

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SLING TV, L.L.C.
Petitioner

v.

UNILOC 2017 LLC,
Patent Owner

IPR2019-01363
Patent 9,721,273 B2

Before KEVIN F. TURNER, JENNIFER S. BISK, and
NEIL T. POWELL, *Administrative Patent Judges*.

BISK, *Administrative Patent Judge*.

JUDGMENT
Final Written Decision on Remand
Determining All Challenged Claims Unpatentable
35 U.S.C. §§ 144, 318

INTRODUCTION

We address this case on remand after a decision by the U.S. Court of Appeals for the Federal Circuit in *Sling TV, L.L.C. v. Uniloc 2017 LLC*, No. 2021-1651, 2022 WL 306468 (Fed. Cir. Feb. 2, 2022).

A. Background

On July 19, 2019, Sling filed a Petition requesting *inter partes* review of claims 1–3 of U.S. Patent No. 9,721,273 B2 (Ex. 1001, “the ’273 patent”). Paper 1 (“Pet.”). Uniloc filed a Preliminary Response. Paper 6 (“Prelim. Resp.”). On January 15, 2020, we instituted *inter partes* review pursuant to 35 U.S.C. § 314 as to all challenged claims. Paper 7 (“Dec. on Inst.”).

Following institution, Uniloc filed a Patent Owner Response. Paper 12 (“PO Resp.”). Sling then filed a Reply. Paper 14 (“Reply”). Uniloc followed with a Sur-Reply. Paper 15 (“Sur-Reply”). We held an oral argument on October 14, 2020. A transcript of the oral hearing (“Tr.”) has been entered into the record as Paper 28. Following the oral hearing, we authorized additional briefing on claim construction with respect to the claim phrase “no data representing content of the second collection of presentations” as recited by claims 1 and 2 and its applicability to the asserted prior art, and the parties filed briefs in accordance with that order. *See* Papers 25–27.

On December 28, 2020, following consideration of the full record developed during trial, we issued a Final Written Decision pursuant to 35 U.S.C. § 318(a) and 37 C.F.R. § 42.73 pursuant to 35 U.S.C. § 315(d). Paper 29 (“Final Dec.”). In the Final Written Decision, we concluded that

Sling had not established by a preponderance of the evidence that claims 1–3 are unpatentable on the asserted grounds. *Id.*

Sling appealed to the Federal Circuit (Paper 30). In a decision issued on February 2, 2022, the Federal Circuit held that “[b]ecause the Board’s claim construction excludes a preferred embodiment and is inconsistent with the specification’s description of the invention, it is incorrect” and vacated and remanded our Decision for further proceedings. *Uniloc*, 2022 WL 306468, at *3.

The parties presented the panel with a proposed briefing schedule on remand and the panel granted the request. Ex. 3001. In compliance with that schedule, Sling filed an Opening Brief on Remand (Paper 31, “Pet. Opening Remand Br.”), Uniloc filed a Response (Paper 36, “PO Resp. Remand Br.”), Sling filed a Reply (Paper 37, “Pet. Reply Remand Br.”), and Uniloc filed a Sur-Reply (Paper 38, “PO Sur-Reply Remand Br.”).

For the reasons discussed below, after considering the post-remand briefing, as well as the record previously developed during trial and the Federal Circuit’s decision, we conclude that Sling has shown by a preponderance of the evidence that claims 1–3 are unpatentable.

B. Related Proceedings

The parties identify several district court cases involving the ’273 patent. Pet. v; Prelim. Resp. 2. With its Response, Patent Owner filed a *Markman* ruling issued by the Central District of California on March 9, 2020. Ex. 2001 (*Markman* ruling in *Uniloc 2017 LLC v. Netflix, Inc.*, 8:18-cv-02055).

C. The Claimed Invention

The '273 patent, titled System and Method for Aggregating and Providing Audio and Visual Presentations Via a Computer Network, issued August 1, 2017. Ex. 1001, codes (45), (54). It addresses the problem of locating content on the Internet for the purpose of business productivity and consumer education and entertainment. *Id.* at 1:51–55, 2:6–10. In particular, the '273 patent discusses storing and aggregating audio/visual presentation data for delivery via a computer network using a common web page. *Id.* at 2:15–3:11.

Figure 2 is reproduced below.

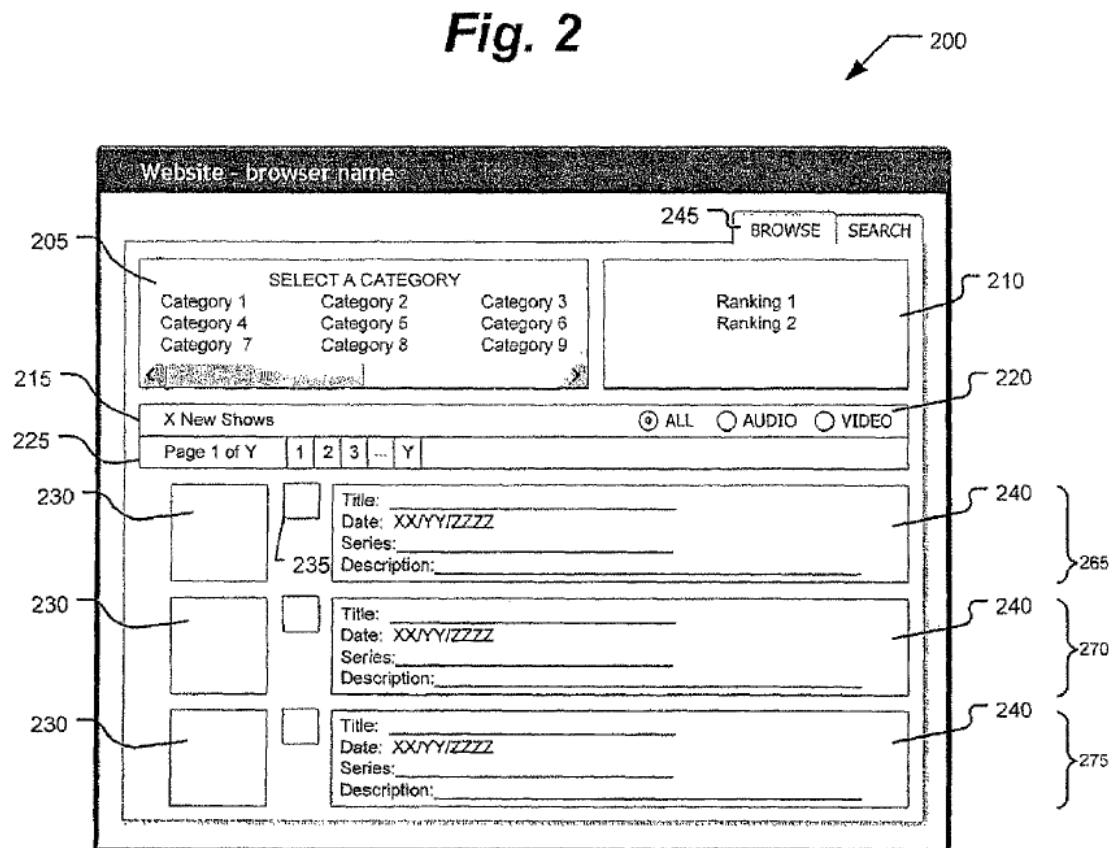


Figure 2 “illustrates an electronic document according to an embodiment of the present invention.” *Id.* at 3:22–23. Web page 200 “aggregates audio

and/or video content for presentation to users of computers 20.” *Id.* at 5:4–6. It displays a row for each of three presentations 265, 270, and 275, each row including particular content graphics 230, particular content information 240, and indicator 235. *Id.* at 5:16–20. “A user may select such a presentation for display by selecting an individual presentation for streaming or downloading, such as by clicking on an indicator” *Id.* at 5:20–23.

The ’273 patent describes an embodiment, process 800, which is “suitable for automatically aggregating and linking to presentations housed elsewhere in memory so as to be accessible to a [user’s computer] via [a] network.” *Id.* at 10:56–62. According to the ’273 patent, “Really Simple Syndication (‘RSS’) is a family of [standardized] Internet feed formats used to publish content that may be frequently updated, such as podcasts (RSS 2.0).” *Id.* at 10:64–66. An RSS document is sometimes referred to as a “feed” or “channel.” *Id.* at 10:66–11:1. The ’273 patent explains that its embodiments use RSS standard 2.0. *Id.* at 10:66–67 (“RSS utilizes a standardized format.”), 11:14–16 (“Embodiments of the present invention will be discussed with regard to RSS 2.0 feeds for non-limiting purposes of explanation only.”). RSS 2.0 discloses that the standard RSS feed includes any number of elements, each of which includes metadata, specifically either title or description. Ex. 1011, 1, 2, 4 (“All elements of an item are optional, however at least one of title or description must be present.”); *see also* Ex. 1002 ¶ 69.

Figure 8 is reproduced below.

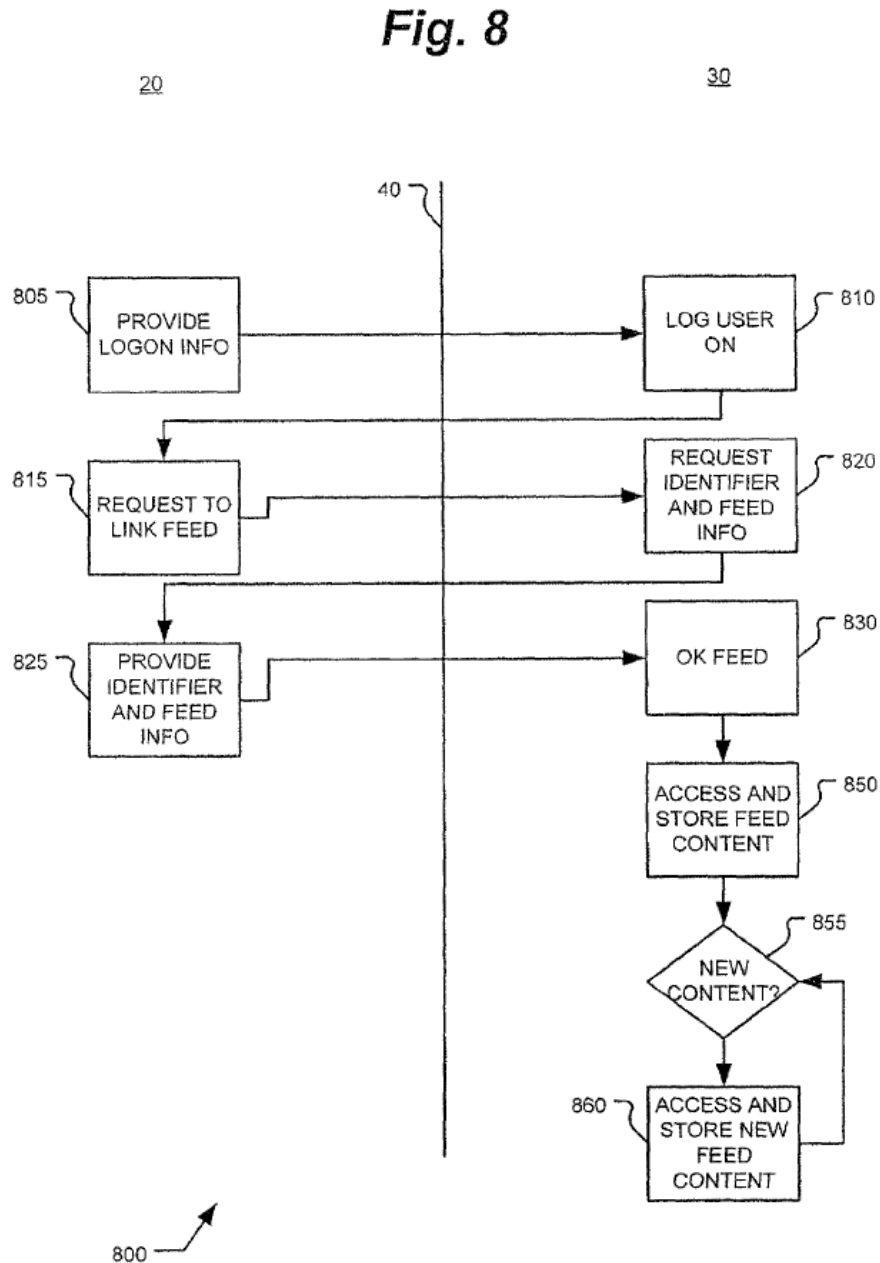


Figure 8, above, shows a flow diagram of process 800. *Id.* at 10:56–58. After a user provides log on information at a client computer (step 805) and a server computer logs the user on (step 810), the logged-on user, at step 815, requests to link an RSS feed by interacting with a web page. *Id.* at 11:20–30. The server then requests information about the content to be

created, including title and description (step 820), and the user provides at least a portion of the requested information (step 825). *Id.* at 11:30–41. The information provided may be screened, filtered, or verified (step 830) and stored (step 850). *Id.* at 11:41–52. At step 855, the server “may determine if new content exists for one or more feeds stored at block 850” using “any of a number of conventional manner[s], including periodically checking when the feed was last updated.” *Id.* at 11:63–12:1. Any new or changed content may be appended to the data stored in step 850. *Id.* at 12:1–3.

D. Claims in Issue

Claims 1 and 2 are independent, and claim 3 depends from claim 2. Claim 1 is illustrative of the subject matter at issue and reads as follows:

1. A method for providing content via a computer network and computing system, the method comprising:

[a] *storing presentation data that represents content of a first collection of one or more presentations using the computer system;*

[b] *storing data indicative of the first collection of presentations so as to be associated with the presentation data;*

[c] *storing feed data that represents a collection of one or more feeds using the computer system, wherein each of the feeds identifies a corresponding second collection of one or more presentations being accessible via the computer network and includes no data representing content of the second collection of presentations;*

[d] *automatically and periodically accessing each of the feeds to identify each of the corresponding second collection of presentations, using the computer system;*

[e] *storing data associated with a third collection of one or more presentations; and*

[f] aggregating each of the first, identified second, and third collections of presentations for delivery via the computer network using a common web page.

Ex. 1001, 12:39–59 (bracketed lettering added) (emphases added to disputed limitations). Claim 2—and, therefore, all challenged claims—contains limitations identical to those emphasized above. *See id.* at 13:1–3, 13:7–11.

E. Proposed Grounds of Unpatentability

We instituted *inter partes* review on the following grounds of unpatentability under 35 U.S.C. § 103. Inst. Dec. 11.

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
1–3	103 ¹	Li ² , knowledge of a person of skill in the art ³
1–3	103	Li, Motte ⁴

Pet. 2, 19–63. Petitioner also relies on the Declaration of James A. Storer, Ph.D. (Ex. 1002).

¹ The Leahy-Smith America Invents Act (“AIA”), Pub. L. No. 112-29, 125 Stat. 284, 287–88 (2011), amended 35 U.S.C. § 103, effective March 16, 2013. Because the application from which the ’273 patent issued was filed before this date, the pre-AIA version of § 103 applies.

² U.S. Patent Appl. Publication No. 2008/0256443 A1 (filed Apr. 16, 2007; published Oct. 16, 2008) (Ex. 1006).

³ Petitioner states that a person of ordinary skill in the art at the time of the ’273 patent “would have knowledge of the webpage, Internet, and feed technology” discussed in Section V of the Petition. Pet. 8 (referring to Pet. 2–4).

⁴ U.S. Patent Appl. Publication No. 2008/0071929 A1 (filed Sept. 18, 2006; published Mar. 20, 2008) (Ex. 1007).

ANALYSIS

A. Legal Standards

In an *inter partes* review, the petitioner has the burden of proving unpatentability by a preponderance of the evidence. 35 U.S.C. § 316(e). That burden never shifts to the patentee. *Dynamic Drinkware, LLC v. Nat'l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015).

A patent claim is unpatentable under 35 U.S.C. § 103(a) if the differences between the claimed subject matter 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;⁵ and (4) when in evidence, objective indicia of obviousness or non-obviousness (i.e., secondary considerations).⁶

⁵ Citing the testimony of Dr. Storer, Sling asserts that a person of ordinary skill in the art for purposes of the '273 patent “would have had a bachelor’s degree in electrical engineering, computer science, or a similar field with at least two years of experience in web page and Internet technology or . . . a master’s degree in electrical engineering, computer science, or a similar field with a specialization in web page and Internet technology. A person with less education but more relevant practical experience may also meet this standard.” Pet. 13 (citing Ex. 1002 ¶ 49). Uniloc “does not offer a competing definition for purposes of this proceeding.” PO Resp. 10. Because we find Petitioner’s proposed definition generally consistent with the subject matter of the '273 patent and cited references, we adopt it for purposes of this analysis.

⁶ The parties do not address secondary considerations, which, therefore, do not constitute part of our analysis.

Graham v. John Deere Co., 383 U.S. 1, 17–18 (1966). One seeking to establish obviousness based on more than one reference also must articulate sufficient reasoning with rational underpinnings to combine teachings. *See KSR*, 550 U.S. at 418.

B. Claim Interpretation

1. “no data representing content”

a. The Final Written Decision

As reproduced above, claim 1 (and claim 2) recites “storing feed data that represents a collection of one or more feeds using the computer system, wherein each of the feeds identifies a corresponding second collection of one or more presentations being accessible via the computer network and includes *no data representing content* of the second collection of presentations” (the “feed limitation”). *See* Ex. 1001, 12:47–51, 13:7–11 (emphasis added). Claim 3 depends from claim 2. *Id.* at 13:20–22.

We determined in the Institution Decision that the feed limitation “‘encompass[es] *links* to RSS channels’ and ‘allow[s] storing of data representing content of the second collection of presentation, as long as those data are not included in a feed.’” Dec. on Inst. 22 (emphasis added). In the Final Decision, we elaborated that metadata qualify as data representing content. *Id.* at 20. Based on these findings, our definition of the feed limitation for the Final Decision excluded a standard RSS feed, which, as described above, includes metadata for each item in the feed. *Id.* at 14–22. We based this claim construction primarily on (1) our understanding that the Petition did not properly clarify that the ’273 patent alters the ordinary meaning of metadata as data representing content, and

(2) the '273 patent does not limit its disclosure to RSS feeds. *Id.* at 17 (citing Ex. 1001, 11:15–19).

b. The Federal Circuit's Decision on Appeal

In its decision on appeal, the Federal Circuit holds that (1) the Petition sufficiently clarified Sling's claim construction position, and (2) the '273 patent's Specification "makes clear that RSS with metadata would be within [the feed limitation]." *Uniloc*, 2022 WL 306468, at *2. Specifically, the Federal Circuit explains that Sling's petition explicitly maps RSS feeds to the claimed feed. *Id.* at *2. In addition, the Federal Circuit explains that "[b]ecause the Board's claim construction excludes a preferred embodiment and is inconsistent with the specification's description of the invention, it is incorrect." *Id.* at *3.

The Federal Circuit, thus, concludes that "the correct claim construction of the feed limitation encompasses RSS feeds containing metadata, but would exclude, for example RSS feeds containing 'the entirety of a text story,' which the Board noted would be within the RSS standard but outside the scope of the limitation." *Id.* at *3 (citing Dec. on Institution 17). In light of this construction, the Federal Circuit directs the Board to "determine whether the challenged claims in the '273 patent would have been obvious over Li or the combination of Li and Motte." *Id.*

2. "*presentation data that represents content*"

As reproduced above, claim 1 (and claim 2) recite "storing *presentation data that represents content* of a first collection of one or more presentations using the computer system" ("the presentation data

limitation”).⁷ *See* Ex. 1001, 12:41–43, 13:1–3 (emphasis added). Although none of the pre-remand briefing contained separate claim construction sections addressing this limitation, the briefing does indicate a dispute between the parties on the meaning of “presentation data that represents content.”

For example, the Petition explains, in analyzing the obviousness of this limitation, that the phrase “presentation data” is not used outside the claims of the ’273 patent, and notes that the phrase was introduced by amendment. Pet. 23 (citing Ex. 1001, Ex. 1004, 74); Reply 17–18. Thus, in interpreting the term, Petitioner turns to Li’s embodiment description, stating that Figure 2 of the ’273 patent “illustrates a webpage 200 that presents ‘particular content graphics 230’ and ‘particular content information 240,’ such as a ‘content title’ for an individual presentation.” Pet. 23 (citing Ex. 1001, 5:15–17). Based on this example, Petitioner concludes that the term “presentation data that represents content” encompasses content graphics, including thumbnails, and titles. *Id.* at 23–25.

To the contrary, in pre-remand briefing, Patent Owner asserts that “presentation data that represents content” and “no data representing content” must be construed in the same manner, and, therefore, if RSS feed metadata is not data representing content, then thumbnails and titles also cannot be data representing content. Sur-Reply 3–5. Thus, Patent Owner concludes that thumbnails and titles must be excluded from “presentation data that represents content” as recited. *Id.* The Federal Circuit, however, did not agree with Patent Owner’s presumption that “presentation data that

⁷ The parties refer to this limitation as “1(a).” *See* Pet. 23; PO Remand Response Br. 3.

represents content” and “no data representing content” require the same construction, explicitly stating that “[w]e think that the language of the two limitations does not require the same construction.” *Uniloc*, 2022 WL 306468, at *3 n.1.

Post-remand, Patent Owner reiterates and enlarges the argument that “presentation data that represents content” does not include thumbnails or titles, by emphasizing the phrase “data that represents content” and discounting the word “presentation.” *See* PO Response Remand Br. 3 (“Thus, the Board should proceed to properly address the construction of the ‘data that represents content’ term in 1(a).”), 4 (stating that “the critical language is virtually identical—‘data that represents content’ versus ‘data representing content’”), 6 (“[T]he *only* difference between ‘data that represents content’ and ‘data representing content’ is a marginally different form of the word ‘represent.’”), 8 (“Based on the claim language alone, the Board should conclude that ‘data that represents content’ in 1(a) carries the same meaning as ‘data representing content’ is 1(c).”) (“The specification also shows that the ‘data representing content and ‘data that represents content’ terms should be construed the same.”), 9 (emphasizing that prosecution amendments to claims 1 and 2 “changed dissimilar language—data ‘associated with’ in 1(a), and data ‘indicative’ in 1(c)—to nearly identical language: data ‘that represents/representing content,’” which ignores that only the first limitation added the word “presentation”).

According to Patent Owner, “the emphasis Petitioner places on the addition of ‘presentation’ in 1(a) is a red herring: both 1(a) and 1(c) deal with data relating to presentations” and “the simple addition of

‘presentation’ in 1(a) certainly does not support Petitioner’s argument. . . .”
PO Remand Response Br. 9.

Petitioner, on the other hand, notes that only the presentation data limitation includes the modifier “presentation” and the feed limitation “recites a negative limitation regarding the contents of a *feed*.” Pet. Remand Reply Br. 2. According to Petitioner, these differences and the Federal Circuit’s language in its decision support different constructions for the terms. *Id.*

We agree with Petitioner that the Federal Circuit’s footnote supports a position that metadata included in a feed may differ from thumbnails and titles stored somewhere other than a feed. *Uniloc*, 2022 WL 306468, at *3 n.1 (“Sling’s petition relied on Li’s disclosure of a ‘content library,’ not Li’s use of RSS feeds, to satisfy the ‘presentation data’ limitation.”).

We also agree with Petitioner that the intrinsic record supports a construction that “presentation data representing content” includes content graphics, including thumbnails, and titles. In particular, the ’273 patent describes an embodiment in which content graphics and titles are “organized to indicate individual presentations.” *See* Ex. 1001, Figs. 2, 3, 5:16–18; *see also id.* at 5:20–23 (“A user may select such a presentation for display by selecting individual presentation for streaming or downloading, such as by clicking on an indicator **235**, **240**, or **245**”); 6:53–56, 7:36–40, 8:58–61, 11:31–34 (“In certain embodiments, the requested information may include a content title, date, series information and description, akin to that to be displayed in a corresponding indicator **240** (FIGS. 2, 3).”). We understand this disclosure to teach that content graphics 230 and content information 240, including titles, is presentation data that represents content.

Patent Owner does not point us to any other disclosure of the '273 patent describing presentation data that represents content. *See* PO Remand Response Br. 3–15; PO Remand Reply Br. 1–4. We also find Dr. Storer's testimony to support a finding that content graphics, as used in the '273 patent, include thumbnails. Ex. 1002 ¶ 127 (“[L]ike the '273 Patent, Li discloses particular content graphics (thumbnails) and particular content information (titles) representing the data files (e.g. videos) of the first collection.”). And Patent Owner does not dispute that the term “content graphics” as used in the '273 patent includes thumbnails. *See* PO Remand Response Br. 3–15; PO Remand Reply Br. 1–4.

Further, we do not agree with Patent Owner's argument that titles and thumbnails cannot be “presentation data that represents content” because they are metadata. PO Remand Response Br. 10–15. Whether thumbnails and titles not contained in an RSS feed are metadata is immaterial to whether they are “presentation data that represents content.” The Federal Circuit's holding does not address metadata other than those contained in an RSS feed. *Uniloc*, 2022 WL 306468. Thus, the Federal Circuit does not explicitly find that metadata are not data representing content. *Id.* We also do not make such a finding.

Because, as discussed above, the only indication from the '273 patent is that graphics and titles are considered “presentation data that represents content,” we are not persuaded by Patent Owner to limit the term to exclude them.

C. Obviousness of Claims 1–3 over Li

1. Overview of Li

Li is titled “System for Aggregating and Displaying Syndicated News Feeds.” Ex. 1006, code (54). Li describes “a content library that comprises both web related material (e.g. from RSS feeds) and data files (music, videos, pictures, . . .).” *Id.* ¶ 41. Figure 1 of Li is reproduced below.

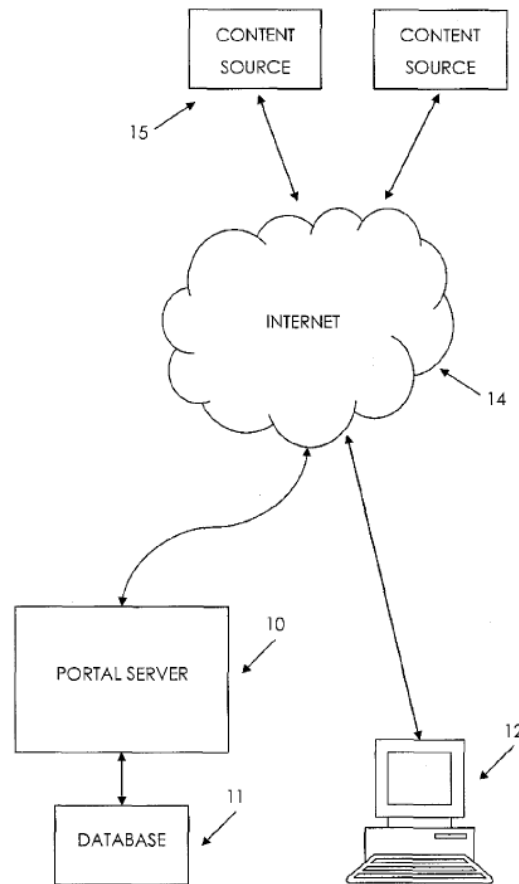


FIGURE 1

Figure 1, reproduced above, shows “network 14, for example the internet,” connected to portal server 10, which hosts the aggregator application and has access to different “content sources 15 (e.g. web sites)” through network 14

and “database 11 may be provided along portal server 10 to store RSS feed content sent to said server.” *Id.* ¶44.

“One or more client devices 12 may access the content sources 15 directly or [from] the portal server 10 through network 14.” *Id.* “Content sources 15 may for example be data feeds . . . which include audio, text, videos, pictures and the like . . . organized in distinct items, an item being for example a piece of news, a group of pictures, the title of a document and the link to retrieve said document.” *Id.* ¶46. Each of these items, along with its corresponding metadata, “may be stored in database 11 for later retrieval.” *Id.* ¶ 58.

2. Claim 1

a. Preamble: “a method for providing content via a computer network and computing system”

The preamble of claim 1 recites “a method for providing content via a computer network and computing system.” Ex. 1001, 12:39–40. Petitioner asserts that Li discloses this limitation. Pet. 20–22. Specifically, Petitioner explains that Li discloses “network 14 that maps to the claimed ‘computer network’ and a portal server 10, together with a database 11, that maps to the claimed ‘computing system.’” *Id.* at 20 (citing Ex. 1006, Fig. 1, ¶¶ 23, 1, 14; Ex. 1002 ¶¶ 121–125). In addition, Petitioner asserts that Li’s “portal server 10 provides web pages to client devices 12 via a computer network 14 (e.g., the Internet)” and “the web pages include content, such as text, images, videos, and web links.” *Id.* at 22 (citing Ex. 1006 ¶¶ 44, 51; Ex. 1002 ¶¶ 123–125).

Based on the record, we are persuaded by Petitioner’s showing that Li teaches or suggests a method for providing content via a computer network and computing system. Patent Owner does not dispute Petitioner’s

contentions regarding the preamble. *See* PO Resp. 11–18; PO Sur-Reply 1–6. Accordingly, we determine that Petitioner has established by a preponderance of the evidence that Li teaches the preamble of claim 1.⁸

b. The Presentation Data Limitation

Claim 1 recites “storing presentation data that represents content of a first collection of one or more presentations using the computer system.” Ex. 1001, 12:41–43. Petitioner asserts that Li discloses this limitation. Pet. 23–26. Specifically, Petitioner explains that Li “discloses a first collection of one or more items of content in the form of data files (e.g., music or videos) that a user device accesses remotely via the network.” Pet. 23 (citing Ex. 1006 ¶¶ 41, Ex. 1002 ¶ 126). According to Petitioner, Li’s thumbnails and titles are presentation data that represents content of the data files. *Id.* at 23–24.

Petitioner adds that Li discloses storing the thumbnails and titles “in a ‘content library’ of database 11 and/or a ‘cache memory of portal server 10.” Pet. 24 (citing Ex. 1006 ¶¶ 41, 113). Dr. Storer testifies that Li’s content library can store both data files and *part* of an item of content, which a person of ordinary skill would understand to include thumbnails and titles. Ex. 1002 ¶ 128 (citing Ex. 1006 ¶¶ 41, 113, 118). Finally, Petitioner asserts that Li discloses using database 11, a part of the computer system, to store the presentation data in the content library or in the cache memory of portal server 10. *Id.* at 24–25 (citing Ex. 1006 ¶¶ 40, 44, 45, 59, 81, 85, 113; Ex. 1002 ¶¶ 128–131).

⁸ In light of this finding, we need not reach whether claim 1’s preamble is limiting.

Patent Owner argues that Li's thumbnails and titles do not qualify as "presentation data that represents content," under its proposed construction of the term. Reply 3–5; PO Remand Response Br. 3–15; PO Remand Reply Br. 1–4. However, as explained in detail above, we do not adopt Patent Owner's construction of this term. Instead, we agree with Petitioner that Li's thumbnails and titles qualify as "presentation data that represents content." We also agree that these data represent videos stored in a content library of database 11, which are part of a computer system. Ex. 1006 ¶¶ 41, 64, 113; Ex. 1002 ¶¶ 128–131. Thus, Li teaches the presentation data limitation.

Based on the record, we are persuaded by Petitioner's showing that Li teaches or suggests "storing presentation data that represents content of a first collection of one or more presentations using the computer system." Accordingly, we determine that Petitioner has established by a preponderance of the evidence that Li teaches the presentation data limitation of claim 1.

c. "storing data indicative of the first collection of presentations so as to be associated with the presentation data"

Claim 1 recites "storing data indicative of the first collection of presentations so as to be associated with the presentation data." Ex. 1001, 12:41–43. Petitioner asserts two alternative ways in which Li discloses this limitation. Pet. 26–28.

First, Petitioner explains that Li stores item addresses in database 11. *Id.* at 26 (citing Ex. 1006 ¶ 58). According to Petitioner, "[b]y storing the item address of a data file of the first collection, Li allows for providing the data file to the user's computing device via the computer network," which

satisfies this limitation. *Id.* at 26 (citing Ex. 1002 ¶¶ 134–135). Petitioner adds that Li also discloses storing item addresses “so as to be associated with the presentation data.” *Id.* at 27 (citing Ex. 1002 ¶ 136).

Second, Petitioner explains that Li describes using tags (“keywords that characterize the content item”) “to identify the content to include on a user’s personalized web page.” *Id.* (citing Ex. 1006 ¶¶ 57, 99). Petitioner adds that “Li also discloses storing the tags ‘so as to be associated with the presentation data.’” *Id.* (quoting Ex. 1002 ¶ 138).

Based on the record, we are persuaded by Petitioner’s showing that both Li’s item addresses and tags teach or suggest “storing data indicative of the first collection of presentations so as to be associated with the presentation data.” Patent Owner does not dispute Petitioner’s contentions regarding this limitation. *See* PO Resp. 11–18; PO Sur-Reply 1–6. Accordingly, we determine that Petitioner has established by a preponderance of the evidence that Li teaches this limitation of claim 1.

d. The Feed Limitation

Claim 1 recites “storing feed data that represents a collection of one or more feeds using the computer system, wherein each of the feeds identifies a corresponding second collection of one or more presentations being accessible via the computer network and *includes no data representing content* of the second collection of presentations.” Ex. 1001, 12:46–51. Petitioner asserts that Li discloses this limitation. Pet. 28–33. Specifically, Petitioner explains that Li discloses feed data, such as RSS feeds, representing a collection of one or more feeds and a registration act that causes portal server 10 to store an RSS feed’s URL address for later update. *Id.* at 29–30 (citing Ex. 1006 ¶¶ 3, 40–41, 72; Ex. 1002 ¶¶ 140–41). Thus,

Petitioner concludes that Li discloses “storing feed data that represents a collection of one or more feeds using the computer system.” *Id.*

For the “wherein” clause of the feed limitation, Petitioner asserts that Li’s second collection “comprises items of audio and/or video content obtained from an RSS data feed” that is “accessible via the computer network.” *Id.* at 30–31 (citing Ex. 1006 Fig. 2, ¶¶ 44, 46; Ex. 1002 ¶ 142). In addition, Petitioner asserts that a person of ordinary skill in the art “would understand that the feature of ‘no data representing content’ is inherent to an RSS feed, such as that disclosed by Li.” *Id.* at 32–33 (citing Ex. 1002 ¶¶ 143–144). Moreover, according to Petitioner, a person of ordinary skill would understand Li’s Figure 5C that portal server 10 would access a feed address. *Id.*

Patent Owner argues that Li’s RSS feeds include data representing content under its proposed interpretation of the feed limitation because of the included metadata. PO Resp 13–18; PO Sur-Reply 1–6. However, as explained in detail above, the Federal Circuit has held that “the correct claim construction of the feed limitation encompasses RSS feeds containing metadata.” Based on this construction, we agree with Petitioner that Li teaches the feed limitation.

Based on the record, we are persuaded by Petitioner’s showing that Li teaches or suggests “storing feed data that represents a collection of one or more feeds using the computer system, wherein each of the feeds identifies a corresponding second collection of one or more presentations being accessible via the computer network and includes no data representing content of the second collection of presentations.” Accordingly, we

determine that Petitioner has established by a preponderance of the evidence that Li teaches the feed limitation of claim 1.

- e. “automatically and periodically accessing each of the feeds to identify each of the corresponding second collection of presentations, using the computer system”*

Claim 1 recites “automatically and periodically accessing each of the feeds to identify each of the corresponding second collection of presentations, using the computer system.” Ex. 1001, 12:52–54. Petitioner asserts that Li discloses this limitation. Pet. 33–35.

First, Petitioner explains that Li discloses RSS feeds and RSS feed updates. *Id.* at 33–34. Petitioner asserts that Li discloses that its RSS feed update “begins with a user subscribing to a feed via portal server 10 so that thereafter the portal server 10 receives content from the data feed to which the user has subscribed.” *Id.* at 34 (citing Ex. 1006 ¶ 72; Ex. 1002 ¶ 147). In addition, Petitioner points out that the ’273 patent explicitly states that standard RSS readers “typically check[] the user’s subscribed feeds for new content at predetermined intervals, downloads updates, and provides a user interface to monitor and view feeds.” *Id.* at 33 (quoting Ex. 1001, 11:10–13).

Petitioner adds that Li discloses that portal server 10 hosts an aggregator application and receiving content from a data feed the user has subscribed to. *Id.* at 33–34 (citing Ex. 1006 ¶¶ 41, 44–46, 72).

Based on the record, we are persuaded by Petitioner’s showing that both Li’s item addresses and tags teach or suggest “automatically and periodically accessing each of the feeds to identify each of the corresponding second collection of presentations, using the computer system.” Patent Owner does not dispute Petitioner’s contentions regarding this limitation.

See PO Resp. 11–18; PO Sur-Reply 1–6. Accordingly, we determine that Petitioner has established by a preponderance of the evidence that Li teaches this limitation of claim 1.

f. “storing data associated with a third collection of one or more presentations”

Claim 1 recites “storing data associated with a third collection of one or more presentations.” Ex. 1001, 12:55–56. Petitioner asserts that Li discloses this limitation. Pet. 35–40.

Petitioner notes that this claim does not provide specifics about the third collection of presentations and that some embodiments of the ’273 patent “distinguish different collections of presentations based on the source of the content.” *Id.* at 36 (citing Ex. 1001, 11:4–12:29) (describing an example using content from multiple web sources); Ex. 1002 ¶ 151). According to Petitioner, the ’273 patent “only refers to ‘third’ presentations in one embodiment” in which both the second and third presentations are obtained from a feed. *Id.* (quoting Ex. 1001, 2:56–3:11). Thus, Petitioner concludes that a person of ordinary skill in the art “would understand that the ’273 patent encompasses embodiments in which the ‘second’ and ‘third’ presentations are each obtained from a respective feed.” *Id.* at 37 (citing Ex. 1002 ¶ 152). We find this rationale and conclusion to be reasonable and, therefore, we credit Dr. Storer’s testimony on this issue. Ex. 1002 ¶¶ 151–152. Patent Owner does not dispute this conclusion. See PO Resp. 11–18; PO Sur-Reply 1–6.

Using this understanding of the breadth of the term “third collection,” Petitioner asserts that Li’s disclosure of using multiple RSS feeds along with obtaining presentations from a regular website teaches the recited third

collection. Pet. 37–40. Specifically, Petitioner points to Li’s discussion of (1) aggregating content from multiple “syndicated new feeds,” (2) storing a combination of “web related material (e.g. from RSS feeds) and data files, and (3) presentations obtained from other sources, such as regular websites. *Id.* at 38–40 (citing Ex. 1006 Abs., ¶¶ 41, 44, 46, 47, 68; Ex. 1002 ¶¶ 155–158). We find this reading of Li to be reasonable and, therefore, we credit Dr. Storer’s testimony on this issue.

Based on the record, we are persuaded by Petitioner’s showing that Li teaches or suggests “storing data associated with a third collection of one or more presentations.” Patent Owner does not dispute Petitioner’s contentions regarding this limitation. *See* PO Resp. 11–18; PO Sur-Reply 1–6. Accordingly, we determine that Petitioner has established by a preponderance of the evidence that Li teaches this limitation of claim 1.

g. “aggregating each of the first, identified second, and third collections of presentations for delivery via the computer network using a common web page”

Claim 1 recites “aggregating each of the first, identified second, and third collections of presentations for delivery via the computer network using a common web page.” Ex. 1001, 12:57–59. Petitioner asserts that Li discloses this limitation. Pet. 40–44. Specifically, Petitioner explains that Li discloses “a user can access portal server 10 to set up a ‘personalized webpage’ that aggregates all of the content that the user is interested in.” *Id.* at 40 (citing Ex. 1006 ¶¶ 55, 118). Petitioner adds that Li’s portal server 10 hosts the aggregator application and generates web pages for use by a user. *Id.* (citing Ex. 1006, Figs. 5A–5D, ¶¶ 45, 51).

Based on the record, we are persuaded by Petitioner’s showing that Li teaches or suggests “aggregating each of the first, identified second, and

third collections of presentations for delivery via the computer network using a common web page.” Patent Owner does not dispute Petitioner’s contentions regarding this limitation. *See* PO Resp. 11–18; PO Sur-Reply 1–6. Accordingly, we determine that Petitioner has established by a preponderance of the evidence that Li teaches this limitation of claim 1.

3. *Claim 2*

Claim 2 recites nearly identical language to claim 1 except that the preamble of claim 2 differs from that of claim 1. *See* Ex. 1001, 12:60–13:19. Therefore, we adopt the same reasoning for claim 2 as discussed above for claim 1 except for the preamble, which we discuss below.

The preamble of claim 2 recites “a non-transitory computer readable medium useful in association with a computer that includes one or more processors and a memory, the computer readable medium including computer instructions that are configured to cause the computer, by execution of the computer instructions in the one or more processors from the memory, to provide content from a computer system via a computer network to a computer device.” Ex. 1001, 12:60–67. Petitioner asserts that Li discloses this limitation. Pet. 45–46. Specifically, Petitioner explains that Li discloses portal server 10 with a processor 110, a cache memory, and database 11 that together teach a computer system that provides content via network 14 to client device 12. *Id.* at 45 (citing Ex. 1006 ¶¶ 59, 81, 85; Ex. 1002 ¶¶ 168–171). According to Petitioner, based on these teachings, a person of ordinary skill in the art “would understand that it was inherent, or at least obvious, in view of Li to include a ‘non-transitory computer readable medium’ with instruction that, when executed in the one or more processors,

cause the computer to perform the steps of claim 2.” *Id.* at 46 (citing Ex. 1002 ¶ 171). We find this reading of Li to be reasonable and we credit Dr. Storer’s testimony on this issue.

Based on the record, we are persuaded by Petitioner’s showing that Li teaches or suggests the non-transitory computer readable medium recited by the preamble. Patent Owner does not dispute Petitioner’s contentions regarding this limitation. *See* PO Resp. 11–18; PO Sur-Reply 1–6. Accordingly, we determine that Petitioner has established by a preponderance of the evidence that Li teaches the preamble of claim 2.⁹

4. Claim 3

Claim 3 depends from claim 2 and recites “wherein the computer comprises at least one web server, at least one database server and at least one file server.” Ex. 1001, 13:20–22. Petitioner asserts that Li discloses this limitation. Pet. 47–49. Specifically, Petitioner explains that Li discloses at least one web, database, and file server. *Id.* (citing Ex. 1006 ¶¶ 41, 59, 74, 79, 81, 82, 84–86, 94, 95; Ex. 1002 ¶¶ 178–182).

Based on the record, we are persuaded by Petitioner’s showing that Li teaches or suggests “wherein the computer comprises at least one web server, at least one database server and at least one file server.” Patent Owner does not dispute Petitioner’s contentions regarding this limitation. *See* PO Resp. 11–18; PO Sur-Reply 1–6. Accordingly, we determine that Petitioner has established by a preponderance of the evidence that Li teaches this limitation of claim 3.

⁹ In light of this finding, we need not reach whether claim 2’s preamble is limiting.

5. *Conclusion*

For the reasons set forth above, we determine that Petitioner has established by a preponderance of the evidence that claims 1–3 of the '273 patent would have been obvious over Li.

D. Obviousness of Claims 1–3 over Li and Motte

Claim 1 recites “aggregating each of the first, identified second, and third collections of presentations for delivery via the computer network using a common web page.” Ex. 1001, 12:57–59. Petitioner argues that “[t]o the extent that the Board finds that claims 1–3 are not rendered obvious by Li”, because Li does not explicitly describe three collections of presentations, “they are rendered obvious by Li in view of Motte” because Motte “provides screen shots of web pages that confirm bringing collections of presentations together in visual juxtaposition on a single web page.” Pet. 49–51 (citing Ex. 1007, Abs., Figs. 4, 13, 18B, ¶¶ 99, 105–109, 149, 151, 205; Ex. 1002 ¶¶ 183–209). Because we find that Petitioner has shown by a preponderance of the evidence that claims 1–3 would have been obvious over Li, we do not reach this alternative ground. *See Beloit Corp. v. Valmet Oy*, 742 F.2d 1421, 1423 (Fed. Cir. 1984) (finding an administrative agency is at liberty to reach a decision based on a single dispositive issue); *cf. Bos. Sci. Scimed, Inc. v. Cook Grp. Inc.*, 809 F. App'x 984, 990 (Fed. Cir. 2020) (non-precedential) (recognizing that “[t]he Board has the discretion to decline to decide additional instituted grounds once the petitioner has prevailed on all its challenged claims”).

CONCLUSION¹⁰

After reviewing the record developed during trial anew and taking into account the Federal Circuit’s decision, we are persuaded that Sling has demonstrated by a preponderance of the evidence that claims 1–3 of the ’273 patent are unpatentable over Li and the combination of Li and Motte.

Claims	35 U.S.C. §	Reference(s)/Basis	Claims Shown Unpatentable	Claims Not shown Unpatentable
1–3	103	Li	1–3	
1–3	103	Li, Motte ¹¹		
Overall Outcome			1–3	

ORDER

For the reasons given, it is:

ORDERED that claims 1–3 of the ’273 patent have been proven by a preponderance of the evidence to be unpatentable; and

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

¹⁰ Should Uniloc wish to pursue amendment of the challenged claims in a reissue or reexamination proceeding subsequent to the issuance of this decision, we draw Uniloc’s attention to the April 2019 *Notice Regarding Options for Amendments by Patent Owner Through Reissue or Reexamination During a Pending AIA Trial Proceeding*. See 84 Fed. Reg. 16,654 (Apr. 22, 2019). If Uniloc chooses to file a reissue application or a request for reexamination of the challenged patent, we remind Uniloc of its continuing obligation to notify the Board of any such related matters in updated mandatory notices. See 37 C.F.R. § 42.8(a)(3), (b)(2).

¹¹ We do not reach this alternative ground.

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