

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

DROPBOX, INC.,
Petitioner,

v.

WHITSERVE LLC,
Patent Owner.

IPR2019-01019
Patent 8,812,437 B2

Before KALYAN K. DESHPANDE, MICHELLE N. WORMMEESTER,
and SCOTT RAEVSKY, *Administrative Patent Judges*.

RAEVSKY, *Administrative Patent Judge*.

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

I. INTRODUCTION

Dropbox, Inc. (“Petitioner”) filed a Petition (Paper 2, “Pet.”) requesting an *inter partes* review of claims 1–20 (the “challenged claims”) of U.S. Patent No. 8,812,437 B2 (Ex. 1101, “the ’437 patent”). WhitServe LLC (“Patent Owner”) filed a Preliminary Response. Paper 8 (“Prelim. Resp.”). In view of those submissions, we instituted an *inter partes* review of claims 1–20. Paper 13 (“Decision”). Subsequent filings include a Patent Owner Response (Paper 18, “PO Resp.”), a Petitioner Reply (Paper 20, “Pet. Reply” or “Reply”), and a Patent Owner Sur-Reply (Paper 23, “Sur-Reply”). An oral hearing was held on July 30, 2020, and a copy of the transcript was entered into the record. Paper 27.

We have jurisdiction over this proceeding under 35 U.S.C. § 6(b). After considering the evidence and arguments of the parties, we determine that Petitioner has proven by a preponderance of the evidence that claims 1, 3–10, and 12–20 of the ’437 patent are unpatentable. *See* 35 U.S.C. § 316(e) (2018). We also determine that Petitioner has not proven by a preponderance of the evidence that claims 2 and 11 are unpatentable. We issue this Final Written Decision pursuant to 35 U.S.C. § 318(a).

II. BACKGROUND

A. *Related Proceedings*

Petitioner and Patent Owner identify a related litigation involving the ’437 patent: *WhitServe LLC v. Dropbox, Inc.*, No. 1:18-cv-00665 (D. Del.), filed May 1, 2018. Pet. 4; Paper 6, 2; Ex. 2102, 1. Petitioner also concurrently filed another *inter partes* review petition challenging claims of the ’437 patent in IPR2019-01018, for which we denied institution. Pet. 4;

Dropbox, Inc. v. Whitserve LLC, IPR2019-01018, Paper 13 (PTAB Nov. 1, 2019).

B. The '437 patent (Ex. 1101)

The '437 patent concerns a system for onsite backup of internet-based data. Ex. 1101, Abstr. Figure 1 of the '437 patent is reproduced below.

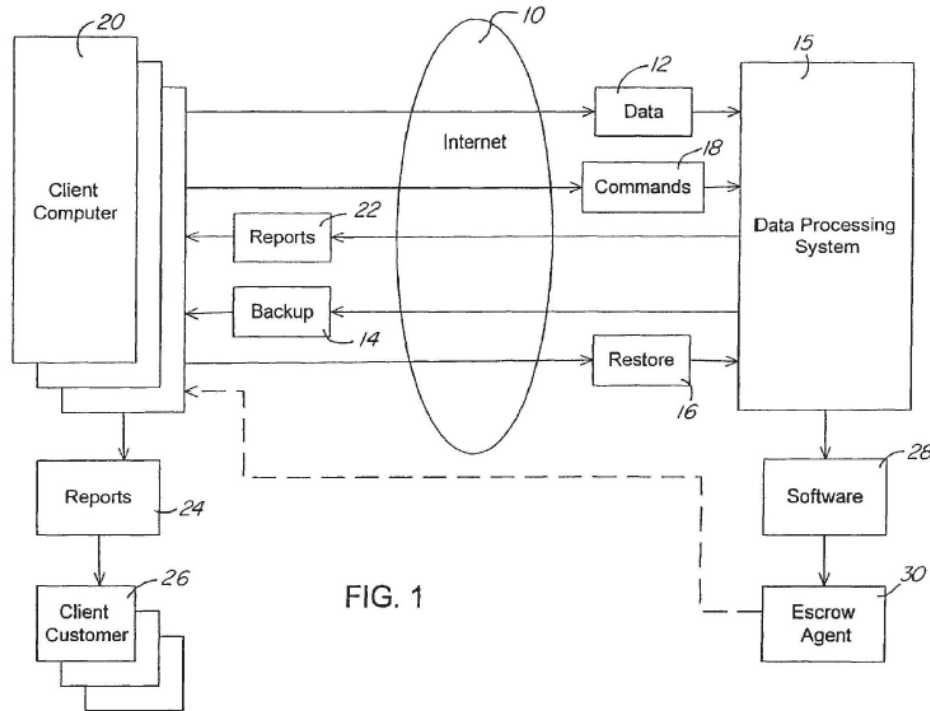


FIG. 1

Figure 1 illustrates an Internet-based data processing system providing backup on clients' sites. *Id.* at 2:34–35. In the system, client computer 20 and data processing system 15 are connected by Internet communications link 10. *Id.* at 2:35–37. Client computer 20 executes software, residing on data processing system 15, for storing data on the data processing system. *Id.* at 2:37–40. This software is for displaying, updating, and deleting data 12 stored on central data processing system 15. *Id.* at 2:40–43. Data processing system 15 transmits a copy 14 of stored data to client computer 20, which issues commands 18 for transmitting (restoring) data 16 back to data processing system 15. *Id.* at 2:43–46.

The '437 patent also discloses format conversion and encryption features with respect to Figure 4. *Id.* at 3:4–5. Figure 4 is reproduced below:

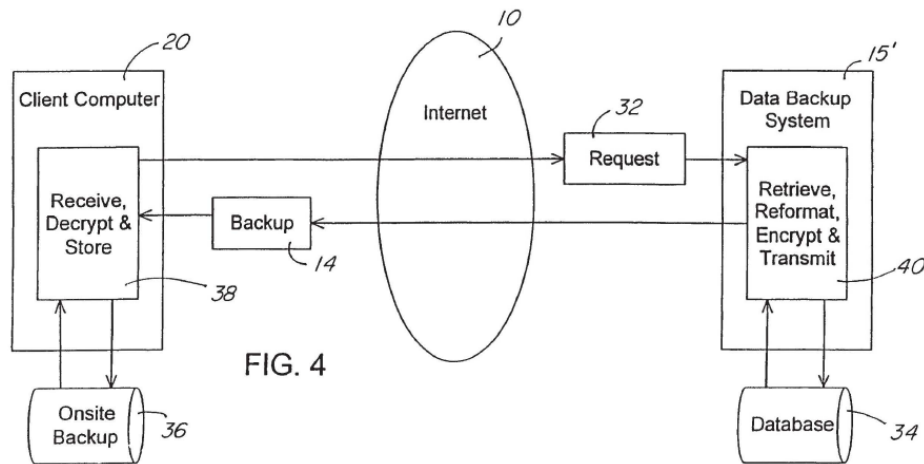


Figure 4 illustrates format conversion and encryption features. *Id.* These features allow a client to back up data on-site that is securely stored in a plurality of formats the client may require. *Id.* at 3:6–8. Client computer 20 transmits request 32 to data backup system 15'. *Id.* at 3:8–9. Data backup system 15' accesses data stored on data backup system 34, reformats the data, encrypts the data, and transmits the data to client computer 20. *Id.* at 3:9–12. Client computer 20 receives, decrypts, and stores 38 the data onsite 36. *Id.* at 3:12–13.

C. Challenged Claims

The Petition challenges claims 1–20. Pet. 3. Claim 1 is illustrative of the challenged claims and is reproduced below.¹

¹ The numbering of the claim limitations in brackets are those that are provided in the Petition. *See* Pet. 17–39.

1. [p] A system for onsite backup for third party internet-based data processing systems, comprising:
 - [a] a central computer managed by a third party and accessible by at least one client computer at a client site via the Internet for outsourced data processing;
 - [b] at least one database containing a plurality of data records accessible by said central computer, the data records including internet-based data modifiable over the Internet from the at least one client computer;
 - [c] a plurality of client identifiers, wherein each of the plurality of data records is associated with at least one of said client identifiers;
 - [d] data processing software executing on said central computer and managed by the third party for outsourcing data processing to the Internet from the at least one client computer, said data processing software displaying, updating and deleting the internet-based data in the plurality of data records according to instructions received over the Internet from the at least one client computer;
 - [e] software executing on said central computer to receive, via the Internet from the at least one client computer, a request for a backup copy of at least one of the plurality of data records including the internet-based data in the at least one of the plurality of data records that has been updated or deleted by said data processing software; and
 - [f] software executing on said central computer to transmit the backup copy of the at least one of the plurality of data records including the internet-based data in the at least one of the plurality of data records that has been updated or deleted by said data processing software to the client site for storage of the internet-based data from the at least one of the plurality of data records in an onsite location accessible via the at least one client computer.

Ex. 1101, 3:20–52.

D. Prior Art and Asserted Grounds

Petitioner relies on the following references:

Reference		Date	Exhibit
Amstein	U.S. Pat. No. 5,793,966	Filed Dec. 1, 1995	Ex. 1113
Mantha	U.S. Pat. No. 6,163,779	Filed Sept. 29, 1997	Ex. 1114
Chang	U.S. Pat. No. 6,219,700 B1	Filed July 28, 1998	Ex. 1115
Elgamal	U.S. Pat. No. 5,657,390	Published Aug. 12, 1997	Ex. 1116
Glenn	<i>Access Management of Web-based Services: An Incremental Approach to Cross-organizational Authentication and Authorization</i> , D-Lib Magazine	Published Sept. 1998	Ex. 1117

Petitioner asserts that claims 1–20 would have been unpatentable on the following grounds, supported by two declarations by Dr. Todd Mowry (Exs. 1102, 1121):

Claims Challenged	35 U.S.C. §	References/Basis
1–5, 8, 10, 11, 13, 15, 16, 18–20	103 ²	Amstein ³
1–5, 8, 10, 11, 13, 15, 16, 18–20	103	Amstein, Mantha, Glenn
6, 7, 12, 14	103	Amstein, Chang ⁴

² The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, 125 Stat. 284, 287–88 (2011), amended 35 U.S.C. § 103. Because the ’437 patent claims priority to an application filed before the effective date of the relevant amendment, we apply the pre-AIA version of § 103.

³ Although Petitioner’s summary of grounds (Pet. 6–7) does not include obviousness over Amstein alone, Petitioner presented arguments that claims 1–5, 8, 10, 11, 13, 15, 16, and 18–20 would have been obvious over Amstein alone. *See* Pet. 17–57. We, therefore, treat these arguments as a separate ground.

⁴ For similar reasons as note 3, *supra*, we treat Petitioner’s arguments regarding obviousness over Amstein and Chang as a separate ground. *See*

Claims Challenged	35 U.S.C. §	References/Basis
6, 7, 12, 14	103	Amstein, Mantha, Glenn, Chang
9, 17	103	Amstein, Elgamal ⁵
9, 17	103	Amstein, Mantha, Glenn, Elgamal

See Pet. 6–7.

III. ANALYSIS

A. Principles of Law Relating to Obviousness

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. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying factual determinations, including: (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of skill in the art; and (4) when in evidence, objective evidence of nonobviousness, i.e., secondary considerations. See *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). We analyze the asserted obviousness grounds with the principles identified above in mind.

B. Level of Ordinary Skill in the Art

We review the grounds of unpatentability in view of the understanding of a person of ordinary skill in the art at the time of the

Pet. 57–63.

⁵ For similar reasons as note 3, *supra*, we treat Petitioner’s arguments regarding obviousness over Amstein and Elgamal as a separate ground. See Pet. 63–67.

invention. *Graham*, 383 U.S. at 17. Petitioner asserts that a person of ordinary skill “would have [had] a Bachelor’s Degree in electrical engineering, computer science, or a related scientific field, and approximately two years of work experience in the computer science field including, for example, networked systems, distributed systems, database management, operating systems, encryption, web development, and/or online services, though additional education can substitute for less work experience and *vice versa*.” Pet. 5–6 (citing Ex. 1102 ¶ 41).

Patent Owner disagrees with Petitioner’s level of skill because “it focuses on wrong aspects of the ’437 Patent and it is not directed towards Internet-based systems for data manipulation.” PO Resp. 7 (citing Ex. 2013 ¶ 28). Patent Owner contends, “while experience with fields such as operating systems may be helpful to inform [a skilled person’s] understanding of computers, it also leads to an improper understanding of the invention, and experience with solely operating systems would leave one unprepared to tackle issues with Internet-based technology.” *Id.* Patent Owner contends a person of ordinary skill “would have been someone with at least ‘a Bachelor’s degree in electrical engineering, computer science, or a related scientific field, and approximately two years of work experience in real-world Internet-based technology.’” *Id.* (citing Ex. 2013 ¶ 28). Petitioner does not address Patent Owner’s proposal in the Reply. *See generally* Pet. Reply.

Our reviewing court instructs us that “[i]n determining this skill level, the court may consider various factors including type of problems encountered in the art; prior art solutions to those problems; rapidity with which innovations are made; sophistication of the technology; and

educational level of active workers in the field.” *In re GPAC Inc.*, 57 F.3d 1573, 1579 (Fed. Cir. 1995). The level of ordinary skill in the art is also reflected by the prior art of record. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001).

Both parties agree that one of ordinary skill in the art “would have a Bachelor’s Degree in electrical engineering, computer science, or a related scientific field, and approximately two years of work experience,” but the parties disagree as to the nature of that work experience. Pet. 5–6; PO Resp. 7. Patent Owner singles out “fields such as operating systems” as unsuitable but does not explain why the remainder of Petitioner’s fields, including “networked systems, distributed systems, database management, . . . encryption, web development, and/or online services,” are not pertinent to the ’437 patent. *See* PO Resp. 7; Pet. 5–6. Yet the ’437 patent mentions at least networks (e.g., “LANs” and “the Internet,” Ex. 1101, 1:43–44, claim 1), a database (*id.* at claim 1, Figure 4), encryption (*id.* at 3:5–12, claim 9), and web interfaces (*id.* at 1:15, claim 8).

We disagree with Patent Owner except as to “operating systems,” which we find is not sufficiently pertinent to the subject matter of the ’437 patent, the background technical field, or the asserted prior art. Based on our review of the entire record, we adopt Petitioner’s definition, except that we omit “operating systems”:

[one of ordinary skill in the art] would have a Bachelor’s Degree in electrical engineering, computer science, or a related scientific field, and approximately two years of work experience in the computer science field including, for example, networked systems, distributed systems, database management, . . . encryption, web development, and/or online services,

though additional education can substitute for less work experience and *vice versa*.

See Pet. 5–6 (citing Ex. 1102 ¶ 41).⁶

C. Claim Construction

In an *inter partes* review filed on or after November 13, 2018, we apply the same claim construction standard used by Article III federal courts in civil actions under 35 U.S.C. § 282(b), which follow *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc), and its progeny. Changes to the Claim Construction Standard for Interpreting Claims in Trial Proceedings Before the Patent Trial and Appeal Board, 83 Fed. Reg. 51,340 (Oct. 11, 2018) (amending 37 C.F.R. § 42.100(b) effective November 13, 2018) (now codified at 37 C.F.R. § 42.100(b) (2019)). Because Petitioner filed the instant Petition on May 2, 2019, we apply that standard here. Accordingly, we construe each challenged claim of the '437 patent to generally have “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) (2019).

Petitioner proposes constructions for the claim terms “backup copy” and “internet-based data.” Pet. 15–17. Petitioner contends all other claim terms should be given “the meaning that the term would have to [one of ordinary skill in the art] at the time of the invention.” *Id.* at 15. Patent Owner argues that constructions for the terms “backup copy” and “internet-

⁶ Regardless, our conclusions as to claim construction and obviousness would be the same under Patent Owner’s proposed level of skill.

based data” are unnecessary and proposes its own constructions of “database” and “data record.”⁷ PO Resp. 8–14. We address each in turn.

1. “backup copy”

Petitioner contends that “backup copy” means “a copy of stored data.” Pet. 15 (citing Ex. 1102 ¶ 44; Ex. 1101, 2:4–6). Petitioner contends the Specification describes “backup 14” as “a copy of stored data . . . [that] [t]he data processing system 15 transmits . . . to the client computer 20” and as “data (stored on the data backup system 34) . . . [that] data backup system 15’ accesses . . . , reformats . . . , encrypts . . . , and transmits . . . to the client computer 20.” Pet. 16 (citing Ex. 1101, 2:43–44, 3:9–14). Relying on the testimony of Dr. Mowry, Petitioner contends that one of ordinary skill in the art would have understood that “a backup copy is simply a copy, whether reformatted or not, that corresponds to data stored elsewhere.” *Id.* (citing Ex. 1102 ¶ 45). Petitioner notes that the construction “a copy of stored data” was adopted by the Board for “data backup” in the -249 IPR Final Written Decision.⁸ *Id.* (citing Ex. 1111, 10–13; Ex. 1102 ¶¶ 44–46). We discuss that decision in more detail below.

Patent Owner contends no construction is necessary but proposes: “by its plain and ordinary meaning, [backup copy means] a copy of that data is transmitted to the client computer, and if a user subsequently wants to use that data on the internet-based data processing system, the data can be

⁷ Patent Owner provides an explicit construction for “database” but in the same section also construes “data record.” PO Resp. 13.

⁸ *Google, Inc. v. Whitserve LLC*, IPR2013-00249, Paper 32 (PTAB Sept. 9, 2014) (addressing U.S. Patent No. 6,981,007, which the ’437 patent relies on for priority).

transmitted back to the internet-based data processing system.” PO Resp. 11–12. Patent Owner relies on the ’437 patent’s description of Figure 1, which states “[t]he data processing system 15 transmits 14 a copy of stored data to the client computer 20” and that “[t]he client computer 20 issues commands 18 for transmitting (restoring) data 16 back to the data processing system 15.” *Id.* (citing Ex. 1101, 2:53–56).

Petitioner’s construction is more persuasive. Patent Owner makes a similar error as in the -249 IPR: ignoring Figure 4, “which shows an alternative embodiment” where the “‘data backup system’ . . . ‘accesses data[], reformats the data, encrypts the data, and transmits the data’ to the client computer. No mention is made of any ability of the data to be restored to the central computer.” Ex. 1111, 12 (citing Ex. 1001, 3:15–16). The Board in the -249 IPR further found, “[t]he fact that the data is reformatted and encrypted leaves open the possibility that the *data backup* may not be in a format capable of being subsequently stored on the central computer.” *Id.* Patent Owner here also relies only on the Figure 1 embodiment to argue that a backup copy would encompass “data [that] can be transmitted back to the internet-based data processing system,” “if a user subsequently wants to use that data on the internet-based data processing system.” *See* PO Resp. 11.

Construing “backup copy” in the manner Patent Owner proposes would read into the claims functionality from the Figure 1 embodiment to the exclusion of the Figure 4 embodiment. As the Board noted in the -249 IPR, our reviewing court has explained that “[i]t is improper to read limitations from a preferred embodiment described in the specification—even if it is the only embodiment—into the claims absent a clear indication in the intrinsic record that the patentee intended the claims to be so limited.”

IPR2013-00249, Paper 32 at 13 (quoting *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 913 (Fed. Cir. 2004)).

Although the Board in the -249 IPR applied the broadest reasonable interpretation standard, we determine the Board’s analysis there comports with the *Phillips* standard applicable here. In relying on the principle of law articulated above in *Liebel-Flarsheim* (decided prior to *Phillips*), the -249 IPR decision relied on a general statement of law applicable to a *Phillips* analysis. See, e.g., *Openwave Sys., Inc. v. Apple, Inc.*, 808 F.3d 509, 514 (Fed. Cir. 2015) (applying *Phillips* and quoting the same passage above from *Liebel-Flarsheim*). The -249 IPR decision also interpreted the claims in light of the Specification. See Ex. 1111, 12–13. We likewise follow *Phillips*’s mandate to interpret disputed terms “in the context of the entire patent, including the specification.” *Phillips*, 415 F.3d at 1313. As stated above, we find the -249 IPR decision’s Specification analysis compelling.⁹

We also credit Dr. Mowry’s declaration testimony that one of ordinary skill in the art would have understood that “a backup copy is simply a copy, even if in a different format, that corresponds to data stored elsewhere.” Ex. 1102 ¶ 45; see also *Phillips*, 415 F.3d at 1318 (“[E]xpert testimony can be useful . . . to establish that a particular term in the patent or the prior art has a particular meaning in the pertinent field.”).

We determine the plain and ordinary meaning of backup copy encompasses, as Petitioner asserts, “a copy of stored data.”¹⁰

⁹ Based on our review, we find the Specifications of the ’007 priority patent and the ’437 patent are substantially identical. Compare Ex.1101, with Ex. 2118 (including a copy of the original specification of the application that matured into the ’007 patent), and US Pat. No. 6,981,007 (public record).

¹⁰ Neither party’s briefing relies on the prosecution history to construe any

2. “internet-based data”

Petitioner contends “internet-based data” means “data that is capable of being modified via the Internet.” Pet. 16 (citing Ex. 1102 ¶ 47). Patent Owner disagrees with Petitioner’s construction but concludes no construction is necessary. PO Resp. 8–11. We agree. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (“[W]e need only construe terms that are in controversy, and only to the extent necessary to resolve the controversy.”) (internal quotation and citation omitted).

3. “database” and “data records”

a) “database”

Claim 1 recites in part, “at least one database containing a plurality of data records accessible by said central computer.” Ex. 1101, 3:25–26. Patent Owner proposes construing the term “database” as “data records organized with tables.” PO. Resp. 12–14. Patent Owner relies on the claim language, Specification, and extrinsic dictionary evidence. *Id.*

Pointing to the claim language “at least one database,” Patent Owner contends “[i]t is well known that database tables are often linked, or related to one another.” *Id.* at 12 (citing Ex. 2103 ¶ 58). Patent Owner contends, “[r]elational databases allow for increases in computational ability, including

claim terms. *See generally* Pet.; PO Resp.; *see also* Tr. 21:18–22:17, 39:1–10. We have reviewed the prosecution history excerpts of the ’437 patent submitted by Petitioner (Exs. 1106–1109) and the prosecution history of the ’007 patent (to which the ’437 patent claims priority) submitted by Patent Owner (Ex. 2118). Apart from the -249 IPR decision discussed above for “backup copy,” we have not identified any other prosecution history statements that would assist our claim constructions.

scalability, and increases in manipulability, two concepts at the core of the '437 [p]atent.” *Id.* at 12–13 (citing Ex. 1101, 1:16, 1:26, 1:54–55, 2:57, 3:1). Patent Owner also notes the claims state the “database” contains “a plurality of data records,” contending that “[i]n database parlance, the term ‘records’ is commonly used to refer to ‘rows’” and that recitation of the term “records” is evidence of the “patentee’s intent to claim a database as ‘data records organized with tables.’” *Id.* at 13 (citing Ex. 2013 ¶ 59).

Patent Owner next refers to the Specification’s mention of “Internet based order entry and payment billing systems,” contending one of ordinary skill in the art “would have known such systems were typically implemented using databases for tracking inventory and billing records (customers, addresses, shipping information, etc.).” *Id.* (citing Ex. 1101, 1:27; Ex. 2103 ¶ 60). Patent Owner also argues one of ordinary skill in the art would have viewed the Specification’s reference to “generating reports” and “reformat[ing] the data” as referring to “reports generated out of a database . . . , as it is the data that needs to be organized and manipulated.” *Id.* (citing Ex. 2103 ¶ 61). Patent Owner also relies on the '437 patent’s mention of “client identification number” in the Abstract, contending that one of ordinary skill in the art “would have understood that a client identification number was typically used as a key in a relational database.” *Id.* at 13 (citing Ex. 1101, Abstr.; Ex. 2013 ¶ 58).

Lastly, Patent Owner cites the following dictionary entry as supporting its construction of database:

database[:] Loosely, any aggregation of data; a file consisting of a number of records (or tables), each of which is constructed of fields (columns) of a particular type, together with a collection

of operations that facilitate searching, sorting, recombination, and similar activities.

Id. at 14 (citing Ex. 2015, 8).

In Reply, Petitioner contends that “database” should be given its ordinary and customary meaning and argues that Patent Owner’s construction is inconsistent with that meaning. Reply 2–3. Petitioner contends Patent Owner’s construction is inconsistent with the intrinsic and extrinsic record. *Id.* 3. Petitioner contends that from the intrinsic record, “[person of ordinary skill in the art] would have understood ‘database’ to include any structured collection of data including hierarchical structures.” *Id.* at 4 (citing Ex. 1121 ¶ 7); *see also id.* at 9 (discussed below). Petitioner also contends “the word ‘table’ appears nowhere in the ’437 [S]pecification.” *Id.* at 4–5 (citing Ex. 1101; Ex. 1121 ¶¶ 8–10). Petitioner points to the teachings of Amstein as evidence that “the computational goals purportedly described in the ’437 patent were achievable using systems other than a relational database.” *Id.* at 5–6 (citing Pet. 10–11; PO Resp. 12–13; Ex. 1121 ¶ 11).

Petitioner also contends the Abstract’s mention of “client identification numbers” does not support Patent Owner’s construction because such numbers “were not unique to relational databases and were used in other data storage systems,” including Amstein’s. *Id.* at 6 (citing Pet. 26–27). Petitioner further contends Patent Owner’s reliance on the term “records” in the claims as referring to “rows” rests on a “faulty premise,” namely that “‘data records’ only has the meaning that [Patent Owner] proposes if the claimed ‘database’ is understood to mean a relational database.” *Id.* at 7. Petitioner argues that the Specification instead uses the term “data records” consistent with its broader meaning, “all hosted data,” as

all hosted data would need to be retrieved “[i]n order to meaningfully retrieve a backup of the outsourced website.” *Id.* Petitioner contends this interpretation is supported by Figures 1 and 4 of the ’437 patent, “which also generally describe information backed up from the server to the client as ‘data’ or ‘stored data,’ without any limitation as to how the data is organized or what types of data are backed up.” *Id.* at 7–8. And Petitioner contends that even if the Specification’s “order entry and payment billing systems would have only been implemented using relational databases, the ’437 patent is not limited to these examples.” *Id.* at 8.

Petitioner further contends Patent Owner’s construction is inconsistent with the extrinsic record. Petitioner contends Patent Owner’s own dictionary definition supports a broader construction because it provides multiple definitions, including “[l]oosely, any aggregation of data.” *Id.* at 9 (citing Ex. 2105, 8–9). Petitioner also cites other dictionary evidence interpreting database as “any aggregation of data or any structured collection of data.” *Id.* (citing Ex. 1121 ¶ 18 (citing Ex. 1123, 73 (defining “database” as a “structured collection of data”; Ex. 1124, 468 (defining “database” as “a structured set of data held in a computer”))). Petitioner also relies on a portion of a reference submitted by Patent Owner, which states “[a] database system is essentially nothing more than a *computerized record-keeping system*.” *Id.* at 10–11 (citing Ex. 1133, 9). Finally, Petitioner concludes that Patent Owner “ignore[s] other types of databases that do not fit into [its] narrow construction” and thus fails to provide a proper construction for “database.” *Id.* at 12 (citing Ex. 1121 ¶ 22).

In its Sur-Reply, Patent Owner contends that “database” cannot be construed to include hierarchical file systems because they do not include a

client identification number. Sur-Reply 3–4 (citing Ex. 2103 ¶ 58). Patent Owner also contends that the definition “[l]oosely, any aggregation of data”—which it submitted—is “so untethered from the ’437 patent that it could include an old-fashioned rolodex or hand markings in a journal.” *Id.* Patent Owner further contends that although a dictionary Petitioner relies on refers to “hierarchical” as one type of database, “[h]ierarchical databases are not hierarchical file structures, as confirmed by a patent cited by Dropbox, which never refers to a hierarchical database as a file system and instead notes that they include ‘objects’ which each have a single ‘parent.’” *Id.* at 4–5 (citing Ex. 1123, 3; Ex. 1125, 1:35–42). Patent Owner asserts that none of the references Dr. Mowry cites “make the same comparison between a ‘hierarchical file system’ and a ‘hierarchical database.’” *Id.* at 5 (citing Ex. 1121 ¶ 21). Patent Owner also argues that the same dictionary refers to database files “contain[ing] records and are different from normal files.” *Id.* (citing Ex. 2119, 116). Patent Owner disagrees with Petitioner’s contention that hierarchical file systems are “scalable or even usable in internet-based systems.” *Id.* (citing Ex. 1129, 219). Finally, Patent Owner contends the ’437 patent does not disclose a hierarchical file system embodiment. *Id.* at 6.¹¹

¹¹ At the hearing, Patent Owner also referred to the prosecution history for the first time as supporting its construction of “database”:

MR. KEELER: . . . [T]here is no discussion of the term database on its own in the ’437 patent prosecution history. However, there is discussion in the prosecution history that talk about the data records and how they are transmitted and taken as a whole. A person having ordinary skill in the art would know that a proper construction of database in this context would be data records organized with tables.

Turning to our analysis, we first analyze Patent Owner’s argument that the claim language “at least one database” supports Patent Owner’s interpretation of database. PO Resp. 12–13. Patent Owner relies on the testimony of Dr. Jawadi to support its contention that “at least one database” implies a relational database. *See id.* at 12 (citing Ex. 2103 ¶ 58). We find more persuasive, however, Petitioner’s contention that “there is nothing inherent in the term ‘at least one database’ to suggest to [one of ordinary skill in the art] that database **tables** are required or that the database tables must be linked.” *See* Reply 4 (citing Ex. 1121 ¶ 7). Patent Owner also does not persuade us that the claim language “a plurality of data records” necessarily refers to “rows” or that the presence of “data records” implies tables.¹² *See* PO Resp. 13 (citing Ex. 2103 ¶ 59). We agree instead with Petitioner that “‘data records’ only has the meaning that [Patent Owner] proposes if the claimed ‘database’ is understood to mean a relational database.” Reply 7.

Patent Owner’s arguments based on the Specification are also unpersuasive. Patent Owner does not contend that the Specification sets forth an explicit definition or disavows the full scope of the term “database”; nor does the Specification do so. *See* PO Resp. 12–14. Rather, Patent Owner contends the claims and Specification implicitly define “database.” Tr. 38:11–13 (“JUDGE RAEVSKY: So counsel, is it your position then that the specification implicitly defines database? MR. KEELER: Yes,

Tr. 39:5–10. This conclusory assertion does not assist our interpretation of the claims, and in any event, was raised for the first time at the hearing, and thus, we do not consider it. *See* Consolidated Trial Practice Guide 85–86.

¹² We discuss a construction of “data records” in more detail below.

Your Honor.”); PO Resp 12–13. But Patent Owner does not point us to any critical language in the Specification that disparages databases of types other than ones with tables. *See id.* at 38:17–20 (“JUDGE RAEVSKY: And can you point us to anything in the specification that disparages alternate interpretations? MR. KEELER: Your Honor, I don’t think anything in the specification disparages alternatives.”); *cf. Abbott Diabetes Care, Inc.*, 696 F.3d 1142, 1149–1150 (Fed. Cir. 2012) (finding implicit definition where the “patents ‘repeatedly, consistently, and exclusively’ depict[ed] an electrochemical sensor without external cables or wires while simultaneously disparaging sensors with external cables or wires.”). Instead, Patent Owner contends that the Specification’s “Internet based order entry and payment billing systems” would have been “implemented using databases” and that “generating reports” and “reformat[ing] the data” indicate use of “a database.” PO Resp. 13 (citing Ex. 1101, 1:27, 2:51; Ex. 2103 ¶¶ 60, 61). Each of these arguments are facially deficient because they merely refer to a *database*, without even contending that the database would include “data records organized with tables.” *See id.*

Patent Owner also does not persuade us that client identification numbers imply tables because they supposedly refer to a “key in a relational database.” *See* PO Resp. 13 (citing Ex. 2103 ¶ 58). The Specification’s only mention of “client identification number” occurs in the Abstract, which says, “[t]he system also includes at least one database containing a plurality of data records accessible by the central computer, each data record containing a *client identification number*.” Ex. 1101, Abstr. (emphasis added). Nothing in this statement refers to a key in a relational database, and we agree with Petitioner that client identification numbers “were not

unique to relational databases.” *See* Reply 6–7 (citing Ex. 1121 ¶ 12). Dr. Jawadi merely testifies, without support, that “[one of ordinary skill in the art] would have understood that a client identification number was typically used as a key in a relational database.” Ex. 2103 ¶ 58. We give little weight to this unsupported opinion because Mr. Jawadi does not account for types of files other than tables that can include client identification numbers. We conclude that the Specification does not provide a special definition for database, whether express or implied.

Turning to the extrinsic evidence, Patent Owner’s own submitted dictionary evidence, as well as additional dictionary definitions submitted by Petitioner, confirm that one of ordinary skill in the art understood “database” to also mean things other than data records organized with tables. *See* Ex. 2105, 8 (“database *Loosely, any aggregation of data*; a file consisting of a number of records (or tables)”) (emphasis added); Ex. 1123, 73 (“database” is a “structured collection of data”); Ex. 1124, 468 (“database” is “a structured set of data held in a computer”). Although the definition, “Loosely, any aggregation of data,” describes database too loosely to adopt it as the correct construction, it does suggest that one of ordinary skill in the art would have viewed “database” as encompassing more than data records with tables. Petitioner’s dictionary definitions (“a structured collection of data” and “a structured set of data held in a computer”) also suggest that a database can include a more generic collection of data than data records organized with tables. And the Hutchinson Dictionary (Ex. 1123) describes “three main types (or ‘models’) of database: hierarchical, network, and relational, of which relational is the most widely used.” Ex. 1123, 74. We cannot narrowly select a relational database—one with tables—as the sole

database encompassed by the claims when one of ordinary skill in the art would have understood “database” to also encompass other types of databases, such as hierarchical and network databases.

We also find Patent Owner’s related contention, that hierarchical databases are not hierarchical file structures, untethered from the evidence. *See* Sur-Reply 4–5. Patent Owner rests this assertion on “a patent cited by Dropbox, which never refers to a hierarchical database as a file system and instead notes that they include ‘objects’ which each have a single ‘parent.’” *Id.* (citing Ex. 1125, 1:35–42). But the mere absence of a reference to a hierarchical file system in one unrelated patent is weak evidence at best, particularly when the passage Patent Owner cites does not mention a hierarchical database at all. *See* Ex. 1125, 1:35–42 (referring to “networks,” “FAX machines,” “telephones,” and “e-mail”).¹³

We agree with Petitioner that Patent Owner’s construction “ignore[s] other types of databases.” *See* Reply 12. Based on the full record, we construe database as having its plain and ordinary meaning, which we find one of ordinary skill in the art would have understood to encompass “a structured collection of data.” *See* Ex. 1123, 73.

¹³ In the hearing, Patent Owner suggested Petitioner’s Exhibit 1125 “should have been US Patent Number 5878415 as cited in the Mowry Rebuttal Declaration, [as] we believe that there was a typo in the patent and the wrong exhibit got submitted by Petitioner.” Tr. 41:15–18. Patent Owner has not requested to submit the supposedly correct exhibit as supplemental information under 37 C.F.R. § 42.123(b). Even if Patent Owner had satisfied the requirements of § 42.123(b), we question whether a statement in an unrelated patent would outweigh the more specific extrinsic evidence submitted by Petitioner. *See* Exs. 1123, 1124.

b) “data records”

We also find it necessary to construe “data records,” which the parties interpret in their discussion of “database.” PO Resp. 13; Reply 7–8.

Patent Owner contends that “records” refers to “rows.” PO Resp. 13 (citing Ex. 2013 ¶ 59). Dr. Jawadi testifies that the book, “Database: A Primer” (Ex. 1112) describes records as rows and states that “row and record can be used interchangeably.” Ex. 2013 ¶ 59 (citing Ex. 2112, 10, 18) (emphasis omitted).

Petitioner contends that the ’437 patent does not limit “data records” because apart from the claims and Abstract, it does not use the term. Reply 7, n.4. Petitioner’s expert testifies that “[i]n other database contexts, ‘data records’ is not limited to meaning of a row in a database table,” citing the Hutchinson Dictionary’s definition of “record” as a “collection of related data items or fields.” Ex. 1121 ¶ 13 (citing Ex. 1123, 233). Petitioner further contends “data records” means “all hosted data” because “[i]n order to meaningfully retrieve a backup of the outsourced website (e.g., for safeguarding or to migrate to another server), all hosted data (which [one of ordinary skill in the art] would have understood as ‘data records’) would need to be retrieved.” Reply 7. Petitioner contends that Figures 1 and 4 of the ’437 patent further support its argument, as they “generally describe information backed up from the server to the client as ‘data’ or ‘stored data,’ without any limitation as to how the data is organized or what types of data are backed up.” *Id.* at 7–8.

Patent Owner’s Sur-Reply does not directly address Petitioner’s Reply arguments on “data records” but indirectly addresses this term in its “database” argument. Sur-Reply 5. There, Patent Owner “notes how

database files contain records and are different from normal files,” referring to the Hutchinson Dictionary: “Database files usually consist of a set of *records*, each having a number of *fields* for specific items of data.” Sur-Reply 5 (citing Ex. 2119, 116) (emphasis added and omitted).

We first note that apart from the claims, the Specification only refers to data records in the Abstract as follows: “The system also includes at least one database containing a plurality of data records accessible by the central computer, each data record containing a client identification number.” Ex. 1101, Abstr. This text evinces no intent to limit the meaning of data records beyond its plain and ordinary meaning. The Specification refers to “data” more generally as “storing data on the data processing system” and “data . . . that is securely stored in a plurality of formats the client may require.” Ex. 1101, 2:39–40, 3:6–8. The Specification’s generic description of storing data, including “in a plurality of formats,” instructs us that interpreting “data records” as “rows” would be too restrictive.

We also reject Petitioner’s proffered interpretation of “all hosted data” as overly restrictive. Petitioner provides little Specification support for this interpretation, stating only that Figures 1 and 4 of the ’437 “generally describe information backed up from the server to the client as ‘data’ or ‘stored data,’ without any limitation as to how the data is organized or what types of data are backed up.” Reply 7–8. Neither Figure 1 nor 4 refers to “data records” specifically. *See id.* Although we agree that the Specification does not limit how the data is organized or what types of data are backed up, the Specification does not refer restrictively to data records as “all” hosted data. Claim 1 recites “at least one database containing a plurality of data records,” but it does not necessarily limit these data records

to *all* the records hosted.

Extrinsic evidence is helpful in this case to interpret “data records.” The Hutchinson Dictionary, cited by Petitioner’s expert, defines “record” as a “collection of related data items or fields.” Ex. 1121 ¶ 13 (citing Ex. 1123, 233). The same dictionary’s entry for “file” refers to “[d]atabase files usually consist[ing] of a set of *records*, each having a number of *fields*.” Sur-Reply 5 (citing Ex. 2119, 116) (emphasis added and omitted). These definitions generically describe records and files and are in agreement with the Specification’s generic description of storing data “in a plurality of formats.” See Ex. 1101, 2:39–40, 3:6–8. Only one book Patent Owner relies on, “Database: A Primer,” more narrowly describes records as rows.¹⁴ Ex. 2112, 10, 18. This book and its definition appear to be tied closely to the relational, table-based model of databases. See *id.* But as we determined above, “database” is not limited to data records organized with tables. We find that one of ordinary skill in the art would have understood “data records” to be broader than merely “rows.”

Based on the full record before us, we determine that one of ordinary skill in the art would have understood “data records” to encompass “collections of related data items or fields.” See Ex. 1121 ¶ 13 (citing Ex. 1123, 233).

¹⁴ Dr. Jawadi also relies on the Microsoft Press Computer Dictionary definition for “database” as “records (or tables),” but the same dictionary entry more “[l]oosely” refers to database as “any aggregation of data.” See Ex. 2103 ¶ 62 (quoting Ex. 2105, 105) (emphasis added). This non-limiting dictionary entry leads us to conclude that records are not limited to tables.

D. Overview of the Prior Art

Before turning to Petitioner's asserted grounds, we provide an overview of the asserted references.

1. Amstein (Ex. 1113)

Amstein describes systems for creating, developing, and modifying online services in a client-server information system. Ex. 1113, 1:10–11. Specifically, Amstein provides a mechanism through which a client application program can use operations to create and modify information on a Web server for online services. *Id.* at 10:58–61. Amstein's client system remotely causes the server to perform operations required in the process of authoring an online service. *Id.* at 9:37–41. For example, the client system communicates with a Web server program using the same type of network connection and the same protocol (HTTP) used by a Web browser. *Id.* at 13:32–36. Amstein's system allows access to the online service's document objects only through the Web server program, and thus conforms to additional security rules implemented by the server program. *Id.* at 13:64–14:1.

The system handles requests to retrieve or store objects on the server machine. *Id.* at 21:16–18. One procedure used is the "GetDocument" procedure, which retrieves one document from the server and returns the document to the client application module. *Id.* at 21:25–32. The client authoring tool calls the GetDocument procedure to retrieve a document and the associated document meta information from the server machine. *Id.* at 23:60–62. Amstein discloses that it is also possible that a service author will keep local copies of document objects of an online service so that only a remote storage function is used. *Id.* at 28:55–57.

2. *Mantha (Ex. 1114)*

Mantha discloses a method of copying an HTML document to a local hard drive. Ex. 1114, 2:23–25. A copy of an HTML file is retrieved from a server (or from a browser cache) and then saved on the local hard drive. *Id.* at 2:32–35. Mantha’s method aims to provide a user with a simple technique to take a “snap shot” of a particular Web page that could be stored on the client machine and then retrieved for subsequent viewing or use. *Id.* at 1:56–59.

3. *Glenn (Ex. 1117)*

Glenn discloses an access management broker software for web-based services in a university setting. Ex. 1117, 1. The broker works with an existing institutional and directory infrastructure, permits delivery of complex remote services from providers outside of the home organization, and provides user attributes to remote service providers. *Id.* Glenn discloses that in a cross-organizational setting, a web server would be operated by a remote or “third-party” service provider, i.e., a provider at another institution, commercial or otherwise. *Id.* at 4.

E. *Patentability Analysis*

1. *Challenges Applying Amstein, Mantha, and Glenn*

Petitioner contends that claims 1–5, 8, 10, 11, 13, 15, 16, and 18–20 are unpatentable under 35 U.S.C. § 103(a) as obvious over Amstein alone or in combination with Mantha and Glenn. Pet. 17–57. For the reasons that follow, we are persuaded that Petitioner establishes, by a preponderance of the evidence, that claims 1, 3–5, 8, 10, 13, 15, 16, and 18–20 are unpatentable as obvious over the combination of Amstein, Mantha, and Glenn. Because we determine the challenge based on Amstein, Mantha, and

Glenn is dispositive of all these claims, we need not reach the parties' arguments as to whether these claims would have been obvious over Amstein alone. *See Boston Sci. Scimed, Inc. v. Cook Grp. Inc.*, 809 Fed. Appx. 984, 990 (Fed. Cir. Apr. 30, 2020) (nonprecedential) (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").

For the reasons that follow, we are not persuaded that Petitioner establishes, by a preponderance of the evidence, that claims 2 and 11 are unpatentable as obvious over Amstein alone or over Amstein, Mantha, and Glenn.

2. Challenges Applying Amstein, Mantha, and Glenn

a) Independent Claim 1

Petitioner sets forth how the combination of Amstein, Mantha, and Glenn discloses each limitation of claim 1. Pet. 17–39. Petitioner also provides reasons to combine Amstein, Mantha, and Glenn and asserts that the combination is within the capability of a person having ordinary skill in the art. *Id.* at 23–24, 31–35. Patent Owner argues that Petitioner has failed to show obviousness because the proposed combination fails to teach or suggest all the limitations of claim 1 and because one of ordinary skill in the art would not have combined Amstein, Mantha, and Glenn. PO Resp. 22–50. Patent Owner also presents evidence that it contends establishes objective indicia of non-obviousness. *Id.* at 50–52.

We first analyze the scope and content of the prior art and the differences between the art and the claimed subject matter. We then

consider the reasons to combine, taking into consideration the level of ordinary skill in the art and evidence of a reasonable expectation of success, and the proffered evidence of objective indicia of non-obviousness.

(1) [p] “*A system for onsite backup for third party internet-based data processing systems*”

Petitioner contends the preamble is not limiting, but even if it is, Amstein alone or Amstein, Mantha, and Glenn teach it. Pet. 17–18 (citing Ex. 1102 ¶ 64). We need not determine whether the preamble is limiting because we find that Petitioner has established that the combination of Amstein, Mantha, and Glenn teaches or suggests it.

Petitioner asserts Amstein discloses the preamble’s “system for . . . internet-based data processing systems” because Amstein teaches “a computer **system** for creating and maintaining on-line services [**internet-based**]” that includes “a client machine 80 connected to a server machine 84 [**data processing system**] over a communication channel 83 through which the client sends requests 108 and receives responses 110.” *Id.* at 18 (citing Ex. 1113, 15:3–27, FIG. 3; Ex. 1102 ¶ 65). Petitioner also asserts Mantha teaches “onsite backup” by disclosing a “method of saving a web page to a local hard drive.” *Id.* at 19 (citing Ex. 1114, Title 2:23–25, claim 18, Ex. 1102 ¶¶ 66–76).

With respect to the preamble’s “internet-based data processing systems” are “third party . . . processing systems,” Petitioner contends that because Amstein can be implemented in remote servers accessible by system administrators but not clients, one of ordinary skill in the art would have understood that Amstein’s remote servers are third-party processing systems. *Id.* Petitioner also argues that Glenn discloses this preamble language because Glenn teaches that a “web server [can] be operated by a remote, or

‘third-party’ service provider,” i.e., a “service provider outside of the local organization.” *Id.* (citing Ex. 1117, §§ 3.1, 3.3; Ex. 1102 ¶¶ 77–83).

(2) [a] “a central computer managed by a third party and accessible by at least one client computer at a client site via the Internet for outsourced data processing”

Petitioner asserts that Amstein discloses the recited “central computer . . . accessible by at least one client computer at a client site via the Internet” because Amstein discloses a “client machine 80 [**client computer**] connected to a server machine 84 [**central computer**] over a communication channel 83” that allows the client and server machines to “exchange messages over the Internet [**accessible via the Internet**].” *Id.* at 19–20 (citing Ex. 1113, 15:3–7; 2:20–34, 3:9–32, 11:40–44, 15:28–38, 15:60–67, 16:55–58, FIG. 3; Ex. 1102 ¶ 85).

Petitioner also asserts that Amstein discloses the recited “central computer . . . [is] for outsourced data processing” because Amstein teaches “‘a client system which remotely causes the server to perform operations’ [**outsourced data processing**].” *Id.* at 21 (citing Ex. 1113, 9:38–42, 10:26–61, 11:27–40, 15:7–14, claim 17, Table 1; Ex. 1102 ¶ 86).

Petitioner further asserts that Amstein discloses the recited “central computer” is “managed by a third party.” *Id.* at 22. According to Petitioner, Amstein teaches that clients or “service author[s] . . . construct . . . online service[s] for the World Wide Web,” those service authors are “physically remote” from the server, and “‘system administrators’ have exclusive access to the server.” *Id.* at 22 (citing, e.g., Ex. 1113, 2:5–34, 8:15–24, 8:63–64, 9:13–15, 8:32–44, 4:10–14, 1:14–48, 8:36–44). Petitioner also asserts that one of ordinary skill in the art “would have understood that a system administrator who has exclusive access to manage the server is a third party

(i.e., different from the service authors and the other users), and therefore that the server **[central computer]** is managed by a third party.” *Id.* (citing Ex. 1102 ¶¶ 87–92). Alternatively, Petitioner asserts that Glenn discloses the recited “third party” because Glenn teaches that a “web server [can] be operated by a remote, or ‘third-party’ service provider.” *Id.* (citing Ex. 1117 §§ 3.1, 3.3; Ex. 1102 ¶ 93).

(3) *[b] “at least one database containing a plurality of data records accessible by said central computer, the data records including internet-based data modifiable over the Internet from the at least one client computer”*

Petitioner contends that Amstein teaches this limitation. Pet. 24–26. Petitioner asserts Amstein discloses the recited “at least one database containing a plurality of data records” because, for example, Amstein teaches that a server has a “‘hierarchical file system’ **[database]** where ‘all documents and information associated with the web are stored’ and made ‘accessible to the end user of the web using a web browser.’” *Id.* at 24 (citing Ex. 1102 ¶¶ 97–101; Ex. 1113, FIG. 4, 17:32–39, 17:49–50; 1:33–35, 17:48–54).

Petitioner asserts Amstein teaches the recited “data records” are “accessible by said central computer” because Amstein describes “retriev[al] of a “document” and “document meta information . . . on the server machine.” *Id.* at 25–26 (citing Ex. 1113, 21:16–18, 23:65–24:3, 26:36–27:9; Ex. 1102 ¶ 99). Further, Petitioner asserts Amstein teaches the recited “internet-based data modifiable over the Internet from the at least one client computer” because Amstein teaches client authoring operations that can “create or *modify* or store information on the server machine.” *Id.* at 26

(citing Ex. 1113, 11:66–12:6, 13:23–26, 17:19–31, 24:10–30, 27:10–46; Ex. 1102 ¶ 100).

Patent Owner contends Amstein’s “hierarchical file system is not a database” under its construction of that term. PO. Resp. 23–27. Patent Owner contends Amstein “distinguishes ‘files’ and ‘databases’” by mentioning both files and databases but choosing a hierarchical file system over a database. *Id.* (citing Ex. 1113, 17:32–39). Patent Owner argues Amstein’s database merely contains “document dependencies for the web” and not “Internet-based data.” *Id.* at 26 (citing Ex. 2013 ¶¶ 107–108, 134–135; Ex. 1113, 18:31–38).

Petitioner responds that Patent Owner’s arguments rely on a “narrow and improper construction” of database and that “[t]here appears to be no dispute that Amstein teaches this limitation under the proper understanding of ‘database.’” Reply 12–13. Petitioner reaffirms that Amstein discloses a hierarchical file system, which stores “all document objects and associated information” on the server. *Id.* at 13 (citing Pet. 24–25). Petitioner contends that one of ordinary skill in the art would have understood that Amstein’s hierarchical file system is “a structured collection or aggregation of data, which is consistent with the ordinary and customary meaning of ‘database.’” *Id.* (citing Ex. 1102 ¶¶ 97–101; Ex. 1121 ¶ 23). Petitioner also disputes that Amstein’s separate recitation of a “database” means its hierarchical file system cannot be a database because “[w]hile Amstein can define ‘database’ to have a particular meaning in the Amstein patent, this is not the case in the ’437 patent, where the ordinary and customary meaning of ‘database’ should prevail.” *Id.* n.8 (citing Ex. 1121 ¶ 24).

In the Sur-Reply, Patent Owner asserts that Petitioner “presents no new evidence or rebuttal arguments” and contends that database does not include hierarchical file systems under “any other reasonable construction of the term.” Sur-Reply 7 (citing Ex. 2103 ¶¶ 73–139; Ex. 2117).

Patent Owner’s arguments are unpersuasive because they are based on its incorrect construction of database. Under the correct construction of “database” as “a structured collection of data,” we find that Amstein’s hierarchical file system teaches or suggests the claimed database. *See* Ex. 1113, 17:35–39. We credit Dr. Mowry’s testimony that Amstein’s hierarchical file system is a structured collection of data, and thus, a database. *See* Ex. 1121 ¶ 23; *see also* Ex. 1102 ¶¶ 97–101. We also rely on the Hutchinson Dictionary, which states that “hierarchical” is one of the “three main types (or ‘models’) of database.” Ex. 1123, 74.

Patent Owner also disputes Dr. Mowry’s testimony that Amstein’s description of a “web” stored in a directory represents “data records” in a database. PO Resp. 23–26 (citing Ex. 1102 ¶ 104, Ex. 2111, 97:6–99:14). Patent Owner contends, “data stored for each web in a directory is not equivalent to the claimed data records, much less organized with tables, for example, by a client identification number.” *Id.* at 26 (Ex. 2013 ¶¶ 144–170). Petitioner responds that the claimed “data records” are not “rows” because “‘data records’ only has the meaning that [Patent Owner] proposes if the claimed ‘database’ is understood to mean a relational database.” Reply 7.

We construed “data records” above to encompass “collections of related data items or fields,” not merely “rows.” *See supra* § III.C.3.b. We reject Patent Owner’s argument as relying on an overly narrow construction

of the term “data records.” Under the correct constructions of database and data record, Petitioner persuades us that Amstein discloses the disputed limitation, as its assertions are logical, detailed, and supported by evidence of record, including both Dr. Mowry’s expert testimony and documentary evidence.

(4) [c] “a plurality of client identifiers, wherein each of the plurality of data records is associated with at least one of said client identifiers”

Petitioner asserts Amstein teaches this limitation because Amstein discloses, for example, “[w]eb server specific access control information **about each web** may also be included, such as list of users and their passwords, definitions of groups of users, and a **list of users and groups that may access the web or a particular part of the web.**” Pet. 26–27 (citing Ex. 1113, 18:22–28; Ex. 1102 ¶¶ 102–106).

(5) [d] “data processing software executing on said central computer and managed by the third party for outsourcing data processing to the Internet from the at least one client computer, said data processing software displaying, updating and deleting the internet-based data in the plurality of data records according to instructions received over the Internet from the at least one client computer”

For this limitation, Petitioner first asserts that Amstein, Mantha, and Glenn teach the recited “said central computer . . . managed by the third party” for reasons described above with respect to limitation 1[a]. *Id.* at 27 (citing Ex. 1102 ¶ 108). Second, Petitioner asserts the phrase “data processing software executing . . . for outsourcing data processing to the Internet from the at least one client computer” does not have patentable weight because it recites intended use. *Id.* at 27–28, n.6. We need not decide whether this phrase is limiting because Petitioner asserts, and Patent

Owner does not dispute, that Amstein discloses it. *Id.* For example, Petitioner asserts Amstein discloses this phrase by teaching “[w]hen . . . a message contains a request for an authoring operation to be performed . . . the *server machine executes a process* to perform the authoring operation.” *Id.* at 28 (citing Ex. 1113, 23:19–25; Ex. 1102 ¶ 109).

Third, Petitioner asserts that Amstein teaches the recited “said data processing software . . . updating and deleting the internet-based data in the plurality of data records according to instructions received over the Internet from the at least one client computer.” *Id.* at 28–29. For example, Petitioner asserts Amstein discloses that “according to . . . a ‘PUT_DOCUMENT’ command from the client machine [**instructions received over the Internet from the at least one client computer**], the server **updates** meta-information [**internet-based data**] associated with the modified document.” *Id.* at 29 (citing Ex. 1113, 24:10–59; FIGS. 6A–6B). Petitioner also asserts Amstein discloses the claimed “deleting” by teaching, for example, “deletions of links in the new version of the document.” *Id.* (citing Ex. 1113, 24:37–42; Ex. 1102 ¶¶ 110–116). Petitioner further asserts “Amstein also teaches other authoring operations that can be used to ‘modify’ and ‘delete’ HTML documents and to ‘modify the meta information about a document’ separate from document updates.” *Id.* (citing Ex. 1113, 5:66–6:3, 27:29–39; Ex. 1102 ¶¶ 110–116).

Fourth, Petitioner contends that Amstein teaches the recited “displaying” by disclosing, for example, that the server, in response to a client “request[] for authoring operations,” uses the document meta-information to generate a “response message” that is “display[ed]” at the

client machine. *Id.* at 29–30 (citing Ex. 1113, 11:27–47, 15:36–67, 10:47–61; Ex. 1102 ¶ 113).

(6) [e] “software executing on said central computer to receive, via the Internet from the at least one client computer, a request for a backup copy of at least one of the plurality of data records including the internet-based data in the at least one of the plurality of data records that has been updated or deleted by said data processing software”

Petitioner addresses this limitation in two parts. First, Petitioner asserts Amstein and Mantha teaches the first part of this limitation, namely, “software executing on said central computer to receive, via the Internet from the at least one client computer, a request for a backup copy of at least one of the plurality of data records.” Pet. 30–35. Petitioner asserts Amstein discloses a “‘procedure to retrieve a document and the associated document meta information . . . from the server machine’ via the GetDocument API.” *Id.* at 30 (citing Ex. 1113, 23:59–61). And Petitioner asserts that Mantha teaches that a user can use a browser to access and save a local copy of a Web page and store his local copy on the “local hard drive.” *Id.* at 31 (citing Ex. 1114, Title, FIG. 4, 8:15–9:8, 2:23–25; Ex. 1102 ¶¶ 123–124).

Petitioner further asserts that “it would have been obvious to use Amstein’s document retrieval and editing protocol with the local save technique described in Mantha to arrive at the limitations of claim 1.” *Id.* at 32.

Second, Petitioner also asserts Amstein teaches the latter part of limitation [e], “the plurality of data records including the internet-based data in the at least one of the plurality of data records that has been updated or deleted by said data processing software.” Pet. 35–36. Petitioner asserts Amstein discloses this portion of the limitation because after links in documents are “modified or deleted” and the corresponding “meta-

information is updated,” Amstein’s client machine can send a request for the document and modified meta-information via a GetDocument API transaction request. *Id.* at 36 (citing Ex. 1113, 24:37–41, 23:60–24:3).

(7) [f] “software executing on said central computer to transmit the backup copy of the at least one of the plurality of data records including the internet-based data in the at least one of the plurality of data records that has been updated or deleted by said data processing software to the client site for storage of the internet-based data from the at least one of the plurality of data records in an onsite location accessible via the at least one client computer”

Petitioner asserts Amstein and Mantha teach or suggest this limitation. *Id.* at 36–39. For the first part of this limitation, “software executing on said central computer to transmit the backup copy of the at least one of the plurality of data records including the internet-based data in the at least one of the plurality of data records that has been updated or deleted by said data processing software to the client site,” Petitioner asserts a “backup copy” would have been obvious in view of Mantha. *Id.* at 36–37 (citing Ex. 1102 ¶ 128); *see also id.* at 31 (“To the extent a ‘backup copy’ requires something more than ‘local’ storage, . . . Mantha teaches it.”). Petitioner contends Mantha teaches “[a]n Internet client machine 10 is connected to a server platform 12 via . . . the Internet.” Pet. 31 (citing Ex. 1114, 4:13–16, 4:25–32, 4:45–50).¹⁵ Petitioner further contends Mantha teaches that “a user can use a browser to access and save a local copy of a Web page.” *Id.* (citing Ex. 1114, Title, FIG. 4, 8:15–9:8). According to Petitioner, “[t]his local

¹⁵ Petitioner’s argument for limitation [f] refers back to its discussion of Mantha for limitation [e]. Pet. 37, 31. We reproduce Petitioner’s arguments under limitation [e] for completeness.

copy is stored on the ‘local hard drive.’” *Id.* (citing Ex. 1114, 2:23–25, claim 18; Ex. 1102 ¶¶ 123–124).

Petitioner relies on Amstein for “of the at least one of the plurality of data records including the internet-based data in the at least one of the plurality of data records that has been updated or deleted.” Pet. 35–38, 28–29; Tr. 31:1–19. As we noted above with respect to limitation [d], Petitioner contends that Amstein discloses “internet-based data . . . that has been updated or deleted” because Amstein discloses that “the server **updates** meta-information [**internet-based data**] associated with the modified document.” *Id.* at 29 (citing Ex. 1113, 24:10–59; FIGS. 6A–6B). Petitioner also asserts Amstein discloses the claimed “deleting” by teaching, for example, “deletions of links in the new version of the document.” *Id.* (citing Ex. 1113, 24:37–42; Ex. 1102 ¶¶ 110–116). Further, Petitioner asserts “Amstein also teaches other authoring operations that can be used to ‘modify’ and ‘delete’ HTML documents and to ‘modify’ the meta information about a document’ separate from document updates.” *Id.* (citing Ex. 1113, 5:66–6:3, 27:29–39; Ex. 1102 ¶¶ 110–116).

Petitioner contends that Amstein and Mantha also teach the second part of this limitation, “the internet-based data from at least one of the plurality of data records” that is transmitted from the central computer is “for storage . . . in an onsite location accessible via the at least one client computer.” *Id.* at 37. Petitioner contends, “Amstein and Mantha teach ‘backup’ of internet-based data, including an HTML document and associated meta-information.” *Id.* Petitioner relies on Mantha for disclosing the claimed “onsite location” because Mantha teaches that a user can use a browser to access and save a local copy of a Web page on the “local hard

drive.” *Id.* at 37–39 (citing Ex. 1114, Title, Fig. 4, 8:15–9:8, 2:23–25; Ex. 1102 ¶ 126).

Patent Owner refers to this limitation as the “onsite backup” limitation. PO Resp. 6 (referring to this limitation in shorthand as “onsite storage of a backup copy of data record including Internet-based data that has been updated or deleted over the Internet in the database”), 27–38 (referring to this limitation as “onsite backup”). Although its Response is somewhat unclear as to whether “onsite backup” refers solely to this limitation, Patent Owner confirmed at the oral hearing that limitation [f] is the limitation to which “onsite backup” refers. Tr. 63:7–13.

Patent Owner disputes that Amstein discloses “internet-based data in the at least one of the plurality of data records that has been updated or deleted.” PO Resp. 28–30. Patent Owner contends, “the data retrieved by [Amstein’s] GET method is not a copy of data record including Internet-based data that has been updated or deleted in the database, because as explained above, Amstein fails to disclose ‘database’ and such ‘data record.’” *Id.* at 29. Next, Patent Owner contends that in Amstein, “the local copies are original copies, not backup copies, of the documents, and thus the documents are not Internet-based data that has been modified by the client.” *Id.* at 29 (citing Ex. 2103 ¶ 216). Patent Owner also contends Amstein’s “‘retrieved document’ is not a copy of data record[s] including Internet-based data that has been updated or deleted in the database” because “Amstein fails to disclose ‘database’ and such ‘data record.’” *Id.* at 29–30 (citing Ex. 2103). Patent Owner further contends Amstein’s “published web page is not a copy of data records including Internet-based data” because

“the published webpage is not modifiable once it is published.” *Id.* at 30 (citing Ex. 2013 ¶ 228), 11 (citing Ex. 2103 ¶¶ 49, 228).

Patent Owner contends Mantha does not disclose the “internet-based data” limitation “because Mantha does not concern about backing up data and its whole disclosure does not include any word like ‘backup’ or ‘safeguard.’” *Id.* at 34 (citing Ex. 2103 ¶¶ 225–29). According to Patent Owner, Mantha also does not disclose a client identifier because “a public document is downloaded.” *Id.* Patent Owner contends Mantha discloses “client-side browsing, not backing up data.” *Id.* (citing Ex. 2103 ¶ 227). Moreover, Patent Owner contends Mantha’s “published web page is not a copy of data record including Internet-based data that has been updated or deleted in the database because Mantha does not disclose any such database nor data record.” *Id.* at 35 (Ex. 2103 ¶ 228).

Patent Owner further asserts that even if Amstein and Mantha are combined, “the combination teaches 1) saving a published webpage under publishing mode, 2) editing remotely and accessing edited documents only through the web server program under authoring mode, and 3) editing locally and saving a copy on the server under offsite storage mode,” not saving a backup copy of Internet-based data. *Id.* at 43 (citing Ex. 2103 ¶¶ 226–229).

In its Reply, Petitioner contends that Patent Owner “does not dispute that Amstein teaches that a user of an on-line service can . . . use a client computer to author documents on a server by remotely causing a web server to perform operations ([PO Resp.], 17 (referred to as an ‘authoring mode’)).” Reply 14. Petitioner further contends that Patent Owner does not dispute that “Mantha teaches saving a web page in non-volatile memory.” *Id.*

(citing POR 34–35; Ex. 1121 ¶ 25). Petitioner contends that to the extent “safeguarding” is required by the claims (“though not claimed”), Patent Owner’s “expert acknowledges that ‘safeguarding’ simply means that ‘data . . . is saved,’” and Mantha saves data at the client. *Id.* at 15 (citing Ex. 1122, 191:13–14). Petitioner disputes that Mantha does not teach the claimed “onsite backup” merely because Mantha does not use the words “backup” or “safeguard,” contending there is no requirement for Mantha to use exactly the same words as in the claims. *Id.* at 19.

Patent Owner responds, in its Sur-Reply, that because Mantha takes snapshots of web pages, Mantha does not include “data records including internet-based data modifiable over the Internet from the at least one client computer.” Sur-Reply 9 (citing Ex. 2103 ¶¶ 226–229, 259, 262).

We find Petitioner’s arguments more persuasive. We find that Amstein discloses (1) “software executing on said central computer . . . of the at least one of the plurality of data records including the internet-based data in the at least one of the plurality of data records that has been updated or deleted by said data processing software . . . of the internet-based data from the at least one of the plurality of data records” and that Mantha discloses (2) “to transmit the backup copy . . . to the client site for storage . . . in an onsite location accessible via the at least one client computer.”

Petitioner persuades us that Amstein teaches element (1) above. We also agree that Patent Owner “does not dispute that Amstein teaches that a user of an on-line service can . . . use a client computer to author documents on a server by remotely causing a web server to perform operations (POR, 17 (referred to as an ‘authoring mode’)).” Reply 14. Patent Owner states, “Amstein . . . describes how a system of authoring a ‘web’ works[:] . . . the

client machine communicates with the server machine to allow *a client system to remotely perform operations on document objects* and associated meta-information of a ‘web.’” PO Resp. 17 (citing Ex. 1113, 15:3–20:42, 20:43–27:58) (emphasis added). We find that Amstein’s asserted “authoring mode,” as described by Patent Owner, discloses claim element (1) because remotely performing operations on document objects updates them over the Internet. In light of Patent Owner’s concession, we find unpersuasive Patent Owner’s arguments that other teachings in Amstein regarding “local copies,” a “retrieved document,” and “published web page” are not Internet-based data modified by a client. *See* PO Resp. 29–30.

We are also persuaded that Amstein discloses the claimed “deleted” by teaching “deletions of links in the new version of the document,” which Patent Owner also does not dispute. *See* Pet. 29 (citing Ex. 1113, 24:37–42; Ex. 1102 ¶¶ 110–116). We further agree with Petitioner that Amstein’s document objects and associated meta-information represent “data records” under our construction of data records as “collections of related data items or fields.” *See* Pet. 24–26 (Amstein teaches that a server has a “‘hierarchical file system’ [**database**] where ‘all documents and information associated with the web are stored’ and made ‘accessible to the end user of the web using a web browser.’”) (citing Ex. 1113, Fig. 4, 17:32–39, 17:49–50, 1:33–35, 17:48–54). Patent Owner’s arguments related to Amstein not disclosing “data records” are unpersuasive because they rely on an incorrect claim construction of data records. *See* PO Resp. 29–30.

For element (2) (“to transmit the backup copy . . .”), we agree with Petitioner that Mantha teaches this because Mantha discloses that it is “desirable to provide a user a simple technique to take a ‘snap shot’ of a

particular Web page that could be stored on the client machine and then retrieved for subsequent viewing or use.” Ex. 1114, 1:56–59. Mantha further teaches that “[i]n response to a user’s request to save a copy of a Web page . . . [t]he base HTML document is first copied into a new HTML page on the local hard drive.” *Id.* at 2:22–25. Mantha also teaches, “[a] copy of that file is retrieved from the server (or perhaps from browser cache) and then saved on the local hard drive.” *Id.* at 2:33–35. Mantha refers to this process as a “Save” or “copy” operation. *Id.* at 8:15–17.

Patent Owner’s argument that Mantha does not include any word like “backup” or “safeguard” exalts vocabulary over substance. *See id.* at 34. The issue of whether a reference discloses a claim limitation is not an “*ipsissimis verbis* test.” *Cf. In re Bond*, 910 F.2d 831, 832 (Fed. Cir. 1990) (addressing anticipation). We also reject Patent Owner’s argument that Mantha discloses “client-side browsing, not backing up data” because we have construed “backup copy” to mean “a copy of stored data.” PO Resp. 34 (citing Ex. 2103 ¶ 227). Mantha’s disclosure of client-side browsing is irrelevant to the question of whether Mantha discloses a backup copy. We credit Dr. Mowry’s testimony that Mantha creates a “copy” of an HTML document that is saved on a client’s “local hard drive.” Ex. 1102 ¶ 70; Ex. 1121 ¶ 34; *see also* Ex. 1114, 2:22–25, 2:33–35, 8:15–17. This is a backup copy.

Patent Owner’s other arguments against Mantha also do not undermine Petitioner’s persuasive showing. Patent Owner’s contention that Mantha does not disclose a client identifier is inapposite because Petitioner relies on Amstein for the claimed client identifier. *See* PO Resp. 34; Pet. 26–27. And Patent Owner’s contention that Mantha’s “published web

page is not a copy of data record including Internet-based data that has been updated or deleted in the database because Mantha does not disclose any such database nor data record” is similarly irrelevant because Petitioner relies on Amstein for the claimed database and data record. *See* PO Resp. 35; Pet. 24–26.

We also disagree with Patent Owner that even if Amstein and Mantha are combined, “the combination teaches 1) saving a published webpage under publishing mode, 2) editing remotely and accessing edited documents only through the web server program under authoring mode, and 3) editing locally and saving a copy on the server under offsite storage mode,” not saving a backup copy of Internet-based data. *See id.* at 43; Sur-Reply 9. That is not the combination Petitioner proposes. Petitioner proposes that “it would have been obvious to use Amstein’s document retrieval and editing protocol with the local save technique described in Mantha.” Pet. 32. By attacking a combination Petitioner does not propose, Patent Owner attacks a straw man.

(8) Summary

We are persuaded by Petitioner’s arguments and cited evidence, and Patent Owner’s arguments do not undermine Petitioner’s showing. Accordingly, we find that the combination of Amstein, Mantha, and Glenn discloses each and every limitation of claim 1.

(9) Reasons to Combine

With respect to limitation [a], Petitioner argues that it would have been obvious to incorporate Glenn’s teaching of a third-party server into Amstein’s system “because doing so would have been choosing from a finite number of options.” *Id.* at 23. Petitioner asserts that one of ordinary skill in

the art “would have understood there were a finite number of solutions for control of client and server computers—e.g., control by the same party, control by separate parties, or shared control by separate parties.” *Id.* (citing Ex. 1102 ¶¶ 79–81, 94–96; Ex. 1117 §§ 3.1, 3.3). Petitioner further asserts that implementing the third-party service providers of Glenn in the system of Amstein would have been a simple substitution of a known technique. *Id.* Petitioner also contends that one of ordinary skill in the art would have had a reasonable expectation of success implementing Glenn’s server controlled by a third party in Amstein “because it would have been a simple matter of changing one owner of a server to another as contemplated by Glenn.” *Id.* at 24 (citing Ex. 1102 ¶¶ 82, 94–96). Petitioner argues that because “Amstein states that a server can be accessed by multiple companies,” one of ordinary skill would have been motivated to have a separate third-party manage the server in order to reduce “security concerns.” *Id.*

For limitation [e], Petitioner argues it would have been obvious to modify Amstein’s system by incorporating the local save technique as disclosed in Mantha. *Id.* at 31 (citing Ex. 1102 ¶¶ 71–76). Petitioner asserts that one of ordinary skill in the art would have understood that combining the local save technique of Mantha with the Amstein client computer would have involved nothing more than “combining prior art elements (a client computer accessing Web pages plus a technique for saving those web pages to a hard drive) according to known methods (simply adding the local save technique of Mantha to a browser) to yield predictable results (a client machine that can store a Web page locally).” *Id.* at 32 (citing Ex. 1102 ¶ 72). Petitioner further asserts that “both references are in the same field of client/server systems, and address the same problem: how a user interacts

with Web pages over the Internet.” *Id.* at 33 (citing Ex. 1113, 1:8–10, 8:15–24; Ex. 1114, 1:8–10, 1:62–65). Moreover, Petitioner asserts “applying the local save technique of Mantha to the computer system of Amstein would have been applying a known technique to improve similar devices.” *Id.* at 33–34 (citing Ex. 1113, Fig. 3, 13:36–38; Ex. 1114, 1:8–10, 1:66–2:2). And according to Petitioner, one of ordinary skill in the art “would have had a reasonable expectation that storing that document on a local hard drive of the Amstein client machine in the way described by Mantha would provide for the same benefits described by Mantha—namely, offline access to the Web page and a ‘snap shot’ of a Web page in time.” *Id.* at 35.

For limitation [f], Petitioner asserts that in addition to the reasons described above (for limitation 1[e]), it would have been obvious to combine Amstein and Mantha because there were a finite number of location options for storing data records—“i.e., onsite or offsite.” *Id.* at 39 (citing Ex. 1102 ¶ 131). Petitioner contends, “storing data onsite would have been one of a limited number of choices and obvious to try.” *Id.* (citing Ex. 1102 ¶ 132). According to Petitioner, one of ordinary skill in the art “would have had a reasonable expectation of success of storing data onsite at the client machine (e.g., in Mantha’s local hard drive), because doing so would allow Amstein’s user to keep a ‘local’ copy of the data to edit.” *Id.* (citing Ex. 1113, 16:15–35; Ex. 1102 ¶¶ 131–132).

Patent Owner makes several arguments against the combination. PO Resp. at 35–38, 44–50. Patent Owner contends Amstein teaches away from combining with Mantha. *Id.* at 35–38 (citing Ex. 2103 ¶¶ 230–235). In essence, Patent Owner contends Amstein only permits file access through its web server and that permitting the client to save copies of files would create

a security problem. *Id.* Patent Owner asserts the following teachings characterize Amstein’s security concern: “the only access to files used by the Web server may be through the Web server alone” and “access to the online service document objects [is] only through the Web server program.” *Id.* at 36 (citing Ex. 1113, 8:37–44), 37 (citing Ex. 1113, 13:64–14:8). Patent Owner also refers to Amstein’s discussion of problems in the prior art, including that “[one] approach is cumbersome because of the need for the separate steps of transferring the documents from the server back to the client, and transferring the documents back to the server after the editing is complete. This approach also has the security problems mentioned above for the other approaches.” *Id.* (citing Ex. 1113, 9:10–15). Patent Owner concludes that “[s]aving a local copy of the documents involves additional transfer of the documents and would be discouraged by Amstein.” *Id.* at 38; *see also id.* at 39–43 (arguing the claims are not obvious over Amstein alone).

Patent Owner next contends that, contrary to Dr. Mowry’s assertion that both Amstein and Mantha are in the same field and address the same problem (“how a user interacts with Web pages over the Internet”), the ’437 patent seeks to solve a different problem related to safeguarding outsourced data. PO Resp. 44 (citing Ex. 1102 ¶ 73; Ex. 2103 ¶¶ 257–63). Patent Owner also argues that Amstein and Mantha “seek to solve unrelated problems and address different issues.” *Id.* at 46. Patent Owner contends Mantha teaches away from the combination because “Mantha’s copies of web pages are meant to be archives and not edited by the user.” Sur-Reply 9. Patent Owner further contends that Amstein does not need a local saving function since all modified data is saved to the web server. PO Resp. 44

(citing Ex. 2103 ¶¶ 257–63). And Patent Owner contends one of ordinary skill in the art would not have been motivated to combine “Mantha’s local saving with Amstein for a solution of safeguarding data because the combination would not safeguard Internet-based data.” *Id.* at 45 (citing Ex. 2103 ¶¶ 226–35, 257–63).

Patent Owner also contends one of ordinary skill in the art would not have had a reasonable expectation of success because, first, “the combination results only in saving a ‘snap shot’ of a published web page,” not a backup copy; and second, storing data on the client machine would have “jeopardize[d] one advantage” of Amstein: allowing access to online documents only through the web server. *Id.* at 46–47 (citing Ex. 2103 ¶¶ 226–35, 257–63). Moreover, Patent Owner contends the combination would not serve any purpose that Mantha seeks “because the saved web page would not be modifiable for archiving purpose and Mantha would not appreciate the unnecessary and useless security requirements such as user names, passwords, and encryptions for saving a copy of public information.” *Id.* at 47 (citing Ex. 2103 ¶¶ 226–35, 257–63).

Finally, Patent Owner contends the prosecution history does not support Dr. Mowry’s testimony that “once you can store something, you could either store it remotely or store it locally.” *Id.* at 48 (citing Ex. 2111, 81:13–15). Patent Owner asserts that during prosecution, the Applicant did not dispute that a cited reference, Hubacher, disclosed a form of data backup, but rather “stated that Hubacher’s form of data backup did not correspond to the claims because the backup was not transmitted to the client computer but to a plurality of servers.” *Id.* at 50 (citing Ex. 2118, 103–107). Patent Owner contends that “[t]his demonstrates that the

examiner had considered whether onsite backup was obvious.” *Id.* (citing Ex. 2118, 183).

Petitioner responds that Patent Owner’s “contentions that Amstein discourages additional transfer of documents also miss the point” because “[a]t most, Amstein discusses certain disadvantages of having multiple transactions between client and server, *not* transactions taking place solely on the client side.” Reply 25 (citing Ex. 1121 ¶¶ 40–41). Petitioner also contends Patent Owner’s “arguments about Amstein and Mantha being incompatible largely parrot the same arguments in the [Preliminary Response], which the Board has already rejected in its Institution Decision.” *Id.* at 25 (citing PO Resp. 44–47; Decision 32–33). Petitioner also disputes that its arguments are subject to hindsight bias because Amstein explicitly teaches, suggests, or motivates one of ordinary skill in the art “to incorporate onsite storage.” *Id.* Further, Petitioner asserts that “the ’437 patent itself recognizes that the prior art teaches that data was stored either remotely or onsite.” *Id.* (citing Pet. 10–11, 34; Ex. 1102 ¶¶ 52, 72; Ex. 1121 ¶ 43). Petitioner also contend Patent Owner’s prosecution-based hindsight bias arguments are “irrelevant as they are tangential to Petitioner’s arguments here.” *Id.* at 25. Petitioner agrees with Patent Owner that “neither reference considered during prosecution taught sending a copy of data from the server to the client,” but in contrast, Amstein and Mantha “explicitly teach sending a copy of data to the client computer.” *Id.* at 26. Patent Owner’s Sur-Reply does not address these arguments in any detail. *See* Sur-Reply 10.

Turning to our analysis, we again find Petitioner’s arguments more persuasive. We agree with Petitioner that one of ordinary skill in the art would have modified Amstein to incorporate Glenn’s teaching of a third-

party server into Amstein’s system, for the reasons stated by Petitioner (and not disputed by Patent Owner). *See* Pet. 23–24 (citing Ex. 1102 ¶¶ 79–82, 94–96; Ex. 1117 §§ 3.1, 3.3). We also agree one of ordinary skill in the art would have incorporated Mantha’s local save technique into Amstein’s system for the reasons stated by Petitioner. *See* Pet. 31 (citing Ex. 1102 ¶¶ 71–76). For example, we agree with Petitioner that the combination would involve nothing more than “combining prior art elements (a client computer accessing Web pages plus a technique for saving those web pages to a hard drive) according to known methods (simply adding the local save technique of Mantha to a browser) to yield predictable results (a client machine that can store a Web page locally).” *Id.* at 32 (citing Ex. 1102 ¶ 72). We also agree that applying Mantha’s local save technique to Amstein’s system would have applied a known technique to improve similar devices. *Id.* at 33–34 (citing Ex. 1113, Fig. 3, 13:36–38; Ex. 1114, 1:8–10, 1:66–2:2). We further agree that storing data onsite would have been obvious to try because “there were a finite number of location options for storing data records—‘i.e., onsite or offsite.’” *Id.* at 39 (citing Ex. 1102 ¶ 131). And we agree that one of ordinary skill in the art would have had a reasonable expectation of success in combining Amstein, Mantha, and Glenn for the reasons stated by Petitioner. *See id.* (citing Ex. 1113, 16:15–35; Ex. 1102 ¶¶ 131–132), 24 (citing Ex. 1102 ¶¶ 82, 94–96).

Patent Owner’s arguments do not undermine Petitioner’s persuasive showing. We disagree with Patent Owner that Amstein teaches away from combining with Mantha due to Amstein’s security concerns. *See* PO Resp. 35–38. Amstein teaches that transferring documents from the server to the client and “*back to the server*” presents a “security problem.” Ex. 1113,

9:10–15 (emphasis added). But in the proposed combination, documents would be transferred solely to the client, not back to the server. *See* Pet. 31 (“It would have been obvious to modify Amstein’s system by incorporating the *local save* technique as disclosed in Mantha.”) (emphasis added).¹⁶ Patent Owner introduces no evidence that merely saving documents to the client would create a security problem. To the contrary, Patent Owner concedes that Amstein discloses a “browsable web page retrieved by the GET method is displayed through the web browser.” PO Resp. 15 (citing Ex. 2103 ¶¶ 187–188, 210–213). We find Amstein’s willingness to transmit a web page from the server to a client’s browser shows that Amstein does not have a security concern about merely downloading documents to a client device. Consequently, we agree with Petitioner that Patent Owner’s “contentions that Amstein discourages additional transfer of documents also miss the point” because “[a]t most, Amstein discusses certain disadvantages of having multiple transactions between client and server, *not* transactions taking place solely on the client side.” Reply 25 (citing Ex. 1121 ¶¶ 40–41).

¹⁶ Patent Owner appears to rely on an incorrect construction of “backup copy” in asserting that Amstein’s security concerns would be implicated. As we noted above, Patent Owner contends that backup copy includes “a copy of . . . data [that] is transmitted to the client computer, and if a user subsequently wants to use that data on the internet-based data processing system, the data can be *transmitted back* to the internet-based data processing system.” *Id.* at 11 (emphasis added). Patent Owner appears to assume, incorrectly, that a backup copy would include data that is transmitted back to the server, which Amstein explains would create a security problem. Ex. 1113, 9:10–15 (emphasis added). Under the correct construction of backup copy, and under the proposed combination, no such security concern is implicated in Amstein.

We also find unpersuasive Patent Owner’s contention that one of ordinary skill in the art would not have looked to “Mantha’s local saving for a solution of safeguarding data because the combination would not safeguard Internet-based data.” PO Resp. 45 (citing Ex. 2103 ¶¶ 226–36, 257–63). This argument fails for two reasons. First, it echoes Patent Owner’s arguments regarding Amstein’s security concerns and is similarly unpersuasive. And second, the claims do not require “safeguarding data.” Regardless, Patent Owner’s expert acknowledged that “safeguarding” merely means “data . . . is saved,” which is exactly what Mantha discloses. *See* Reply 15 (citing Ex. 1112, 191:13–14 (“Data that is safeguarded, that means data is saved.”)).

We also note, “[t]he fact that the motivating benefit comes at the expense of another benefit . . . should not nullify its use as a basis to modify the disclosure of one reference with the teachings of another. Instead, the benefits, both lost and gained, should be weighed against one another.” *See Winner Int’l Royalty Corp. v. Wang*, 202 F.3d 1340, 1349 n.8 (Fed. Cir. 2000). Mantha discloses that “[i]t would be very desirable to provide a user a simple technique to take a ‘snap shot’ of a particular Web page that could be stored on the client machine and then retrieved for subsequent viewing or use.” Ex. 1114, 1:56–59. To the extent the combination *might* impact security in Amstein, we find that the relative advantages of saving documents in Mantha and the relative potential disadvantages related to security in Amstein amount to a tradeoff, which is a decision well within the level of one ordinarily skilled in the art. There is no evidence of record that one of the references teaches away from the proposed combination or that the proposed combination would destroy the operation of Amstein’s system.

“[J]ust because better alternatives exist in the prior art does not mean that an inferior combination is inapt for obviousness purposes. *See In re Mouttet*, 686 F.3d 1322, 1334 (Fed. Cir. 2012).

Patent Owner’s contention that Amstein and Mantha “seek to solve unrelated problems and address different issues” also does not undermine Petitioner’s persuasive showing. *See* PO Resp. 44–46 (citing Ex. 1102 ¶ 75; Ex. 2103 ¶¶ 257–63). The test for obviousness is not “that a person of ordinary skill in the art attempting to solve a problem will be led only to those prior art elements designed to solve the same problem.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 402 (2007). Merely arguing that two references “address different issues” overlooks that “familiar items may have obvious uses beyond their primary purposes, and a person of ordinary skill often will be able to fit the teachings of multiple patents together like pieces of a puzzle.” *Id.* To the extent Patent Owner implicitly argues the references are nonanalogous art, Patent Owner does not address the two legal tests for determining whether art is nonanalogous, and thus, does not undermine Petitioner’s persuasive showing. *See In re Bigio*, 381 F.3d 1320, 1325 (Fed. Cir. 2004) (“References within the statutory terms of 35 U.S.C. § 102 qualify as prior art for an obviousness determination only when analogous to the claimed invention. Two separate tests define the scope of analogous prior art: (1) whether the art is from the same field of endeavor, regardless of the problem addressed and, (2) if the reference is not within the field of the inventor’s endeavor, whether the reference still is reasonably pertinent to the particular problem with which the inventor is involved.”) (internal citation omitted).

Patent Owner's contention that "Amstein does not need a local saving function" also does not undermine Petitioner's showing because "[u]nder the correct analysis, any need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed." *Id.* at 420. As we noted above, Mantha describes the desirability of taking a "snap shot" of a web page for storage at the client, which provides a reason for combining with Amstein, even if Amstein itself does not recognize a need for local saving. Ex. 1114, 1:56–59.

We also disagree with Patent Owner that one of ordinary skill in the art would not have had a reasonable expectation of success due to the combination "result[ing] only in saving a 'snap shot' of a published web page in Amstein, but not a backup copy." *See* PO Resp. 46. Patent Owner's argument depends on an unduly narrow construction of "backup copy"; under the correct construction, Mantha's snap shot constitutes a copy of stored data, and thus, a backup copy. *See* Ex. 1102 ¶ 70 ("Mantha . . . creates a local copy of the Web page."). Similarly, we disagree with Patent Owner's contention that the combination would not serve any purpose that Mantha seeks due to the saved web page not being "modifiable for archiving purpose[s]," as the backup copy need not be modifiable under the correct construction. *See* PO Resp. 47. And Patent Owner's argument that "Mantha would not appreciate the unnecessary and useless security requirements such as user names, passwords, and encryptions for saving a copy of public information" is irrelevant. *See id.* The correct inquiry is not whether Mantha would appreciate certain aspects of Amstein but whether one of

ordinary skill in the art would have combined the two. We find that one of ordinary skill would have done so.

Finally, we agree with Petitioner that Patent Owner’s prosecution history argument is tangential to Petitioner’s arguments here. *See* Reply 25; PO Resp. 48–50. Patent Owner’s argument that “the examiner had considered whether onsite backup was obvious” over various prosecution references, none of which are at issue here, is irrelevant to our consideration of obviousness over Amstein, Mantha, and Glenn.¹⁷

(10) Objective Evidence of Non-Obviousness

Patent Owner also contends that Petitioner “does not even mention secondary considerations and fails to provide any analysis of secondary considerations.” *Id.* at 51. Patent Owner contends, “Patent Owner has granted licenses to the ’437 patent family to multiple companies that have used the ’437 patent in their businesses. . . . A nexus exists between the commercial success of these businesses and the merits of the claimed invention.” *Id.* (citing Ex. 2102 ¶ 10).

“In order to accord substantial weight to secondary considerations in an obviousness analysis, the evidence of secondary considerations must have a nexus to the claims, *i.e.*, there must be a legally and factually sufficient connection between the evidence and the patented invention.” *Fox Factory, Inc. v. SRAM, LLC*, 944 F.3d 1366, 1373 (Fed. Cir. 2019) (internal quotations omitted). Patent Owner only cites its complaint filed in the

¹⁷ To the extent Patent Owner raises a belated argument that trial should not have been instituted under Section 325(d), this argument fails because the time for requesting rehearing of the institution decision has passed. *See* 35 U.S.C. § 325(d); 37 C.F.R. § 42.71(d)(1).

district court, which states, “WhitServe has granted licenses to the ’437 patent family to multiple companies that have used the ’437 patent in their businesses.” Ex. 2102 ¶ 10. Merely citing its own complaint is self-serving and far removed from the quantum of evidence required to establish commercial success.

(11) *Conclusion as to Claim 1*

Having considered the parties’ arguments and evidence, we evaluate all of the evidence together to make a final determination of obviousness. *In re Cyclobenzaprine Hydrochloride Extended-Release Capsule Patent Litig.*, 676 F.3d 1063, 1075 (Fed. Cir. 2012) (describing the court’s precedent as “requiring that a fact finder consider all evidence relating to obviousness before finding a patent invalid”). As noted above, we find that Petitioner has established that the combination of Amstein, Mantha, and Glenn discloses all of the limitations of claim 1. As we also noted above, we find that one of ordinary skill in the art would have combined Amstein, Mantha, and Glenn, and that such person would have had a reasonable expectation of success in making such a combination.

We weigh the foregoing findings with Patent Owner’s asserted evidence of commercial success. We explained above that the evidence of commercial success is entitled to no weight. Thus, based on our review of the evidence of record, we are persuaded that Petitioner demonstrates by a preponderance of the evidence that claim 1 of the ’437 patent would have been unpatentable as obvious over the combined teachings of Amstein, Mantha, and Glenn.

b) Independent Claims 10 and 19

Independent claims 10 and 19 are similar to claim 1, and Petitioner makes a detailed showing, supported by evidence, that claims 10 and 19 are unpatentable over Amstein, Mantha, and Glenn. Pet. 45–56. Based on the full record, we find that Petitioner has persuasively shown that these claims are unpatentable over the combination of Amstein, Mantha, and Glenn. Patent Owner raises specific arguments concerning some of these claims, which we address below. These arguments do not undermine Petitioner’s persuasive showing.

Patent Owner appears to apply the same arguments regarding claim 1 from above to claims 10 and 19. *See generally* PO Resp. 22–52. Patent Owner also argues that Amstein does not disclose claim 19’s client identifiers because Amstein does not disclose a database:

As discussed above, Amstein and Mantha each fails to disclose the claimed database. *See supra* Part VI. Thus, Amstein and Mantha each fails to disclose a plurality of client identifiers included in the database. *See* Ex. 2103, ¶¶ 250, 253, 256, and 274. Glenn also fails to teach this deficiency. *Id.* Thus, the cited references fail to teach or suggest a plurality of client identifiers included in such database, as recited in claim 19.

Id. at 52. We have already rejected Patent Owner’s argument that Amstein does not disclose a database. Thus, we also find unpersuasive Patent Owner’s argument that Amstein does not disclose the plurality of client identifiers of claim 19. Patent Owner’s arguments do not undermine Petitioner’s persuasive showing. We conclude that Petitioner has shown, by a preponderance of the evidence, that the combination of Amstein, Mantha, and Glenn renders claims 10 and 19 obvious.

c) Claims 2 and 11

Claim 2 recites, “wherein a client’s access to said central computer and said at least one database is limited to the client’s own data by at least one of said plurality of client identifiers.” Claim 11 recites a similar limitation. Petitioner asserts Amstein teaches these claims because Amstein discloses “limiting a client’s access to the server ‘to service authors with a validated user name and password.’” Pet. 40 (citing Ex. 1113, 13:45–50, 25:5–36). Petitioner also relies on Amstein’s disclosure of

a locking mechanism so that the system will correctly handle *multiple authors accessing or modifying web information at the same time*. Web server specific access control information about each web may also be included, such as list of users and their passwords, definitions of groups of users, and a list of users and groups that may access the web or a particular part of the web.

Id. (citing Ex. 1113, 18:20–28) (emphasis added). Petitioner further asserts that one of ordinary skill in the art would have understood “Amstein’s description of implementing access control to correctly handle multiple authors accessing or modifying web information at the same time to show ‘a client’s access . . . is limited to the client’s own data,’ and that such access would be limited by client identifiers, such as user names.” *Id.* (citing Ex. 1102 ¶¶ 136–37).

In our Institution Decision, we concluded that on the preliminary record, the passages of Amstein on which Petitioner relies, including “a locking mechanism so that the system will correctly handle multiple authors accessing or modifying web information at the same time,” suggest a different interpretation. Decision 35. Amstein’s teaching of permitting “*multiple authors*” to access or modify “web information at the same time”

caused us to preliminarily determine that Amstein suggests the opposite of claim 2, i.e., that Amstein’s clients are *not* limited to accessing their own data. *Id.* We also determined preliminarily that Petitioner’s assertion that Amstein “limit[s] a client’s access to the server to service authors with a validated user name and password” does not suggest the claimed limitation either because “only access to the *server* is limited, not access to a client’s own data.” *Id.*

Patent Owner agreed with our preliminary analysis in its Response. PO Resp. 53–54. Patent Owner contends that in Amstein, “an end user of the on-line service, regardless of whether the end user is the author or not, may access information on the service, and thus a client in Amstein can view information or use an on-line service that is not authored by the client.” *Id.* at 54 (citing Ex. 2103 ¶¶ 92–94, 99, 104); *id.* at 53 (citing Ex. 1113, 11:37–44 (“information on the server machine is then made accessible by the server machine to other client systems”), 13:5–8, 17:48–51)). Patent Owner further contends that claim 2’s recitation of “by at least one of said plurality of client identifiers” is not disclosed by the cited references for the same reasons as claim 19.¹⁸ *Id.* at 54 (citing PO Resp. § VIII.E).

Petitioner responds that “the Petition explains how Amstein teaches this limitation in two ways—1) a multiple author web locking mechanism, and 2) an access control system.” Reply 20 (citing Pet. 39–40). Under its first point, Petitioner contends, “[t]he claim limitation does not exclude a client’s own data being accessible by other users; all that is required is that a client can only access their own data (which can be data that is common to

¹⁸ Because we uphold the patentability of claims 2 and 11 on other grounds, we need not reach Patent Owner’s “client identifier” argument.

multiple users).” *Id.* (citing Ex. 1121 ¶¶ 35–36). Under its second point, Petitioner contends, “Amstein teaches limiting access to the Web using, e.g., a ‘list of users and their passwords, definitions of groups of users, and a list of users and groups that may access the web or a particular part of the web.’” *Id.* at 21 (citing Pet. 40 (citing Ex. 1113, 18:20–28)). Petitioner further argues that one of ordinary skill in the art “would have understood that the list of users in Amstein is configurable to include any number of users based on access control requirements, including limiting access control to a single user.” *Id.*

In the Sur-Reply, Patent Owner contends that Petitioner’s interpretation of Amstein “goes against the plain language of Amstein, which the Board previously correctly interpreted.” Sur-Reply 11. Patent Owner asserts that in Amstein, “files on the server are accessible to multiple users,” and as such, “neither the ‘web server access control information’ nor the ‘locking mechanism’ limits access to ‘the client’s own data.’” *Id.* at 11–12.

Based on the full record before us, Petitioner has not met its burden to show the unpatentability of claims 2 and 11. While we agree with Petitioner that claim 2 “does not exclude a client’s own data being accessible by other users; all that is required is that a client can only access their own data,” we determine that Amstein does not disclose this feature. *See* Reply 20 (citing Ex. 1121 ¶¶ 35–36).

We analyze each passage of Amstein cited by Petitioner in turn. First, Petitioner cites Amstein’s teaching that “[a]ccess to files on the server machine may be limited to service authors with a validated user name and password.” Pet. 40 (citing Ex. 1113, 13:45–50). This passage teaches that

Amstein limits access to files on the server, but it does not teach or suggest that a client can only access its own data. To find otherwise would be to affirm the consequent, which is a logical error. Suppose one says, if a car is out of gas, that the car cannot run: it would be illogical to then conclude that if a car does not run, it must be out of gas. Similarly, in Amstein access to a file is limited to an author, but it would be illogical to conclude the author can only access that file.

Second, Petitioner relies on Amstein's disclosure of a locking mechanism so that the system will correctly handle multiple authors accessing or modifying web information at the same time. Web server specific access control information about each web may also be included, such as list of users and their passwords, definitions of groups of users, and a list of users and groups that may access the web or a particular part of the web.

Id. (citing Ex. 1113, 18:20–22). We disagree that this passage teaches or suggests the limitations of claims 2 and 11. The first sentence of this passage discloses that multiple authors may access the same data (web information), not that a client may only access its own data. This sentence *permits* multiple authors to access web information but does not *limit* any authors from accessing anything.

The second sentence of the above passage also does not support Petitioner's case. Amstein's "Web server specific access control information" including "a list of users and groups that may access the web or a particular part of the web" merely states that certain users *may* access that web, not that users are *limited* to only accessing that web. Dr. Mowry's testimony on this passage is unpersuasive. He testifies, "[w]hen multiple authors are accessing the same server, each author needs to have access to

the author's own data, while being restricted from accessing another author's data. The data would be identified using client identifiers, so that the data could be properly identified and access thereto properly limited." Ex. 1102 ¶ 136. This testimony finds no basis in the teachings of Amstein. Dr. Mowry adds the gloss of "each author need[ing] to have access to the author's own data, while being restricted from accessing another author's data," but Amstein describes no such concept. Dr. Mowry's testimony is speculative and cites no evidence in support. This testimony is entitled to little or no weight. 37 C.F.R. § 42.65(a) (2019).

In the Reply, Petitioner papers over Amstein's deficiency by arguing, "[one of ordinary skill in the art] would have understood that the list of users in Amstein is configurable to include any number of users based on access control requirements, including limiting access control to a single user. That is, [one of ordinary skill in the art] would have understood that Amstein's list of users would have included any number of users, including a single user." Reply 21 (citing Ex. 1121 ¶¶ 35–36). Petitioner relies on Dr. Mowry's identical testimony, but as this testimony is also unsupported, we give it little weight. *See id.*; *see, e.g.*, Ex. 1121 ¶ 36. Even if Amstein's list of users included a single user, Amstein would merely teach that a single user *may* access that web, not that that single user is *limited* to only accessing that web.

Accordingly, we determine that Petitioner has failed to meet its burden to show, by a preponderance of the evidence, that Amstein, Mantha, and Glenn render claim 2 and similar claim 11 obvious.

d) Claims 3–5, 8, 13, 15, 16, 18, and 20

Petitioner contends dependent claims 3–5, 8, 13, 15, 16, 18, and 20 are obvious over Amstein alone or in combination with Mantha, and Glenn. Pet. 40–52, 56–57. Petitioner provides a detailed analysis explaining where Amstein, Mantha, and Glenn disclose the limitations of these claims. Based on the full record, we find that Petitioner has persuasively shown that these claims are unpatentable over the combination of Amstein, Mantha, and Glenn. Patent Owner raises specific arguments concerning some of these claims, which address below. These arguments do not undermine Petitioner’s persuasive showing.

Patent Owner first argues claim 3 is patentable over Amstein alone or in combination with Mantha and Glenn. PO Resp. 55. Claim 3 recites, “further comprising software executing on said central computer to reformat the at least one data record, wherein the backup copy of the at least one data record is sent to the client site in one of a plurality of formats required by the client.” Patent Owner contends that because “neither the meta-information file nor the HTML response message [in Amstein] is a ‘data record,’ the format thereof is not disclosed by the cited references.” *Id.* (citing PO Resp. § VI; Ex. 2103 ¶¶ 69–170). Petitioner responds that Patent Owner’s arguments for claim 3 (and claims 4, 5, 8, 9, 13, 15–18, and 20) “are essentially the same as [Patent Owner’s] arguments for the independent claims and are incorrect for at least the reasons described above with respect to the independent claims.” Reply 22.

We agree with Petitioner. Patent Owner’s argument is conclusory and relies on an incorrect construction of “data records.” We explained above that “data records” encompasses “collections of related data items or fields.”

Petitioner contends, “Amstein also teaches that the server sends, to the client, an HTTP response message with meta-information reformatted in an HTML format **[reformatted]**.” Pet. 41 (citing Ex. 1113, Fig. 10, 22:49–56; Ex. 1102 ¶ 139). We find that this meta-information constitutes collections of related items, and hence, data records. Patent Owner’s contention that “the format thereof is not disclosed” is unpersuasive because Amstein discloses “[t]he document meta information consists of attribute name value pairs in *HTML format*.” See Ex. 1113, 22:49–56 (emphasis added).

Patent Owner next addresses claim 8, which recites “a web interface for accessing the plurality of data records via the Internet from said client computer, wherein the request for the backup copy is received via said web interface,” and similar claims 16 and 20. PO Resp. 55–56. Patent Owner contends that “because there is no disclosure regarding ‘data record’, its access through a web interface is not disclosed by the cited references.” *Id.* at 56 (citing *id.* Part VI; Ex. 2103 ¶¶ 69–170, 272–275). Patent Owner’s arguments are similar to those for claim 3, which we find do not undermine Petitioner’s persuasive showing for similar reasons.

For claim 15, Patent Owner contends that in the claim phrase “at least one storage is managed by a third party,” “no such database is disclosed.” *Id.* at 56 (citing *id.* at Part VI; Ex. 2013 ¶¶ 69–170, 264–271). This argument fails for reasons discussed above related to Patent Owner’s incorrect construction of database, as well as because claim 15 recites “at least one storage,” not a “database.” Patent Owner further contends that “Amstein is not a ‘third party.’” *Id.* Patent Owner asserts that “Amstein does not involve cross-organizational situations as discussed in Glenn, and

[one of ordinary skill in the art] would not be motivated to use a third party in Amstein.” *Id.* (citing Ex. 2013 ¶¶ 264–271). According to Patent Owner,

Amstein provide services to its client and client’s customer (i.e., an end user of the on-line service), which makes the server not a third party to the end user, while the ’437 patent does not require the interaction between the third party and client’s customer, which makes the server a third party.

Id.

Petitioner responds, “[a]s described in the Petition, Amstein **does** involve cross organizational situations, e.g., by teaching that the server can be accessed by multiple companies.” Reply 23 (citing Pet. 24). Petitioner contends “Amstein also teaches system administrators having access to a server that is ‘physically remote’ from service authors, further suggesting a cross organizational structure.” *Id.* (citing Pet. 22). Petitioner further argues that Amstein’s service authors “‘creat[e] and maintain[] on-line **services**’” including ‘electronic commerce’ or ‘online classified advertisements,’” and as such, “the customers of the service authors are, like the customers described in the ’437 patent, third parties with the server.” *Id.* at 23–24 (citing Pet. 11; Ex. 1102 ¶ 82; Ex. 1121 ¶ 39). Relying on Amstein alone or in view of Glenn, Petitioner contends the references teach the claimed “third party.” *Id.* (citing Ex. 1121 ¶¶ 37–38).

We find most persuasive the original arguments in the Petition that Glenn discloses the claimed “central computer managed by a third party.” *See* Pet. 50 (citing discussion of claim 1[a]), 22. Petitioner contends, “[t]o the extent Amstein does not explicitly disclose that the server is managed by a ‘third party,’ Glenn teaches . . . that a ‘web server [can] be operated by a remote, or ‘third-party’ service provider.” *Id.* at 22 (citing Ex. 1117 §§ 3.1, 3.3, 3.0; Ex. 1102 ¶ 93). Glenn discloses, “[i]n a cross-organizational

setting, that web server would be operated by a remote, or ‘third-party’ service provider.” Ex. 1117 § 3.3. As we noted above, Petitioner also provides a detailed rationale for combining Glenn with Amstein and Mantha. *See* Pet. 23–24.

As Patent Owner does not dispute that Glenn discloses this limitation, Patent Owner does not undermine Petitioner’s persuasive showing. And Patent Owner’s arguments that “Amstein does not involve cross-organizational situations as in Glenn” and that “[one of ordinary skill in the art] would not be motivated to use a third party in Amstein” are conclusory. PO Resp. 56. We conclude that Petitioner has demonstrated, by a preponderance of the evidence, that Amstein, Mantha, and Glenn render obvious claims 3–5, 8, 13, 15, 16, 18, and 20.

E. Claims 6, 7, 12, and 14 as Unpatentable over Amstein and Chang Alone or in Combination with Mantha and Glenn

Petitioner contends that claims 6, 7, 12, and 14 are unpatentable under 35 U.S.C. § 103(a) as obvious over Amstein and Chang or in combination with Mantha and Glenn. Pet. 57–63. Petitioner provides a detailed analysis explaining where Amstein, Mantha, Glenn, and Chang disclose the limitations in dependent claims 6, 7, 12, and 14. *Id.* Based on the full record, we find that Petitioner has persuasively shown these claims are unpatentable over the combination of Amstein, Mantha, Glenn, and Chang. Patent Owner raises the same “third party” argument as for claim 15, which we find unpersuasive for the same reasons as set forth above. PO Resp. 57.

We conclude Petitioner has demonstrated, by a preponderance of the evidence, that Amstein, Mantha, Glenn, and Chang render obvious claims 6, 7, 12, and 14. Accordingly, we need not reach whether claims 6, 7, 12, and

14 are obvious over Amstein and Chang. *See Boston Sci. Scimed*, 809 Fed. Appx. at 990.

F. Claims 9 and 17 as Unpatentable over Amstein and Elgamal Alone or in Combination with Mantha and Glenn

Petitioner contends that claims 9 and 17 are unpatentable under 35 U.S.C. § 103(a) as obvious over Amstein and Elgamal or in combination with Mantha and Glenn. Pet. 63–67. Petitioner provides a detailed analysis explaining where Amstein, Mantha, Glenn, and Elgamal disclose the limitations in dependent claims 9 and 17. *Id.* Based on the full record, we find that Petitioner has persuasively shown these claims are unpatentable over the combination of Amstein, Mantha, Glenn, and Elgamal. Patent Owner asserts that “as explained above, no data record is disclosed[,] [n]or is a backup copy.” PO Resp. 58. These arguments repeat arguments we have rejected above.

We conclude Petitioner has demonstrated, by a preponderance of the evidence, that Amstein, Mantha, Glenn, and Elgamal render obvious claims 9 and 17. Accordingly, we need not reach whether claims 9 and 17 are obvious over Amstein and Elgamal.

IV. CONCLUSION¹⁹

In summary:

Claims	35 U.S.C. §	Reference(s)/ Basis	Claims Shown Unpatentable	Claims Not shown Unpatentable
1–5, 8, 10, 11, 13, 15, 16, 18–20	103(a)	Amstein ²⁰		2, 11
1–5, 8, 10, 11, 13, 15, 16, 18–20	103(a)	Amstein, Mantha, Glenn	1, 3–5, 8, 10, 13, 15, 16, 18–20	2, 11
6, 7, 12, 14	103(a)	Amstein, Chang ²¹		
6, 7, 12, 14	103(a)	Amstein, Mantha, Glenn, Chang	6, 7, 12, 14	
9, 17	103(a)	Amstein, Elgamal ²²		
9, 17	103(a)	Amstein, Mantha, Glenn, Elgamal	9, 17	
Overall Outcome			1, 3–10, 12– 20	2, 11

¹⁹ Should Patent Owner wish to pursue amendment of the challenged claims in a reissue or reexamination proceeding subsequent to the issuance of this decision, we draw Patent Owner’s attention to the April 2019 *Notice Regarding Options for Amendments by Patent Owner Through Reissue or Reexamination During a Pending AIA Trial Proceeding*. See 84 Fed. Reg. 16,654 (Apr. 22, 2019). If Patent Owner chooses to file a reissue application or a request for reexamination of the challenged patent, we remind Patent Owner of its continuing obligation to notify the Board of any such related matters in updated mandatory notices. See 37 C.F.R. § 42.8(a)(3), (b)(2).

²⁰ We do not reach this ground as to claims 1, 3–5, 8, 10, 13, 15, 16, and 18–20 because the challenge based on Amstein, Mantha, and Glenn is dispositive of these claims.

²¹ We do not reach this ground because the challenge based on Amstein, Mantha, Glenn, and Chang is dispositive of these claims.

²² We do not reach this ground because the challenge based on Amstein, Mantha, Glenn, and Elgamal is dispositive of these claims.

V. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that Petitioner has shown by a preponderance of the evidence that claims 1, 3–10, and 12–20 of the '437 patent are unpatentable;

FURTHER ORDERED that Petitioner has not shown by a preponderance of the evidence that claims 2 and 11 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.

IPR2019-01019
Patent 8,812,437 B2

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