

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

UIPATH, INC.,
Petitioner,

v.

RULE 14 LLC,
Patent Owner.

IPR2024-01306
Patent 11,048,712 B2

Before JO-ANNE M. KOKOSKI, NABEEL U. KHAN, and
ANDREAS BALTATZIS, *Administrative Patent Judges*.

BALTATZIS, *Administrative Patent Judge*.

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

I. INTRODUCTION

UiPath, Inc. (“Petitioner”) filed a Petition requesting an *inter partes* review of claims 1–20 (the “challenged claims”) of U.S. Patent No. 11,048,712 B2 (Ex. 1001, “the ’712 patent”). Paper 1 (“Pet.”). Rule 14 LLC (“Patent Owner”) filed a Preliminary Response (Paper 7, “Prelim. Resp.”) and a statutory disclaimer of claims 8 and 17 (Ex. 2012).

Under 35 U.S.C. § 314(a), the Board “may not authorize an *inter partes* review to be instituted unless . . . the information presented in the petition . . . and any response . . . shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” After considering the Petition, the Preliminary Response, and the evidence of record, we determine that Petitioner has not demonstrated a reasonable likelihood of prevailing with respect to at least one claim challenged in the Petition. Accordingly, we deny institution of an *inter partes* review.

II. BACKGROUND

A. *Real Parties in Interest*

Petitioner identifies itself as the real party in interest. *See* Pet. 1. Patent Owner identifies itself as the real party in interest. Paper 4 (Patent Owner’s Mandatory Notices).

B. *Related Matters*

The parties list the following co-pending litigation as a related matter: *Rule 14, LLC v. UiPath, Inc.*, Case No. 2:23-cv-627 (E.D. Tex.) (“co-pending litigation”).

Petitioner concurrently filed a petition for *inter partes* review challenging claims 1–21 of related U.S. Patent No. 9,229,977 B2 (IPR2024-01304).

C. The '712 Patent

The '712 patent relates to a method for analyzing data by generating a query for non-textual data. Ex. 1001, 1:63–65. Non-textual data may include images, video, audio, or other types of data. *Id.* at 4:31–38. A user may generate the query using natural language. *Id.* at 4:39–46. For example, the query may be “find people that go to the beach,” which “is used to find images of a beach and/or people with images at the beach.” *Id.* at 4:47–50.

The query search terms are then “expanded based on search lexicons.” *Id.* at 4:51–55. “The lexicon may be generated based on user input and/or may be generated based on automatic word association, such as synonym/antonym trees and lexicons of positive and/or negative modifiers.” *Id.* at 4:55–58. After the search terms are expanded, the query is executed on a plurality of data sources. *Id.* at 4:66–5:6. The data sources may include open-source data and proprietary data sources. *See id.*

Once the search is completed, the query results are reviewed. *Id.* at 5:27. “If the results are satisfactory, specific data sources may be selected to be monitored.” *Id.* at 5:27–29. “The monitoring may be performed by data extractors that monitor changes to a data source in real-time.” *Id.* at 5:33–34. For example, “[w]hen information at the data sources is updated or located to match the query terms, a data extractor extracts the data to be analyzed.” *Id.* at 5:35–37. The extracted data may then be communicated to specific individuals or other users. *Id.* at 5:41–44.

D. Illustrative Claims

Petitioner challenges claims 1–20 of the '712 patent. Pet. 2. Claims 1, 10, and 19 are the challenged independent claims of the '712 patent. Claim 1 is illustrative of the challenged subject matter, and is reproduced below.

1. A method of analyzing data, comprising:

receiving, from a first user, a query for non-textual data;

expanding search terms of the query;

executing the query on a plurality of data sources;

selecting at least one data source from the plurality of data sources, the at least one data source being selected when results of the query are greater than or equal to an accuracy thresholds;

monitoring, based on a set schedule, the at least one data source to extract non-textual data from the at least one data source when at least an update to stored data matches the query, newly added non-textual data matches the query, or a combination thereof; and

establishing a communication channel with a second user based at least in part on the data extracted from the at least one monitored data source.

Ex. 1001, 30:17–32.

E. Asserted References

Petitioner relies on the following references in its asserted grounds of unpatentability:

Name	Reference	Ex. No.
Schultz	US 5,721,902	1013
Kirsch	US 6,018,733	1011
Nelson	US 6,243,713 B1	1019
Vinsonneau	US 7,043,482 B1	1018
Eichstaedt	US 7,765,228 B2	1015
Lucovsky	US 7,844,603 B2	1016
Liang	US 2006/0106793 A1	1012
Chadha (“the ’301 publication”)	US 2014/0040301 A1	1014
Mellin	WO 01/65336 A2	1017

F. Asserted Grounds of Unpatentability

Petitioner asserts that claims 1–20 of the ’712 patent are unpatentable in view of the following grounds. Pet. 26.

Claim(s) Challenged	35 U.S.C. §¹	Reference(s)/Basis
1, 2, 4–8, 10, 11, 13–17, 19, 20	103	Kirsch, Schultz, Eichstaedt, Lucovsky
1, 2, 4–8, 10, 11, 13–17, 19, 20	103	Kirsch, Schultz, Eichstaedt, Mellin
3, 12	103	Kirsch, Schultz, Eichstaedt, Lucovsky, Liang
9, 18	103	Kirsch, Schultz, Eichstaedt, Lucovsky, Vinsonneau
9, 18	103	Kirsch, Schultz, Eichstaedt, Mellin, Vinsonneau
1–4, 7, 8, 10–13, 16, 17, 19, 20	103	Liang, Nelson, Lucovsky
1–8, 10–17, 19, 20	103	Liang, Nelson, Kirsch, Schultz, Lucovsky
1, 4, 7, 8, 10, 13, 16, 17, 19	103	Liang, Nelson, Mellin
2, 3, 5, 6, 11, 12, 14, 15, 20	103	Liang, Nelson, Mellin, Kirsch, Schultz
9, 18	103	Liang, Nelson, Lucovsky, Vinsonneau
9, 18	103	Liang, Nelson, Kirsch, Schultz, Lucovsky, Vinsonneau

¹ The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112–29, 125 Stat. 284 (2011), amended 35 U.S.C. §§ 102 and 103, effective on March 16, 2013. Petitioner asserts that “the effective filing date of the ’712 [p]atent is no earlier than December 4, 2015 -- the filing date of Application No. 14/960,316.” Pet. 5. Patent Owner argues that the challenged claims are “entitled to the June 2013 priority date of the ’313 Application,” referring to Application No. 13/928,313, filed June 26, 2013. Prelim. Resp. 58. Both parties agree that the ’712 patent claims priority to an application that has a filing date after March 16, 2013. Thus, for purposes of this Decision, we apply the AIA versions of §§ 102 and 103.

Claim(s) Challenged	35 U.S.C. § ¹	Reference(s)/Basis
1–20	103	'301 Publication, Schultz

Petitioner relies on the Declaration of Jaideep Srivastava, Ph.D. (Ex. 1004) in support of its contentions. Patent Owner relies on the Declaration of Christopher Thompson (Ex. 2001) in support of its Preliminary Response.

III. 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 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 claimed invention and the prior art are such that the claimed invention as a whole would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to

which the claimed invention pertains. *See 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.² *See Graham v. John Deere Co. of Kan. City*, 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 relevant to the challenged claims, as of the earliest claimed priority date, “would have had a bachelor’s degree in electrical engineering, computer science, or equivalent training, and approximately two years of work experience in software development with a basic knowledge of database searching techniques.” Pet. 14 (citing Ex. 1004 ¶ 28).

Patent Owner’s declarant adopts Petitioner’s definition of the level of ordinary skill in the art. *See* Ex. 2001 ¶ 6.

For the purposes of this Decision, we adopt Petitioner’s formulation for a person of ordinary skill in the art, which appears to be consistent with the level of skill in the art reflected in the prior art of record and the disclosure of the ’712 patent. *See Litton Indus. Prods., Inc. v. Solid State Sys. Corp.*, 755 F.2d 158, 163 (Fed. Cir. 1985) (explaining that specific findings regarding ordinary skill level are not required “where the prior art itself reflects an appropriate level and need for testimony is not shown”).

² In the present record, neither party presents arguments or evidence relating to secondary considerations.

C. Claim Construction

We construe claim terms according to the standard set forth in *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–17 (Fed. Cir. 2005) (en banc), i.e., as construed in a civil action under 35 U.S.C. § 282(b). *See* 37 C.F.R. § 42.100(b). Under *Phillips*, claim terms are afforded “their ordinary and customary meaning.” 415 F.3d at 1312. “[T]he ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention.” *Id.* at 1313. “Importantly, the person of ordinary skill in the art is deemed to read the claim term not only in the context of the particular claim in which the disputed term appears, but in the context of the entire patent, including the specification.” *Id.*

Petitioner notifies the Board of two terms being disputed in the co-pending litigation: (1) “expanding search terms of the query,” and (2) “accuracy threshold.” Pet. 12–15. For each term, Petitioner contends the “Board need not resolve” or address the dispute. *See id.*

Patent Owner does not address claim construction. *See generally* Prelim. Resp.

We agree with Petitioner that we need not resolve the claim construction disputes from the co-pending litigation. Accordingly, we need not construe explicitly any claim terms because no such construction is necessary to determine whether to institute. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (stating that “we need only construe terms ‘that are in controversy, and only to the extent necessary to resolve the controversy’” (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999))).

D. Overview of the References Cited Against the Independent Claims

1. Kirsch (Ex. 1011)

Kirsch relates to “a method of performing effective document searches over multiple, independent document collections.” Ex. 1011, 1:11–13. Kirsch explains that a “known problem in providing access to multiple databases is the relative difficulty or inefficiency in identifying an optimal database or set of databases that should be searched to obtain the best search report for a some particular unstructured, or ad hoc, database query.” *Id.* at 1:64–2:1. This is known as the “collection selection problem.” *Id.* at 2:19–20.³

Kirsch’s method addresses the collection selection problem by applying a user query to select a qualified set of most likely relevant document collections. *Id.* at 6:29–30. A collection search engine uses the user query against an identified collection set. *Id.* at 6:34–37. The user query terms may be “reduced and expanded as appropriate into a list of specifically identified search terms.” *Id.* at 7:5–7. “The effective search terms of the processed query . . . are then provided to the collection meta-index search engine . . . for analysis against a collection meta-index.” *Id.* at 7:47–49. “The list of likely most relevant collections is then identified . . . from the list of likely most relevant meta-index documents that are within a predetermined or specific user defined maximum number of collections to select at one time for searching, or that meet at least a minimum relevance ranking threshold, or both.” *Id.* at 9:66–10:4.

³ The Petition explains that the “collection selection” problem was first presented in 1995. *See* Pet. 14–17; Ex. 1004 ¶¶ 49–56.

2. *Liang (Ex. 1012)*

Liang relates to “methods and software for the retrieval, mining, filtering and visualization of information stored on a plural of computers connected to the Internet and on a local computer.” Ex. 1012 ¶ 2. Liang describes “a user interface for an intelligent search engine that accepts a user’s natural language description of a search and search automation options.” *Id.* ¶¶ 18, 48, Fig. 1. The software will “broaden[] a search by expanding search keywords into concepts comprising of the synsets, [hypernym], and/or hyponym/troponym of a keyword, and acronyms or full expressions of a concept.” *Id.* ¶ 13.

Liang’s user interface further includes options to search in multiple sources, using known source extensions. *Id.* ¶¶ 21, 178, 229, Fig. 4. Liang describes “[a] source clustering program [that] counts the number of web pages and files in the search results that are from a website or domain name, e.g., cnn.com, ieee.org, irs.gov.ucla.edu, etc.” *Id.* ¶ 229. “In one embodiment, the source clustering program selects the first S, where S is a positive integer and can be set by default or by user, websites or domain names, from which the most number of web pages and files are retrieved in the search results.” *Id.*

Liang also describes an option to keep the user’s “search active for a period of time to monitor for new sources and changes to existing sources by specifying a date range . . . and when a change is detected, the option to alert the user.” *Id.* ¶ 52, Fig. 1. The user may “specify the time period over which he wants to monitor the web page, and the frequency a page/site monitoring program of this invention should check[] the monitored pages for changes.” *Id.* ¶ 347.

3. *The '301 Publication (Ex. 1014)*

The '301 publication relates to a method of analyzing data by generating a user query based on a topic of interest. Ex. 1014 ¶¶ 9, 26, Fig. 1. The method includes expanding the query search terms and executing the query on one or more data sources. *Id.* ¶ 9. The method then follows with analyzing the data and communicating the data to specific individuals or other users. *Id.* ¶ 32. When the user identifies a desired data source, the user may set a schedule to monitor the data source for new content. *Id.* ¶ 48.

4. *Schultz (Ex. 1013)*

Schultz relates to a system for identifying documents corresponding to a search topic or query. Ex. 1013, 1:5–6. The user provides a search query in natural language format. *Id.* at 12:15–21. Then a query server “scans its document index database . . . based on the user’s search query in order to identify document identification numbers representing textual documents and multi-media files relevant to the search query.” *Id.* at 12:49–53. The document identification numbers correspond to document files that include the desired search term. *Id.* at 12:57–63. A document file is a file in a database “which stores either a textual document or, alternatively, a file which stores a multi-media record.” *Id.* at 12:66–13:4. “In contrast to files solely representing textual documents, each multi-media file in database 118 is stored along with a separate portion of text related to the multi-media record This associated text field is used as the basis for generating document index information.” *Id.* at 13:4–10.

The user PC then displays the search results together with “relevance scores corresponding to each document identification number on the search results list.” *Id.* at 14:29–33. The search results further include “an indication whether the document file corresponds to a textual document or a

multi-media file such as, for example, a file representing a still image.” *Id.* at 14:35–37. “This information is displayed . . . in relevance ranked order such that the document file(s) with a highest relevance score is/are displayed at the top of the list.” *Id.* at 14:37–41.

5. *Nelson (Ex. 1019)*

Nelson relates to information retrieval systems for retrieving multimedia information. Ex. 1019, 1:9–12. The system allows for compound queries that include various types of multimedia components. *Id.* at 3:1–6. For example, “a compound query can include text, image, audio, or video components.” *Id.* at 3:6–7. The system uses “position information in the multimedia index, along with the indexed data (e.g. color data) to find compound documents that have the desired text and have an image with image characteristics (e.g. color, texture, luminance) which match the input query image within the defined proximity relationship.” *Id.* at 3:12–17.

Nelson further describes retrieving multimedia. *See id.* at 6:35–65. The user specifies a compound query. *Id.* at 6:35–39. In an example, the query includes both text and image components. *Id.* at 6:44–48. The query may be expanded using tokens that “represent other words similarly spelled to query keywords or that have similar meanings, or other images (or image attributes) of similar shape or color, texture, and so forth.” *Id.* at 7:11–23.

6. *Eichstaedt (Ex. 1015)*

Eichstaedt relates “to a system and method for enabling a user to register an interest and subsequently provide a notification (an alert) to the user when new information becomes available regarding the registered interest.” Ex. 1015, 2:5–9. “[Q]ueries can be applied to new content information for registered interests as the new content information becomes available.” *Id.* at 2:43–45.

Eichstaedt describes a poller server that manages polled content to produce scheduled alerts. *Id.* at 7:45–49. The poller server wakes up after a predefined period and checks for current content. *Id.* at 7:65–8:22. The poller server then compares the old query results to the current content. *Id.* at 8:36–44. “[I]f a current content item is different from an old query result, the poller server can replace the old query result with the current content item.” *Id.* Storage servers then access stored alerts to be delivered at predefined periods. *Id.* at 12:34–41.

7. *Lucovsky (Ex. 1016)*

Lucovsky describes a method for distributing user search results. Ex. 1016, 6:16–22; Fig. 4. In one example, a user may enter a search query to obtain search results, automatically copy the search results in an email (as opposed to links to the results), and send the email to a recipient. *See id.* at 7:9–59; Figs. 4–6. In another example, the user may post search results using a message board interface. *See id.* at 8:43–67, Fig. 7. Lucovsky provides additional examples of users sharing search results in an instant messaging interface (*see* Fig. 8) and a blog authoring tool (Fig. 9). *See id.* at 9:1–41.

8. *Mellin (Ex. 1017)*

Mellin relates to a method for group collaboration using email. Ex. 1017, 2:12–15. Mellin specifically addresses the “problem of Internet document attachment version control by providing a unique way to manage email attachments as independent documents linked to messages or other documents.” *Id.* at 3:24–27.

E. Alleged Obviousness of Claims 1, 10, and 19 over Kirsch, Schultz Eichstaedt, and Other References

Petitioner argues that independent claims 1, 10, and 19 are unpatentable as obvious over Kirsch, Schultz, Eichstaedt, and Lucovsky.

Pet. 27–34. Alternatively, Petitioner argues that these claims are unpatentable as obvious over Kirsch, Schultz, Eichstaedt, and Mellin. *Id.* at 41–42. Patent Owner disagrees, arguing that the Petition fails to establish a reasonable likelihood of prevailing in demonstrating the unpatentability of the claims. *See* Prelim. Resp. 8–23. Specifically, Patent Owner argues that Petitioner’s “obviousness grounds rely on conclusory statements instead of specific reasoning based on evidence,” as to the reasons to combine the references. *Id.* at 9.

On this record, we determine that Petitioner has not met its burden to establish a reasonable likelihood that one skilled in the art would have combined the references.

1. Steps for Addressing the Collection Search Problem

Claim 1 recites a method of analyzing data, including a series of steps for addressing the collection search problem, i.e., how to narrow an Internet search from many data sources to a few useful collections.⁴ *See* Ex. 1001, 30:17–24; *see also* Pet. 14–17. The claimed steps include receiving a first user’s query for non-textual data, expanding search terms of the query, executing the query on a plurality of data sources, and selecting at least one data source when the results of the query are greater than or equal to an accuracy threshold.⁵ *See* Ex. 1001, 30:17–24. Petitioner contends that Kirsch

⁴ Claim 10 recites an apparatus comprising a memory unit and a processor configured to perform the method of claim 1. *See* Ex. 1001, 30:61–31:15. Claim 19 recites a computer program comprising a non-transitory computer-readable medium having program code that, when executed, performs the method of claim 1. *See id.* at 32:12–30. The parties treat claim 1 as representative of the independent claims. *See* Pet. 34; Prelim. Resp. 20.

⁵ Claim 1 recites plural “accuracy thresholds” with the singular article “an.” Neither party addresses this issue. Instead, both parties refer to a singular

teaches or suggests similar steps to solve the collection search problem. *See* Pet. 27–31. For example, Petitioner contends that Kirsch teaches a method of analyzing data⁶ by receiving a user’s query, expanding the search terms, searching a plurality of data sources (document collections), and selecting a data source (qualified set of most relevant document collections based on a relevancy threshold, e.g., minimum level of relevance). *Id.* (citing Ex. 1011, 6:29–30, 6:34–37, 6:40–43, 7:6–7, 7:47–49, 9:67–10:4, 10:19–21, 14:48–50; Ex. 1004 ¶¶ 79–89).

Petitioner further cites Schultz for teaching a user query for non-textual data such as images. *Id.* at 27 (citing Ex. 1013, 12:49–53, 12:66–13:4). Petitioner also cites Schultz for additional teachings of expanding the terms of the query, executing the query on a plurality of data sources, and selecting at least one data source when the results of the query are greater than or equal to an accuracy threshold. *Id.* at 28–31 (citing Ex. 1013, 6:30–32, 12:49–53, 12:66–13:4, 13:20–24; 14:29–41, Fig. 4A; Ex. 1004 ¶¶ 85, 88).

Patent Owner does not dispute Petitioner’s arguments as to the teachings of Kirsch and Schultz. *See* Prelim. Resp. 9–16. Rather, Patent Owner argues that Petitioner does not establish a reason to combine references, which we address below. *See id.*

“accuracy threshold” in their discussion. *See* Pet. 30–31; *See* Prelim. Resp. 15–16. For the purposes of this Decision, we use the singular “accuracy threshold.”

⁶ Because Petitioner has sufficiently shown that the prior art teaches the preamble, we need not determine whether the preamble is limiting. *See Nidec*, 868 F.3d at 1017.

2. *Monitoring the Selected Data Source and Communication with a Second User*

Claim 1 recites two additional steps in the claimed method. First, claim 1 adds a step of “monitoring, based on a set schedule, the at least one data source to extract non-textual data from the at least one data source when at least an update to stored data that matches the query, newly added non-textual data matches the query, or a combination thereof.” Ex. 1001, 30:25–29 (“monitoring step”). Second, claim 1 adds the step of “establishing a communication channel with a second user based at least in part on the data extracted from the at least one monitored data source.” *Id.* at 30:30–32 (“communication with a second user”).

Petitioner cites additional references in combination with Kirsch and Schultz to teach these steps. As to the monitoring step, Petitioner relies on Eichstaedt’s teaching of notifying a user by email when new information becomes available regarding the search results. Pet. 31–32 (citing Ex. 1015, 2:5–15, 2:43–45). Specifically, Petitioner cites Eichstaedt’s poller server that compares an old query to current content, replaces the old query with the current content when different, and delivers an alert with the current content. *Id.* (citing Ex. 1015, 7:67, 8:14–21, 8:28–54, 12:38–41, Figs. 5–6; Ex. 1004 ¶¶ 91–92).

As to communication with a second user, Petitioner relies on Lucovsky teaching “a first user sharing search results with a second user via an email (Figures 4–6), message board (Figure 7), instant messaging (Figure 8) and a blog (Figure 9).” *Id.* at 33 (citing Ex. 1016, Figs. 4–9). Petitioner adds that Eichstaedt further teaches sending an update with new content to both the user that generated the query and other users. *Id.* (citing Ex. 1015, 4:13–51; Ex. 1004 ¶ 95).

Alternatively, Petitioner relies on Mellin to teach communication with a second user. *Id.* at 41. Specifically, Petitioner argues that Mellin teaches using “a group email address to facilitate collaboration among members of a group.” *Id.* (citing Ex. 1017, 3:24–26).

Patent Owner does not dispute Petitioner’s arguments as to the teachings of Eichstaedt, Lucovsky, and Mellin. *See* Prelim. Resp. 17–23. Rather, Patent Owner argues that Petitioner does not establish a reason to combine references, which we address in detail below. *See id.*

3. *Reason to Combine the References*

As discussed above, Petitioner combines Kirsch, Schultz, and Eichstaedt with Lucovsky or Mellin to argue that claim 1 is unpatentable as obvious to a person of ordinary skill in the art. Petitioner sets forth reasons to combine Kirsch, Schultz, and Eichstaedt, with Lucovsky or Mellin.

a) *Petitioner’s Arguments*

First, as to Schultz, Petitioner argues:

Kirsch and Schultz both relate to search technology, and it would have been obvious to incorporate Schultz’s techniques for querying non-textual image data into Kirsch. A [person of ordinary skill in the art (POSITA)] would have been motivated to combine the references in order to apply Kirsch’s collection selection techniques to collections that included image data.

Pet. 27–28 (citing Ex. 1004 ¶ 80).⁷

⁷ Because Patent Owner does not dispute that Kirsch teaches “expanding the search terms of the query,” “executing the query on a plurality of data sources,” and “selecting at least one data source,” and we agree on this record that Kirsch teaches the limitations, we need not address whether it would have been obvious to combine Schultz’s teachings as to these limitations.

Second, as to Eichstaedt, Petitioner argues:

Kirsch, Schultz and Eichstaedt are all directed to search query technology. It would have been obvious to a POSITA to incorporate Eichstaedt's monitoring functionality into the combination of Kirsch and Schultz described above, so that a user could receive periodic updates of new images from the "selected document collections."

Id. at 32 (Ex. 1004 ¶ 93).

Third, as to Lucovsky, Petitioner argues:

Kirsch, Schultz, Eichstaedt and Lucovsky are all directed to search query technology. It would have been obvious to incorporate Lucovsky's search results sharing techniques with Kirsch, Schultz and Eichstaedt, so that a first user could share updates with a second user.

Id. at 33 (Ex. 1004 ¶ 95).

Fourth, as to Mellin, Petitioner argues:

In a case where the author of the query (mapped to "a first user" in the claim) was part of a group collaboration, it would have been obvious for the author to designate a group email address to receive search result updates so that the updated search results were distributed to all collaborators. Any collaborator on the group email address other [than] the author of the search query maps to "a second user" in the claim.

Id. at 41 (Ex. 1004 ¶ 121).

b) Patent Owner's Arguments

Patent Owner argues that Petitioner's statements are conclusory and do not establish a reason to combine Kirsch with Schultz or Eichstaedt. *See* Prelim. Resp. 9. For example, Patent Owner argues that "two references sharing a field does not establish a reason to combine them." *Id.* at 10, 18 (citing *Securus Techs., Inc. v Glob. Tel*Link Corp.*, 701 F. App'x 971, 976–

77 (Fed. Cir. 2017) (non-precedential); *Microsoft Corp. v. Enfish, LLC*, 662 F. App'x 981, 990 (Fed. Cir. 2016) (non-precedential)). Specifically, as to Schultz, Patent Owner argues that Petitioner “fails to explain *why* a POSITA would have sought ‘to apply Kirsch’s collection selection techniques to collections that included image data.’” *Id.* at 11 (emphasis added). And as to Eichstaedt, Patent Owner argues that “a mere statement of what a combination would provide does not establish why a POSITA would have made the combination in the first place—it instead amounts to arguing that a POSITA would have combined features in order to obtain the combined features.” *Id.* at 18. Finally, Patent Owner asserts that Dr. Srivastava’s (Petitioner’s declarant) testimony is entitled to little weight because the testimony “largely repeats the petition’s conclusory assertions.” *Id.* at 12, 18 (citing Pet. 27–28; Ex. 1004 ¶ 80; *Xerox Corp. v. Bytemark, Inc.*, IPR2022-00624, Paper 9 at 15–17 (PTAB Aug. 24, 2022) (precedential)).

Patent Owner presents similar arguments against Petitioner’s reasons to combine Kirsch, Schultz, and Eichstaedt with Lucovsky or Mellin. *See* Prelim. Resp. 18–19 (discussing Lucovsky), 22–23 (discussing Mellin). For example, Patent Owner argues that Petitioner’s argument to combine Lucovsky’s “search results sharing techniques” with Kirsch, Schultz, and Eichstaedt “does not establish why a POSITA would have made the combination.” *Id.* at 19. As to Mellin, Patent Owner argues that “the petition fails to explain *why* a query author would want to designate a group email address to receive search results, let alone *why* updates to the search results would want to be shared with the group email address.” *Id.* at 23. Finally, Patent Owner reiterates that Dr. Srivastava’s testimony for combining Kirsch, Schultz, and Eichstaedt with Lucovsky or Mellin “does not cure the petition’s deficiencies, as that testimony repeats the same sort of deficient

contentions as the petition.” *Id.* at 21 (citing Ex. 1004 ¶¶ 102–103), 23 (citing Ex. 1004 ¶ 121).

c) Analysis

We agree with Patent Owner that Petitioner’s arguments for combining Kirsch, Schultz, Eichstaedt, and Lucovsky or Mellin fail to meet Petitioner’s burden to establish a reasonable likelihood of success.

Our reviewing court has emphasized that the “motivation-to-combine analysis is a flexible one.” *Intel Corp. v. PACT XPP Schweiz AG*, 61 F.4th 1373, 1379 (Fed. Cir. 2023). And it is well-established that “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. Despite this flexible standard, our reviewing court cautions that “‘a conclusory assertion with no explanation is inadequate to support a finding that there would have been a motivation to combine’ because ‘[t]his type of finding, without more, tracks the *ex post* reasoning *KSR* warned of and fails to identify any actual *reason* why a skilled artisan would have combined the elements in the manner claimed.’” *TQ Delta, LLC v. CISCO Sys., Inc.*, 942 F.3d 1352, 1359 (Fed. Cir. 2019) (quoting *In re Van Os*, 844 F.3d 1359, 1361–62 (Fed. Cir. 2017)); *see also TriVascular, Inc. v. Samuels*, 812 F.3d 1056, 1066 (Fed. Cir. 2016) (“Although the *KSR* test is flexible, the Board must still be careful not to allow hindsight reconstruction of references without any explanation as to *how* or *why* the references would be combined to produce the claimed invention.”).

Petitioner first argues that Kirsch, Schultz, Eichstaedt, and Lucovsky are all directed to the same search query technology. *See* Pet. 27, 32–33. Although not expressly stated, Petitioner appears to rely on the “known-

technique” rationale for combining references, i.e., “if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.” *Intel*, 61 F.4th at 1380. For example, in *Intel*, the petitioner asserted “that a person of ordinary skill would have been motivated to combine [the asserted references] because they ‘relate to the same field of multiprocessor . . . systems’ and ‘address the same problem: maintaining cache coherency.’” *Id.*

In contrast, Petitioner makes no connection between the similarity of the references and the problem to be solved. For example, Petitioner asserts that one skilled in the art would combine Schultz with Kirsch to search collections that include image data. Pet. 28. But Petitioner does not explain *why* a skilled artisan would have been motivated to combine Schultz’s teachings with those in Kirsch. In another example, Petitioner asserts one skilled in the art would “incorporate Eichstaedt’s monitoring functionality into the combination of Kirsch and Schultz . . . so that a user could receive periodic updates of new images from the ‘selected document collections.’” *Id.* at 32. But Petitioner does not establish why an ordinarily skilled artisan would have been motivated to improve the combination of Kirsch and Schultz with Eichstaedt’s monitoring functionality as Petitioner proposes. Rather this is a conclusory assertion, without explanation, that one skilled in the art would incorporate Eichstaedt’s method to gain the benefit of Eichstaedt’s method.

Further, as Patent Owner notes, Petitioner’s declarant testimony is identical to the Petition and does not cite to any evidence either in the asserted references or other documents to support a reason to combine the references. *See, e.g.*, Ex. 1004 ¶¶ 80, 93. In brief, “[t]he declaration does not

provide any technical detail, explanation, or statements supporting *why* [Dr. Srivastava] determines that the feature in question was required or would have been obvious based on the prior art disclosure.” *Xerox*, IPR2022-00624, Paper 12 at 5. Accordingly, we give little weight to Petitioner’s declarant testimony because the declaration merely offers conclusory assertions without underlying factual support and repeats, *verbatim*, Petitioner’s conclusory arguments. *Id.*

Petitioner’s proposed combinations of Kirsch, Schultz, and Eichstaedt with Lucovsky or Mellin fail for the same reasons. Petitioner’s reason to combine Kirsch, Schultz, and Eichstaedt with Lucovsky is a conclusory assertion that one of skill in the art would have incorporated Lucovsky’s functionality of sharing updates (Pet. 33) that is mirrored by Dr. Srivastava’s declaration, which lacks supporting evidence or explanation (*see* Ex. 1004 ¶ 95). Petitioner’s reason to combine Kirsch, Schultz, and Eichstaedt with Mellin provides a hypothetical in which, “[i]n a case where the author of the query . . . was part of a group collaboration, it would have been obvious for the author to designate a group email address to receive search result updates so that the updated search results were distributed to all collaborators.” Pet. 41. But Petitioner does not support this hypothetical with evidence, either in the Petition itself or in the identical recitation in Dr. Srivastava’s declaration. *See* Ex. 1004 ¶ 121. Accordingly, Petitioner has not met its burden to show a reasonable likelihood that the claims it challenges are unpatentable based on the asserted grounds.

4. *Conclusion as to the Combinations of Kirsch, Schultz, Eichstaedt, and Other References*

For these reasons, Petitioner does not establish a reasonable likelihood that one skilled in the art would have combined Kirsch, Schultz, Eichstaedt,

and Lucovsky or Mellin as proposed by Petitioner. Accordingly, Petitioner has not shown a reasonable likelihood of prevailing with respect to independent claims 1, 10, and 19, and their dependent claims,⁸ on the grounds relying on the combinations of Kirsch, Schultz, Eichstaedt, and Lucovsky or Mellin.

F. Alleged Obviousness of Claims 1, 10, and 19 over Liang, Nelson, and Other References

Petitioner argues that independent claims 1, 10, and 19 are unpatentable as obvious over Liang, Nelson, and Lucovsky or Mellin. Pet. 46–55, 62. Alternatively, Petitioner argues that claims 1, 10, and 19 are unpatentable as obvious over Liang, Nelson, Kirsch, Schultz, and Lucovsky. *Id.* at 58–60. Patent Owner disagrees, arguing that Petitioner’s “obviousness grounds rely on conclusory statements instead of specific reasoning based on evidence,” as to the reasons to combine the references. *See* Prelim. Resp. 9.

On this record, we determine that Petitioner does not establish a reasonable likelihood that one skilled in the art would have combined the references.

1. Steps for Addressing the Collection Search Problem and Monitoring the Selected Data Source

Petitioner contends that Liang teaches a method of analyzing data⁹ by generating a query for non-textual data (e.g., images), expanding the search terms, searching a plurality of data sources, and selecting a data source.

⁸ Petitioner’s challenges of dependent claims 2–9, 11–18, and 20–21 all rely on the same underlying combinations of Kirsch, Schultz, Eichstaedt, and Lucovsky or Mellin, and therefore fail for the same reasons. *See* Pet. 32–45.

⁹ Because Petitioner has sufficiently shown that the prior art teaches the preamble, we need not determine whether the preamble is limiting. *See Nidec*, 868 F.3d at 1017.

Pet. 46–52 (citing Ex. 1012 ¶¶ 13, 167, 178, 184, 229, Figs. 1, 4, 5; Ex. 1004 ¶¶ 148–149, 151–154). Petitioner also contends that Liang teaches the step of monitoring the selected (at least one) data source. *See id.* at 52–54 (citing Ex. 1012 ¶¶ 52, 347, Fig. 1; Ex. 1004 ¶ 155). Petitioner combines Liang with Nelson, which teaches using non-textual data in the query. *Id.* at 48–49 (citing Ex. 1019, 3:6–17, 6:35–36, 7:14–21). Petitioner asserts that one skilled in the art “would have been motivated to combine [Liang and Nelson] . . . to expand the capabilities of Liang such that a user can include both text and a query image in a query, and would have had a reasonable expectation of success with respect to this combination.” *Id.* (citing Ex. 1004 ¶ 150).

Patent Owner does not dispute Liang’s teachings or the combination with Nelson.¹⁰ We are persuaded by Petitioner’s argument that the combination of Liang and Nelson teaches or suggests the claimed steps for addressing the collection search problem, including a query for non-textual data, and a step for monitoring the at least one data source for new non-textual data.

2. *Communicating with a Second User*

Petitioner cites Lucovsky or Mellin in combination with Liang and Nelson to teach the step of “establishing a communication channel with a

¹⁰ Because Petitioner has shown sufficiently that Liang teaches the selecting and monitoring steps, we do not address Petitioner’s combination of Liang and Nelson with Kirsch and Schultz directed to the same limitation. *See* Pet. 58–60.

second user based at least in part on the data extracted from the at least one monitored data source.”¹¹ *See* Pet. 54–55, 62.

a) Petitioner’s Arguments

Petitioner relies on Lucovsky’s teaching of “a first user sharing search results with a second user” via an email, message board, instant messaging, and a blog. Pet. 54 (citing Ex. 1016, Figs. 4–9); *see also* Pet. 58 (citing Ex. 1004 ¶ 170). As to the reason to combine Lucovsky with Liang and Nelson, Petitioner argues:

Liang, Nelson and Lucovsky are all directed to search query technology. It would have been obvious to incorporate Lucovsky’s search results sharing techniques with Liang and Nelson, so that a first user could share updates with a second user.

Id. (citing Ex. 1004 ¶¶ 158).

Alternatively, Petitioner relies on Mellin to teach using “a group email address to facilitate collaboration among members of a group.” *Id.* at 62 (citing Ex. 1017, 3:24–26). As to the reason to combine Mellin with Liang and Nelson, Petitioner argues:

In a case where the author of the query (mapped to “a first user” in the claim) was part of a group collaboration, it would have been obvious for the author to designate a group email address to receive search result updates so that the updated search results were distributed to all collaborators. Any collaborator on the group email address other [than] the author of the search query maps to “a second user” in the claim.

Id. (citing Ex. 1004 ¶ 186).

¹¹ Petitioner also relies on Lucovsky to teach this step in combination with Liang, Nelson, Kirsch, and Schult. *See* Pet. 58–60.

b) Patent Owner's Arguments

Patent Owner reiterates its previous arguments—applied against Petitioner’s proposed combination of Kirsch, Schultz, Eichstaedt, and Lucovsky or Mellin—to the combination of Liang, Nelson, and Lucovsky or Mellin. First, Patent Owner argues that “references simply being directed to the same field or technology is not a motivation to combine.” Prelim. Resp. 30. Second, Patent Owner argues that Petitioner’s argument “that a POSITA would have combined features in order to obtain the combined features” is conclusory and result-oriented. *Id.*; *see also id.* at 33–34 (arguing that the Petition fails to explain why one skilled in the art would combine the references). Finally, Patent Owner argues that “Dr. Srivastava’s testimony again tracks the petition here, adding nothing of substance to the deficient reasoning set forth in the petition.” *Id.* at 30 (citing Ex. 1004 ¶ 158); *see also id.* at 34 (citing Ex. 1004 ¶ 186).

c) Analysis

We agree with Patent Owner that Petitioner’s arguments for combining Liang, Nelson, and Lucovsky or Mellin fail to meet Petitioner’s burden to establish a reasonable likelihood of success.

Petitioner’s reasons to combine Liang and Nelson with Lucovsky or Mellin are identical to its previously stated reasons to combine Kirsch, Schultz, and Eichstaedt with Lucovsky or Mellin. While not necessarily improper, repeating the identical argument emphasizes Petitioner’s conclusory reasoning that one skilled in the art would simply combine the references for the purposes of adding the feature, entirely independent of the primary references’ teachings. *See TQ Delta*, 942 F.3d at 1359 (holding that declarant testimony that “fail[s] to provide any meaningful explanation for why one of ordinary skill in the art would be motivated to combine the[]

references” is insufficient to support an obviousness determination).” As discussed above, we give little weight to Dr. Srivastava’s testimony supporting the reason to combine because it merely offers conclusory assertions without underlying factual support and repeats, *verbatim*, the Petition’s conclusory arguments. *See Xerox*, IPR2022-00624, Paper 12 at 5. Because Petitioner’s reasoning is conclusory and not supported by evidence, we are not persuaded that Petitioner has shown sufficiently that one skilled in the art would have combined the references.

3. *Conclusion as to the Combinations of Liang, Nelson, and Other References*

For these reasons, Petitioner does not establish a reasonable likelihood that one skilled in the art would have combined Liang, Nelson, and Lucovsky or Mellin as Petitioner proposes. Accordingly, Petitioner has not shown a reasonable likelihood of prevailing with respect to independent claims 1, 10 and 19, and their dependent claims¹² on the grounds relying on the combinations of Liang, Nelson, and Lucovsky or Mellin.

G. *Alleged Obviousness of Claims 1–20 over the ’301 Publication and Schultz*

Petitioner argues that independent claims 1, 10, and 19 are unpatentable as obvious over the ’301 publication and Schultz. Pet. 65–69. Patent Owner disagrees, arguing that the Petition fails to establish a reasonable likelihood of prevailing in demonstrating unpatentability of the

¹² Petitioner’s challenges of dependent claims 2–4, 7, 8, 10–13, 16, and 17 all rely on the same underlying combinations of Liang, Nelson, and Lucovsky; Liang, Nelson, and Mellin; or Liang, Nelson, Kirsch, Schultz, and Lucovsky (claims 2–8 and 11–17), and therefore fail for the same reasons. *See* Pet. 55–57, 60–65.

claims. *See* Prelim. Resp. 39–47. Specifically, Patent Owner argues that Petitioner’s “conclusory reasoning does not establish that a POSITA would have been motivated to combine the ’301 Publication and Schultz.” *Id.* at 43 (emphasis omitted).

On this record, we determine that Petitioner does not establish a reasonable likelihood that one skilled in the art would have combined the references. Because we find this issue to be dispositive, we need not address the parties’ dispute as to the priority date of the challenged claims. *See* Pet. 5–10; Prelim. Resp. 47–58.

1. Terminal Disclaimer is not an Admission

Before we address the combination of the ’301 publication and Schultz, we address Petitioner’s argument that “Patent Owner effectively conceded during prosecution that the combination of the ’301 Publication and Schultz renders all of the Challenged Claims obvious,” by filing a terminal disclaimer during prosecution of the ’712 patent. Pet. 65.

During prosecution of the ’712 patent, the pending claims were rejected for nonstatutory double patenting as not being patentably distinct from claims 1–20 of U.S. Patent No. 9,229,977 B2 (“the ’977 patent”). *See* Ex. 1006, 91–92.¹³ In response, the applicant filed a terminal disclaimer, disclaiming the term extending beyond the expiration date of the ’977 patent. Ex. 1006, 69–70, 83. The remarks accompanying the terminal disclaimer stated “applicants make no admissions as to the propriety of the rejections of claims 1–20 under the judicially created doctrine of obviousness-type double patenting.” *Id.* at 83.

¹³ Before issuing, the ’977 patent published as the ’310 publication. *See* Ex. 1001, code (63); Ex. 1014, code (21).

Petitioner argues that by filing a terminal disclaimer, Patent Owner conceded that the challenged claims would have been obvious over the '977 patent combined with art teaching non-textual data. Pet. 11–12, 65 (citing Ex. 1006, 82–83; Ex. 1004 ¶ 46). Petitioner argues that the '301 publication contains the same teachings as the '977 patent, and “Schultz is prior art directed to non-textual data.” *Id.* at 65. Accordingly, Petitioner asserts that the same “concession” applies to the combination of the '301 publication and Schultz. *Id.*

Patent Owner disputes Petitioner’s arguments on both the prosecution history and case law. *See* Prelim. Resp. 40–41. Patent Owner cites to the prosecution history, referenced above, in arguing that the applicant made no concessions either in the terminal disclaimer or its accompanying remarks. *Id.* at 41 (citing Ex. 1006, 74, 83). We agree. The then-applicant clearly stated that it made “no admissions as to the propriety” of the double-patenting rejection. *See* Ex. 1006, 83.

We also agree with Patent Owner’s argument that Petitioner’s argument contradicts Federal Circuit case law. Prelim. Resp. 40. As Patent Owner cites, Federal Circuit “cases foreclose the inference that filing a terminal disclaimer functions as an admission regarding the patentability of the resulting claims.” *SimpleAir, Inc. v. Google LLC*, 884 F.3d 1160, 1167 (Fed. Cir. 2018). We therefore reject Petitioner’s argument to the contrary.

2. *Reason to Combine the References*

Petitioner asserts that the '301 publication teaches all of the limitations of claim 1, except for specifying “non-textual data.” Pet. 65–68 (citing Ex. 1014 ¶¶ 9, 26, 32, 48; Ex. 1004 ¶¶ 200–209). Petitioner argues that Schultz teaches “querying for non-textual data such as images” and “relevance scoring and relevance ranking for images objects within a

collection.” *Id.* at 66–67 (citing Ex. 1013, 12:49–53, 12:66–13:4, 14:29–41, Figs. 4A).

As to the reason to combine the references, Petitioner argues:

The ‘301 Publication and Schultz both relate to search technology, and it would have been obvious to incorporate Schultz’s techniques for querying non-textual image data into the ‘301 Publication. A POSITA would have been motivated to combine the references in order to apply Schultz’s image querying techniques into the ‘301 Publication, and would have had a reasonable expectation of success with respect to this combination.

Id. at 66 (citing Ex. 1004 ¶ 201).

Patent Owner responds that a motivation to combine is not established merely by identifying references in the same technology or by stating what the combination does rather than why the combination would have been made by one skilled in the art. *See* Prelim. Resp. 43. Patent Owner also emphasizes that “Dr. Srivastava’s testimony again tracks the petition here, adding nothing to the deficient reasoning set forth in the petition.” *Id.* (citing Ex. 1004 ¶ 201).

We agree with Patent Owner. Petitioner makes no connection between the similarity of the references and the problem to be solved. And Petitioner’s conclusory reasoning does not explain “why a skilled artisan would have combined the elements in the manner claimed.” *TQ Delta*, 942 F.3d at 1359. Finally, Petitioner cites no evidence to support its conclusion. Because Petitioner’s reasoning is conclusory and not supported by evidence, we are not persuaded that Petitioner has shown sufficiently that one skilled in the art would have combined the references.

3. *Conclusion as to the Combination the '301 Publication and Schultz*

For these reasons, Petitioner does not establish a reasonable likelihood that one skilled in the art would have combined the '301 publication and Schultz as Petitioner proposes. Accordingly, Petitioner has not shown a reasonable likelihood of prevailing with respect to independent claims 1, 10, and 19, and their dependent claims¹⁴ on the ground relying on the combination of the '301 publication and Schultz.

IV. CONCLUSION

For the foregoing reasons, we determine that Petitioner does not establish a reasonable likelihood of prevailing with respect to any challenged claims. Thus, we do not institute an *inter partes* review.

V. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that, pursuant to 35 U.S.C. § 314(a), the Petition is denied, and no *inter partes* review is instituted.

¹⁴ Petitioner's challenge of dependent claims 2–9 and 11–18 relies on the same combination of the '301 publication and Schultz, and therefore fails for the same reasons. *See* Pet. 69–71.

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