony, credit that testimony, and find that the combination of Kloba, Multer, Hoyle, and Loughran teaches the additional limitations of claims 7, 14, and 17. Ex. 1003 ¶¶ 268–269, 311–314, 318, 329; Pet. 55–59. For example, for claim 7, Loughran’s disclosure of an alert module that is maintained in a standby mode and powers up on receipt of an SMS message, combined with the teachings of Kloba, teaches “the remote computer server platform communicates a Short Message Service (SMS) message to at least one of the plurality of consumer device assets that causes one or more components of said asset to power up from a powered down state for facilitating the exchange of further communications between said asset and the remote computer server platform” limitation of claim 7, as well as the similar recitations of claims 14 and 17. Ex. 1006 ¶¶ 19, 25, 39–41, 45, 47, 49; Ex. 1003 ¶¶ 311–314. As to the “one or more management instructions that the remote computer server platform determines to send based upon the results of having processed at least some of the consumer preference information,” as recited in claims 14 and 17, this limitation is taught by Kloba for the reasons given above for claim 4.

Petitioner also cites the '1205 FWD in addressing claims 7, 14, and 17. Pet. 55–59 (citing Ex. 2011, 75–76, 82–83). We adopt and incorporate by reference the cited portions of the '1205 FWD. We note also that the '1205 FWD adopted and incorporated by reference findings from the '1892 FWD, which addressed a materially similar claim 7 of the '358 patent. *Id.* at 82 (incorporating Ex. 2009, 55–56, 63). We likewise adopt and incorporate by reference the findings at pages 62–63 of the '1892 FWD as to claim 7 of the '358 patent. For the additional reasons set forth in the '1205 and '1892 FWDs, we find that the combination of Kloba, Multer, Hoyle, and Loughran teaches the additional limitations of claims 7, 14, and 17.

3. *Independent Claim 20*

Petitioner asserts that the combination of Kloba, Multer, Hoyle, and Loughran renders obvious the subject matter of independent claim 20. Pet. 61–67. Independent claim 20 includes limitations materially similar to limitations in independent claim 1. *Id.* at 66–67 (mapping similar claim 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. *Id.* at 65–66. Petitioner supports its showing with citations to the record, the testimony of Mr. Rysavy, and citations to the '1205 FWD. *Id.* 62–64 (citing Ex. 1003 ¶¶ 221–269, 337–339, 341–345, 348–366; Ex. 1004; Ex. 1005; Ex. 1006; Ex. 2011, 81–82). Patent Owner argues claims 1 and 20 together. *See* PO Resp. 19–41, 48–55.

For reasons similar to 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. Pet. 61–67.

Based on the foregoing discussion, including the discussion of claims 1 and 7, and the determination of collateral estoppel with respect to the materially similar limitations of claim 20 (limitations 20[a]–20[f] and 20[h]–20[j]) as compared to claims 1 and 7, Petitioner shows by a preponderance of evidence that claim 20 would have been obvious over Kloba, Multer, Hoyle, and Loughran.

4. Dependent claims 16 and 19

Claim 16 depends from claim 14; claim 19 depends from claim 17. Both add (emphasis added)

wherein the remote computer server platform includes in one or more of the aforesaid wireless packet switched data message communications containing one or more management instructions sent to one or more of the plurality of consumer device assets a *unique identifier* of the particular receiving consumer device asset, and *wherein said unique identifier comprises in whole or in part an identification code specific to that particular receiving consumer device asset.*

As to this limitation, Petitioner contends that Kloba describes using TCP/IP for server-client communications and that its client devices interact directly with the Internet, without a router. Pet. 60 (citing Ex. 1004, 4:45–63, 5:9–10, 9:57–67, 12:13–16, 21:67–22:1, Figs. 1V, 30, 36; Ex. 1003 ¶ 326).

Mr. Rysavy testifies as follows:

The IP address allows messages sent over TCP/IP to be properly routed to the intended target device. For an IP data packet to reach an intended remote target device over the

internet, the packet's sender must insert the IP address of the target device into the packet.

Ex. 1003 ¶ 325.¹² Petitioner contends that a skilled artisan would have understood an IP address in Kloba's communication to be a unique identifier for the intended target of the communication and that the sender of the communication must insert the client device's IP address into the communication when sending it over the Internet. Pet. 60–61 (citing Ex. 1004, 4:53–58, 5:29–32; Ex. 1003 ¶¶ 325–326).¹³

Patent Owner responds that Kloba does not contain an express disclosure of a unique identifier and, instead, Petitioner is relying on an inherency theory that Kloba's disclosure does not support. PO Resp. 57; Sur-reply 24. Patent Owner argues that Petitioner's expert in the '1205 IPR, Dr. Kesidis, admitted that Kloba's mobile devices, when wirelessly

¹² Mr. Rysavy testifies that “[a]dditionally, if one or more Network Address Translators (‘NATs’) exist between the sending device and the target device, the sender must insert the IP address of the NAT plus the destination port number corresponding to the target device, in which case this combination will be unique to the target device sitting behind the NAT.” Ex. 1003 ¶ 325. Patent Owner contends that this is an additional inherency argument and provides argument in response. PO Resp. 63–64; Sur-reply 26–27. Because we find that Kloba teaches including a unique identifier, and because Patent Owner is collaterally estopped from arguing otherwise, we do not reach this additional potential teaching of a unique identifier in Kloba.

¹³ Petitioner argues, in the alternative, that “at a minimum [persons of ordinary skill in the art] would have found it obvious for Kloba's server to include a unique IP address of a target client device in a wireless packet switched data message communication in the manner described above, to ensure that the communication is routed to the intended device.” Pet. 61. Patent Owner contests this argument. PO Resp. 62. Because we find that Kloba teaches including a unique identifier, and because Patent Owner is collaterally estopped from arguing otherwise, we do not reach whether this unique identifier also would have been obvious.

connected to the Internet (as opposed to a cell phone network) would have been connected via Wi-Fi to a wireless router, and that communications conducted through such a router would not have included destination IP addresses. PO Resp. 59 (citing Ex. 2007 (Kesidis Dep. Tr.) 116–17, 119–20, 150–51, 153–55, 161–63, 168). Patent Owner contends that this possibility defeats Petitioner’s inherency argument. *Id.* at 59–60.

Patent Owner further argues that Petitioner is incorrect in arguing, and prior Board decisions are incorrect in finding, that Kloba describes a router-less method by which Kloba’s mobile devices connect wirelessly to the Internet. *Id.* at 60–66; Sur-reply 24–26.

First, Patent Owner is collaterally estopped from contesting that Kloba teaches the additional limitation of claims 16 and 19. Collateral estoppel precludes a party from re-litigating 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.

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

In the ’1205 FWD, the Board found that Kloba teaches the additional limitation of claims 16 and 19 of the ’989 patent. Ex. 2011, 83–85. The additional limitation of claims 16 and 19 of the ’989 patent is identical to the additional limitation of claims 16 and 19 of the ’442 patent (including the unique identifier). Ex. 1011 (claim chart comparing claims 16 and 19 of the ’989 patent to claims 16 and 19 of the ’442 patent). Thus, the ’1205 FWD presented the identical issue and actually litigated and adjudicated the issue. We address Patent Owner’s argument as to the identity of the issue below.

Resolving this issue was necessarily required to determine whether claims 16 and 19 of the '989 patent were unpatentable. Ex. 2011, 83–85. Patent Owner was fully represented in the '1205 IPR and Patent Owner does not contend otherwise.

Citing to the briefing in the '1205 IPR, Petitioner argues that “[i]n IPR2019-01205, the parties presented and extensively litigated the identical issue of whether Kloba discloses the ‘unique identifier’ limitations.” Pet. Supp. Br. 3–4. Indeed, the Board observed that Patent Owner argued, as it does here, that the mobile devices of Kloba were typically connected wirelessly to the Internet through a router and, thus, the communications would have had the IP address of the wireless router rather than the IP address of the mobile devices. Ex. 2011, 83. Patent Owner relied on expert testimony to support these arguments. *Id.* Patent Owner also alleged similar admissions by Dr. Kesidis in his deposition testimony in the '1205 IPR. *Id.* at 84. Petitioner responded in that proceeding by arguing, as it does here, that Kloba’s Figures 1V, 30, and 36 show a direct connection between mobile devices and Kloba’s server over the Internet without using a router. *Id.* Petitioner also showed that Patent Owner’s expert, Mr. Berg, admitted that devices can directly connect to a server through the Internet and conceded that Kloba does not discuss routers. *Id.* In its sur-reply in the '1205 IPR, Patent Owner did not directly address this evidence and instead argued that Petitioner presented an inherency argument that was unsupported because Petitioner admitted that the unique identifier for a particular device is only sometimes sent by Kloba’s server. *Id.* at 85. Considering this argument and evidence, the '1205 FWD

[found] 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.

Id. at 85.

The Federal Circuit affirmed these findings, concluding that these findings were supported by substantial evidence. [Patent Owner's] expert witnesses admitted that devices can directly connect to a server through the internet without the use of an intermediate router and that Kloba makes no mention of routers. And none of the Board's findings on this limitation were seriously disputed by [Patent Owner].

Ex. 2026, 11 (internal citations omitted). The Federal Circuit observed that the Board did not hold Petitioner to an improper standard for inherency because

the Board did not rely on inherency for Kloba's disclosure of the "unique identifier." Indeed, the Board explicitly noted that, "[c]ontrary to Patent Owner's arguments, inherency is not at issue here." Instead, the Board found that a person of ordinary skill would have understood Kloba to disclose a client and server in direct communication, without the use of an intermediate router, where said communications would necessarily include the unique IP address of the receiving device. The Board found that this unique IP address satisfied the "unique identifier" limitation of the asserted claims. This finding is not based on inherent disclosure.

Id. at 10 (internal citations omitted).

Patent Owner argues that collateral estoppel should not apply to the '1205 FWD's conclusion that Kloba teaches the additional limitation of

claims 9 and 16 because the '1205 FWD did not address the identical issue that we are being asked to resolve. PO Supp. Br. 10. Patent Owner argues that Petitioner contends, in this proceeding, that Kloba inherently discloses unique identifiers, while “the Federal Circuit found that inherency theories were not at issue in the '1205 IPR.” *Id.* (citing Ex. 2026, 10–11). To the contrary, Petitioner does not argue inherency in this proceeding and, instead, presents substantially the same arguments and evidence as it did in the '1205 IPR. In the '1205 FWD, the Board explained that Patent Owner mischaracterized Petitioner’s arguments as grounded in inherency. Ex. 2011, 85. Patent Owner similarly mischaracterizes Petitioner’s similar arguments in this proceeding as grounded in inherency.

Patent Owner further argues that the only examples of substantial evidence found by the Federal Circuit as supporting the Board’s '1205 FWD on this point was testimony by Mr. Berg that “ha[s] never been relied upon by Petitioner herein.” PO Supp. Br. 10. That is inaccurate. Petitioner raises this testimony in the Reply to rebut Patent Owner’s arguments. Reply 22 (citing Ex. 1013, 148:16–25, 156:6–15).

In any case, the '1205 FWD resolved the identical issue, whether Kloba teaches the additional limitation of claims 16 and 19. Patent Owner’s position now essentially is that we are not considering the identical issue in this proceeding because the parties’ arguments and evidence are not identical. The Federal Circuit has rejected this approach. *See Dana v. E.S. Originals, Inc.*, 342 F.3d 1320, 1325 (Fed. Cir. 2003) (“That statement does not indicate that there is any difference in the issues presented in the two cases. Instead, it simply reflects the defendants’ wish to buttress their case through different evidence, including a new expert witness declaration. The

actions involve the same patent, the same accused products, and the same argument with respect to activation of the lights on the footwear. As such, the issues presented to the district court in this case are identical to those resolved by the district court in the California action.”); *Aspex Eyewear, Inc. v. Zenni Optical Inc.*, 713 F.3d 1377, 1382 (Fed. Cir. 2013) (“The selection of additional claims for litigation and additional terms for ‘construction’ does not override the holding of non-infringement. In determining whether Aspex had a full and fair opportunity to litigate the dispositive claim limitations in the prior proceeding, ‘[i]t is the issues litigated, not the specific claims around which the issues were framed, that is determinative.’” (quoting *Westwood Chem., Inc. v. United States*, 525 F.2d 1367, 1372 (Ct. Cl. 1975))).

Patent Owner (PO Supp. Br. 10) also argues that the issue was not actually litigated because the Federal Circuit found that “none of the Board’s findings on this limitation were seriously disputed by [Patent Owner].” Ex. 2026, 11. This argument is misplaced. Patent Owner argued extensively in the ’1205 IPR that Kloba does not teach the additional limitation of claims 16 and 19, as set forth in the ’1205 FWD, at 83–85. That Patent Owner did not meaningfully contest or rebut the argument and evidence on which Petitioner ultimately prevailed does not mean that Patent Owner did not actually litigate the issue whether Kloba teaches the additional limitation of claims 16 and 19. Moreover, as noted, Patent Owner actually litigated the ultimate issue of whether these additional (or materially similar) limitations present patentable subject matter in the ’1205 IPR. *See MaxLinear*, 880 F.3d at 1376 (holding 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”).

In sum, Patent Owner is collaterally estopped from arguing that Kloba does not teach the additional limitation of claims 16 and 19.

Moreover, Petitioner has shown that Kloba teaches the additional limitation of claims 16 and 19. Figures 1V, 30, and 36 of Kloba each depict mobile devices communicating with the Internet without using a router. Although this is clear from the figures themselves, Mr. Rysavy testifies that “Kloba’s Figure 1V, Figure 30, and Figure 36 . . . depict a direct wireless connection between servers and mobile devices over the internet without using a wireless router as intermediary.” Ex. 1003 ¶ 326. Kloba expressly states that, “[i]n 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.” Ex. 1004, 8:23–28. Mr. Rysavy testifies that a skilled artisan “would understand [that disclosure of Kloba] to mean that there is no router between the client and server.” Ex. 1003 ¶ 326. Kloba teaches communications between the client devices and server using TCP/IP. Ex. 1004, 9:57–67, 12:13–16, 21:67–22:1. Mr. Rysavy testifies that “[f]or an IP data packet to reach an intended remote target device over the internet, the packet’s sender must insert the IP address of the target device into the packet.” Ex. 1003 ¶ 325. According to Mr. Rysavy, “every device on the internet has a unique IP address,” leading to the conclusion that an IP address is a unique identifier for the target device of a communication using TCP/IP. *Id.* In the ’1205 IPR, Patent Owner’s expert witness, Mr. Berg, admitted that Kloba teaches a direct

wireless connection between a wireless module and the Internet and that, in this case, the wireless module would have a unique IP address:

Q. The next part of this Column 14, 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. 1013, 156:6–15. Mr. Rysavy's testimony is consistent with the disclosure in Kloba, confirmed by Mr. Berg, and therefore credible.

Patent Owner argues that Kloba does not expressly describe a unique identifier and that, therefore, Petitioner is relying on an inherency theory. PO Resp. 57–62. As shown above, this argument is incorrect. Moreover, the Board considered Petitioner's same theory in the '1205 FWD and determined that it is not an inherency theory. Ex. 2011, 85 ("Contrary to Patent Owner's arguments, inherency is not at issue here."). The Board reiterated that on rehearing. '1205 IPR, Paper 50 at 24–25 (PTAB Sept. 7, 2021) ('1205 RR) ("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."). The Federal Circuit agreed that the '1205 FWD's finding that Kloba's unique IP address satisfied the "unique identifier" limitation "is not based on inherent disclosure." Ex. 2026, 11. Patent Owner has repeatedly raised its inherency point, and that point has been repeatedly rejected. We reject it again here, for the same reasons.

Patent Owner argues that Petitioner's expert witness in the '1205 IPR, Dr. Kesidis, admitted that Kloba's mobile devices would have been wirelessly connected to the Internet via a wireless router. PO Resp. 59 (citing Ex. 2007, 116, 150–51, 168). Here, Dr. Kesidis was discussing typical mobile devices, noting that they could communicate with the Internet via wireless routers. However, Dr. Kesidis was not discussing the communications described in Kloba when the mobile devices are directly connected to the Internet. Moreover, we considered this testimony in the '1205 IPR and found that Kloba teaches the claimed unique identifiers. '1205 FWD 84–85; '1205 RR 23–25. We agree with and incorporate those findings herein by reference.

Patent Owner also argues that Kloba's figures and description are not detailed enough to show that Kloba's mobile devices wirelessly connect to the Internet without a router. PO Resp. 60–61. As noted above, Mr. Berg has admitted that Kloba describes a direct connection between mobile devices and the Internet. Ex. 1013, 156:6–15. Moreover, in the '1205 IPR, the Board considered substantially the same evidence and concluded that Kloba teaches "direct connections (i.e., wireless connections with no router) between a server and a wireless module or telephone." '1205 RR 23–24 (citing Ex. 1004, Figs. 1V, 30, 36); *see also* '1205 FWD 84 (agreeing with Petitioner's characterization of Figures 1V, 30, and 36, and Mr. Berg's testimony). We agree with and incorporate those findings herein by reference.

In sum, we find, based on the evidence presented by Petitioner, including Kloba's disclosure, Mr. Rysavy's testimony, and Mr. Berg's admissions in the '1205 IPR, that Kloba teaches the additional limitation of

claims 16 and 19. Patent Owner is collaterally estopped from arguing that Kloba does not teach this limitation. Nevertheless, even when considered, Patent Owner's responsive arguments are unpersuasive and have been rejected previously by the Board and the Federal Circuit.

5. Dependent Claims 21–25

Petitioner asserts that the combination of Kloba, Multer, Hoyle, and Loughran renders obvious the subject matter of dependent claims 21–25, which ultimately depend respectively from claim 20. Pet. 67–68. Petitioner supports these assertions with citations to the record and the testimony of Mr. Rysavy. *Id.* (citing Ex. 1003 ¶¶ 275–305, 367–374, 377–378).

Claim 22 depends from claim 1 and adds a limitation substantially the same as that added by claim 4. Petitioner and Patent Owner both argue claim 22 together with claim 4. Pet. 67; PO Resp. 41–48. For the reasons explained above for claim 4, we find that Kloba teaches the additional limitation of claim 22.

Claims 21, 23, and 24 add limitations substantially the same as those added by claims 3, 5, and 6, respectively. Petitioner argues claims 21, 23, and 24 together with claims 3, 5, and 6. Pet. 67. Patent Owner argues claim 23 together with claim 5 and does not argue claims 21 or 23 separately. PO Resp. 41–48. For the reasons explained above for claims 3, 5, and 6, we find that Kloba teaches the additional limitations of claim 21, 23, and 24.

The additional limitations of claims 21 and 23 are identical to those of claims 21 and 23 of the '989 patent. Ex. 1011. The additional limitation of claim 24 is nearly identical to that of claim 24 of the '989 patent. *Id.* Relying on substantially the same evidence that Petitioner cites from Kloba

in this case, in the '1205 FWD the Board concluded that Kloba teaches the additional limitations of claims 21, 23, and 24 of the '989 patent. Ex. 2011, 70, 75–76, 82–83. Here, Patent Owner does not challenge separately Petitioner's contentions that Kloba discloses the additional limitations of claims 21, 23, and 24 of the '442 patent. We have analyzed claim 24 and determine that the differences between this claim and claim 24 of the '989 patent (changing “or over the Internet” to “and over the Internet”) do not materially alter the question of unpatentability. *See Ohio Willow*, 735 F.3d at 1342.

Therefore, because the '1205 IPR presented the identical issues of whether Kloba teaches the additional limitations of claims 21, 23, and 24, which Patent Owner had a full and fair opportunity to litigate, and because the panel's findings that Kloba teaches the additional limitations of claims 21, 23, and 24 were necessary for the Board's determination of unpatentability for claims 21, 23, and 24 of the related '989 patent, we find that collateral estoppel prevents Patent Owner from re-litigating these specific claims.

Claim 25 depends from claim 24 and adds

wherein one or more of said further communications facilitated by the remote computer server platform sending a Short Message Service (SMS) message comprises one or more management instructions generated by the remote computer server platform that the remote computer server platform determines to send based upon the results of having processed at least some of the consumer preference information.

Petitioner asserts that the additional limitation of claim 25 would have been obvious for the same reasons given for claim 4. Pet. 68. Patent Owner includes claim 25 in its opposition to Petitioner's allegations regarding

claim 4, but does not otherwise argue claim 25 separately. PO Resp. 41–48. For the reasons given above for claim 4, we find that Kloba teaches the additional limitation of claim 25.

6. Conclusion of Obviousness

In sum, as detailed above, a combination of Kloba, Multer, Hoyle, and Loughran teaches each limitation of claims 7, 14, 16, 17, and 19–25. A skilled artisan would have had reasons, with rational underpinning, to combine the teachings of Kloba, Multer, Hoyle, and Loughran. Patent Owner does not argue or introduce evidence of objective indicia of nonobviousness. Upon consideration of all the evidence, we conclude that Petitioner has proved by a preponderance of the evidence that claims 7, 14, 16, 17, and 19–25 would have been obvious over Kloba, Multer, Hoyle, and Loughran.

F. Obviousness of claims 8–12, 15, 18, and 26–30 over Kloba, Multer, Hoyle, Loughran, and Fong; and over Kloba, Multer, Davis, Loughran, and Fong

Claims 8–12, 15, 18, and 26–30 depend indirectly from independent claim 1. Claims 26–30 depend indirectly from claim 20.

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, Hoyle, Loughran, and Fong; and (ii) the combined teachings of Kloba, Multer, Davis, Loughran, and Fong. Pet. 5, 69–73. For the reasons discussed in Section I.D above, we need not decide if claims 8–12, 15, 18, and 26–30 would have been obvious in view of the combined teachings of Kloba, Multer, Davis, Loughran, and Fong.

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

1. Scope and content of the prior art – overview of Fong (Ex. 1008)

Fong 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. 1008, 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.

2. Dependent claims 8–12, 15, 18, and 26–30

For the additional limitation of claim 8, Petitioner contends that Kloba teaches maintaining state information associated with clients and that Fong teaches monitoring operational details of mobile devices such as data indicative of battery charge levels of mobile terminals. Pet. 69–70 (citing Ex. 1004, 6:9–34, 21:42–47, 24:23–45, 28:23–30; Ex. 1008, 10:10–16; Ex. 1003 ¶¶ 381, 383). Mr. Rysavy testifies that Fong’s teaching would

have helped prevent clients from running out of power while downloading information. Ex. 1003 ¶ 383. Each of claims 15, 18, and 26 recites substantially the same additional limitation as recited in claim 8. Petitioner contends that claims 15, 18, and 26 would have been obvious for the same reasons given for claim 8. Pet. 72 (citing Ex. 1003 ¶¶ 380–383, 400, 402, 404). We credit Mr. Rysavy’s uncontroverted testimony and find, based on Petitioner’s cited evidence, that Kloba and Fong teach the additional limitation of claims 8, 15, 18, and 26. Patent Owner does not separately contest Petitioner’s allegations for claims 8, 15, 18, and 26.

Each of claims 9, 27, and 28 recites substantially the same additional limitation as recited in claim 16. Petitioner contends that claims 9, 27, and 28 would have been obvious for the same reasons given for claim 16. Pet. 70–71 (citing Ex. 1003 ¶¶ 324–327, 385, 406, 408). Patent Owner includes claims 9, 27, and 28 in its opposition to Petitioner’s allegations regarding claim 16, but does not otherwise argue claims 9, 27, and 28 separately. PO Resp. 56–64. For the reasons given above for claim 16, we find that Kloba teaches the additional limitation of claims 9, 27, and 28.

Claim 10 recites substantially the same additional limitation as recited in claim 25. Petitioner contends that claim 10 would have been obvious for the same reasons given for claim 25. Pet. 71 (citing Ex. 1003 ¶¶ 376–378, 387). Patent Owner includes claim 10 in its opposition to Petitioner’s allegations regarding claims 4 and 25, but does not otherwise argue claim 10 separately. PO Resp. 41–48. For the reasons given above for claim 25, we find that Kloba teaches the additional limitation of claim 10.

Claim 11 additionally recites “one or more additional management instructions cause at least one selected from the group consisting of

automatic deletion without replacement of one or more existing stored display data content files from the at least one asset, and automatic updating of one or more software programs stored on the at least one asset.”

Petitioner contends that Kloba teaches that its synchronization can automatically upgrade software or remove from clients information such as objects and channels, thus teaching “automatic deletion without replacement of one or more existing stored display data content files from the at least one asset, and automatic updating of one or more software programs stored on the at least one asset.” Pet. 71 (citing Ex. 1004, 5:32–35, 5:48–50, 26:42–46, 30:61–65, 33:5–9; Ex. 1003 ¶ 390). Petitioner refers to its allegations for claim limitation 1[f] to contend that the automatic deletion and automatic updating would have been performed by management instructions and argues that such removal or upgrading could be part of a future synchronization, making the instructions “additional.” *Id.* at 71–72 (citing Ex. 1004, 10:20–24, 20:13–17; Ex. 1003 ¶¶ 284–285). Each of claims 29 and 30 recites substantially the same additional limitation as recited in claim 11. Petitioner contends that claims 29 and 30 would have been obvious for the same reasons given for claim 11. Pet. 73 (citing Ex. 1003 ¶¶ 389–393, 410, 412). We credit Mr. Rysavy’s uncontroverted testimony and find, based on Petitioner’s cited evidence, that Kloba teaches the additional limitation of claims 11, 29, and 30. Patent Owner does not separately contest Petitioner’s allegations for claims 11, 29, and 30.

Claim 12 recites “wherein the one or more communications networks comprise a cellular mobile telecommunications network and the Internet.” Petitioner contends that Kloba teaches using applications on mobile devices that interact with the Internet; and (referring to its allegations for the

preamble of claim 20) that a skilled artisan would have been motivated to use Loughran's teaching of using a GSM network with Kloba's mobile devices. Pet. 72 (citing Ex. 1004, 4:45–63; Ex. 1003 ¶¶ 341–342, 396–398). We credit Mr. Rysavy's uncontroverted testimony and find, based on Petitioner's cited evidence, that Kloba and Loughran teach the additional limitations of claim 12. Patent Owner does not separately contest Petitioner's allegations for claim 12.

3. Conclusion of Obviousness

In sum, as detailed above, a combination of Kloba, Multer, Hoyle, Loughran, and Fong teaches each limitation of claims 8–12, 15, 18, and 26–30. A skilled artisan would have had reasons, with rational underpinning, to combine the teachings of Kloba, Multer, Hoyle, Loughran, and Fong. Patent Owner does not argue or introduce evidence of objective indicia of nonobviousness. Upon consideration of all the evidence, we conclude that Petitioner has proved by a preponderance of the evidence that claims 8–12, 15, 18, and 26–30 would have been obvious over Kloba, Multer, Hoyle, Loughran, and Fong.

III. CONCLUSION

Petitioner has proved by a preponderance of the evidence that claims 1–30 would have been obvious. The outcome for the challenged claims of this Final Written Decision follows. In summary:

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

IV. ORDER

In consideration of the foregoing, it is hereby

ORDERED that claims 1–30 of the '442 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.

¹⁴ As explained above, we do not reach the three alternative grounds based on Davis.

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