

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

META PLATFORMS, INC.,
Petitioner,

v.

ANGEL TECHNOLOGIES GROUP LLC,
Patent Owner.

IPR2023-00058
Patent 9,959,291 B2

Before MIRIAM L. QUINN, SHARON FENICK, and
MICHAEL T. CYGAN, *Administrative Patent Judges*.

FENICK, *Administrative Patent Judge*.

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

I. INTRODUCTION

A. *Background and Summary*

Meta Platforms, Inc. (“Petitioner”) filed a Petition (Paper 1, “Pet.”) requesting *inter partes* review of claims 1–26 (“challenged claims”) of U.S. Patent No. 9,959,291 B2 (Ex. 1001, “the ’291 patent”). Angel Technologies Group LLC (“Patent Owner”) filed a Preliminary Response (Paper 9). Petitioner filed a Preliminary Reply (Paper 14) and Patent Owner filed a Preliminary Sur-reply (Paper 15). We determined that the information presented in the Petition established that there was a reasonable likelihood that Petitioner would prevail with respect to at least one of the challenged claims, and therefore we instituted this proceeding on May 11, 2023, as to all challenged claims and all grounds of unpatentability. Paper 16 (“Dec. on Inst.”).

Patent Owner filed a Patent Owner’s Response (Paper 24, “PO Resp.”), Petitioner filed a Reply (Paper 29, “Pet. Reply”), and Patent Owner filed a Sur-reply (Paper 30, “PO Sur-reply”). The parties presented oral arguments on February 13, 2024 and the Board entered a transcript into the record. Paper 39.

For the reasons set forth in this Final Written Decision pursuant to 35 U.S.C. § 318(a), we determine that Petitioner demonstrates by a preponderance of evidence that claims 1–14 and 16–26 are unpatentable but that Petitioner does not demonstrate that claim 15 is unpatentable.

B. *Real Parties in Interest*

Petitioner identifies itself and Instagram, LLC as the real parties in interest, and notes that it was formerly known as Facebook, Inc. Pet. 2.

Patent Owner identifies only itself as a real party in interest. Paper 4 (Patent Owner’s Mandatory Notices), 2.

C. Related Matters

Petitioner and Patent Owner identify *Angel Technologies Group LLC v. Facebook, Inc. and Instagram LLC*, No. 2:21-cv-08459 (C.D. Cal.) as a related case. Pet. 2–3; Paper 4, 2. Petitioner notes that an appeal of that case was filed with the Federal Circuit. Pet. 2–3. The parties identify that appeal as *Angel Technologies Group LLC v. Meta Platforms, Inc.*, Case No. 22-2100, filed with the Federal Circuit on August 3, 2022. *Id.*; Paper 25 (Patent Owner’s Fourth Amended Mandatory Notices), 1.

Petitioner and Patent Owner additionally identify IPR2023-00057 (challenging claims of U.S. Patent 8,954,432 B2); IPR2023-00059 (challenging claims of U.S. Patent 10,417,275 B2); and IPR2023-00060 (challenging claims of U.S. Patent 10,628,480 B2) as related *inter partes* review requests. *Id.* at 3; Paper 4, 2.

D. The ’291 Patent

The ’291 patent is titled “Users Tagging Users in Media Online” and relates to using computer(s) and a communication network for storing and sharing images such as photographs and permitting the identification of objects such as persons within the photos. Ex. 1001, codes (54), (57), 1:19–25. The ’291 patent issued from an application filed October 15, 2013, and claims priority to an application filed November 15, 2001, and to a provisional application, No. 60/248,994, filed on November 15, 2000. *Id.* at codes (22), (60), (63), 1:6–15; Ex. 2017. A certificate of correction (“Cert. of Corr.”) was issued on May 1, 2018 correcting certain errors in claim 26.

The ’291 patent describes, as the part of the prior art, websites that allow users to organize digital photographs into online photo albums that can be accessed by other users. Ex. 1001, 1:35–2:6. However, the ’291 patent describes disadvantages or limitations to these prior art albums, among

others these include: (1) no ability for users to identify individuals or objects in photos; (2) text captions or descriptions cumbersome and possibly vague; (3) no search capabilities for searching for photos of specific individuals; and (4) no ability to associate descriptive terms identifying an object or individual in a photo with a specific area of the photo. *Id.* at 2:7–35, 2:49–3:9, 3:17–25; 3:31–40.

The '291 patent describes a system in which databases are used to store information to provide users access to upload, view, and access images, information about objects or people, and information about relationships between users and images. *Id.* at 5:42–55, 7:10–57. The '291 patent specification describes that the information can be stored in one or more databases. *Id.* at 7:12–14. “For instance, the system may utilize a Users database 230, Identifications database 240, and Images database 250 as depicted in FIG. 2.” *Id.* at 7:14–16. Figure 2, reproduced below, is a schematic diagram of the databases according to one embodiment of the invention. *Id.* at 4:47–48.

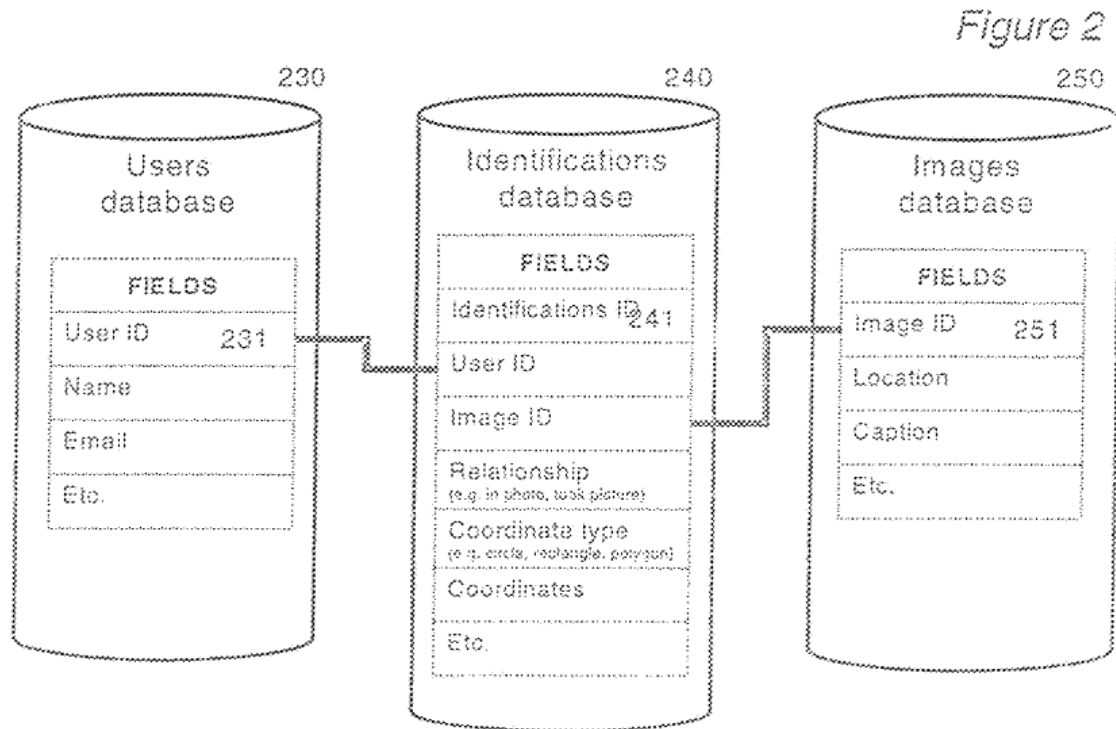


Figure 2 depicts users database 230, identifications database 240, and images database 250, with the fields used in each database, and shows that identifications database 240 links information in users database 230 with information in images database 250. *Id.* at 7:14–57.

Users database 230 stores information about people or other objects identified within images. *Id.* at 7:18–21. The information can relate to users who access the system, and may include a user identifier unique to a user or the user’s client computer system and other information relating to the user, including name, e-mail address, home page address, and a list of contacts. *Id.* at 7:18–25, 9:29–36. Users may enter other users as contacts. *Id.* at 9:36–46.

Images database 250 receives and stores image data, and may include a photo identifier and the location of the image file on the network, in addition to descriptive information such as a caption or date taken. *Id.* at 7:27–44, 9:47–59.

Identifications database 240 receives, stores, and provides information about relationships between users and photos, for example by linking information in users database 230 with information in images database 250. *Id.* at 7:45–57, 8:11–30, 8:51–61, 9:59–62. The location of the person in the photo may also be specified in the identifications database. *Id.* at 8:15–30. Web pages that permit users to identify people or other objects within photos are presented to obtain identifying information. *Id.* at 10:10–18, 11:56–59. The location of a user in an image may also be captured in such a page. *Id.* at 11:64–12:20. Figure 4, reproduced below, is an example of such an “identifying page.” *Id.* at 10:19–20.

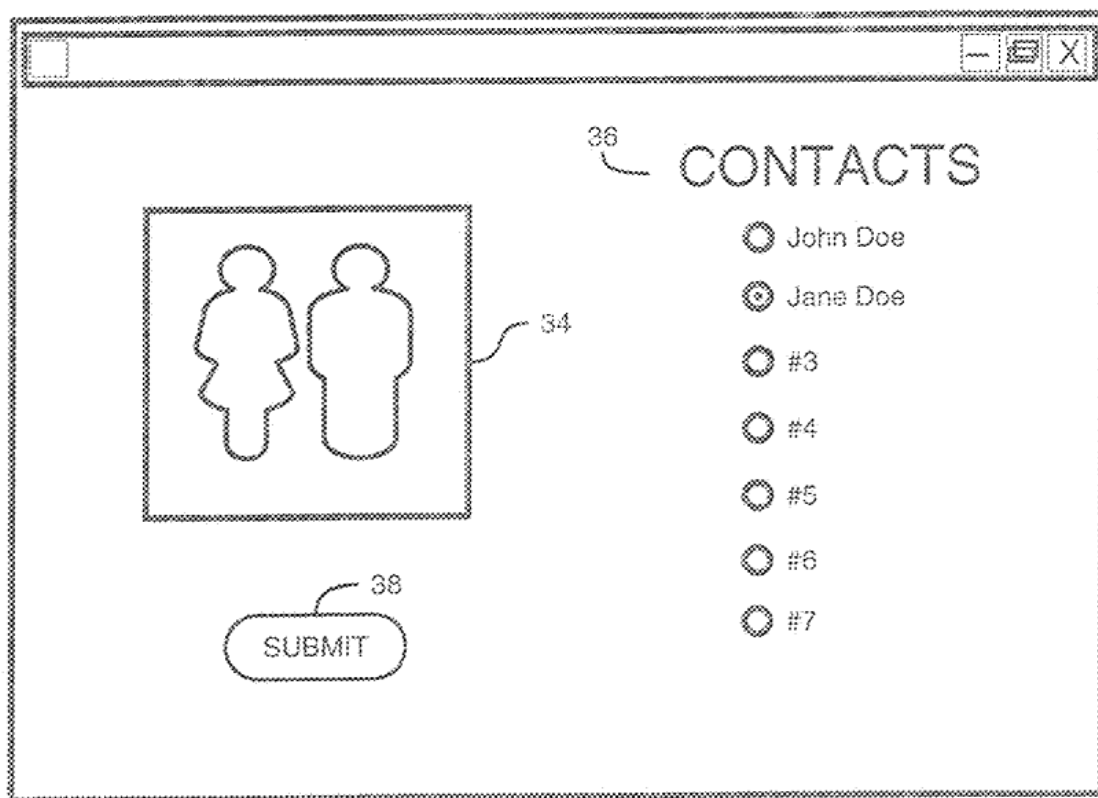


Figure 4 is a web page that presents photo 34, list of contacts 36 labeled “CONTACTS” and including seven options and radio buttons, and submit button 38. *Id.* at 10:20–22. The list of contacts may be selected from among the objects and users listed in users database 230 or may optionally be a

filtered list from users database 230, for example, a list of user contacts. *Id.* at 11:13–17. The information identifying people within the image displayed, obtained from a user interaction with an identifying page, is stored in the identifications database. *Id.* at 10:11–16, 10:46–52, 12:36–13:13.

Information in identifications database 240 may be used to find all the people identified in a given photo or to find all the photos a given person has been identified in. *Id.* at 8:62–9:22, 13:44–16:30.

E. Illustrative Claims

Claims 1, 24, 25, and 26 are independent, and claims 2–23 are dependent. Independent claims 1 and 26 are illustrative, and are reproduced below with limitation identifiers in brackets.

1. [1pre] A method implemented within a computer system including a plurality of computing devices connected via a communications network, the method associating users of the computer system with digital media accessible to one or more of the plurality of computing devices, the method comprising:

[1a] identifying a plurality of users of the computer system, one or more of the plurality of users having a unique user identifier stored in memory accessible to one or more of the plurality of computing devices, the plurality of users including a first user and a second user, the first user being different from the second user;

[1b] determining, from memory accessible to one or more of the plurality of computing devices, associations between descriptive information about one or more of the plurality of users and unique user identifiers of the users, the associations including an association between descriptive information previously provided by the first user and a unique user identifier of the first user;

- [1c] determining, from memory accessible to one or more of the plurality of computing devices, associations between the plurality of users, the associations including an association between the first user and the second user;
 - [1d] determining, from a plurality of digital media accessible to one or more of the plurality of computing devices, a unique digital media identifier corresponding to a digital media selection input by the second user;
 - [1e] providing, via one or more of the plurality of computing devices, a graphical user interface for presentation to the second user, the graphical user interface operative to receive one or more inputs from the second user indicating a selection of one or more of the plurality of users from descriptive information associated with unique user identifiers of the one or more of the plurality of users, the graphical user interface configured to display descriptive information associated with unique user identifiers of one or more of the plurality of users with a determined association with the second user;
 - [1f] receiving, via the communications network, an input initiated by the second user via the graphical user interface, the received input indicating a selection of the first user from descriptive information associated with the unique user identifier of the first user;
 - [1g] determining the unique user identifier of the first user from the received input initiated by the second user indicating the selection of the first user; and
 - [1h] in response to receiving the input initiated by the second user indicating the selection of the first user and to determining the unique user identifier of the first user, storing in memory accessible to one or more of the plurality of computing devices an association between the unique user identifier of the first user and the unique digital media identifier corresponding to the digital media selection input by the second user.
26. [26pre] A method implemented within a computer system including a plurality of computing devices connected via a

communications network, the method associating users of the computer system with digital media accessible to the computer system, the method comprising:

- [26a] distinguishing between users of the computer system via one or more unique user identifiers stored in a computer-readable medium accessible to the computer system, the users including a named user and an identifying user, the named user being different from the identifying user, the named user having naming information associated with a unique user identifier of the named user;
- [26b] in response to an input from the identifying user indicating a selection of an item of digital media, determining a unique digital media identifier corresponding to the digital media selected;
- [26c] receiving, from the identifying user, an input indicating a selection of the named user from a list of other network users, the list of other users including naming information previously provided by other users, the list of other users including one or more users in a contact list associated with the identifying user, the identifying user's contact list including the named user;
- [26d] in response to receiving from the identifying user the input indicating the selection of the named user from the list of other users, determining a unique user identifier of the named user; and
- [26e] storing an association between a unique user identifier of the named user and a unique digital media identifier corresponding to the digital media selected.

Ex. 1001, 22:4–60, 26:30–60, Cert. of Corr.

F. Prior Art and Asserted Grounds

Petitioner asserts that claims 1–26 would have been unpatentable on the following grounds:

Claim(s) Challenged	35 U.S.C. § ¹	Reference(s)/Basis
1, 5, 10–26	103	Sharpe ²
1–26	103	Sharpe, Eintracht ³
18, 19, 26	103	Sharpe, Carey ⁴
18, 19, 26	103	Sharpe, Eintracht, Carey

Petitioner additionally relies on declarations of Dr. Benjamin B. Bederson (Exs. 1003, 1039). Patent Owner relies on a declaration of Dr. Eli Saber (Ex. 2021).

II. ANALYSIS

A. Legal Standards

“In an [*inter partes* review], the petitioner has the burden from the onset to show with particularity why the patent it challenges is unpatentable.” *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016) (citing 35 U.S.C. § 312(a)(3) (requiring [*inter partes*] review petitions to identify “with particularity . . . the evidence that supports the grounds for the challenge to each claim”)). This burden never shifts to Patent Owner. *See Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015) (citing *Tech. Licensing Corp. v. Videotek, Inc.*, 545 F.3d 1316, 1326–27 (Fed. Cir. 2008)) (discussing the burden of proof in *inter partes* review). Furthermore, Petitioner must explain with particularity how the prior art would have rendered the challenged claims

¹ The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, 125 Stat. 284, 287–88 (2011), amended 35 U.S.C. §§ 102, 103. Because the ’291 patent claims priority to an application filed before the effective date of the applicable AIA amendment, we refer to the pre-AIA version of the relevant statutes. *See* Ex. 1001, code (22); *see* Pet. 5 nn.1–3 (applying pre-AIA statutes).

² Sharpe et al., US Patent 7,461,099 B1 (iss. Dec. 2, 2008) (Ex. 1005).

³ Eintracht et al., US Patent 6,687,878 B1 (iss. Feb. 3, 2004) (Ex. 1006).

⁴ Carey et al., US Patent 6,714,793 B1 (iss. Mar. 30, 2004) (Ex. 1007).

unpatentable. 35 U.S.C. § 312(a)(3); 37 C.F.R. § 42.104(b)(4) (“The petition must specify where each element of the claim is found in the prior art patents or printed publications relied upon.”).

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) objective evidence of nonobviousness, i.e., secondary considerations.⁵ See *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966).

B. Level of Ordinary Skill in the Art

Petitioner argues that one of ordinary skill in the art would “have had at least a bachelor’s degree in computer science, electrical engineering, computer engineering, or a similar technical field, with at least two years of experience in the field of networked and Web-based media applications” and that “[a]dditional experience could substitute for less education, and additional education could likewise substitute for less experience.” Pet. 13–14 (citing Ex. 1003 ¶¶ 37–43).

In the Decision on Institution, we removed the open-ended term “at least” from Petitioner’s proposed definition and adopted that amended

⁵ On the current record, no party has raised any arguments relating to objective evidence of nonobviousness. See Pet. 77.

definition. Dec. on Inst. 9–10. Consistently, Patent Owner contends that a person of ordinary skill in the art “would have a bachelor’s degree in computer science, electrical engineering, computer engineering, or a similar technical field, with two years of experience in the field of networked and Web-based media applications” and that “[a]dditional experience could substitute for less education, and additional education could likewise substitute for less experience.” PO Resp. 16 (citing Ex. 2021 ¶44).

We adopt Patent Owner’s definition, which is consistent with the specification of the ’291 patent and the prior art and supported by the testimony of both experts.

C. *Claim Construction*

Petitioner discusses the construction of the following claim terms: “user identifier” (all claims) and “contact” (in claim 26). Pet. 14–16. Petitioner argues that each should be given their ordinary meaning in the context of the ’291 patent. *Id.* For “user identifier,” Petitioner argues that the ordinary meaning is “a series of characters identifying a user.” *Id.* at 14–16 (citing Ex. 1001, 7:58–60, 8:1–3; Ex. 1003 ¶¶ 62–64). For “contact,” Petitioner argues that the ordinary meaning of “contacts” is “people known to the user.” *Id.* at 15–16 (citing Ex. 1001, 9:36–37, 9:39–42; Ex. 1003 ¶¶ 65–67).

In response, with respect to these claim terms, Patent Owner argues that no claims require express construction and that each term should be given its ordinary and customary meaning. PO Resp. 17 (citing Ex. 2021 ¶ 63).

“The Board is required to construe ‘only those terms . . . that are in controversy, and only to the extent necessary to resolve the controversy.’” *Realtime Data, LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed. Cir. 2019)

(alteration in original) (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng'g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)). Petitioner does not appear to use the claim constructions it discusses in the Petition in its unpatentability arguments and Patent Owner does not raise the proper construction of these terms in its Response or Sur-reply.

In this case, with respect to “user identifier” and “contact,” these terms do not require construction to reach our decision with respect to patentability, and therefore we do not provide any constructions for these terms. *See Realtime Data*, 912 F.3d at 1375.

To the extent required, we discuss the claim interpretation of “determining . . . the unique digital media identifier corresponding to a digital media selection input by the second user,” from claim 1, below, in our analysis of claim 1. *See infra* § II.D.4.c.

With that possible exception, no other terms require construction to reach our decision. *Realtime Data*, 912 F.3d at 1375.

D. Challenge to Claims 1, 5, and 10–26 as Obvious Over Sharpe

Petitioner argues that claims 1, 5, and 10–26 would have been obvious over Sharpe. Pet. 22–59. Patent Owner presents contentions countering certain aspects of Petitioner’s showing. PO Resp. 18–49; PO Sur-reply 4–16.

1. Sharpe – Overview

Sharpe is titled “Method and System for Archiving and Retrieving Items Based on Episodic Memory of Groups of People” and describes archiving and retrieving digital media items. Ex. 1005, codes (54), (57), 1:33–37.

Sharpe describes that a user archives digital media items by identifying a group to which the user belongs and archiving the digital media

item for the group. *Id.* at 1:37–45. To archive the digital media item, the user can select parameters to index the digital media item; these parameters may include identifying as associated with the item: a group event type, persons, or a time period. *Id.* at 1:47–58, 1:66–2:02, 8:15–25. These parameters can then be used to retrieve digital media items. *Id.* at 1:58–63, 2:2–9.

“The index information may be stored together with the digital media item for example as a ‘header’. Alternatively, the digital media items may be stored separately with unique identifiers such as a file name or index.” *Id.* at 3:64–67, 5:43–45. In such cases, the index information, stored separately from the digital media items in a faster storage medium, includes a reference to this unique identifier. *Id.* at 3:67–4:3. “This allows the digital mediabase to be searched quickly but does not use the expensive, fast access storage for space consuming digital media files.” *Id.* at 4:3–6.

Figure 1 of Sharpe, reproduced below, is a block diagram of an embodiment of Sharpe. *Id.* at 5:4–6.

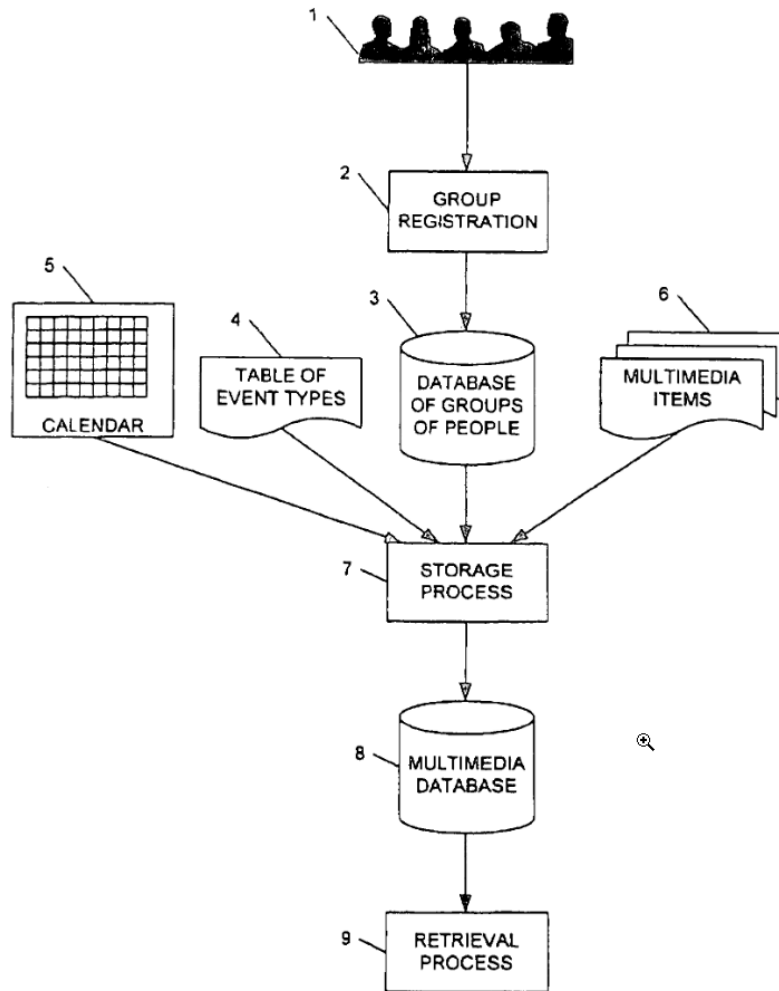


Fig 1

Figure 1 includes processes, information, databases, and their relationships. Groups of users 1 are registered by group registration process 2 as stored in database of groups of people 3, including information identifying the people in the group and identifying a group. *Id.* at 5:4–6, 7:35–38. A user of the system may identify themselves as a member of the group using a user name and password. *Id.* at 7:39–41. This allows them to associate stored multimedia items with the group to which the user belongs. *Id.* at 7:47–48.

Information from database of groups of people 3 is used, along with multimedia items to be archived 6, information from table of event types 4 and calendar 5, resulting in the indexing of a multimedia item in accordance with the group, members of the group, event type, and date. *Id.* at 5:24–37, 5:41–43.

Figure 4 of Sharpe, reproduced below, depicts a graphical user interface according to the Sharpe system. *Id.* at 6:58–59.

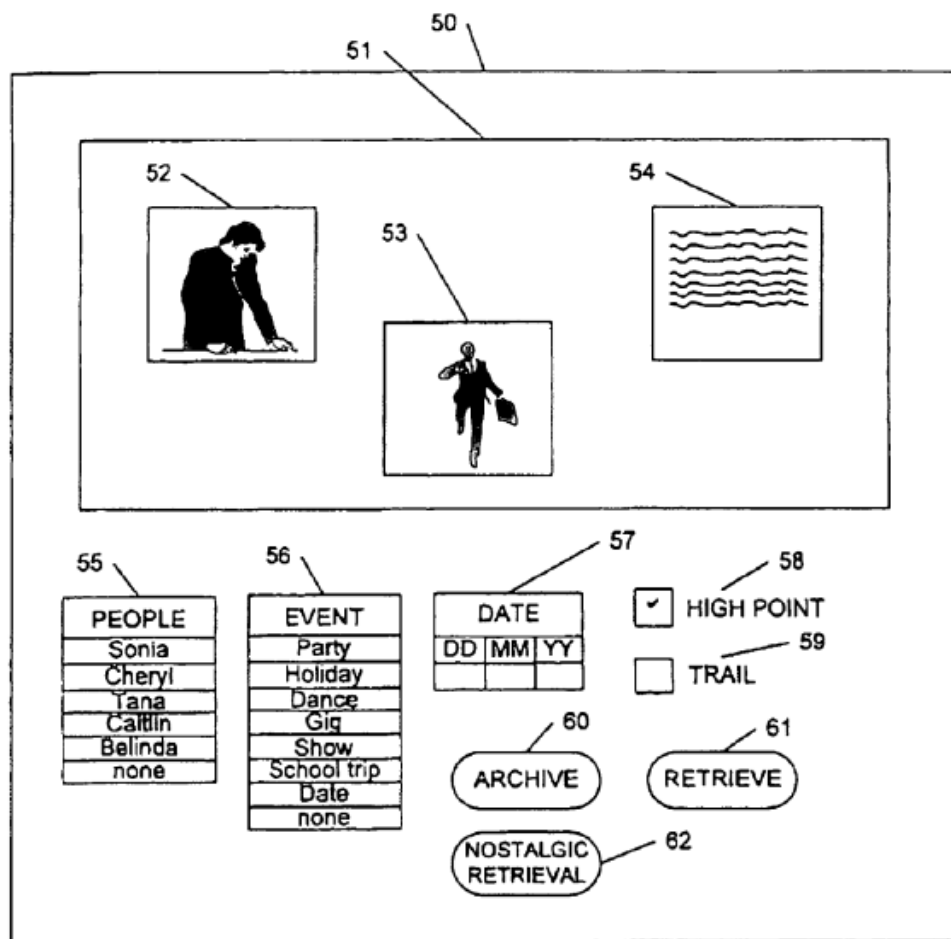


Fig 4

Figure 4 includes work space 51 that displays media items (images 52 and 53 and text 54) and user controls for generating index information. *Id.* at 6:59–67, 7:42–44. Drop down box 55 allows selection of any of a number of people from within a group. *Id.* at 6:67–7:1. The database of groups of people 79 is used to provide the list of people. *Id.* at 8:26–27. Drop down box 56 allows the identification of one of a number of event types. *Id.* at 7:1–2. Date entry 57 allows a user to enter a date. *Id.* at 7:3. Archive button 60 is used to enter this index information for the archiving process. *Id.* at 7:14–24, 7:44–47, 8:30–31, 8:37. This allows group members to view the contents of the group archive, for example, with a focus on a specific person or people, date or time period, or event type. *Id.* at 8:45–67, 9:12–32, Fig. 7.

2. *Arguments Regarding Sufficiency of the Obviousness Ground Presented*

Before we address specific assertions regarding unpatentability, we address arguments Patent Owner raises regarding this single-reference obviousness ground.

Patent Owner argues that although the Petition styles arguments relating to unpatentability in view of Sharpe alone as an obviousness ground, the Petition “contains no actual obviousness analysis” and rather only contends that Sharpe actually discloses the elements of the challenged claims. PO Resp. 44–49. Patent Owner asserts that, “[b]y not addressing what is missing from Sharpe such that an obviousness modification would be hypothetically made, the Petition’s analysis is flawed at least with respect to” the second *Graham* factor, relating to differences between the claimed subject matter and the prior art. *Id.* at 44–45 (referencing the four factors set forth in *Graham v. John Deere Co.*, 383 U.S. at 17–18). Additionally,

Patent Owner argues that no analysis was presented regarding the reasonable expectation of success regarding any such modification. *Id.* at 45–46 (citing *In re Stepan Co.*, 868 F.3d 1342, 1346 n.1 (Fed. Cir. 2017)). Patent Owner argues that Petitioner has created a “legal limbo” in which it would be impossible to determine whether Petitioner has sufficiently shown obviousness because the Petition is fatally ambiguous regarding obviousness and does not provide Patent Owner proper notice of the theory of unpatentability under the Administrative Procedure Act (APA). *Id.* at 46–49. Patent Owner additionally argues that arguments relating to obviousness in the Petitioner’s Reply are improper new arguments that should be excluded. PO Sur-reply 1–4.

We do not agree that the obviousness ground is deficient.

Patent Owner cites *M & K Holdings* (PO Resp. 47–49) to argue that the Board cannot deviate from the invalidity theory set forth in a petition in a final determination, and we begin by examining what is present in the Petition in this proceeding. *See M & K Holdings, Inc. v. Samsung Elecs. Co.*, 985 F.3d 1376, 1385 (Fed. Cir. 2021). We agree with Petitioner that it was clear from the Petition that an obviousness ground over Sharpe was presented, and that the Petition describes the “knowledge and skills that a [person of ordinary skill in the art] would have applied to implement Sharpe.” *See* Pet. Reply 14. The Petition describes the ground as relating to obviousness over 35 U.S.C. § 103. Pet. 5 (identification of challenges), 22 (heading). The ground specifically describes elements of Sharpe as teachings recognizable by one of ordinary skill in the art rather than as disclosures of Sharpe. *See, e.g., id.* at 25 (one of ordinary skill in the art recognizing the identification of users registered as being in a group through usernames), 26 (one of ordinary skill in the art understanding that a

username would be unique and would support database queries relating to people associated with digital media items), 29 (one of ordinary skill in the art understanding regarding the association of a username and personal name), 34 (one of ordinary skill in the art's understanding regarding collection of naming information), 35–36 (one of ordinary skill in the art's modification of Sharpe to include a contact list), 36–38 (one of ordinary skill using a username as a primary key for databases); *see also id.* at 39–47 (similar arguments with respect to claim 1), 57–59 (reference to claim 1 arguments for claims 24 and 25).

Patent Owner's Response shows that Patent Owner had notice that Petitioner's arguments were styled as based on obviousness. PO Resp. 18. Our Decision on Institution (at 7, 24–27) indicated the Board's understanding of the Petition as presenting an obviousness ground over Sharpe, Petitioner's Reply (at 2–5, 13–18) clarified this further, and Patent Owner has had an opportunity to respond to the obviousness theories presented throughout the proceeding. Thus, we perceive no APA issue; Patent Owner has had notice and a fair opportunity to be heard on these matters. *See Belden Inc. v. Berk-Tek LLC*, 805 F.3d 1064, 1080 (Fed. Cir. 2015) (in an IPR, “the Administrative Procedure Act requires the PTO to timely inform a patent owner of the matters of fact and law asserted in an inter partes review of its patent, to give all interested parties opportunity for . . . the submission and consideration of facts and arguments . . . and hearing and decision on notice, and to permit a party to submit rebuttal evidence, and to conduct such cross-examination as may be required for a full and true disclosure of the facts” (internal quotations and citations elided)).

With respect to the argument that the Petition was deficient as lacking a showing of a reasonable expectation of success, we agree with Petitioner

that *Stepan* stands for the proposition that such a showing must be made when there is a combination of teachings, including from the same reference. Pet. Reply 16–17; *Stepan*, 868 F.3d at 1346 n.1 (“Whether a rejection is based on combining disclosures from multiple references, combining multiple embodiments from a single reference, or selecting from large lists of elements in a single reference, there must be a motivation to make the combination and a reasonable expectation that such a combination would be successful, otherwise a skilled artisan would not arrive at the claimed combination.”). We note that Petitioner – in describing the collection of name information (e.g., for presentation in a drop down box of a workspace as in Sharpe’s Figure 4) during registration as a “conventional design choice” and in citing Dr. Bederson’s testimony to this effect – provides argument and evidence regarding an expectation of success in using the username. Pet. 34 (citing Ex. 1003 ¶ 168); see *Sisvel S.p.A. v. TCT Mobile Int’l Ltd.*, No. 2023-1123, 2024 WL 1173047 at *3 (Fed. Cir. March 19, 2024) (nonprecedential) (finding a reasonable expectation of success where an expert testified regarding a “simple design choice” and the prior art reference noted a solution as “a good candidate”).

With respect to arguments in the Reply that relate to obviousness, including arguments that the use of a username was a design choice (PO Sur-reply 2–3), we find that Petitioner’s arguments in the Reply “properly expand[] on and [are] a fair extension of its previously raised . . . argument.” *Rembrandt Diagnostics, LP v. Alere, Inc.*, 76 F.4th 1376, 1385 (Fed. Cir. 2023). In the Petition, Petitioner argued that one of ordinary skill would have understood that a username would have been “typically implemented” as a unique user identifier that would support the querying of the database and storing information in a database. Pet. 25–26 (citing Ex. 1003 ¶¶ 141–

143), 28–29, 34 (citing Ex. 1003 ¶¶ 168), 36–38 (citing Ex. 1003 ¶¶ 174–176, 179). The Petition further describes the knowledge of one of ordinary skill regarding the “typical implement[ation]” of a username as a unique identifier and that the use of such a unique identifier supports querying a database, particularly in the circumstances of Sharpe. Pet. 26 (citing Ex. 1003 ¶¶ 142–143). The Reply further explains that in view of Sharpe’s teachings, the username is the most obvious design choice because a username is one such unique identifier. Pet. Reply 3. We determine the discussion in the Reply describing the use of a username rather than the user’s personal name as a design choice for use as a primary key (Pet. Reply 3–4) is the same argument as, or a fair extension of, these contentions in the Petition.

For these reasons, we do not find the ground of obviousness over Sharpe deficient as Patent Owner argues. We reserve for later portions of this Decision specific determinations regarding substantive arguments of the parties with respect to the ground presented and regarding the ultimate question of whether the Petitioner has met its burden of proof.

3. *Independent Claim 26*

Petitioner begins by addressing the obviousness of claim 26, and we follow this ordering in our analysis.

a) *Petitioner’s Contentions in the Petition*

Without arguing that the preamble of claim 26 is limiting, Petitioner argues that Sharpe renders the preamble of claim 26 obvious by teaching a method for associating users with digital media. Pet. 22–24 (citing, *inter alia*, Ex. 1005, 4:21–26, 5:4–13, 5:27–35, 5:50–63, 7:35–48; Ex. 1003 ¶¶ 129–135).

With respect to limitation 26a, the method step of “distinguishing between users of the computer system via one or more unique user identifiers stored in a computer-readable medium accessible to the computer system, the users including a named user and an identifying user, the named user being different from the identifying user, the named user having naming information associated with a unique user identifier of the named user,” Petitioner describes Sharpe’s disclosure of groups of users registered in a database. Pet. 25 (citing Ex. 1005, 2:29–30, 7:35–41; Ex. 1003 ¶¶ 138–140). Petitioner further argues that one of ordinary skill in the art would have understood that the usernames of Sharpe are unique usernames because such a login process would typically be implemented with a unique username, and because Sharpe’s archiving and retrieving of images based on associated users would require a unique user identifier. *Id.* at 25–26 (citing Ex. 1005, 7:35–48, 8:60–9:11; Ex. 1003 ¶¶ 142–143). Petitioner further argues that the recitations relating to a “named user” and an “identifying user” is taught in Sharpe’s discussion of a first user identifying a second user as present in a digital media item. *Id.* at 27–28 (citing Ex. 1005, 3:57–63, 5:6–13; Ex. 1003 ¶¶ 148–151). With respect to the named user having named information associated with a unique user identifier, Petitioner argues that Sharpe teaches this in the personal name of a user displayed in a drop down menu in the GUI of Figure 4. *Id.* at 28–29 (citing Ex. 1005 6:67–7:1, 8:26–29; Ex. 1003 ¶¶ 152–157).

For limitation 26b, the method step of “in response to an input from the identifying user indicating a selection of an item of digital media, determining a unique digital media identifier corresponding to the digital media selected,” Petitioner argues that Sharpe discloses determining an

identifier for each item to be stored. *Id.* at 30–31 (citing Ex. 1005, 3:64–4:6, 5:24–40, 7:42–44, 8:30–36; Ex. 1003 ¶¶ 158–160).

With respect to limitation 26c, “receiving, from the identifying user, an input indicating a selection of the named user from a list of other network users, the list of other users including naming information previously provided by other users, the list of other users including one or more users in a contact list associated with the identifying user, the identifying user’s contact list including the named user,” *Id.* at 31–36 (citing Ex. 1005, 2:27–38, 5:6–13, 6:58–7:24, 8:15–29, 9:29–32, Fig. 4 (item 55); Ex. 1003 ¶¶ 163–171).

Limitation 26d recites “in response to receiving from the identifying user the input indicating the selection of the named user from the list of other users, determining a unique user identifier of the named user,” and Petitioner argues that Sharpe describes creating associations between users and media items, and that in order to create such relationships in the database tables described in Sharpe, one of ordinary skill in the art would have understood a unique identifier / primary key would be used. *Id.* at 36–37 (citing Ex. 1005, 4:63–65, 7:32–34, 8:15–36; Ex. 1003 ¶¶ 173–176).

Lastly, with respect to the final step of claim 26 (limitation 26e), “storing an association between a unique user identifier of the named user and a unique digital media identifier corresponding to the digital media selected,” Petitioner contends that the “associated information” stored for a multimedia item when a user had been identified as associated with that item would have included a username for the named user. *Id.* at 37–38 (citing Ex. 1005, 2:32–35, 4:63–65, 7:32–34, 8:30–36; Ex. 1003 ¶¶ 177–179).

b) Patent Owner's Arguments

Patent Owner contends, with respect to limitations 26d and 26e, and specifically with respect to the use of the username as the “unique user identifier” that “Sharpe’s thin disclosure regarding a user name” amounts to a “limited and solitary reference” that “indicates Sharpe’s lack of concern with further utilization of the user name for functionalities such as determining a user name in response to a selection of a user in an image.” PO Resp. 19–20 (citing Ex. 2021 ¶ 79). Patent Owner additionally argues that a username would not be used as a primary key for creating relationships among database tables for the same reason. *Id.* at 23 (citing Ex. 2021 ¶ 85).

Patent Owner argues, assuming the Petition only argued anticipation, that the use of the Sharpe username as argued by Petitioner is not inherent or disclosed in Sharpe. *Id.* at 19–24; PO Sur-reply 4–6. With respect to obviousness, Patent Owner generally argues that the Petition did not present an obviousness analysis. PO Sur-reply 6.

c) Our Analysis and Conclusion

We determine that Petitioner has shown by a preponderance of the evidence that claim 26 would have been obvious in view of Sharpe.⁶ Sharpe teaches a method for associating users with digital media. Ex. 1005, 5:27–35; Ex. 1003 ¶ 134). Petitioner has shown that one of ordinary skill would have used Sharpe’s usernames as unique user identifiers to distinguish between a named and an identifying user as described in limitation 26a. Ex. 1005, 7:35–41; Ex. 1003 ¶¶ 140–142. Petitioner has additionally shown

⁶ We do not reach a determination regarding whether the preamble of claim 26 is limiting because we determine that Petitioner’s showing is sufficient if it were to be construed as limiting.

that Sharpe teaches a first user (“identifying user”) identifying a second user (“named user”) in a digital media item. Ex. 1005, 3:57–63, 5:6–13; Ex. 1003 ¶¶ 149–150). With respect to the named user having named information associated with a unique user identifier, we determine that Sharpe teaches this in the personal name of a user displayed in a drop down menu in the GUI of Figure 4, and credit Dr. Bederson’s testimony that one of ordinary skill in the art would have used a personal name in such a menu, rather than a username. Ex. 1005 6:67–7:1, 8:26–29; Ex. 1003 ¶ 154.

With respect to limitation 26b, the evidence shows that Sharpe discloses a unique media identifier corresponding to digital media selected in response to an input from the identifying user indicating a selection of an item of digital media. Ex. 1005, 3:64–4:6, 5:24–40, 7:42–44, 8:30–36; Ex. 1003 ¶¶ 158–160. And the drop down box 55 of Sharpe teaches the receipt of an input indicating a named user from a list of users, where the named user and the identifying user are each group members per Sharpe’s teaching of an archive with digital media items archived for a group of users. Ex. 1005, 2:27–38, 5:6–13, 6:58–7:24, 8:15–29, Fig. 4 (element 55); Ex. 1003 ¶¶ 163, 164, 166–168, 170–172).

Finally, with respect to limitations 26d and 26e, the preponderance of the evidence shows Sharpe teaching or suggesting these, with Sharpe teaching the associations between users and media items being created and stored, and the use of the username of Sharpe as a unique user identifier used as a primary key taught or suggested by Sharpe in view of the implementation by one of ordinary skill in the art, as Dr. Bederson testifies. Ex. 1005, 2:32–35, 4:63–65, 5:24–45, 7:32–34, 8:15–36; Ex. 1003 ¶¶ 173–179). Although Patent Owner argues that it was well known to assign an internal unique identifier to a user, and this could have been assigned rather

than the use of a username as primary key (PO Resp. 20–21; Ex. 2021 ¶¶ 81–82), this argument only establishes that there were other choices that could have been selected as the primary key. The preponderance of the evidence, however, supports Petitioner’s argument that the username would have been an obvious design choice for the primary key. Pet. 36–37; Pet. Reply 2–4; Ex. 1003 ¶¶ 175–176; Ex. 1039 ¶¶ 7–10. Indeed, Dr. Bederson’s testimony, which we credit, reveals that selecting the username as a primary key is the most obvious design choice because it is a unique identifier already required by Sharpe and would be suitable for specifying a relationship between a particular user and a particular image in Sharpe’s database. Ex. 1039 ¶¶ 7–9.

Accordingly, we determine that Petitioner has sufficiently shown, by a preponderance of the evidence that claim 26 is unpatentable under § 103 as being obvious over Sharpe.

4. Independent Claim 1

a) Petitioner’s Contentions in the Petition

Without arguing that the preamble of claim 1 is limiting, Petitioner’s arguments relating to claim 1 refer back to and are substantively similar to those relating to the preamble of claim 26, discussed above. Pet. 39 (citing Ex. 1005, 4:21–33, 5:50–63, Fig. 2; Ex. 1003 ¶ 182). With respect to limitation 1a, relating to a first and second user and identifying users with user identifiers, the Petition refers to the similar limitations of limitation 26a of claim 26, discussed above, and additionally argues that Sharpe describes two users, the first user different from the second user, depicted in an image. *Id.* at 39–40 (citing Ex. 1005, 5:4–13, 7:39–41, 8:26–29, Fig. 1; Ex. 1003 ¶¶ 184–185).

With respect to limitation 1b, “determining . . . associations between descriptive information about one or more of the plurality of users and unique user identifiers of the users” including “an association between descriptive information previously provided by the first user and a unique user identifier of the first user,” the Petition cites Sharpe’s teaching of associations between users’ personal names and their usernames from database tables of Sharpe. *Id.* at 40–41 (citing Ex. 1005, 2:27–38, 5:4–6, 6:67–7:1, 7:35–38, 8:26–29, claim 29; Ex. 1003 ¶¶ 188–189).

For limitation 1c’s determination of associations between the plurality of users, the Petitioner cites Sharpe’s teachings of a group identifier that identifies members of a group and Dr. Bederson’s testimony that a determination of a user to be identified in an image and an archiving user could be made from tables storing the group identifiers. *Id.* at 41–42 (citing Ex. 1005, 2:27–29, 4:63–65, 7:33–35; Ex. 1003 ¶¶ 191–193).

Petitioner contends that limitation 1d is taught or suggested in the storage of new images with an item identifier that is associated with a group, and that a user can retrieve digital media items using the interface in Sharpe, and that a server would determine a unique digital media identifier corresponding to the input. *Id.* at 42–43 (citing Ex. 1005, 1:58–65, 2:5–9, 9:4–7, 7:42–48, Fig. 6b; Ex. 1003 ¶¶ 196–197).

For the graphical user interface provided to the second user, in limitation 1e, Petitioner cites the graphical user interface of Figure 4, and the display of people in the group listed in drop down box 55, along with Dr. Bederson’s testimony regarding the use of usernames as a primary key and the resulting association with descriptive information (personal names) for users in the group. *Id.* at 43–44 (citing Ex. 1005, 1:58–65, 2:5–9, 2:32–

35, 4:63–65, 6:58–59, 6:67–7:1, 7:32–34, 7:42–48, 8:30–36, 9:4–7, Fig. 4; Ex. 1003 ¶¶ 199–204).

Limitation 1f requires receipt of an input initiated by the second user via the graphical user interface of a selection of the first user from the descriptive information, limitation 1g requires the determination of the unique user identifier of the first user from that received input, and limitation 1h requires, in response, storing in memory an association between that unique user identifier and the unique digital media identifier. Ex. 1001, 22:45–60. Petitioner argues that these limitations are taught or suggested by the receipt, in Sharpe, of an input by a user of a selection of a personal name from the names in the drop down box of Figure 4, which is received, used to determine the associated username and storage of the association between the digital media identifier and the username in database table 6e. Pet. 45–46 (citing Ex. 1005, 1:58–65, 2:5–9, 2:32–35, 4:63–65, 6:58–59, 6:67–7:1, 7:32–34, 7:42–48, 8:30–36, 9:4–7, Fig. 4, Fig. 6e; Ex. 1003 ¶¶ 205–210).

b) Patent Owner's Arguments

Patent Owner argues that Petitioner does not properly present an obviousness analysis. PO Resp. 44–49.

Patent Owner additionally argues, with respect to the input of limitation 1d that “[t]he user of Sharpe’s process/system, by entering parameters for the retrieval process, isn’t selecting or requesting a *specific* digital media item” but rather “the selection of a set of parameters in order to retrieve any and all responsive images.” *Id.* at 28 (citing Ex. 2021 ¶ 89). Patent Owner does concede that Sharpe might retrieve a single photograph if only one photograph is responsive to search parameters, but Patent Owner contends that even in such cases “the user of the system is not requesting a specific digital media selection item.” PO Sur-reply 7–8 & n.1.

With respect to limitation 1e and 1g, Patent Owner makes the same argument as with respect to claim 26, namely, that Sharpe’s disclosure regarding usernames is “thin” and Sharpe does not disclose that descriptive information (such as a personal name) would be associated with a username. PO Resp. 29–31, 32–33; PO Sur-reply 4–6. Similarly, with respect to limitation 1f and 1g, Patent Owner argues that Petitioner has not shown disclosure of the subject matter of these limitations, and that Petitioner has not argued obviousness. PO Resp. 31–32.

c) Our Analysis and Conclusion

We determine that Petitioner has shown by a preponderance of the evidence that claim 1 would have been obvious in view of Sharpe.⁷ Our analysis is in many respects similar to that with respect to claim 26, with respect to Sharpe’s general focus on a method for associating users with digital media, use of usernames as unique user identifiers, teachings of a first user and second user, and storage of an association between a unique user identifier and a unique digital media identifier responsive to input by a second user. *See supra* § II.D.3.c. Additionally, as discussed above, we do not agree that Petitioner has not properly presented obviousness contentions with respect to claim 1, as Patent Owner argues. *See supra* § II.D.2.

With respect to the question of whether Sharpe teaches “determining, from a plurality of digital media . . . a unique digital media identifier corresponding to a digital media selection input by the second user,” we find that a preponderance of the evidence shows that this is taught by Sharpe’s graphical user interface that allows a user to select parameters for retrieval.

⁷ We do not reach a determination regarding whether the preamble of claim 1 is limiting because we determine that Petitioner’s showing is sufficient if it were to be construed as limiting.

Ex. 1005, 1:58–65, 2:5–9, 9:4–7, Fig. 4. Although Patent Owner argues that, in selecting parameters for image retrieval “Sharpe’s user is not selecting a particular image,” (PO Sur-reply 7–8) that argument is not commensurate with the scope of the claim, which requires that a particular image be determined corresponding to “digital media selection input” by the user, but not that input parameters for selecting a particular image must be input.

We find persuasive Petitioner’s argument (and credit Dr. Bederson’s cited supporting testimony) that when “a unique digital media identifier corresponding to a digital media selection input by second user” is determined, it is not required that only one digital media identifier be identified. Pet. Reply 6–7 (citing Ex. 1039 ¶¶ 13–16). And, as Petitioner argues, and we agree, Sharpe explains that a search would be narrowly focused and would retrieve a specific photograph, even if it is returned with other retrieved photographs. Pet. Reply 7–8 (citing Ex. 1005, 2:21–24, 3:29–44). Additionally Patent Owner agrees that, in some circumstances in Sharpe, one particular image will be the result of a search. PO Sur-reply 7–8; *see* Ex. 1039 ¶ 18. This concession shows how Sharpe teaches a search that only results in one digital media identifier, even if we read that requirement into the claim.

For these reasons, upon considering the record, we determine that Petitioner has sufficiently shown, by a preponderance of the evidence that claim 1 is unpatentable under § 103 as being obvious over Sharpe.

5. *Independent Claims 24 and 25*

Claims 24 and 25 are similar in many respects to claim 1, and are argued by Petitioner on the same basis, with the exception of showings regarding the apparatus / physical computing system of claim 24 and the

non-transitory computer readable medium of claim 25. Pet. 57–59. Patent Owner does not present any additional argument with respect to the specific limitations of these claims. PO Resp. 43–44; PO Sur-reply 8–9.

For the reasons discussed above with reference to claim 1, we determine that Petitioner has sufficiently shown, by a preponderance of the evidence that claim 26 is unpatentable under § 103 as being obvious over Sharpe.

6. *Claim 5*

Dependent claim 5 depends from claim 1 and further limits the method of claim 1 such that “digital media corresponding to the digital media selection input by the second user includes image data from a digital image.” Ex. 1001, 23:14–16.

Petitioner argues that this is taught by Sharpe’s disclosure of archiving images, which would contain image data. Pet. 48 (citing Ex. 1005, 2:24–26, 2:39–53, 5:58–60, 6:60–62, 7:64–65, 8:4; Ex. 1003 ¶¶ 214–215).

Patent Owner does not present any additional argument with respect to this claim. PO Resp. 34.

Because we agree that Sharpe teaches image data from an digital image, and for the reasons discussed above with reference to claim 1, we determine that Petitioner has sufficiently shown, by a preponderance of the evidence that claim 5 is unpatentable under § 103 as being obvious over Sharpe.

7. *Claims 10 and 11*

Dependent claim 10 depends from claim 5 and dependent claim 11 depends from claim 1. Each of these claims further limits the claim from which they depend to include steps of “receiving . . . a request from a computing device of a first user for digital media that the first user has a

stored association with” and, in response, “providing to the computing device of the first user a graphical user interface configured to display a list indicating digital media that the first user has a stored association with.”

Ex. 1001, 23:32–52.

Petitioner argues that this is taught by Sharpe’s disclosure of a user retrieving images of themselves via the user interface, and being provided with digital images. Pet. 48–49 (citing Ex. 1005, 6:63–7:1, 7:25–29, Fig. 4; Ex. 1003 ¶ 217). Petitioner further contends that Sharpe discloses the display of a limited number of results and an indication that the user could display further items, and that one of ordinary skill would have understood that one of ordinary skill could have made a simple design choice to display a list indicating image data corresponding to the additional further items. *Id.* at 49–50 (citing Ex. 1005, 9:16–20, 9:50–56, Fig. 8; Ex. 1003 ¶ 218).

Patent Owner does not present any additional argument with respect to these claims.

Because we agree that Sharpe teaches a user’s request for photographs with which they have a stored association and credit Dr. Bederson’s uncontroverted testimony regarding the display of further items in a list, we determine that Petitioner has sufficiently shown, by a preponderance of the evidence that claims 10 and 11 are unpatentable under § 103 as obvious over Sharpe.

8. *Claim 12*

Claim 12 depends from claim 1 and further limits claim 1 to further comprise “subsequent to storing the association between the unique user identifier of the first user and the unique digital media identifier, providing to a computing device of the first user an interface configured for the first

user to select or deselect users for which to store an association with the unique digital media identifier.” Ex. 1001, 23:53–59.

Petitioner cites Sharpe’s interface, which remains available after storing an association of an image with a user, for use in storing additional associations. Pet. 50–51 (citing Ex. 1005, 2:32–34, Fig. 4; Ex. 1003 ¶¶ 219–220).

Patent Owner reiterates its claim 1 arguments. PO Resp. 35–37. Patent Owner additionally argues that the interface must be provided “in response to storing an association” but that Petitioner has not addressed the “temporal and causative sequence” of claim 12. *Id.* at 36 (citing Ex. 2021 ¶ 101).

We are convinced by Petitioner’s argument and evidence that the user interface of Sharpe remains available for tagging users after a first association is stored. *See* Pet. 50–51; Pet. Reply 8; Ex. 1003 ¶ 220. We credit Dr. Bederson’s testimony that describes this, and give it more weight than Dr. Saber’s testimony, which states in a conclusory fashion that Sharpe does not disclose the interface being provided as per Petitioner’s argument and the language of the claim. *See* Ex. 2021 ¶ 101.

For these reasons and the reasons discussed with respect to claim 1, we determine that Petitioner has sufficiently shown, by a preponderance of the evidence that claim 12 is unpatentable under § 103 as obvious over Sharpe.

9. *Claims 13 and 14*

We determine dependent claims 13 and 14 to be unpatentable under the ground of obviousness over Sharpe and Eintracht, *see infra* Section II.E.8, and we do not address the question of obviousness over Sharpe alone. *See SAS Inst. Inc. v. Iancu*, 138 S. Ct. 1348, 1359 (2018) (holding that

petitioner “is entitled to a final written decision addressing all of the claims it has challenged”); *Boston Scientific Scimed, Inc. v. Cook Grp. Inc.*, 809 F. Appx. 984, 990 (Fed. Cir. 2020) (non-precedential) (recognizing that the “Board need not address issues that are not necessary to the resolution of the proceeding” and, thus, has “discretion to decline to decide additional instituted grounds once the petitioner has prevailed on all its challenged claims”).

10. Claim 15

Claim 15 depends from claim 5 and limits claim 5 to further comprise “determining a photo album associated with the first user, the photo album including a collection of digital images” and adding an image to the photo album in response to receiving input by the second user indicating the selection of the first user. Ex. 1001, 24:14–22.

Petitioner argues that Sharpe’s collection of digital images created based on associations and archived teach the photo album of claim 15 and the addition of an image by a first user teaches the archiving an image to the photo album. Pet. 53–54 (citing Ex. 1005, 1:45–65, 2:12–16, 2:21–24; Ex. 1003 ¶¶ 224–227). Petitioner argues:

Once the images associated with Sonia are identified (*determining a photo album associated with the first user*), Cheryl can further add the photo (*adding the image data from the digital image*) to the collection associated with Sonia (*to the photo album associated with the first user*) by archiving an image using the GUI, selecting Sonia from the drop down box 55, and pressing the “Archive” button.

Id. at 54.

Patent Owner argues that, in Petitioner’s example, the first user would not be adding an image to a photo album, but rather would be retrieving a photo album. PO Resp. 40–41. In the Reply, Petitioner argues that a user in

Sharpe could use the same interface for both retrieval and archiving, and thus retrieval could be followed by a change of association and re-archiving, which would create a digital photo album. Pet. Reply 11–12. Petitioner additionally argues that “claim 15 would have been obvious because the [person of ordinary skill in the art] is not an automaton” and “[o]rdinary creativity is all that is required to reach the limitation of claim 15 in view of the teachings of Sharpe.” *Id.* (citing *KSR*, 550 U.S. at 421; *Elektro Ltd. v. ZAP Surgical Sys., Inc.*, 81 F.4th 1368, 1374 (Fed. Cir. 2023)).

We agree with Patent Owner. Petitioner does not reference switching from retrieval to archiving in the Petition and does not explain why retrieval of tagged images based on a digital media selection of a first user would result in the addition of the images to a collection. As Patent Owner argues, Petitioner’s argument does not explain why “[o]nce images associated with Sonia are identified” it makes sense for “Cheryl [to] further add the photo . . . to the collection associated with Sonia.” Pet. 54. Petitioner’s generic appeal to the capability of one of ordinary skill in the art or to ordinary creativity does not suffice. *See* Pet. Reply 11–12.

Thus, Petitioner has not shown by a preponderance of the evidence that claim 15 would have been obvious over Sharpe.

11. Claims 16 and 17

Claim 16 depends from claim 1 and further provides that “the unique user identifier of the first user was previously provided by the first user.” Ex. 1001, 24:23–25. Claim 17 depends from claim 1 and further provides that “the unique user identifier of the first user is included in the descriptive information previously provided by the first user.” *Id.* at 24:26–28.

Petitioner argues that a user logs into the Sharpe system using a username, that the username could be part of the descriptive information,

and that one of ordinary skill would have understood that the user can provide a username upon registration. Pet. 54–55 (citing Ex. 1003 ¶¶ 228–229).

Patent Owner presents no arguments with respect to claim 16, but with respect to claim 17 argues that the user’s personal name is the claimed “descriptive information” and not the user’s username. PO Resp. 42–43. Petitioner argues that this means that the claimed “descriptive information” of claim 1 is the same as the unique user identifier of the first user. *Id.* But in claim 1, an association is made between some “descriptive information” and the unique user identifier. Petitioner persuasively argues that descriptive information may include both a screen name and the username (unique user identifier) and the Petition’s arguments regarding the “association” of claim 1 (limitation 1b) do not contradict this reading. Pet. Reply 12.

We determine that Petitioner has shown by a preponderance of the evidence one of ordinary skill would have understood that the unique user identifier of the first user could have been provided by the user, and would be part of descriptive information. Thus, we determine that Petitioner has sufficiently shown, by a preponderance of the evidence that claims 16 and 17 are unpatentable under § 103 as obvious over Sharpe.

12. Claims 18 and 19

Claim 18 depends from claim 1 and further provides that “descriptive information includes one or more of a name, e-mail address, other naming information, or a home page address.” Ex. 1001, 24:29–31. Claim 19 depends from claim 1 and further provides that “descriptive information includes a screen name.” *Id.* at 24:32–33.

Petitioner argues that the descriptive information including a name is taught by personal names described in Sharpe as being included in the

information selected for retrieval, such as “Sonia.” Pet. 55. With respect to a screen name, Petitioner relies on its argument for claim 17, and additionally contends that one of ordinary skill in the art would understand the use of a username as a screen name in Sharpe. *Id.* (citing Ex. 1003 ¶ 233).

Patent Owner refers back to arguments regarding the inclusion of the username as descriptive information and additionally argue that Petitioner has not properly explained why a username would function as a screen name. PO Resp. 43.

Petitioner’s evidence shows the names presented in Sharpe are included in Sharp’s descriptive information, and has shown by a preponderance of the evidence that claim 18 is unpatentable under § 103 as obvious over Sharpe. Additionally, for the same reasons discussed above with reference to claim 17, and crediting Dr. Bederson’s testimony that a screen name might be a made up pseudonym and thus used in place of a user’s name in a system like Sharpe (Ex. 1003 ¶ 233), we determine that Petitioner has shown by a preponderance of the evidence that claim 19 is unpatentable under § 103 as obvious over Sharpe.

13. Claims 20–22

Claim 20 depends from claim 1 and further provides that “the graphical user interface includes one or more user interface elements operative to receive the one or more inputs from the second user.” Ex. 1001, 24:34–37. Claim 21 depends from claim 20 and further provides that “one or more of the user interface elements is a control.” Ex. 1001, 24:38–39. Claim 22 depends from claim 21 and further provides that “the control includes one or more of a radio button, a checkbox, a list, select element,

Macromedia Flash player, Shockwave player, Java applets, or ActiveX controls.” *Id.* at 24:40–43.

Petitioner presents Dr. Bederson’s testimony that Sharpe discloses a graphical user interface including controls such as a checkbox, radio buttons, and a list, which are operative to receive inputs from a user. Pet. 55–56 (citing Ex. 1005, Fig. 4; Ex. 1003 ¶ 235). Patent Owner presents no argument relating to the additional limitations of these claims.

We determine that Petitioner has shown by a preponderance of the evidence that Sharpe discloses a graphical user interface with elements operative to receive inputs, that such elements include controls, and that the controls include checkboxes and lists. Thus, we determine that Petitioner has sufficiently shown, by a preponderance of the evidence that claims 20, 21, and 22 are unpatentable under § 103 as obvious over Sharpe.

14. Claim 23

Claim 23 depends from claim 10 and further requires that “the list includes one or more thumbnails to indicate image data corresponding to the digital media that the first user has an association with.” Ex. 1001, 24:44–46.

Petitioner argues based on its argument relating to claim 10 that the list of claim 10 could have included thumbnails, which were in common use at the time of Sharpe. Pet. 56 (citing Ex. 1003 ¶ 237). Patent Owner does not offer any additional arguments relating to the limitations of claim 23. PO Resp. 34.

Sharpe discloses showing only some identified items, if a large number of items are identified that would “clutter . . . the workspace.” Ex. 1005, 9:16–18 (cited at Ex. 1003 ¶ 237). We credit Dr. Bederson’s uncontroverted testimony that one of ordinary skill in the art would

understand that thumbnail images could also be used to declutter a work space. Ex. 1003 ¶ 237. We determine that Petitioner has shown by a preponderance of the evidence that claim 23 would have been obvious over Sharpe.

15. Conclusion – Challenges Over Sharpe

As discussed above, we find Petitioner has shown by a preponderance of the evidence that claims 1, 5, 10–14, and 16–26 would have been obvious over Sharpe. However, Petitioner has not shown by a preponderance of the evidence that claim 15 would have been obvious over Sharpe.

E. Challenge to Claims 1–26 as Obvious Over Sharpe and Eintracht

1. Eintracht – Overview

Eintracht is titled “Synchronizing/Updating Local Client Notes With Annotations Previously Made by Other Clients in a Notes Database.” Ex. 1006, code (54). Eintracht describes a system for collaborative document annotation based on the exchange of notes (i.e., annotations) attached to web-based documents such as an images or text documents, whereby multiple notes clients may annotate a document asynchronously with respect to each other. *Id.* at code (57), 1:8–13. “In order to differentiate between notes generated by various users, each user chooses a unique user ID that forms a Note Owner identifier.” *Id.* at 8:8–11.

2. Motivation to Combine Sharpe and Eintracht

Petitioner argues that one of ordinary skill in the art would have combined “Eintracht’s asynchronous annotation capability and groupware features” to “improve[] the collaborative digital media archival system of Sharpe.” Pet. 59–62. Petitioner contends that one of ordinary skill in the art would have “understood that, as a web-based, multi-user application, Sharpe’s system would need to address the situation where two or more

users from the same group seek to index the same image simultaneously from different devices,” and would have found Eintracht to provide a solution. *Id.* at 60–61 (citing Ex. 1003 ¶¶ 253–255). Additionally, Petitioner contends that Eintracht would have disclosed features of groupware applications not described in Sharpe, which described “[s]torage and archiving techniques for digital media and corresponding retrieval techniques” as being “well known.” *Id.* at 61 (quoting Ex. 1005, 1:10–11; citing Ex. 1003 ¶ 256). Petitioner additionally argues that one of ordinary skill would have had a reasonable expectation of success in combining Sharpe and Eintracht, based on the similarities between the systems. *Id.* at 61–62 (citing Ex. 1003 ¶¶ 257–258).

Patent Owner argues that Eintracht is related to collaborative document annotation, and Sharpe to archiving and retrieving digital media items, and that the references “are directed to fundamentally different systems with different goals.” PO Resp. 50–52 (citing Ex. 2021 ¶¶ 110–112); PO Sur-reply 16–17. Patent Owner additionally argues that there is no explanation presented of how the combination would operate. PO Resp. 52–53; PO Sur-reply 17–19. However, we are persuaded by Petitioner’s contentions that each is a collaborative system that allows archiving and retrieval of digital documents. *See* Pet. 59–61; Pet. Reply 19; Ex. 1006, 2:8–15; Ex. 1005, 5:6–13. Additionally, we note that a determination of obviousness does not require that each reference address the same problem or goal. Rather, “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.” *KSR*, 550 U.S. at 420.

With respect to the operation of the combination, we credit Dr. Bederson’s testimony that the combination could have been successfully

achieved due to the similarities in the systems, and regarding the specific modifications proposed. Ex. 1003 ¶¶ 257–258, 262, 265, 269, 272, 274, 277, 283–284.

3. *Claims 1, 5, and 10–12 and 15–26*

With respect to claims 1, 5, 10–12, and 16–26, Petitioner’s arguments regarding unpatentability over Sharpe and Eintracht are presented to provide additional teachings from Eintracht to further support unpatentability, with respect to several limitations of these claims. Pet. 61–64, 70–72. As we have found Sharpe teaches or suggests these limitations, we do not address the teachings found in the proposed combination for claims 1, 5, 10–12, and 16–26.

With respect to claim 15, Petitioner’s arguments regarding unpatentability of Sharpe and Eintracht provide no additional support for the unpatentability arguments. Pet. 72. Thus, we determine that the preponderance of the evidence does not support the unpatentability of claim 15 in view of Sharpe and Eintracht for the same reasons discussed above.

4. *Claims 2 and 3*

Claim 2 depends from claim 1, and further provides that the method of claim 1 comprises “in response to receiving the input initiated by the second user indicating the selection of the first user and to determining the unique user identifier of the first user, providing information about the stored association to a computing device of the first user, the information indicating that the first user has been associated with one or more of the plurality of digital media.” Ex. 1001, 22:61–67. Dependent claim 3 depends from claim 2 and further limits claim 2 by providing that “the information about the stored association is provided via an email.” *Id.* at 23:1–2.

Petitioner contends that the combination of Sharpe with Eintracht teaches the additional limitation of claims 2 and 3, because Eintracht teaches that new annotations can trigger email annotations to specific users. Pet. 64–65 (citing Ex. 1006, 11:7–14, claims 37, 40, 68; Ex. 1003 ¶¶ 264–265). Petitioner cites Dr. Bederson’s testimony that one of ordinary skill would have understood that Eintracht’s notifications can be triggered by an annotation identifying a user, and could be filtered to the identified users. Ex. 1003 ¶ 265 (citing Ex. 1006, 10:5–16, 11:7–9, 11:11–14, claims 37, 40, 68).

Patent Owner argues that “[t]he Petition provides absolutely no analysis for Claim 2” and that, with respect to both claims 2 and 3, that Eintracht’s notifications do not relate to information sent to a user with information about an association of a user with an image, but rather relate to database changes or note events. PO Resp. 54–56 (citing Ex. 1006, 2:65–68, 10:5–11; Ex. 2021 ¶ 113); PO Sur-reply 21–22. Patent Owner argues that in Eintracht, no association exists between an annotation and a user, even if the user was described in the annotation. PO Sur-reply 21. However, we credit Dr. Bederson’s testimony regarding the combination of Sharpe and Eintracht as teaching an email identification to an identified user triggered by an annotation identifying the user in the image. Ex. 1003 ¶ 265. Dr. Saber’s declaration does not relate to the combination but discusses the teachings of Eintracht alone. Ex. 2021 ¶¶ 113–114. Additionally, we find no issue in the Petition’s addressing claims 2 and 3 together, with analysis applicable to claim 3 also applying to claim 2, from which it depends.

We determine that Petitioner has sufficiently shown, by a preponderance of the evidence, that claims 2 and 3 would have been obvious over the proposed combination of Sharpe and Eintracht.

5. *Claim 4*

Claim 4 depends from claim 1, and further provides the step of “receiving, via the communications network, another input initiated by the second user, the received another input indicating a selection of a third user from descriptive information associated with a unique user identifier of the third user” and, in response, “providing information to a computing device of the third user, the information indicating that the third user has been associated with one or more of the plurality of the digital media.” Ex. 1001, 23:3–13.

Petitioner argues that one of ordinary skill in the art would have understood Sharpe to contain no restriction on the number of times a user may store associations of people with digital media items. Pet. 65 (citing Ex. 1003 ¶ 267). Petitioner further argues that Eintracht’s synchronization teachings would show how to implement a multi-user system in which the same tasks (of association) may be performed by two users. *Id.* at 65–66 (citing Ex. 1006, 3:59–65; Ex. 1003 ¶ 268). With reference to the second limitation added by claim 5, Petitioner refers to its arguments regarding email notifications described with reference to claims 2–3. *Id.* at 66 (citing Ex. 1003 ¶ 269).

Patent Owner does not offer any additional arguments relating to the limitations of claim 4.

We are convinced by Petitioner’s arguments and evidence that Petitioner’s proposed combination of Sharpe and Eintracht teaches synchronization for two users making associations between people and images, and providing information to a computing device of a third user via email regarding such associations. We determine that Petitioner has shown

by a preponderance of the evidence that claim 4 would have been obvious over Sharpe and Eintracht.

6. *Claims 6–8*

Claim 6 depends from claim 5, and provides that the method further comprises “receiving, via the communications network, one or more inputs initiated by the second user indicating a set of coordinates corresponding to a location of the first user within the image data.” Ex. 1001, 23:17–21.

Dependent claim 7 depends from claim 6 and further limits that claim by providing that “the set of coordinates defines a polygonal area.” *Id.* at 23:22–23. Dependent claim 8 depends from claim 6 and further limits that claim by providing that “the set of coordinates defines a circular area.” *Id.* at 23:24–25.

With respect to claim 6, Petitioner contends that, in the proposed combination of Sharpe and Eintracht, a note anchor, expressed in terms of coordinates in the annotated page of the document would be created using the annotation tool, and that such an annotation could be used to identify pictured users in an image. Pet. 66–67 (citing Ex. 1006, *inter alia*, 2:53–62, 6:55–7:23, 7:55–64, 15:10–16; Ex. 1003 ¶¶ 271–272). With respect to claims 7 and 8, Petitioner contends that Eintracht teaches a set of coordinates that may define a polygon or an ellipse. *Id.* at 67–69 (citing Ex. 1006, 17:42–51, 19:1–8, Fig. 11; Ex. 1003 ¶¶ 273–274).

Patent Owner contends that Eintracht discloses annotations displayed over the image, which “provides the specific location in a document associated with the note” but “does not disclose coordinates corresponding to a location of a named user in the image.” PO Resp. 57–58 (citing Ex. 2021 ¶¶ 117–118); PO Sur-reply 19. Additionally, Patent Owner argues that the proposed combination has a “detrimental result of potentially

obscuring the user from view and cutting against Sharpe’s focus on identifying users within images.” PO Resp. 58–59; PO Sur-reply 22–23.

Although we agree with Patent Owner that Eintracht does not disclose storing coordinates corresponding to a location of a named user in an image, this conclusion addresses only Eintracht’s disclosures and not the teaching of the proposed combination, in which Sharpe’s identification of users in images is combined with Eintracht’s annotation tool that includes coordinates for annotations. And, with respect to Patent Owner’s arguments regarding annotations obscuring the user and Dr. Saber’s testimony that “[i]mplementing coordinate-related functionality from Eintracht in Sharpe’s system would not have been predictable or desirable” (Ex. 2021 ¶ 118) we credit Dr. Bederson’s uncontroverted testimony that one of ordinary skill in the art could have implemented Eintracht’s annotations without obscuring users, including by using tool tip annotations or transparency. Pet. Reply 23 (citing Ex. 1039 ¶¶ 38–40).

With respect to claims 7 and 8, we are convinced by Petitioner’s argument that Bederson discloses the coordinates defining a polygonal area or a circular area.

Thus, after considering the record, we find Petitioner has shown by a preponderance of the evidence that Eintracht’s note anchor / coordinates could have been used with the Sharpe image annotation system, and that claims 6, 7, and 8 would have been obvious over this combination.

7. Claim 9

Claim 9 depends from claim 6 and further comprises “providing, via one or more of the plurality of computing devices, a graphical user interface for presentation to a user of the computer system, the graphical user interface configured to display a representation of the set of coordinates,

thereby indicating the location of the first user within the image data.”
Ex. 1001, 23:26–31.

Petitioner argues that the combination of Sharpe and Eintracht teaches the combination, because Eintracht discloses an image window with a representation of a set of coordinates. Pet. 69–70 (citing Ex. 1006, 2:53–55, Fig. 1C; Ex. 1003 ¶¶ 275–277). Petitioner argues that this overlay of annotations would improve the Sharpe system by visually identifying where people are in an image to enhance the user experience. *Id.* at 70 (citing Ex. 1003 ¶ 277). Patent Owner does not offer any additional arguments relating to the limitations of claim 9.

For the reasons discussed with respect to claim 6 and because we are convinced by Petitioner’s arguments and evidence that the coordinates would be displayed to indicate the location of a user in the proposed combination of Sharpe and Eintracht, we determine that Petitioner has shown by a preponderance of the evidence that claim 9 would have been obvious over Sharpe and Eintracht.

8. *Claims 13 and 14*

Dependent claim 13 depends from claim 1 and dependent claim 14 depends from claim 5. Each of these claims further limits the claim from which they depend to include steps of “in response to a request for [digital media / image data] . . . determining unique user identifiers having an association with the unique digital media identifier associated with the requested [digital media / image data]” and “providing . . . the requesting user an interface configured to display a list of descriptive information associated with unique user identifiers associated with the unique digital media identifier of the requested [digital media / image data].” Ex. 1001, 23:60–24:13.

Petitioner argues, for the determination of unique user identifiers in response to a request for an image (digital media or image data), that Sharpe’s system stores associations between item identifiers and usernames, and will determine unique usernames as part of a retrieval. Pet. 26 (discussing retrieving archived multimedia items using parameters in the interface) (citing Ex. 1005, 9:4–7; Ex. 1003 ¶ 196), 42 (discussing retrieving archived multimedia items by searching for people associated with specific items) (citing Ex. 1005, 8:60–9:11; Ex. 1003 ¶ 143); 51–52 (citing Ex. 1005, 2:66–3:22, 4:21–33, 5:50–63, 9:58–67, Fig. 2, Fig. 4; Ex. 1003 ¶ 222).

With respect to the second limitation in each of claims 13 and 14, the provision of “a list of descriptive information associated with unique user identifiers associated with the unique digital media identifier of the requested” media, Petitioner argues that Eintracht’s user interface provides a list of annotations alongside and overlaid on an image, along with a “Note List window” that displays a list of the annotations associated with a displayed image. *Id.* at 70–71 (citing Ex. 1006, 7:5–17, Fig. 1C; Ex. 1003 ¶¶ 278–284). The annotations would have included the archived descriptive information, such as Sharpe’s associations created between an image and the pictured users, in a combination with Sharpe. *Id.* at 71–72 (citing Ex. 1003 ¶¶ 282–283). Petitioner argues that this would have improved Sharpe’s interface by providing a list of pictured users in context with the image displayed in the work space of Sharpe, and would have added clarity to the interface. *Id.*

Patent Owner presents certain arguments relating to the obviousness of these claims over Sharpe alone. PO Resp. 37–40. Each of these arguments either relates to an argument addressed above, relating to the teachings of Sharpe with respect to claim 1 or relates to teachings of Sharpe

with respect to the second limitation of claims 13 and 14. We find persuasive Petitioner's argument that the first limitation in each of claims 13 and 14 are taught in Sharpe's teaching of unique user identifiers having associations with an image, which would be determined in response to a request for an image. Additionally, we find persuasive Petitioner's showing that the combination of Sharpe and Eintracht teaches the provision of an interface displaying descriptive information, such as personal names, in a list associated with the requested image. Pet. 70–71; Ex. 1003 ¶¶ 252–258, 280–284.

Thus, we determine that Petitioner has shown by a preponderance of the evidence that claims 13 and 14 would have been obvious over Sharpe and Eintracht.

9. *Conclusion – Challenges over Sharpe and Eintracht*

As discussed above, we do not address claims 1, 5, 10–12, and 16–26. We find Petitioner has shown by a preponderance of the evidence that claims 2–4, 6–9, 13, and 14 would have been obvious over Sharpe and Eintracht, but that Petitioner has not shown by a preponderance of the evidence that claim 15 would have been obvious over Sharpe and Eintracht.

F. *Challenges to Claims 18, 19, and 26 as Obvious Over Sharpe and Carey or as Obvious over Sharpe, Eintracht, and Carey*

The Petitioner additionally includes challenges to claims 18, 19, and 26 as obvious over the combination of Sharpe and Carey or over the combination of Sharpe, Eintracht, and Carey. Pet. 72–77. However, as we have found Sharpe teaches or suggests the subject matter of claims 18, 19, and 26, we do not address Petitioner's assertions regarding these proposed combinations.

III. CONCLUSION

In summary:

Claims	35 U.S.C. §	Reference(s)/Basis	Claims Shown Unpatentable	Claims Not Shown Unpatentable
1, 5, 10–26	103 ⁸	Sharpe	1, 5, 10–12, 16–26	15
1–26	103 ⁹	Sharpe, Eintracht	2–4, 6–9, 13, 14	15
18, 19, 26	103 ¹⁰	Sharpe, Carey		
18, 19, 26	103 ¹¹	Sharpe, Eintracht, Carey		
Overall Outcome			1–14, 16–26	15

IV. ORDER

For the foregoing reasons, it is:

ORDERED that, Petitioner has shown by a preponderance of the evidence that claims 1–14 and 16–26 of U.S. Patent No. 9,959,291 B2 are unpatentable;

⁸ Because claims 13 and 14 have been determined to be unpatentable over Sharpe and Eintracht, we need not reach this asserted obviousness contention.

⁹ Because claims 1, 5, 10–14, and 16–26 have been determined to be unpatentable over Sharpe, we do not reach them in this asserted obviousness contention.

¹⁰ Because claims 18, 19, and 26 have been determined to be unpatentable over Sharpe, we need not reach this asserted obviousness contention.

¹¹ Because claims 18, 19, and 26 have been determined to be unpatentable over Sharpe, we need not reach this asserted obviousness contention.

FURTHER ORDERED that, Petitioner has not shown by a preponderance of the evidence that claim 15 of U.S. Patent No. 9,959,291 B2 is 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.

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