

Petition for *Inter Partes* Review of U.S. Patent No. 9,721,273

**UNITED STATES PATENT AND TRADEMARK OFFICE**

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**BEFORE THE PATENT TRIAL AND APPEAL BOARD**

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**Sling TV L.L.C.**  
Petitioner,

v.

Uniloc 2017 LLC  
Patent Owner.

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IPR No.: IPR2019-01363  
Attorney Docket No.: 081841.0123

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**PETITION FOR *INTER PARTES* REVIEW OF  
U.S. PATENT NO. 9,721,273**

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**PETITIONER’S EXHIBIT LIST**

<b>Ex. No.<sup>1</sup></b>	<b>Description of Documents</b>
1001	U.S. Patent No. 9,721,273 (“the ’273 Patent”)
1002	Declaration of Dr. James A. Storer
1003	Curriculum Vitae of Dr. James A. Storer (“Storer CV”)
1004	File History for U.S. Patent No. 9,721,273 (“the ’273 File History”)
1005	First Amended Complaint, <i>Uniloc 2017 LLC v. Sling TV L.L.C.</i> , Case No. 1:19-cv-00278-RBJ-MEH, Dkt. No. 37 (Apr. 10, 2019) (“FAC”)
1006	U.S. Patent Application Pub. No. 2008/0256443 to Li et al. (“Li”)
1007	U.S. Patent Application Pub. No. 2008/0071929 to Motte et al. (“Motte”)
1008	U.S. Patent No. 8,386,588 to Cooley (“Cooley”)
1009	Preston Gralla, <i>How the Internet Works</i> , Millennium Edition, Que 1999 (“Gralla”)
1010	Jim Doree, <i>RSS: A Brief Introduction</i> , J Man Manip Ther. 2007; 15(1): 57–58, <i>available at</i> <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2565593/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2565593/</a> (“RSS Introduction”)
1011	<i>RSS 2.0 Specification</i> , RSS 2.0 at Harvard Law, July 15, 2003, <i>available at</i> <a href="https://cyber.harvard.edu/rss/rss.html">https://cyber.harvard.edu/rss/rss.html</a> (“RSS 2.0”)

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<sup>1</sup> Citations to patents are made by column and line cite; citations to patent publications, Ex[1002], and Ex[1005] are made by paragraph number; citations to the other exhibits are made with reference to the bates-stamped pagination.

**I. MANDATORY NOTICES UNDER 37 C.F.R. 42.8(a)(1)**

**A. Real Party-in-Interest under 37 C.F.R. 42.8(b)(1)**

Sling TV L.L.C. (“Sling”) is the petitioner. Sling is directly or indirectly owned by the following direct or indirect owners: Sling TV Holding L.L.C., DISH Network L.L.C., DISH Technologies L.L.C., and DISH Network Corporation.

**B. Related Matters under 37 C.F.R. 42.8(b)(2)**

The ’273 Patent is the subject of 3 pending district court cases. The ’273 Patent was also involved in an additional 2 district court cases that have been terminated. These 5 cases are listed below:

- *Uniloc 2017, LLC v. Sling TV, LLC*,  
Case No. 1:19-cv-00278, District of Colorado (Pending)
- *Uniloc 2017 LLC v. Dailymotion, Inc. et al.*,  
Case No. 1:19-cv-00181, District of Delaware (Terminated)
- *Uniloc 2017 LLC v. Netflix, Inc.*,  
Case No. 8-18-cv-02150, Central District of California (Pending)
- *Uniloc 2017 LLC v. Hulu, LLC*,  
Case No. 8:18-cv-02058, Central District of California (Pending)
- *Uniloc 2017 LLC et al. v. Hulu, LLC*,  
Case No. 8:18-cv-01953 Central District of California (Terminated)

**C. Lead and Back-Up Counsel under 37 C.F.R. 42.8(b)(3)**

Petitioner designates the following: Lead Counsel is Eliot D. Williams (Reg. No. 50,822) of Baker Botts L.L.P.; Back-up Counsel are G. Hopkins Guy (Reg. No. 35,886) and Ali Dhanani (Reg. No. 66,233) of Baker Botts L.L.P.

**D. Service Information under 37 C.F.R. 42.8(b)(4)**

A copy of this entire Petition, including all Exhibits and a power of attorney, is being served by FEDERAL EXPRESS, costs prepaid, to the address of the attorney or agent of record for Uniloc 2017 LLC (“Uniloc” or “Patent Owner”) in the district court proceedings regarding the ’273 Patent: Feinberg Day Kramer Alberti Lim Tonkovich & Belloli LLP, 1600 El Camino Real, Suite 280, Menlo Park, CA 94025; and to the address of the attorney or agent of record at the USPTO: Uniloc USA Inc., 102 N. College Avenue, Suite 303, Tyler TX 75702. Petitioner consents to service to eliot.williams@bakerbotts.com, hop.guy@bakerbotts.com, and ali.dhanani@bakerbotts.com by electronic mail. A Power of Attorney is filed concurrently herewith under 37 C.F.R. § 42.10(b).

## **II. INTRODUCTION**

Petitioner Sling requests review of claims 1-3 (collectively, “challenged claims”) of U.S. Patent No. 9,721,273 (“the ’273 Patent”). The ’273 Patent is directed, in general, to “providing audio and visual presentations via a computer network.” Ex[1001] Title. More specifically, the ’273 Patent is directed to aggregating three collections of presentations for delivery via a computer network using a common webpage. *Id.*, 2:56-3:11. The ’273 Patent concedes that there were a number of known ways to aggregate and provide content using a webpage. *Id.*, 6:21-23. The alleged “inventive concept” according to Uniloc relates to creating a common webpage that includes presentations from one or more feeds. Ex[1005] ¶84. As explained below, webpages that included presentations from one or more feeds were known before the earliest claimed priority date of the ’273 Patent.

## **III. PAYMENT OF FEES**

The Office is authorized to charge the fee set forth in 37 C.F.R. § 42.15(b) to Deposit Account No. 02-0384 as well as any additional fees that might be due in connection with this Petition.

## **IV. REQUIREMENTS UNDER 37 C.F.R. 42.104**

### **A. Grounds for Standing**

Petitioner certifies the ’273 Patent is eligible for *inter partes* review and certifies that Petitioner meets the eligibility requirements set forth in 37 C.F.R. §

42.104. Uniloc has sued Petitioner for infringement of the '273 Patent. 37 C.F.R. § 42.104(a). Petitioner is not barred or estopped from challenging the claims on the grounds identified within this petition.

**B. Identification of Challenge and Statement of Precise Relief Requested**

Petitioner requests review under the following grounds.

Ground	'273 Patent Claims	Basis for Challenge
1	1-3	35 U.S.C. § 103: Li (Ex[1006]) in view of the knowledge of a POSA
2	1-3	35 U.S.C. § 103: Li in view of Motte (Ex[1007])

**V. BACKGROUND OF THE TECHNOLOGY**

**A. Web Page and Internet Technology, Generally**

The Internet has been widely used since the mid-1990s, well before the August 2008 date to which the '273 Patent claims priority. Ex[1002] ¶51. The Internet works on the “client/server model” of information delivery in which a client, such as user’s computer, depends on a server, usually a more powerful computer, to deliver information over a network. Ex[1002] ¶52-54; Ex[1009] p. 7.

Different types of server software perform different types of services. For example, a web server sends web pages to software (e.g., a web browser) running on the client. Ex[1002] ¶60; Ex[1009] p. 43. Web pages are typically sent according to Hypertext Transfer Protocol (“HTTP”). *Id.* A web server can also operate as a database server by linking to database applications that allow a user to



search the contents of the database. Ex[1002] ¶61; Ex[1009] p. 47. Additionally, a web server can operate as a file server, for example, that allows a user to download files from the web and the Internet. Ex[1002] ¶62-63; Ex[1009] p. 51.

Web pages delivered over the Internet include text, graphics, sound, animation, and other multimedia elements. Ex[1002] ¶55; Ex[1009] p. 11. Web pages are commonly built using a markup language, such as Hypertext Markup Language (“HTML”). Ex[1002] ¶¶56-58; Ex[1009] p. 11. The language tells your browser how to display text, graphics, and multimedia files, and it also contains commands for linking to other web pages. *Id.* Web pages must have unique locations so that your computer can locate and retrieve them. Ex[1002] ¶59; Ex[1009] p. 39. These unique locations are identified by uniform resource locators (URLs), which provide an address for the web page. *Id.*

## **B. Feed Data**

The claims of the '273 Patent include steps for accessing “feeds” to identify presentations. *See e.g.*, Ex[1001] claim 1. The '273 Patent discloses Really Simple Syndication (“RSS”) as an example of a standard that defines a feed format. *Id.*, 10:64-11:3. The RSS standard was designed to assist Internet users in keeping abreast of changes to websites. Ex[1002] ¶65-67; Ex[1010] p. 1. RSS has been around in some form since about 1999 and had gained popularity by the release of version 2.0.1 in 2002. Ex[1002] ¶65-66, Ex[1011] pp. 1 and 6. The

New York Times started offering RSS feeds on its website in 2002, which proved to be a kind of “tipping point” toward widespread adoption. Ex[1002] ¶66; Ex[1010] p. 1. By 2007, nearly every significant web site provided an RSS feed. *Id.*

RSS feeds are accessed by “aggregators” that read RSS-formatted files. Ex[1002] ¶67; Ex[1010] p. 1. Once a user has subscribed to a feed, the aggregator “periodically and automatically” accesses the web server to check for new content. Ex[1002] ¶67; Ex[1010] p. 2. The RSS-formatted files include an rss element, a channel element, and an item element. Ex[1002] ¶68-70; *see* Ex[1011] pp. 1-6. The rss element is at the top level and specifies the version of RSS that the document conforms to. *Id.* The channel element contains information about the RSS channel that can be accessed to obtain items. *Id.* An item element represents content, such as a news story, audio media, or video media. *Id.* The RSS 2.0 specification defines a number of channel sub-elements that assist aggregators in determining when to check the RSS channel for updates and whether the content is new. *Id.*

## **VI. SUMMARY OF THE '273 PATENT**

The earliest priority date alleged for the '273 Patent is August 21, 2008 based on the filing date of a set of provisional applications to which the '273 Patent application claims priority. Ex[1001] (claiming priority to U.S. Provisional Patent

Application Ser. Nos. 61/090,673; 61/090,680; 61/090,678; 61/090,688; 61/090,681; 61/090,684; and 61/090,672).

**A. The Alleged Invention**

The '273 Patent explains that locating content on the Internet can prove difficult because the amount of available content is virtually unlimited. Ex[1001] 1:51-55. Popular search engines (e.g., Yahoo, Google) allowed for searching the Internet using keywords. *Id.* 1:56-2:5. However, the search results were not always meaningful due to nuances in human language. *Id.* Thus, a goal of the '273 Patent was to enable users to locate content of interest on the Internet. *Id.* 2:6-10. The '273 Patent seeks to achieve this goal by aggregating first, second, and third collections of presentations for delivery via a computer network using a common web page. *See e.g., id.*, claim 1. As explained in Section X below, such web pages were known before the earliest claimed priority date of the '273 Patent. Ex[1002] ¶¶71-72.

**B. Embodiments of the '273 Patent**

In the '273 Patent, aggregating first, second, and third collections of presentations involves periodically accessing one or more feeds to identify the second collection of presentations. *See e.g.,* Ex[1001] claim 1. The '273 Patent accomplishes this using a standardized feed format, RSS. *Id.*, 10:63-11:3. The '273 Patent explains that the user requests to link to an RSS feed by interacting

with a web page in a “conventional manner,” and that “conventional” techniques may be used to periodically check the feed for new content. *Id.*, 11:27-29 and 11:52-12:12; Ex[1002] ¶¶73-76.

The '273 Patent admits that it was known in the prior art to “aggregate content from multiple web sources in one place” using RSS. Ex[1001] 11:4-13. The '273 Patent explains that RSS readers are typically executed on a user’s computer. *Id.* An alleged advantage of the '273 Patent involves locating the RSS reader at the system 30, as opposed to at each user computer 20, to provide “substantial savings in network resources” and mitigate the problem of “substantial bandwidth usage” that occurs when each user computer 20 needs to access each RSS feed. *Id.*, 12:4-17. Another alleged advantage of the '273 Patent provides for “automatic aggregation of RSS fed content in combination with non-RSS fed content in a single application independent of any user RSS reader application.” *Id.*, 12:26-29; Ex[1002] ¶¶75-76.

As discussed below in Section X, it was known in the prior art to access an RSS feed from a system other than the user’s computer and to aggregate RSS content with non-RSS content. Ex[1002] ¶76.

### **C. Relevant Prosecution History**

On August 18, 2015, the claims were rejected as anticipated by U.S. Patent No. 8,386,588 (“Cooley”) (Ex[1008]). Ex[1004] pp. 108-111. Cooley discloses a

“serial subscriber application 150” that “can include an RSS-aware streaming data feed aggregator.” Ex[1008] 10:1-13. Cooley illustrates an example in Figure 3, reproduced below, in which the user has “subscribed to several feeds 199-1 through 199-X[.]” *Id.* In the example shown in Figure 3, “serial subscriber 150 causes the serialized content items 175-1 through 175-M to be identified and received relative to [] the user defined subscription point in the feed 199-3.” *Id.* Display region 173 displays a selected content item, such as content item 175-2. *Id.* 10:33-37.

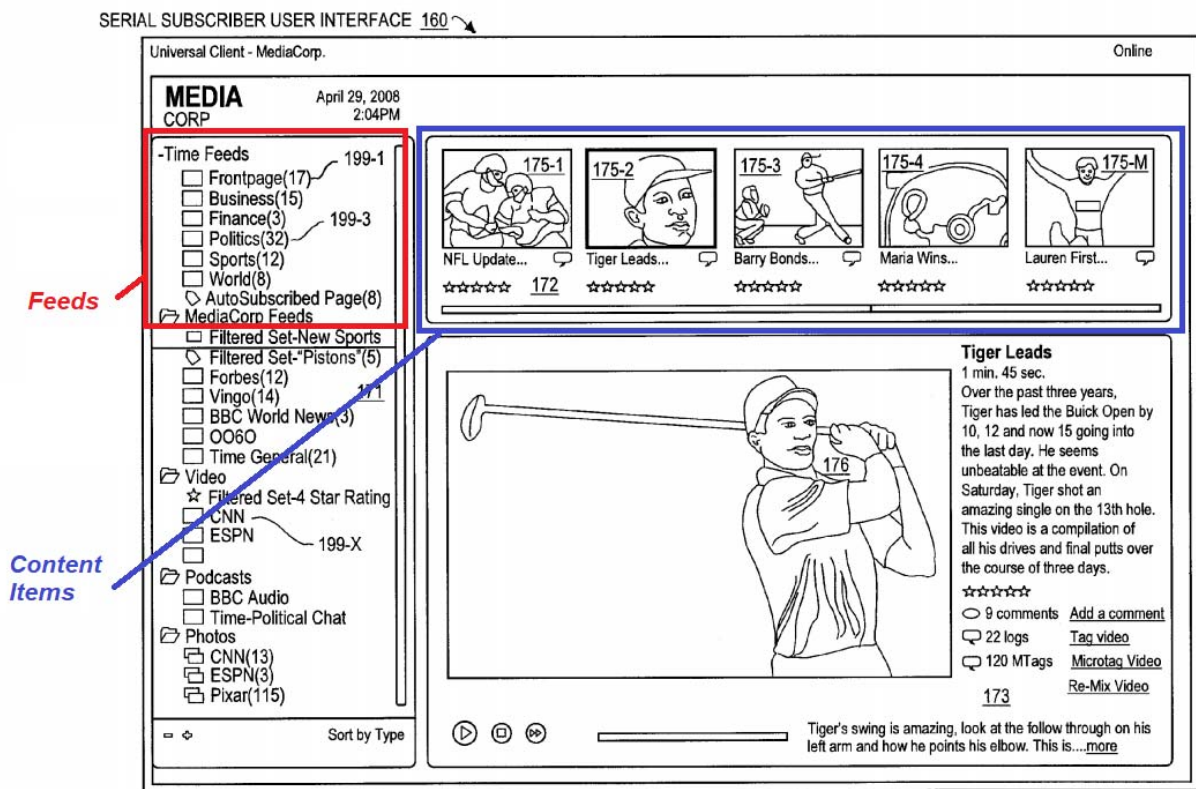


FIG. 3

Ex[1008] Fig. 3 (annotated).

In response, Applicant argued that Cooley's teachings were limited to aggregation of content from feeds, and that Cooley did not disclose aggregation of content from feeds with other presentations identified independently of any feed. *Id.*, pp. 91-92. Applicant also amended the claims, introducing several phrases that do not appear in the '273 Patent specification. These phrases include "presentation data," "feed data," and "each of the feeds . . . includes no data representing content of the second collection of presentations." *Id.*, pp. 74-75. The Examiner then issued a Notice of Allowance with an Examiner's Amendment to add the step of "storing data associated with a third collection of one or more presentations" to claim 10. *Id.*, p. 46 (claim 10 issued as claim 1); Ex[1002] ¶¶77-88.

## **VII. SUMMARY OF THE PRIOR ART**

### **A. The Knowledge of a POSA**

A POSA at the time of the 273 Patent would have knowledge of the webpage, Internet, and feed technology discussed above in Section V.

### **B. U.S. Patent Application Pub. No. 2008/0256443 to Li et al. ("Li")**

Li is titled "System for aggregating and displaying syndicated news feeds." Ex[1006]. Li was filed on April 16, 2007 and published on October 16, 2008. Accordingly, Li is prior art under at least 102(e), with a 102(e) date no later than April 16, 2007. Li was neither cited to nor considered during prosecution of the '273 Patent.

Li discloses a system for “aggregating and displaying content.” Ex[1006] ¶0014. The system includes a portal server 10 that hosts an aggregator application and provides web pages to users via the Internet. *Id.*, ¶0051. The system described by Li allows a user to set up a “personalized webpage” to aggregate all the content that the user is interested in. *Id.*, ¶0055. Li describes that the content can be aggregated into a single page from mixed sources, including datafiles accessed through the Internet, web-based RSS feeds, and regular websites. *Id.*, ¶0068. The content can include video and audio content, among other things. *Id.*, ¶¶0041, 0068; Ex[1002] ¶¶106-112.

To identify the content to include on the web page, Li discloses the use of tags. Tags are “keywords that characterize the content item.” Ex[1006] ¶0057. “The tags may correspond to words taken out of the content itself or the metadata of an item,” and “[s]everal tags may be available for [an] item.” *Id.* The user’s personalized webpage displays “all content having one or more tags in common.” *Id.*, ¶0099. Ex[1002] ¶111.

Figures 5A-5D illustrate a graphical user interface that displays a web page. Ex[1006] ¶¶0056, 0076. By dragging and dropping a tag (such as “Federer”) from a first user space 121 to a second user space 122, the user triggers a search “across all the user content” for content having that tag. *Id.*, ¶0089. The search results are displayed in content block 123. *Id.* Content block 123 provides an example of

bringing different collections of presentations together in visual juxtaposition on a web page at least because all of the search results matching the requested tag are presented in content block 123. Ex[1002] ¶112.

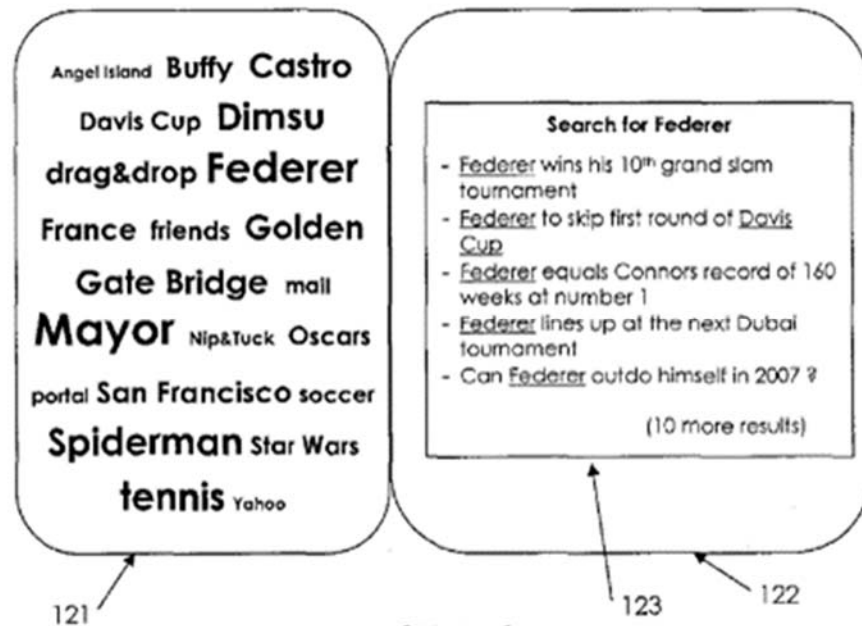


FIGURE 5C

Ex[1006] Fig. 5C.

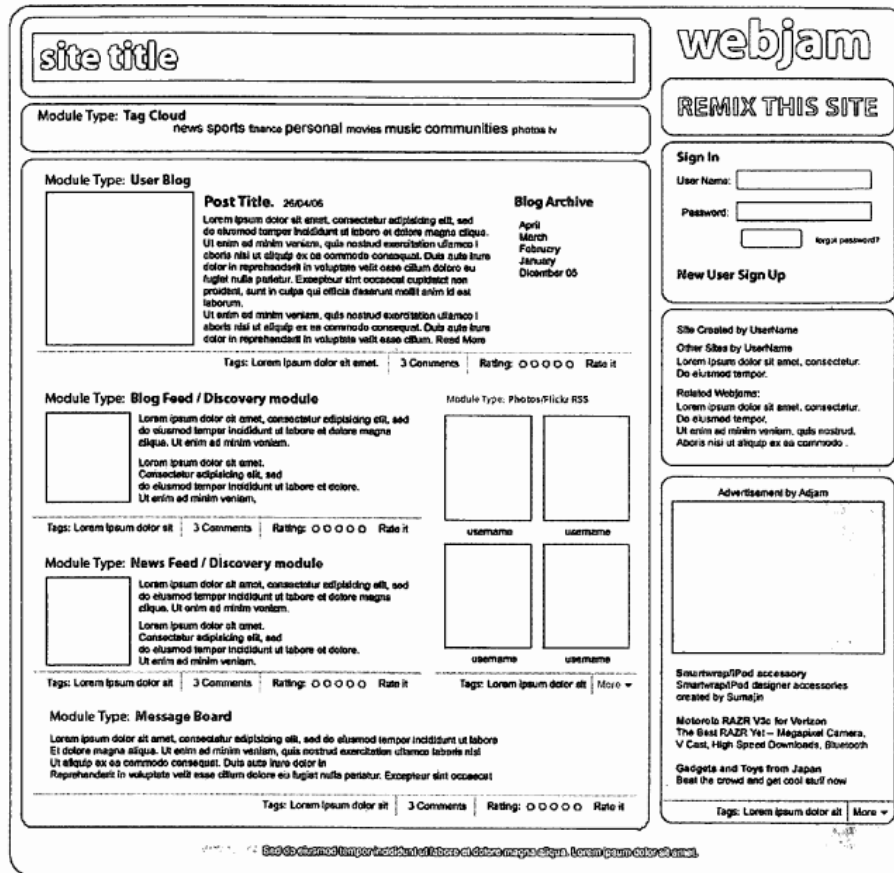
**C. U.S. Patent Application Pub. No. 2008/0071929 to Motte et al. (“Motte”)**

Motte is titled “Methods and apparatus for selection of information and web page generation.” Ex[1007]. Motte was filed on September 18, 2006 and published on March 20, 2008. Accordingly, Motte is prior art under at least 102(a) and 102(e), with a 102(e) date of no later than September 18, 2006. Motte was neither cited to nor considered during prosecution of the ’273 Patent.



Motte discloses systems and methods for generating web pages that may be customized by a user. Ex[1007] Abstract. The content may include “web site content, such as news feeds, blogs, pictures, etc.” *Id.* “Content may be aggregated together into so-called ‘channels.’” *Id.*, ¶0195. Content channels contain a “selection of different modules of different types” that “automatically aggregate” onto a web page. *Id.*, ¶¶0195-0196. Thus, a channel brings together content and modules around any topic into a “single place.” *Id.*, ¶0055. Content selection may use “metadata” such as “tags” specifying the subject matter of the web site and/or individual modules in the web page. *Id.* Abstract, ¶0018 (metadata may be entered by a user or automatically generated, for example, by extracting keywords from the content). *Id.*; Ex[1002] ¶115.

Motte illustrates bringing different collections of presentations together in visual juxtaposition on a web page. Ex[1002] ¶117. For example, Figure 4 shows a screenshot of an example modular web page, according to an embodiment of the invention. Ex[1007] ¶0105.



Ex[1007] Fig. 4. A modular web page comprises one or more modules, laid out in a page format. *See id.* ¶0105. Examples of modules that can be aggregated in a modular web page include RSS or Atom feeds (e.g., text feeds, image feeds, or podcasting feeds), blogs (such as a personal blog or a blog that other users can post to), pictures, video, audio, email, diary, calendar, clock, message board, interface modules for interfacing to a database or other information source, and advertising modules. *Id.*; Ex[1002] ¶118.

## **VIII. LEVEL OF ORDINARY SKILL IN THE ART**

A POSA as of the August 21, 2008 priority date 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 person with 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. Ex[1002] ¶49.

## **IX. CLAIM CONSTRUCTION UNDER 37 C.F.R. 42.104(B)(3)**

The claim terms below are construed in accordance with 37 C.F.R. §42.100(b).

### **A. “computing system” / “computer system” / “computer” (Claims 1 and 2)**

Claim 1 requires, in part, a “computing system” and a “computer system.” Claim 2 requires, in part, a “computing system” and a “computer.” Although the patentee used different terms, in the context of the claims, it is apparent that the patentee intended them to have the same meaning. Ex[1002] ¶¶92-93. The specification of the '273 Patent states that:

The terms “computer,” “computer device” and/or “computer system” as used herein may generally take the form of single computing devices or collections of computing devices having a common operator or under common control.

Ex[1001] 4:29-33. The statement above is consistent with the meaning of the term to a POSA. Thus, “computing system,” “computer system,” and “computer” should each be interpreted to mean “one or more computing devices having a common operator or under common control.” *Id.*

**B. “web server,” “database server,” and “file server” (Claim 3)**

Claim 3 requires, in part, “at least one web server, at least one database server and at least one file server.” The specification of the ’273 Patent states that:

“Server”, as used herein, generally refers to a computing device communicatively coupled to a network and that manages network resources. A server may refer to a discrete computing device, or may refer to an application that is managing resources rather than the entire computing device.

Ex[1001] 4:62-64. This statement is consistent with how a POSA would understand the term “server” at the time of the ’273 Patent. Ex[1002] ¶¶94-95. In particular, it demonstrates that a server could either be a separate device or a program running on a device. *Id.* The terms “web server,” “database server,” and “file server” should be interpreted to encompass one or more devices or programs for performing the assigned function of the server. *Id.*

**C. “collection of one or more presentations”**

Claims 1 and 2 each require a first collection of one or more presentations, a second collection of one or more presentations, and a third collection of one more

presentations. Ex[1001] claims 1 and 2. A “collection of one or more presentations” should be interpreted as a “collection of one or more items of content.” Ex[1002] ¶¶96-98.

The '273 Patent describes presenting items of content (“audio and/or video content”) as presentations that a user can download or stream via a computer network. *See* Ex[1001] 4:34-42, 5:1-6, 5:15-37 and 6:1-6. For example, an audio or video podcast is an item of content that the '273 Patent describes as a “presentation.” *Id.*, 8:5-7 (“it may be determined when a user begins and ends listening to and/or watching a presentation, e.g., a podcast”), 8:43-46 (“[p]rocess 600 is suitable for permitting users to create presentations, such as by hosting an audio show that may be recorded to create a podcast”); 5:32-37 (podcasts can be “audio or video”). Similarly, the '273 Patent describes providing “audio presentations” for playback over the computer network. *Id.*, Abstract and 2:15-38.

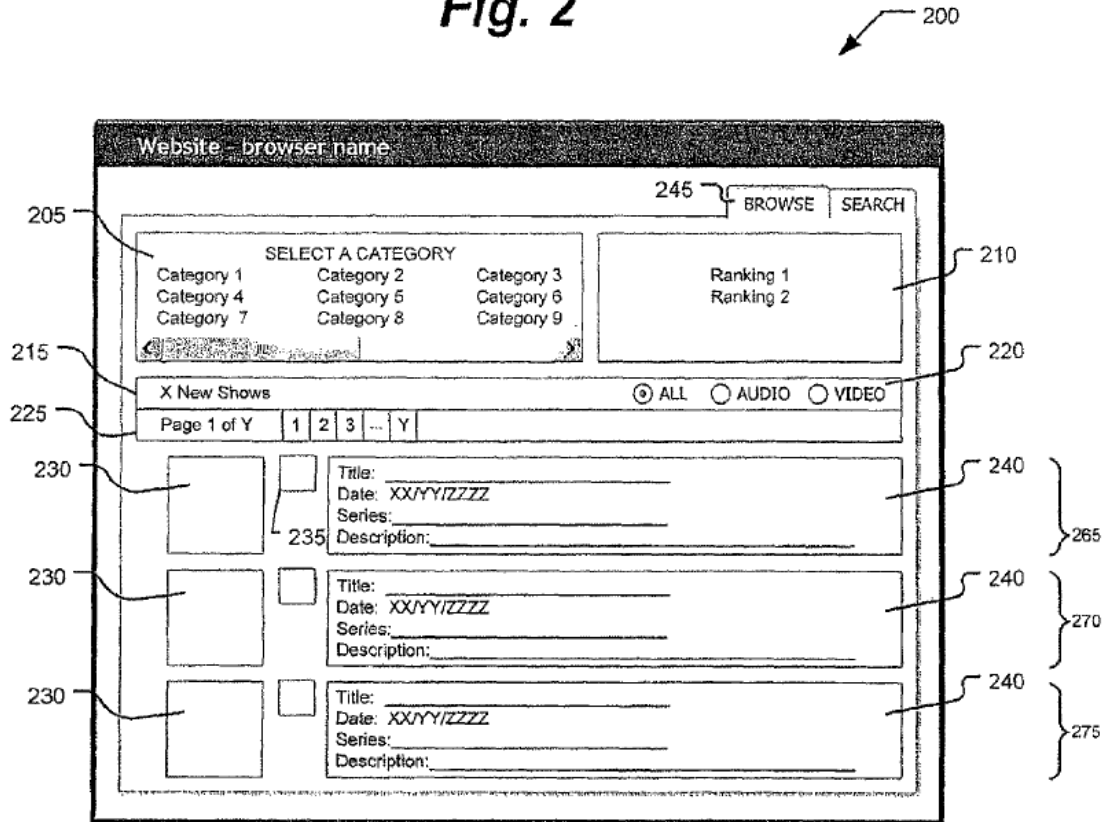
The surrounding claim language is consistent with Petitioner’s interpretation. For example, claim 1 recites “presentation data that represents content of a first collection of one or more presentations.” Thus, the first collection of one or more presentations comprises “content,” whereas data that “represents” the content is described using a different term (“presentation data”).

**D. “aggregating each of the first, identified second, and third collections of presentations for delivery via the computer network using a common web page” (Claims 1 and 2)**

Claims 1 and 2 require, in part, “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] claims 1 and 2. At the time of the alleged invention of the ’273 Patent, the term “aggregate” had a meaning to POSA. Ex[1002] ¶¶99-101. For example, content from RSS feeds would be aggregated by an RSS reader. *Id.*; Ex[1001] 11:4-6 (“An RSS may itself be used to aggregate content from multiple web sources in one place. RSS content is typically accessed using an RSS reader application.”)

With respect to “aggregation” in the disclosed embodiment of the ’273 Patent, Figure 2 illustrates a web page 200 that “aggregates audio and/or video content for presentation to users of computers 20.” Ex[1001] 5:1-6. Figure 2 shows “presentations 265, 270, 275,” and each presentation includes “[p]articular content graphics 230, particular content type indicators 235 and particular content information 240” that are “organized to indicate individual presentations.” *Id.* 5:16-23. A user may stream or download a presentation by clicking on an indicator 235 or 240. *Id.*; Ex[1002] ¶99. Figure 2 of the ’273 Patent is reproduced below:

**Fig. 2**



In this embodiment, presentations 265, 270, and 275 are each arranged on the webpage 200 so that they are visually juxtaposed. Ex[1002] ¶100. Therefore, the term “aggregating each of the first, identified second, and third collections of presentations for delivery via the computer network using a common web page” should be interpreted as “bringing together in visual juxtaposition each of the first, identified second, and third collections of presentations for delivery via the computer network using a common web page.” *Id.* This construction is necessary to reflect the plain and ordinary meaning to a POSA of the term “aggregating.” *Id.*

As discussed in Section IX.C, a “collection of one or more presentations” should be interpreted as a “collection of one or more items of content.” Figure 2 of

the '273 Patent illustrates that bringing the collections of presentations together in visual juxtaposition using a common web page encompasses displaying particular content graphics 230, particular content type indicators 235, and/or particular content information 240, such as a thumbnail or a title with a link that a user may select in order to stream or download the corresponding item of content. *See* Ex[1001] 5:15-37; Ex[1002] ¶100.

**E. “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” (Claims 1 and 2)**

A POSA would understand the “storing feed data . . .” limitation 1[c] to encompass storing data for accessing an RSS feed (e.g., RSS feed address) from which a second collection of one or more presentations can be identified. Ex[1002] ¶102. The stored feed data need only represent *one* feed because the claim recites “one or more feeds.”

The phrases “feed data” and “each of the feeds . . . includes no data representing content of the second collection of presentations” do not appear in the '273 Patent specification. Instead, these phrases were added by amendment. Ex[1004] pp. 0073-0077, 0087-0092, and 106. The remarks filed with the amendment do not explain these phrases. *See e.g., id.*, 0091 (merely stating that



“the amendments made herein overcome the examiner’s rejection”); Ex[1002] ¶103.

The only specific example of a feed disclosed by the ’273 Patent is a feed based on an RSS standard. *See e.g.*, Ex[1001] 11:14-15. According to the ’273 Patent, RSS refers to “a family of Internet feed formats” that use a “standardized format” to publish content that may be “frequently updated.” *Id.*, 10:64-67. RSS content “is typically accessed using an RSS reader application.” *Id.*, 11:5-6. “RSS feeds may typically be subscribed to by entering or selecting the feed’s link using the reader.” *Id.*, 11:9-10. The embodiments disclosed by the ’273 Patent link to an RSS feed in a “conventional manner” (*id.*, 11:27-29) and use “conventional” techniques to periodically check the feed for new content (*id.*, 11:52-12:12). Ex[1002] ¶104.

## **X. THE ASSERTED GROUNDS OF INVALIDITY**

### **A. Ground 1: U.S. Patent Application Pub. No. 2008/0256443 (“Li”) in view of the Knowledge of a POSA renders claims 1-3 obvious under 35 U.S.C. § 103**

#### **1. Claim 1**

Claim 1 requires aggregating three collections of presentations on a webpage. The following summarizes the three collections of presentations that Li discloses aggregating on a webpage:

***First Collection:*** one or more data files, such as music or video files, that the user accesses via the network. Li describes data files separately from web related material (such as RSS feeds).

***Second Collection:*** one or more presentations received from an RSS feed.

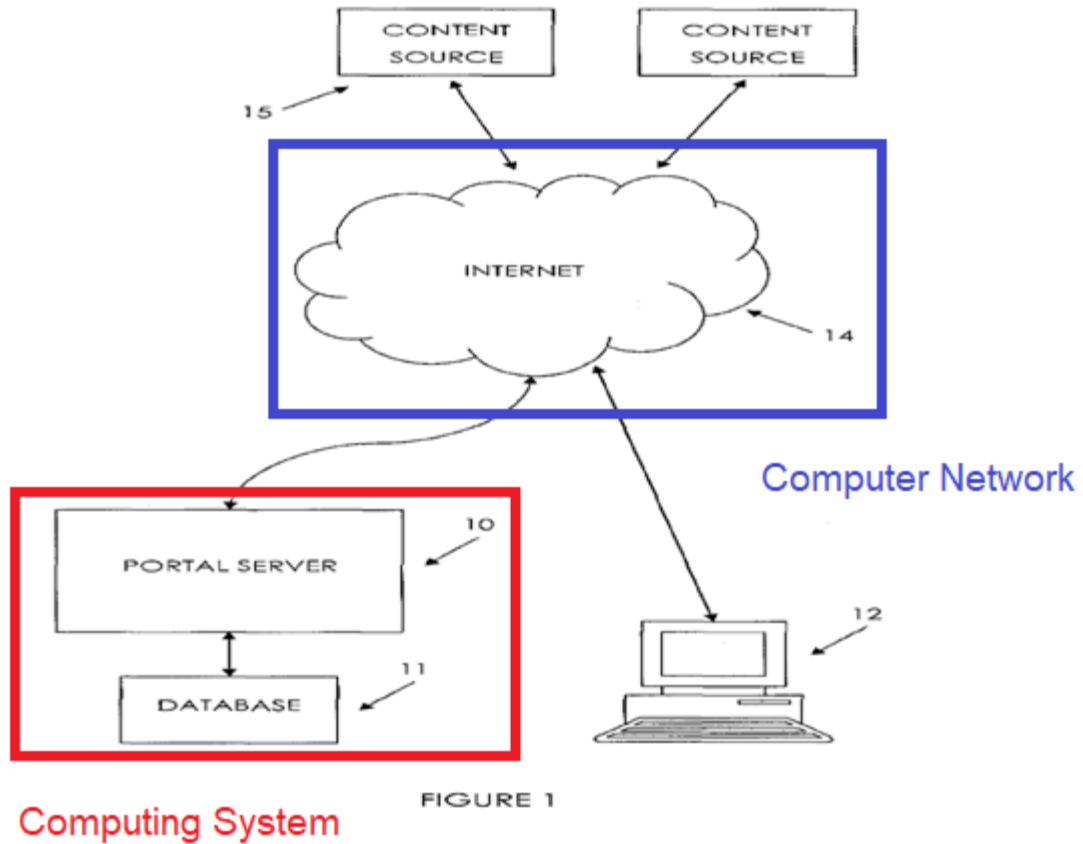
***Third Collection:*** one or more presentations received from another source, such as another RSS feed or a regular website.

See Ex[1002] ¶120.

Li's methods for aggregating the three collections of presentations are further explained in the limitation-by-limitation analysis below.

- a. ***Claim element 1[pre]:*** “A method for providing content via a computer network and computing system”

To the extent that the preamble is limiting, Li discloses this limitation. Li discloses that “the present invention generally relates to computer systems,” such as computer systems for “aggregating and displaying content” from a variety of sources in a computer network. Ex[1006] ¶¶0001, 0014. In Figure 1, reproduced below, Li illustrates a 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.” Ex[1002] ¶¶121-125.



Ex[1006] Figure 1 (annotated).

A POSA would interpret “computing system,” as used in the ’273 Patent, to mean “one or more computing devices having a common operator or under common control.” *See supra* Section. IX.A. Li’s portal server 10 and database 11 satisfy this interpretation. Ex[1002] ¶122. A POSA would understand servers and databases, such as those described by Li, to be conventional “computing devices.” *Id.* A POSA would also understand Li’s portal server 10 and database 11 to have a common operator or be under common control based on Li’s disclosure that database 11 may be part of portal server 10. *Id.*; Ex[1006] ¶¶0059 and 0045

(“database 11 may be provided along portal server 10,” for example, to store content sent to portal server 10).

Li discloses that portal server 10 provides web pages to client devices 12 via a computer network 14 (e.g., the Internet), and that the web pages include content, such as text, images, videos, and web links. Ex[1002] ¶¶123-125; Ex[1006] ¶¶0044 and 0051 (portal server 10 “generate[s] web pages which are transported via the Internet and viewed by the user[.]” “The generated web pages may include . . . the layout of the content (position of the text, pictures, videos, [etc.]) [and] the content itself to display (text, images, videos, web links)[.]”). Ex[1002] ¶123.

Li describes providing content from various sources. “Content sources 15 may for example be data feeds [e.g., RSS feeds] which include audio, text, videos, pictures and the like type of content.” Ex[1006] ¶0046. “The content sources may also be regular websites that do not currently offer RSS feeds.” *Id.*, ¶0047. “The content may also be data files such as music, pictures, videos, . . . either stored locally on a user’s device or remotely accessible . . . . The invention may also be applied in the context of a content library that comprises both web related material (e.g. from RSS feeds) and data files (music, videos, pictures, . . . ).” *Id.*, ¶0041; Ex[1002] ¶124.

- b. ***Claim element 1[a]: “storing presentation data that represents content of a first collection of one or more presentations using the computer system”***<sup>2</sup>

Li discloses this limitation. Petitioner interprets a “collection of one or more presentations” as a “collection of one or more items of content.” *Supra* Section IX.C. 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. Ex[1002] ¶126; Ex[1006] ¶0041.

Li discloses “presentation data that represents content of a first collection of one or more presentations” in the form of thumbnails and titles that represent content of the data files. The ’273 Patent specification does not use the phrase “presentation data.” *See* Ex[1001]. Rather, the phrase “presentation data” was introduced by amendment. Ex[1004] p. 74. To the extent that the ’273 Patent describes data that represents content, Li provides analogous disclosure. Ex[1002] ¶127. For example, in Figure 2, 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. Ex[1001] 5:15-17. Like the ’273 Patent, Li discloses particular content graphics (thumbnails) and

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<sup>2</sup> Petitioner has interpreted the phrase “the computer system” to be the “computing system” recited in the preamble, and Li teaches this as explained in the preamble analysis. Ex[1002] n.5; *supra* Section IX.A.1.a.

particular content information (titles) representing the data files (e.g., videos) of the first collection. Ex[1006] ¶0064 (describing an embodiment where “only part of the retrieved items is either sent or displayed,” and that for videos, it might be “thumbnails (i.e. miniature of the pictures or videos) and a title”); Ex[1002] ¶127.

Li further discloses “storing presentation data.” Li describes storing the presentation data (thumbnails and titles) in a “content library” of database 11 and/or a “cache memory” of portal server 10. Ex[1002] ¶128. Li explains that content stored in the content library can include the data files that map to the first collection. Ex[1006] ¶0041 (describing “a content library that comprises . . . data files (music, videos, pictures, [etc.]).”). Li further explains that content stored in the content library can include *part* of an item of content. A POSA would understand *part* of the item of content to include thumbnails or titles representing the data files of the first collection. Ex[1002] ¶128; Ex[1006] ¶0113 (the content library may store part of an item of content, like “meta data for said content”), with reference to ¶0046 (describing “title” as a type of metadata) and ¶0118 (describing metadata and thumbnails as examples of “virtual representations” of content).

Li discloses “using the computer system” to store the presentation data. Ex[1002] ¶129. As discussed with respect to limitation 1[pre], the computer system disclosed by Li includes portal server 10 and database 11. *See* Ex[1006] ¶¶0045, 0059. Portal server 10 implements an aggregator service. *Id.*, ¶0044. The

aggregator service receives content and stores the content in the content library. *Id.*, ¶0040. As discussed in the previous paragraph, part of an item of content (e.g., the thumbnails and titles that map to the claimed “presentation data”) can be stored in the content library. Ex[1002] ¶¶128-129.

Li further discloses that the content library “may be provided with the system.” Ex[1006] ¶0113. A POSA would understand that the content library may be stored on database 11. Ex[1002] ¶130. For example, Li generally discloses storing content received from RSS feeds in database 11 and, more specifically, in the content library.<sup>3</sup> Ex[1006] ¶¶0040, 0045; Ex[1002] ¶130. A POSA would also understand that presentation data may be stored in cache memory of portal server 10. Ex[1002] ¶131. For example, Li discloses that a processor within portal server 10 retrieves an item from database 11 and stores the item (or part of it) in cache memory to facilitate display. Ex[1006] ¶0085, with reference to ¶0081 (the processor may be part of portal server 10).

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<sup>3</sup> In addition to content from RSS feeds, the content library includes content of the data files (e.g., music and videos in the first collection of presentations). Ex[1002] n.6; Ex[1006] ¶0041.

- c. *Claim element 1[b]: “storing data indicative of the first collection of presentations so as to be associated with the presentation data”*

Li discloses this limitation for at least two independent reasons. As further explained below, the “item addresses” and the “tags” disclosed by Li each disclose this limitation. Ex[1002] ¶¶132-138.

- i. *Claim Element 1[b] is Disclosed by Li’s Item Addresses*

First, Li provides disclosure similar to that of the ’273 Patent. Ex[1002] ¶133. In the context of the ’273 Patent specification, a POSA would understand that storing “data indicative” of a presentation allows for providing that presentation to the user’s computing device via the computer network. *Id.*; see e.g., Ex[1001] 2:15-38 (describing that a user’s selection of a presentation prompts sending “data indicative” of that presentation to the user’s computing device “for playback thereby via the computer network.”).

Li discloses “storing data indicative of the first collection of presentations” in the form of item addresses stored in database 11. Ex[1006] ¶0058 (explaining that each item of content and its item address may be stored in database 11). By storing the item address of a data file of the first collection, Li allows for providing that data file to the user’s computing device via the computer network. Ex[1002] ¶¶134-135. In other words, the stored item address of the data file is indicative of



the location from which the data file can be retrieved and provided to the client device.

Li also discloses storing the item addresses “so as to be associated with the presentation data.” Ex[1002] ¶136. For example, Li discloses associating the item addresses with the various types of presentation data discussed above with respect to claim element 1[a] (thumbnails, titles, tags). *Id.* According to Li, “[e]ach item, along with the extracted tags, may be stored in database 11 for later retrieval. As mentioned earlier, only *the item address and the related tags may be stored*. Some additional information, like the *meta data of each item may also be stored*. This additional information may be used to display part of the item on the client device *so that the user knows what the item is about*.” Ex[1006] ¶0058 (emphasis added). Examples of information describing what the item is about, like meta data, include a thumbnail and a title. *See e.g., id.*, ¶¶0046, 0113, 0118; Ex[1002] ¶136.

ii. *Claim Element 1[b] is Disclosed by Li’s Tags*

*Second*, Li discloses “data indicative of the first collection of presentations” in the form of tags. Ex[1002] ¶¶137-138. Li describes tags as “keywords that characterize the content item,” and Li describes using tags to identify the content to include on a user’s personalized web page. Ex[1006] ¶¶0057, 0099.

Li also discloses storing the tags “so as to be associated with the presentation data.” Ex[1002] ¶138. As discussed above with respect to element 1[a], Li

discloses presentation data in the form of a title obtained from the metadata of a data file. Li further discloses tagging data files (“content may also be data files . . . that have been tagged beforehand either manually or automatically”), and that the tags may correspond to the metadata of an item. *Id.*, ¶¶0041, 0057. As such, the tags are associated with the presentation data. Ex[1002] ¶138. For example, selecting the tag causes the associated presentation data to be displayed on the web page. *Id.*; see Ex[1006] Figure 5C (selection of the “Federer” tag causes the web page to display presentation data with Federer in the title). Ex[1002] ¶138. Li discloses storing the tags and the presentation data (e.g., title obtained from the metadata) for the reasons explained above with respect to claim element 1[a].

- d. ***Claim element 1[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”***

Li discloses this limitation. Ex[1002] ¶¶139-144. As discussed above, a POSA would understand this limitation to encompass storing data for accessing an RSS feed (e.g., RSS feed address) from which a second collection of one or more presentations can be identified. *See supra*, § IX.E.

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

Li discloses “storing feed data that represents a collection of one or more feeds using the computer system.” Ex[1002] ¶140. Li discloses feed data, such as addresses of RSS feeds. Ex[1006] ¶0072 (describing an “RSS feed address” such as a “URL address”). Li also discloses that the feed data represents a collection of one or more feeds, such as the user’s subscribed feeds. *Id.* For example, Li discloses that portal server 10 hosts an aggregator application that aggregates items received from multiple RSS feeds and stores the items in a content library. *See e.g.*, Ex[1006] ¶¶0040-0041. To subscribe to a feed, Li describes that the user performs a “registration act” that sends portal server 10 an RSS feed address, such as a URL address for the feed. *Id.*, ¶0072; Ex[1002] ¶ 140.

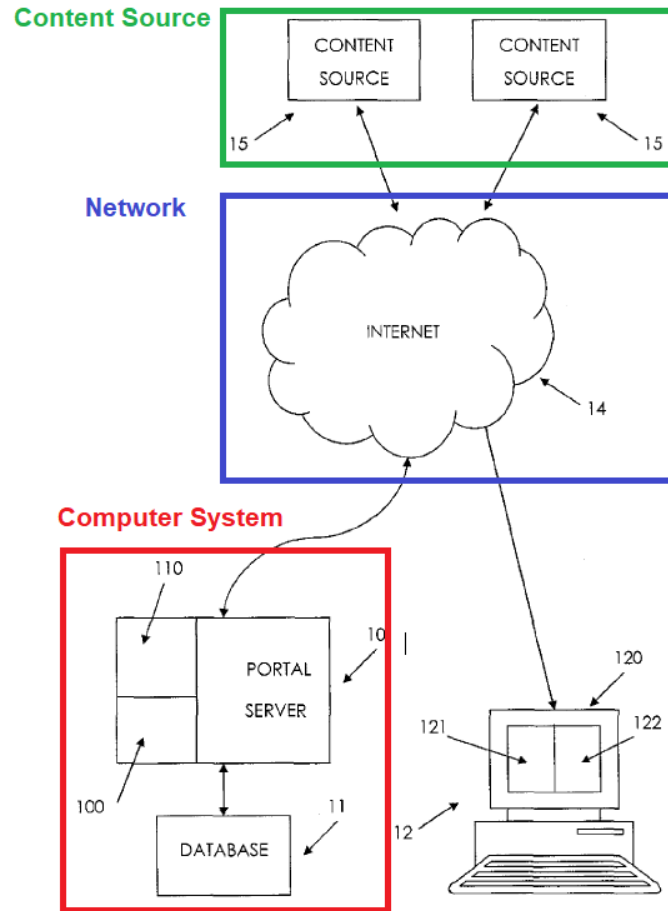
Li discloses “storing feed data . . . using the computer system.” Ex[1002] ¶141. As discussed above, portal server 10 is part of the computer system disclosed by Li. *See supra* claim elements 1[pre]-1[a]. Li describes that the user performs a “registration act” that sends portal server 10 an RSS feed’s URL address (i.e., feed data). Ex[1006] ¶0072. A POSA would understand that the registration act causes portal server 10 to store the URL address to be able to update content from the RSS feed. Ex[1002] ¶141; *see e.g.*, Ex[1006] ¶0072 (describing subscribing to RSS feeds to obtain updates from the RSS feeds); *id.*,

¶0003 (RSS “is a type of web feed formats allowing to broadcast content that is frequently updated.”). Thus, Li discloses storing feed data (addresses of RSS feeds) that represents a collection of one or more feeds (the user’s subscribed feeds) using the computer system (portal server 10). Ex[1002] ¶141.

- ii. *Li discloses that “each of the feeds identifies a corresponding second collection of one or more presentations being accessible via the computer network”*

Li discloses that “each of the feeds identifies a corresponding second collection of one or more presentations being accessible via the computer network.” Ex[1002] ¶142. Petitioner interprets a “collection of one or more presentations” as a “collection of one or more items of content.” *Supra* Section IX.C. The second collection of one or more presentations in Li comprises items of audio and/or video content obtained from an RSS data feed. *Id.*; Ex[1006] ¶0046 (content sources 15 may be data feeds that include audio, videos, and the like). Li also discloses that the second collection of one or more presentations is “accessible via the computer network.” Ex[1002] ¶142; Ex[1006] ¶0044 (“portal server 10 has access to different content sources 15 (e.g. web sites) thanks to the network 14”). For example, Figure 2 (reproduced below) illustrates content sources 15, which “may for example be data feeds,” as accessible via network 14. Ex[1006] ¶0046. Additionally, Li describes that content of a data feed may be retrieved through a

link. *Id.* A POSA would understand that a link, such as a URL address, allows for accessing content via a network. Ex[1002] ¶142.



Ex[1006] Fig. 2 (annotated).

iii. *Li discloses “no data representing content”*<sup>4</sup>

Li discloses “each of the feeds . . . includes no data representing content of the second collection of presentations.” Ex[1002] ¶143. As discussed above, the ’273 Patent Applicant added the phrase “no data representing content” by amendment, and the phrase does not appear in the ’273 Patent specification. *See supra*, § IX.E. The only specific example of a feed disclosed by the ’273 Patent is a feed based on an RSS standard. *Id.* Thus, a POSA would understand that the feature of “no data representing content” is inherent to an RSS feed, such as that disclosed by Li. Ex[1002] ¶143. RSS feeds include RSS channels (i.e., feeds) and items (i.e., second collection of presentations). *Id.*, ¶64-70, 143. RSS aggregators store links to RSS channels. *Id.* The links to the RSS channels provide no data representing content of the items. *Id.* In other words, the links to the RSS channels are not specific to any particular item, but instead provide a means for identifying items that may change over time. *Id.*

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<sup>4</sup> Claim 1 of the ’273 Patent uses the phrase “no data representing content of the second collection of presentations” with reference to the feeds themselves. Ex[1002] n.7. The term does not preclude the computer system from otherwise storing data that represents content of the second collection of presentations, for example, in order to aggregate the identified second collection of presentations on a common web page in claim element 1[f]. *Id.*

Li's description of "RSS feeds" encompasses the approach of the RSS specification. Ex[1002] ¶144. Li describes that a user "subscribes" to a feed through a registration act ("user enters an RSS feed address"), that "portal server 10 receives the content from a data feed the user has subscribed to," and that the content "may be an update of the RSS feed (as the data is pushed)" Ex[1006] ¶0072. Taking Li's Figure 5C as an example, a POSA would understand that to identify "Federer wins his 10th grand slam tournament" from a feed, portal server 10 would access a feed address (such as link to a feed for current sports headlines). Ex[1002] ¶144.

e. ***Claim element 1[d]: "automatically and periodically accessing each of the feeds to identify each of the corresponding second collection of presentations, using the computer system"***

i. *Li discloses claim element 1[d]*

Li discloses this limitation. Ex[1002] ¶¶145-147. For example, Li discloses RSS feeds, and the '273 Patent admits that "RSS uses a standardized format" and that "[t]he RSS reader typically checks the user's subscribed feeds for new content at predetermined intervals, downloads updates, and provides a user interface to monitor and view the feeds." Ex[1001] 10:66-67 and 11:11-14.

Li discloses "using the computer system" for "accessing each of the feeds to identify each of the corresponding second collection of presentations." Ex[1002] ¶146. For example, Li's portal server 10 hosts an aggregator application, such as

an RSS feed aggregator. Ex[1006] ¶¶0041, 0045. “The portal server 10 has access to different content sources 15 (e.g. web sites) thanks to the network 14” and “[c]ontent sources 15 may for example be data feeds as described earlier which include audio, text, videos, pictures and the like type of content.” *Id.*, ¶¶0044, 0046. “[P]ortal server 10 receives the content from a data feed the user has subscribed to.” *Id.*, ¶0072. “A database 11 may be provided along portal server 10 to store the RSS feed content sent to said server.” *Id.*, ¶0046.

Li discloses “automatically and periodically” accessing the feeds at least because Li discloses an “RSS feed update” that begins with a user subscribing to a feed via portal server 10 so that thereafter the portal server 10 receives the content from the data feed to which the user has subscribed. Ex[1002] ¶147; Ex[1006] ¶0072.

ii. *Alternatively, claim element 1[d] was obvious in view of the knowledge of a POSA*

To the extent that the embodiments of Li do not expressly disclose “automatically and periodically” accessing the feeds of claim element 1[d], a POSA would know to automatically and periodically access the feeds according to the teachings in Li’s Background section. Ex[1002] ¶148. Li’s Background section explains that aggregators periodically check and retrieve content from RSS feeds. Ex[1006] ¶0005 (Aggregators allow for grouping “all the RSS feed



content.” “Once a feed has been subscribed to, an aggregator will handle the check and retrieval of new content periodically.”).

A POSA would recognize that Li’s portal server 10 could be used to automatically and periodically check the RSS feeds. Ex[1002] ¶149. As discussed above, the portal server 10 in Li is already configured as an “aggregator” and already accesses “RSS feeds” to identify the corresponding second collection of presentations. *Id.* RSS feeds provided a well-known, standards-based approach for updating content, and a POSA would understand that, in RSS, the purpose of an aggregator is to automatically and periodically check RSS feeds. *Id.*; Ex[1010]; Ex[1011]. The ’273 Patent specification admits as much. Ex[1001] 10:62-11:13 (“RSS utilizes a standardized format,” “RSS content is typically accessed using an RSS reader,” and “[t]he RSS reader typically checks the user's subscribed feeds for new content at predetermined intervals, downloads updates, and provides a user interface to monitor and view the feeds.”). That Li specifically mentions periodically checking RSS feeds provides an explicit motivation to use Li’s portal server 10 to automatically and periodically access the feeds. Ex[1002] ¶149.

f. ***Claim element 1[e]: “storing data associated with a third collection of one or more presentations”***

Li discloses this limitation. Ex[1002] ¶¶150-158. In particular, Li discloses storing data associated with one or more presentations obtained from another source, such as another RSS feed or a regular website.

i. *Overview of the “third collection” based on the ’273 Patent specification and file history*

Claim element 1[e] requires no specifics with respect to the third collection of one or more presentations. In the context of the ’273 Patent, some embodiments distinguish different collections of presentations based on the source of the content. As an example, the ’273 Patent describes one source of content as an RSS feed and another source of content as another RSS feed. The ’273 Patent explains that “[a]n RSS may itself be used to aggregate content from *multiple web sources* in one place,” that “system 30 access[es] *each* RSS feed,” and that content from the feeds “may be automatically aggregated using computers 30.” Ex[1001] 11:4-12:29 (emphasis added); Ex[1002] ¶151.

The ’273 Patent specification only refers to “third” presentations in one embodiment, copied below, which indicates that “second” presentations are obtained from a feed, and that “third” presentations are similar to “second” presentations in that the system does not store data indicative of either:

[A computer program product including] . . . code for storing data associated with a plurality of feeds using the computer system, wherein each of the *feeds provides a corresponding second plurality of presentations* being accessible via the computer network, and *no data indicative of the second plurality of presentations is stored* using the computer system; . . . code for storing data associated with a third plurality of presentations, wherein *data indicative of the third plurality of presentations is not stored* using the computer system[.]

Ex[1001] 2:56-3:11. By contrast, the computer system stores data indicative of the “first” presentations. *Id.* Based on the similarities between the second and third presentations in the above embodiment, a POSA would understand that the ’273 Patent encompasses embodiments in which the “second” and “third” presentations are each obtained from a respective feed. Ex[1002] ¶152.

As further confirmation that the ’273 Patent uses the source of the content to distinguish one collection from another, during prosecution, the Applicant distinguished the first collection from the second collection because the first collection was obtained “*independent of any feed,*” whereas the “second collection of presentations are identified in a feed.” Ex[1004] 91-92. Similarly, the ’273 Patent describes “embodiments of the present invention provide for automatic aggregation of RSS fed content in combination with non-RSS fed content.” Ex[1001] 12:26-29. By aggregating content from different sources, the ’273 Patent purports to solve the problem that “identifying and locating content on the Internet can be difficult due to the virtually unlimited amount of content available.” *Id.*, 1:49-55; Ex[1002] ¶153.

ii. *Li discloses limitation 1[e]*

Li discloses “a third collection of one or more presentations” at least because Li discloses presentations obtained from another source (other than the data file

repository for the first collection and the RSS feed for the second collection), such as another RSS feed or a regular website. Ex[1002] ¶154.

*First*, Li discloses a “third collection of one or more presentations” in the form of presentations received from a feed. Ex[1002] ¶¶155. Li describes aggregating content from at least two feeds and thus the feeds disclose at least two collections of presentations (the second and third collections). *Id.* For example, Li discloses “a system for aggregating and displaying syndicated news feeds.” Ex[1006] Abstract. At least one syndicated news feed (e.g., New York Times) discloses the second collection of one or more presentations, and at least one other syndicated news feed (e.g., BBC News) discloses the third collection of one or more presentations. Ex[1002] ¶155; *see e.g.*, Ex[1010] (RSS Introduction) at p. 1 (describing New York Times feed), Ex[1007] Fig. 5 (illustrating BBC News feed), and Ex[1006] ¶0046 (feed content includes audio and video). Li discloses “storing data associated with” the presentations received from the feed, such as titles, URL links, and tags. Ex[1002] ¶155; *see e.g.*, Ex[1006] at ¶¶0041, 0046, 0056-0058.

*Second*, Li discloses a “third collection of one or more presentations” in the form of presentations received from regular websites, for example. Li discloses that portal server 10 hosts an aggregator application. Ex[1006] ¶0044. The portal server 10 has access to different content sources 15. *Id.* The sources of content include data file repositories that are accessed over the network (first collection of

one or more presentations) and data feeds (which provide a second collection of one or more presentations). *Id.* ¶0041 (describing a content library that comprises both “web related material (e.g. from RSS feeds) and data files”). The system described by Li supports “mixed” sources of content. *Id.*, ¶0068. “By mixed, one may understand that the content sources are both local and distant (accessed through the internet for example) and/or that their content is either datafiles (music, videos, pictures and the likes) or web related material (e.g. RSS feed items).” *Id.*; Ex[1002] ¶156.

Li further discloses other sources of content: “content sources may also be regular websites that do not currently offer RSS feeds. . . . Other sources may include, but not limited to personal content from SMS operators, local desktop applications or web services.” Ex[1006] ¶0047. A POSA would understand Li to disclose the “third collection of presentations” in the form of presentations obtained from such other sources, for example, audio or video presentations obtained from regular websites. Ex[1002] ¶157; *see e.g.*, Ex[1006] ¶0044 (“portal server 10 has access to different content sources 15 (e.g. web sites)”), ¶0046 (content sources 15 include “audio, text, videos, pictures and the like type of content”), and ¶0047 (“content sources may also be regular websites”).

A POSA would further understand Li to disclose “storing data associated with a third collection of one or more presentations.” Ex[1002] ¶158. For

example, Li uses the content library to store data associated with content (e.g., audio and videos) obtained from a regular website. *Id.*; *see e.g.*, Ex[1006] ¶0041 (describing “web related material” stored in the content library). Li also describes that a content scraper may be used to convert the content of regular websites into an RSS feed format. *Id.*, ¶0047. A POSA would understand that the converted format allows the content of regular websites to be tagged, stored, and added to a web page in a manner akin to that described by Li with respect to RSS content. Ex[1002] ¶158. Additionally, a POSA would understand that the system described by Li would at least store addresses associated with the third collection of presentations to be able to provide the third collection of presentations to the client device. *Id.*

- g. *Claim element 1[f]: “aggregating each of the first, identified second, and third collections of presentations for delivery via the computer network using a common web page”***

Li discloses this limitation. Ex[1002] ¶¶159-167. Li discloses “a system for aggregating and displaying content.” Ex[1006] ¶0014. For example, 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.*, ¶0055; *id.*, ¶0118 (“[T]hanks to personalized webpages, a user may regroup and visualize items from different web or local sources into a single page to get a global view of his/her user’s content.

The items are actually displayed through virtual representations which correspond to icons, metadata, headlines or thumbnails depending on the type of items.”).

- i. *Li discloses “aggregating presentations . . . for delivery via the computer network using a common web page”*

Li discloses “delivery via the computer network using a common web page.” Ex[1002] ¶160; Ex[1006] ¶0044 (client devices access portal server 10 via computer network 14). Portal server 10 “host[s] the aggregator application” and provides a “web-based user interface” that “accepts input and provide[s] output by generating web pages which are transported via the Internet and viewed by the user in his/her GUI using a web browser program.” Ex[1006] ¶0051. The generated web pages may include information about the format of the web pages, the layout of the content, and the content itself (e.g., videos, web links). *Id.*, ¶¶0045, 0051.

To identify the content to include on the web page, Li discloses the use of tags. Ex[1002] ¶161. Tags are “keywords that characterize the content item.” Ex[1006] ¶0057. “The tags may correspond to words taken out of the content itself or the metadata of an item,” and “[s]everal tags may be available for [an] item.” *Id.* The user’s personalized webpage displays “all content having one or more tags in common.” *Id.*, ¶0099.

Figure 5A-5D illustrate a graphical user interface (e.g., GUI 120) that displays web pages. Ex[1006] ¶¶0056, 0076. The GUI comprises a first user

space 121 and a second user space 122. *See e.g., id.* The first user space 121 displays a list of tags. *Id.* By dragging and dropping the tag (such as “Federer”) from the first user space 121 to the second user space 122, the user triggers a search “across all the user content” for content having that tag. *Id.*, ¶0089. The search results are displayed in content block 123. *Id.*; Ex[1002] ¶162.

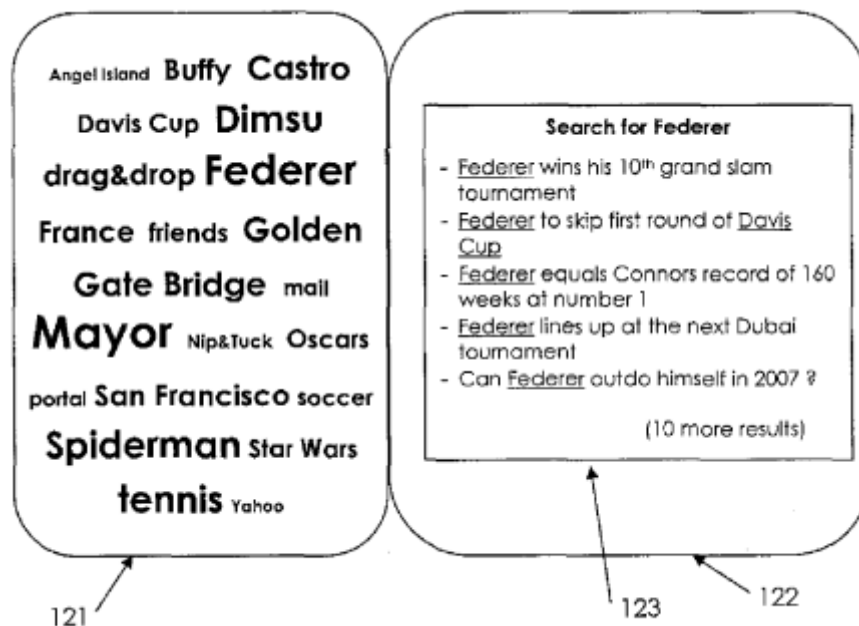


FIGURE 5C

Ex[1006] Figure 5C. Consistent with the claim construction for “aggregating” discussed in Section IX.D, Figure 5C of Li illustrates bringing the search results (presentations) together in visual juxtaposition using a common web page because all of the search results matching the requested tag are presented in content block 123. Ex[1002] ¶162. As discussed in Section IX.D, bringing the presentations together in visual juxtaposition encompasses displaying a thumbnail or a title with a link that a user may select in order to stream or download the corresponding item



of content. Li discloses displaying part of the item of content, such as a thumbnail or meta data (e.g., title), with a URL link. *See e.g.*, Ex[1006] ¶¶0046, 0064, 0088, 0118.

ii. *Li discloses aggregating “first, identified second, and third collections of presentations”*

A POSA would understand Li to disclose aggregating and displaying content from the first, identified second, and third collections of presentations in content block 123 of the web page. Ex[1002] ¶163. Li searches “across all the user content” for content having that tag. Ex[1006] ¶0089. As discussed in the next paragraphs, Li discloses that tags apply to the first, identified second, and third collections of content.

Li discloses that tags apply to data files (the first collection of one or more presentations). *See e.g.*, Ex[1006] ¶0041 (“The content may also be data files such as music, pictures, videos, . . . either stored locally on a user’s device or remotely accessible, content that have been tagged beforehand either manually or automatically when possible.”); Ex[1002] ¶164.

Li discloses that tags apply to content identified from feeds, such as RSS feeds (the second collection of one or more presentations). *See e.g.*, Ex[1006] ¶0056 (“tag extractor engine 100 analyses the incoming content of each RSS feeds received by portal server 10 and generates relevant tags.”); Ex[1002] ¶165.

Li discloses that tags apply to content identified from another source (the third collection of one or more presentations). To the extent that the other source is another RSS feed, Li discloses that tags apply (as discussed in the previous paragraph for the second collection). To the extent that the other source is a regular web site, Li describes converting the content of regular web sites into an RSS feed format. Ex[1006] ¶0047. Li also discloses generating tags for content having an RSS feed format. *Id.*, ¶0056. Li also explains “thanks to personalized webpages, a user may regroup and visualize items from different web or local sources into a single page to get a global view of his/her user’s content.” *Id.*, ¶0118. Thus, a POSA would understand Li to disclose that tags apply to content identified from regular web sites. Ex[1002] ¶166.

For these reasons, Li discloses aggregating, on a common web page, three collections of one or more presentations each: 1) data files, 2) presentations obtained from an RSS feed, and 3) presentations obtained from another source, such as another RSS feed or a regular web site. Ex[1002] ¶167.

**2. Claim 2**

- a. ***Claim element 2[pre]:*** “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”

To the extent that the preamble is limiting, Li discloses this limitation.

Ex[1002] ¶¶168-171.

- i. *Li discloses a “computer” that “provide[s] content from a computer system via a computer network to a computer device”*

The '273 Patent provides a shared description of “computer” and “computer system” that encompasses “single computing devices or collections of computing devices having a common operator or under common control.” *See supra* Section IX.A; Ex[1001] 4:29-33. For the reasons discussed above with respect to claim element 1[pre], Li discloses a computer/computer system (portal server 10 and database 11) that provides content to a computer device (client device 12) via a computer network 14 (e.g., the Internet). Ex[1002] ¶169.

- ii. *Li discloses that the computer “includes one or more processors and a memory”*

Li discloses that the computer includes one or more processors and a memory. Ex[1002] ¶170. For example, Li discloses “a processor 110, e.g.

associated with portal server 10.” Ex[1006] ¶0059. Li discloses that portal server 10 includes at least a cache memory. *Id.*, ¶0085 (“the processor will retrieve the identified items” and “cache memory may also be used to store the identified item content”); with reference to ¶0081 (describing the processor as part of portal server 10). Li also discloses a memory in the form of database 11, which can be part of portal server 10. *See id.*, ¶0059.

iii. *Li discloses a “non-transitory computer readable” and related features*

Based on Li’s disclosure of a portal server 10 that includes processors and cache memory, a POSA would understand that it was inherent, or at least obvious, in view of Li to include a “non-transitory computer readable medium” with instructions that, when executed in the one or more processors, cause the computer to perform the steps of claim 2. Ex[1002] ¶171. Computer processors are unable to perform any meaningful operations without instructions that are provided on computer readable media. *Id.* That is, claim 2 simply recites generic computing components (non-transitory computer readable medium that includes instructions to be executed by one or more processors) that a POSA would have known to implement in a computer/computer system, such as the portal server 10 disclosed by Li. *Id.*

**b. *Claim elements 2[a]-2[f]***

Claim elements 2[a]-2[f] are the same as claim elements 1[a]-1[f]. Thus, Li discloses claim elements 2[a]-2[f] for the same reasons discussed above with respect to claim elements 1[a]-1[f]. See Section X.A.1; Ex[1002] ¶¶172-177. Petitioner incorporates by reference Section X.A.1 as if fully set forth in this section.

**3. Claim 3: “[t]he computer readable medium of claim 2, wherein the computer comprises at least one web server, at least one database server and at least one file server.”**

Li discloses this limitation, as further discussed in the next paragraphs. Ex[1002] ¶¶178-182. For context, the ’273 Patent admits that the alleged invention uses a web server, database server, and file server system in a “conventional manner.” The ’273 Patent describes a system 10 that includes “a database server 32, a content or web server 34 and a file server 36.” Ex[1001] 9:33-35. Web server 34 “may provide page 200 to the requesting computer 20 in a *conventional manner*, optionally using database server 32 to populate page 200[.]” *Id.*, 5:40-43 (emphasis added). Web server 34 “may request file server 36 either stream or download the selected presentation to the requesting user's computer 20, such as via a web page 200 in a *conventional manner*.” *Id.*, 6:3-6 (emphasis added). Claim 3 adds nothing over-and-above the conventional Internet servers summarized in Section V.A above. Ex[1002] ¶178.

The terms “web server,” “database server,” and “file server” should each be interpreted to encompass one or more devices or programs for performing the assigned function of the server. *See supra* Section IX.B. Li discloses at least one device (portal server 10, alone or together with database 11) that performs the assigned functions of serving web pages, serving database content, and serving files.

- i. *Li discloses “the computer comprises at least one web server”*

A POSA would understand Li to disclose at least one web server. Ex[1002] ¶180. Li’s portal server 10 serves web pages and web content to client devices 12. Portal server 10 has access to different content sources 15 (e.g. web sites) and generates web pages that are sent to a user’s web browser via the Internet. Ex[1006] ¶¶0044, 0051. The generated web pages include information about the layout of the content and the content itself (e.g., videos, web links). *Id.*, ¶0051.

- ii. *Li discloses “the computer comprises . . . at least one database server”*

A POSA would understand Li to disclose at least one database server. Ex[1002] ¶181. Li discloses that database 11 may be part of portal server 10. Ex[1006] ¶0059. Database 11 saves content with the corresponding tags to index the items of content. *Id.*, ¶0079. Portal server 10’s processor 110 serves data from database 11, such as tags and the corresponding content, to client devices 12 via

the user's webpage. Ex[1002] ¶181. Figure 4 describes an example method performed by a processor of portal server 10. Ex[1006] ¶0081. The method begins with displaying virtual representations of tags in a first user space 121 of a GUI 120 of client device 12. *Id.*, ¶0082, Figs. 5A-5D. In response to a virtual representation of a tag being dragged from the first user space 121 and dropped into a second user space 122, "items from database 11 comprising said first tag are identified and received by the processor" so that the processor can update the display page to include the identified items. *Id.*, ¶¶0084-0086.

iii. *Li discloses "the computer comprises . . . at least one file server"*

A POSA would understand Li to disclose at least one file server. Ex[1002] ¶182. For example, portal server 10 serves data files to client devices 12. Ex[1006] ¶0041 (the content library includes data files (e.g., music, videos) that have been tagged); *id.*, ¶¶0074, 0085, 0094, 0095 (tags allow for retrieving content from the content library and sending to the user's computing device).

**B. Ground 2: Li in view of U.S. Patent Application Pub. No. 2008/0071929 ("Motte") renders claims 1-3 obvious Under 35 U.S.C. § 103**

To the extent that the Board finds that claims 1-3 are not rendered obvious by Li, they are rendered obvious by Li in view of Motte. Ex[1002] ¶¶183-209. Petitioner believes that at least the text of Li describes aggregating three collections of presentations by bringing the presentations together in visual

juxtaposition on a single web page. However, to the extent that the three collections of presentations might not be readily apparent from the figures of Li, Motte provides screen shots of web pages that confirm bringing collections of presentations together in visual juxtaposition on a single web page was known. As explained below, a POSA would have been motivated to combine the teachings of Li with Motte because they share common objectives (directed to simplifying a user interface for accessing presentations), and are generally directed to the same subject matter (identifying collections of presentations corresponding to a tag and delivering the presentations on a common web page via the computer network). *Id.*, ¶¶183, 204-209; Ex[1006] Abstract; Ex[1007] Abstract.

**1. Claim 1**

Petitioner incorporates by reference Section X.A.1 as if fully set forth in this section.

**a. Claim elements 1[pre] through 1[e]**

The Li-Motte combination discloses claim elements 1[pre] through 1[e] for the reasons discussed above with respect to Li in ground 1, claim elements 1[pre] through 1[e]. Ex[1002] ¶¶184-189.

**b. Claim element 1[f]**

The Li-Motte combination discloses claim 1[f]. Ex[1002] ¶¶190-209. For the reasons discussed above with respect to Li (Ground 1, claim element 1[f]), Li



discloses identifying first, identified second, and third collections of presentations corresponding to a tag and delivering the presentations on a web page via the computer network. Motte also describes identifying collections of presentations corresponding to a tag and delivering the presentations on a web page via the computer network. Motte confirms that it was known to bring the collections of presentations together in visual juxtaposition on a single web page. For example, Motte includes figures that provide screenshots of a web page that aggregates collections of presentations.

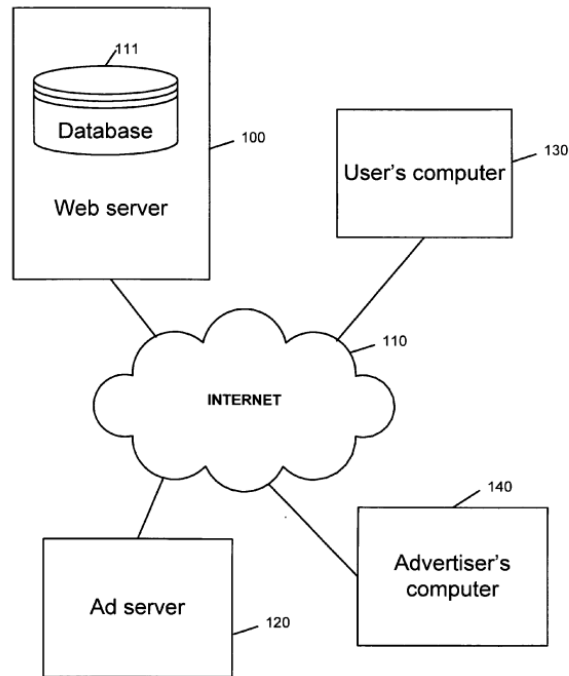
- i. *Motte discloses a system similar to that of Li, including “delivery via the computer network” of web pages*

Like Li, Motte discloses a method and apparatus for “generating new web pages.” Ex[1007] Abstract; Ex[1002] ¶¶106-118, 191-193. In Motte, a user or website designer may “edit individual components of the web page to customise it.” Ex[1007] Abstract; *see also id.*, ¶105. Like Li, content selection in Motte “may also use meta data such as ‘tags’ specifying the subject matter of the web site[.]” *Id.*, Abstract; Ex[1002] ¶191. “The selected content may include advertising material or any other web site content, such as news feeds, blogs, pictures, etc.” Ex[1007] Abstract.

In Figure 1, Motte illustrates an example system in which “[a] web server 100, an ad-server 120, a user’s computer 130 and an advertiser’s computer 140 are

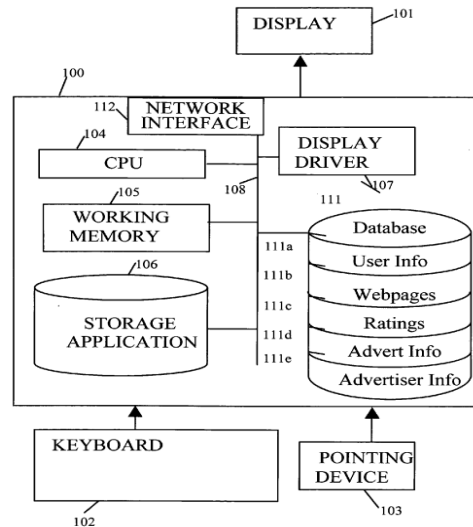
each connected to the internet 110.” Ex[1007] ¶99. “[T]he web server 100 includes a database 111 storing modular web pages belonging to different users.”

*Id.* “The user’s computer 130 may request web pages to be downloaded from the web server 100[.]” *Id.*



**Figure 1**

Ex[1007] Figure 1. Motte illustrates a more detailed block diagram of the web server 100 in Figure 2:



**Figure 2**

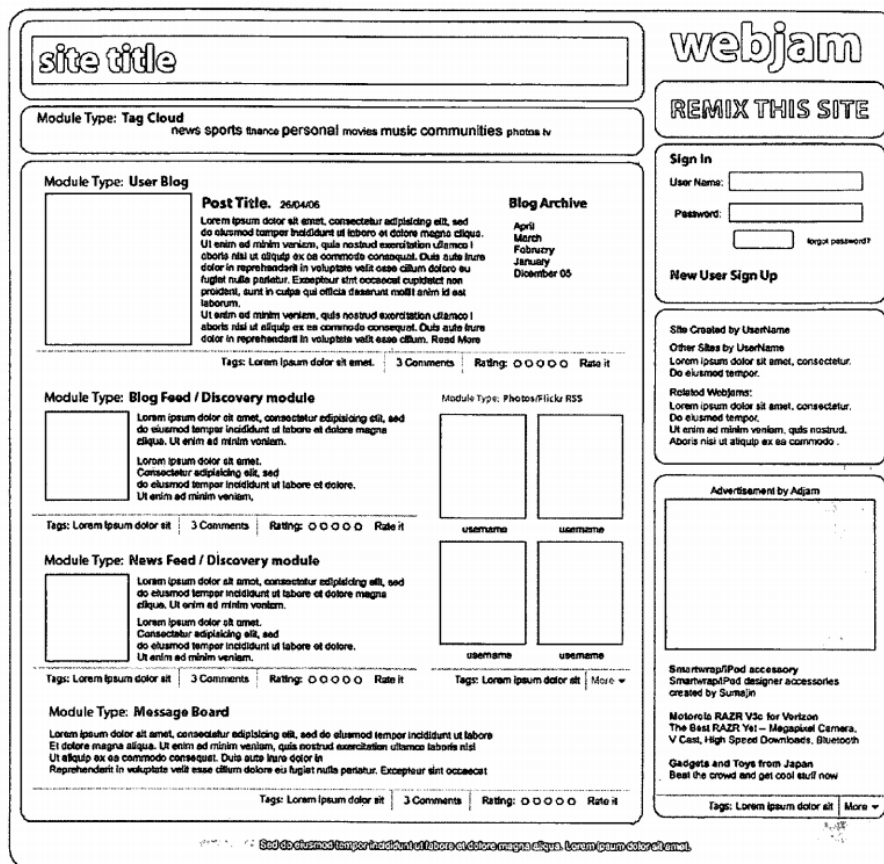
Ex[1007] Figure 2.

- ii. *Motte* discloses “aggregating” (visual juxtaposition) of presentations “using a common web page”

As discussed in Section IX.D, “aggregating” should be interpreted as “bringing together in visual juxtaposition each of the first, identified second, and third collections of presentations for delivery via the computer network using a common web page.” *Motte* discloses “aggregating” under this interpretation. Ex[1002] ¶¶194-198.

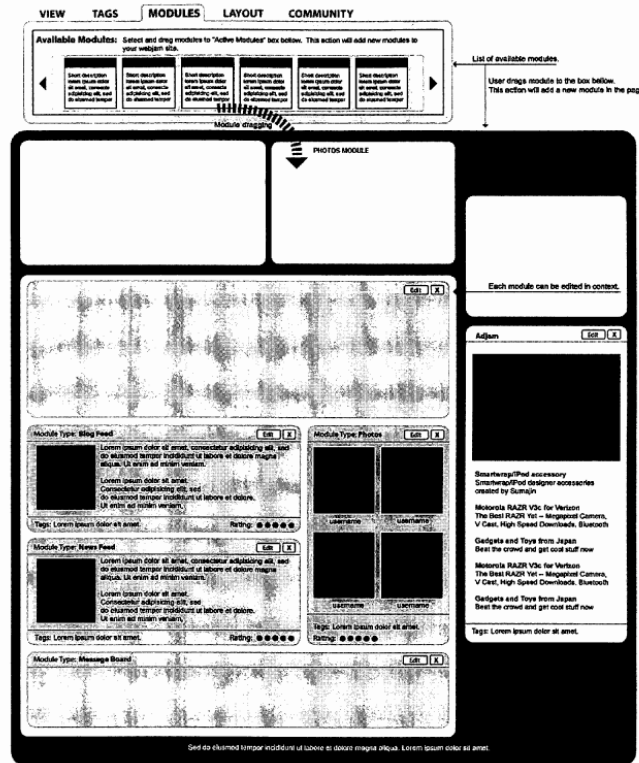
*Motte* illustrates a screenshot of an example modular web page in Figure 4. Ex[1002] ¶195; Ex[1007] ¶0105. “A modular web page comprises one or more modules, laid out in a page format.” Ex[1007] ¶0105. “Each module provides a particular feature or set of features to the web page.” *Id.* For example, “modules

may add particular functionalities or particular design features to a web site.” *Id.* Examples of modules include “*RSS or Atom feeds* (e.g. text feeds, image feeds, or *podcasting feeds*), blogs (such as a personal blog or a blog that other users can post to), pictures, *video, audio*, email, diary, calendar, clock, message board, interface modules for interfacing to a database or other information source, and advertising modules.” *Id.* (emphasis added). Content may be indexed or tagged, e.g. to identify its subject matter and to allow it to be displayed on other modular web pages. Ex[1007] ¶0109.



Ex[1007] Figure 4.

Figure 13 illustrates a method of adding modules to a web page by dragging an available module from the scroll bar at the top of the page to an ‘active modules’ area of the screen. Ex[1007] ¶¶0149; Ex[1002] ¶196.



Ex[1007] Figure 13; *see also id.*, ¶¶0104-0105 (the web page may be configured by a website designer).

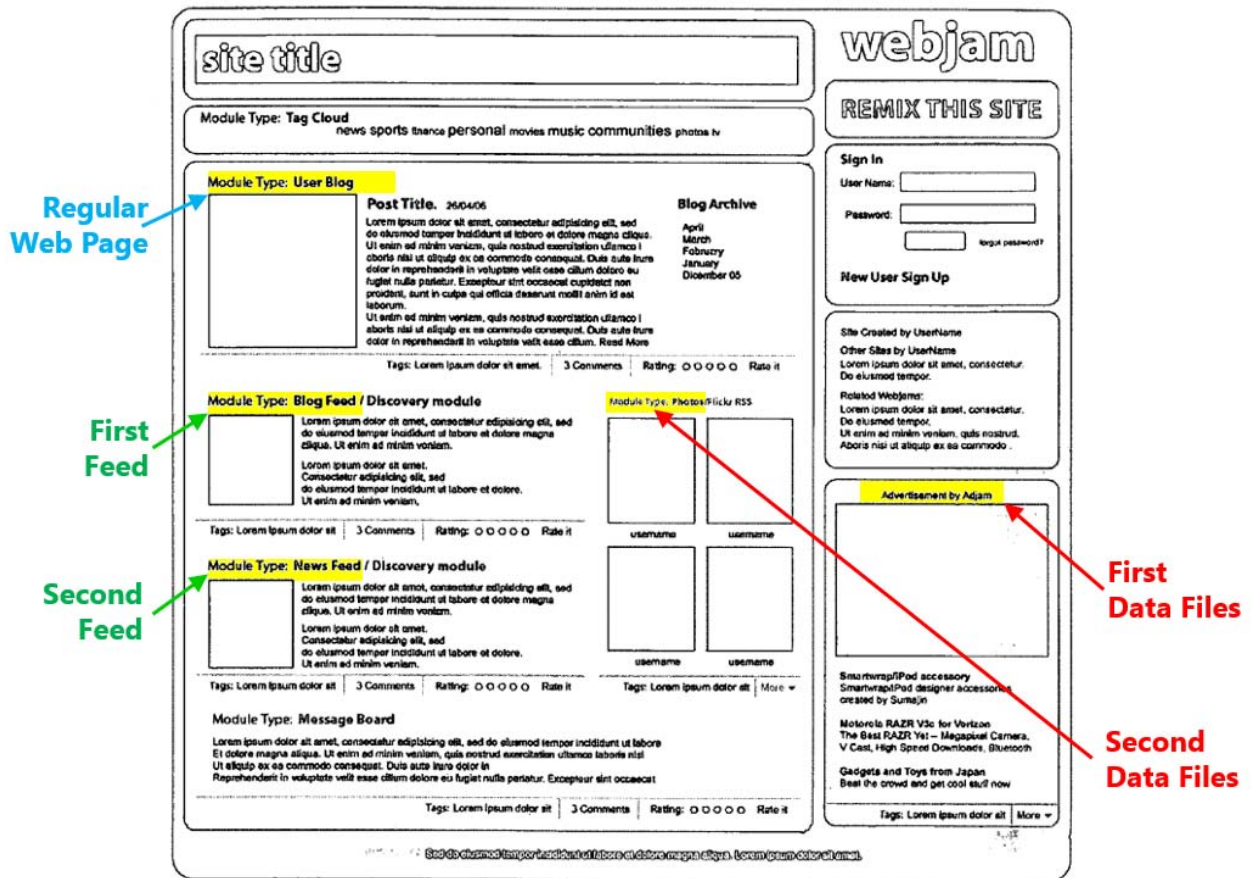
Modules may comprise computer readable code for generating the corresponding features on a web page. Ex[1002] ¶¶197-198; Ex[1007] ¶0106. “Individual modules may include code and data objects, such as html code, XML code, code using other mark-up languages, files (e.g. image files, video files, sound files, data files), database resources, Macromedia Flash files, Shockwave files,

Java applets, software or scripts (e.g. ASP, ASP.NET, JSP, PHP, CGI, ColdFusion, Perl, Python, Ruby) e.g. for dynamically generating code or retrieving data from a database, or any other code that is compliant with a user's web browser.”  
Ex[1007] ¶0106.

According to Motte, “[m]odules may have a code structure that includes fields for holding information about the particular settings of the module contents[.]” Ex[1007] ¶0107. The code structure of each module preferably includes “a definition of the type of content that will appear when the module is rendered to the web browser, and this definition may be stored as a specific type field.” *Id.*

- iii. *Motte discloses aggregating “collections of presentations” similar to the “first, identified second, and third collections of presentations” disclosed by Li*

A POSA would understand the web page shown in Figure 4 of Motte (annotated below) to illustrate collections of presentations similar to the first, identified second, and third collections of presentations disclosed by Li. Ex[1002] ¶¶199-203.



Ex[1007] Figure 4 (annotated).

**First Collection.** As discussed above with respect to Ground 1, claim element 1[a]-1[b], Li's disclosure of data files maps to the first collection of presentations. Motte shows data files on the common web page, annotated above in red. Ex[1002] ¶200. As an example, the "advertisements" module may include data files containing video clips or sound clips. See e.g., Ex[1007] ¶99 ("The ad-server 120 may store text, graphics, video clips, sound clips, etc, for use in the adverts. The user's computer 130 may request web pages to be downloaded from the web server 100, and the web server may request adverts to be sent from the ad-

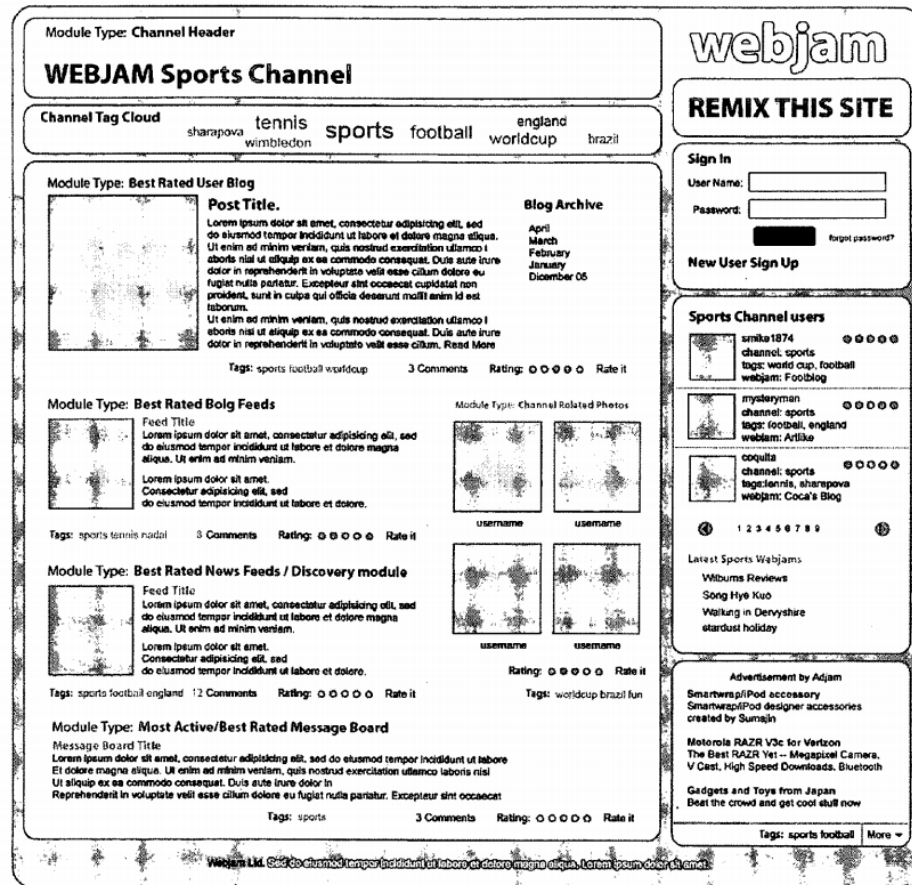
server 120 to the user's computer.”). As another example, the “photos” module may include data files (image files). According to Motte, “[i]ndividual modules may include . . . files (e.g. image files, video files, sound files, data files)[.]” *Id.*, ¶0106. Thus, Motte also discloses that the data files can be video files or sound files. *Id.*

***Second Collection.*** As discussed above with respect to Ground 1, claim element 1[c]-1[d], Li’s disclosure of feeds maps to the second collection of presentations. Motte shows feeds, such as a blog feed and a news feed, on the common web page, annotated above in green. Ex[1002] ¶201; *see e.g.*, Ex[1007] ¶0105 (describing “RSS feeds”).

***Third Collection.*** As discussed above with respect to Ground 1, claim element 1[e], Li discloses the third collection of presentations as content from another source, such as another RSS feed or a regular website. Motte illustrates content from another RSS feed because Motte shows multiple feeds, such as a blog feed and a news feed, on the common web page (annotated in green in Figure 4 above). Ex[1002] ¶202. Motte also illustrates content from a regular website, such as the “user blog” module, on the common web page (annotated in blue in Figure 4 above). Ex[1002] ¶202; *see e.g.*, Ex[1007] Abstract (describing a blog as “web site content”) and ¶0151 (“a user may publish new content to their modular web page by using a publishing system such as a standard blogging platform”).



In Figure 18B, Motte illustrates an example of using sports-themed tags, such as “sports, tennis, sharapova, Wimbledon, football, england, world cup and brazil,” to populate a sports-themed web page with sports photos, sports feeds, sports blogs, etc. Ex[1007] ¶0205. These tags are similar to those shown in Figs. 5A-5D of Li (e.g., soccer, tennis, Federer, and Davis Cup). Ex[1002] ¶203.



Ex[1007] Figure 18B.

iv. *A POSA would have been motivated to combine the teachings of Li and Motte*

A POSA would be motivated to present the resulting collection of Li's first, second, and third collections of presentations in a visual juxtaposition where content of combined three collections of presentations is shown on the same webpage, as shown in Motte's Figure 4. Ex[1002] ¶¶204-209. Motte explains that "there is always a demand for improved user interfaces, for use on individual computers or electronic devices, the internet and elsewhere" (Ex[1007] ¶0007), and the '273 Patent admits that "[a]s will be appreciated by those possessing an ordinary skill in the pertinent arts, there are a number of ways to aggregate and provide content using web page" (Ex[1001] 6:21-23).

Placing different pieces of content on a single webpage was a well-known technique for a POSA at the time of the alleged invention. For example, by the 1990s, the HTML language used to code websites provided "table" elements allowing a webpage to be segregated into different fields and then the fields populated with different data. The HTML language also provided for "frames" where multiple webpages could be loaded in a way that they resembled a single webpage. Thus, placing information from two, three, or more sources on a single web page was a well-known design choice at the time of the alleged invention. Ex[1002] ¶205. Both Li and Motte disclose the use of HTML. Ex[1006] ¶0050; Ex[1007] ¶0106.

Furthermore, both Li and Motte are directed to the same technical field and solve the same problem: aggregating content and presenting that content to a user using web pages. Ex[1002] ¶206; Ex[1006] ¶0040 (“For example, the invention allows an easy search and sharing of items from a content library and is described here after in its application to an aggregator service, to visualize information from several RSS feed contents. The described embodiment relates to a web site and server which implements the aggregator service.”); Ex[1007] ¶0026 (“[A] method and apparatus for automatically generating a web page, where the method includes receiving a user selection or automatic selection of a topic for the web page. The topic selection is then used to search a database for information associated with the topic. . . . A web page is then generated, where the web page includes the selected items of information, which are arranged using predetermined layout information[.]”).

Both Li and Motte describe similar methods for generating a web page. Ex[1002] ¶207. For example, Li describes “generated web pages may include information about their format (font size, color, . . . ), the layout of the content (position of the text, pictures, videos, . . . ), the content itself to display (text, images, videos, web links), and applications that may be executed on the client side or on the server side.” Ex[1006] ¶0051. Similarly, Motte describes “[t]he code defining the web page may also include content and layout sections. The

layout section may include information defining the desired layout of different modules on a user's screen when displayed, such as displayed size, position, colours and pattern. Predetermined layouts may be provided for defining design features of the web page, such as borders, backgrounds, colours, patterns, layouts, etc, or some combination of these. This may provide a certain design theme or a particular 'look and feel' to the web page." Ex[1007] ¶0108.

Modifying Li's collection of the combined three collections of presentations by bringing them together in visual juxtaposition on a single web page as shown in Motte is an application of a known technique in a predictable way to achieve a predictable outcome. Web pages are designed to have multiple fields, for example in a table or other structure. Filling those fields with content from Li's first, second, and third collections of presentations was an obvious step to a POSA, as confirmed by Motte. Ex[1002] ¶208.

Additionally, the combination of Li and Motte uses a known technique (visual juxtaposition of collections of content on a web page) to improve similar systems in the same way. As explained above, Li and Motte describe similar systems that use tags to identify collections of content to display on a web page. The modular web page described by Motte improves the readability and flexibility of the user interface, and it would have been obvious to apply Motte's teachings to improve the readability of the user interface in Li. Ex[1002] ¶209.

**2. Claim 2**

Petitioner incorporates by reference Sections X.A.1, X.A.2, and X.B.1 as if fully set forth in this section.

**a. *Claim elements 2[pre] through 2[e]***

The Li-Motte combination discloses claim elements 2[pre] through 2[e] for the reasons discussed above with respect to Li in ground 1, claim elements 2[pre] through 2[e]. *See* Section X.A.2, with reference to Section X.A.1; Ex[1002] ¶¶210-215.

**a. *Claim element 2[f]***

The Li-Motte combination discloses claim element 2[f] for the reasons discussed above with respect to Li in view of Motte in ground 2, claim element 1[f]. *See* Section X.B.1; Ex[1002] ¶216.

**3. Claim 3**

The Li-Motte combination discloses the additional features of claim 3 for the reasons discussed above with respect to Li in ground 1, claim 3. *See* Section X.A.3, which Petitioner incorporates by reference as if fully set forth in this section; Ex[1002] ¶216.

Petition for *Inter Partes* Review of U.S. Patent No. 9,721,273

Respectfully Submitted,

July 19, 2019

/Eliot D. Williams/

Eliot D. Williams (Reg. No. 50,822)  
G. Hopkins Guy III (Reg. No. 35,866)  
BAKER BOTTS L.L.P.  
1001 Page Mill Road, Bldg. 1, Suite 200  
Palo Alto, California 94304  
650.739.7511

Ali Dhanani (Reg. No. 66,233)  
BAKER BOTTS L.L.P.  
910 Louisiana Street  
Houston, TX 77002  
713.229.1108

Attorneys for Petitioners, Sling TV L.L.C.

**CERTIFICATE OF SERVICE**

In accordance with 37 C.F.R. §§ 42.6(e) and 42.105, the undersigned certifies that on July 19, 2019, a complete and entire copy of the **PETITION FOR *INTER PARTES* REVIEW OF U.S. PATENT NO. 9,721,273 UNDER 35 U.S.C. §§ 311-319 AND 37 C.F.R. §§ 42.100 *ET SEQ.*** (“petition”) including exhibits and testimony relied upon were served on the patent owner at the correspondence address of record for the subject patent,

UNILOC USA INC.  
102 N. College Avenue, Suite 303  
Tyler TX 75702

via FedEx overnight, to counsel for patent owner in the Lawsuit,

FEINBERG DAY KRAMER ALBERTI LIM  
TONKOVICH & BELLOLI LLP  
1600 El Camino Real, Suite 280  
Menlo Park, CA 94025

July 19, 2019

/Eliot D. Williams/  
Eliot D. Williams (Reg. No. 50,822)  
G. Hopkins Guy III (Reg. No. 35,866)  
BAKER BOTTS L.L.P.  
1001 Page Mill Road, Bldg. 1, Suite 200  
Palo Alto, California 94304  
650.739.7511

Ali Dhanani (Reg. No. 66,233)  
BAKER BOTTS L.L.P.  
910 Louisiana Street  
Houston, TX 77002  
713.229.1108

Attorneys for Petitioners, Sling TV L.L.C.

**CERTIFICATION UNDER 37 C.F.R. § 42.24(d)**

Pursuant to 37 C.F.R. § 42.24(d), the undersigned hereby certifies that the word count under § 42.24(a)(1) for the foregoing Petition for *Inter Partes* Review totals 12,590 words, within the 14,000 word limit allowed under § 42.24(a)(1)(i).

Date: July 19, 2019

/Eliot D. Williams/

Eliot D. Williams (Reg. No. 50,822)

G. Hopkins Guy III (Reg. No. 35,866)

BAKER BOTTS L.L.P.

1001 Page Mill Road, Bldg. 1, Suite 200

Palo Alto, California 94304-1007

650.739.7511

Ali Dhanani (Reg. No. 66,233)

BAKER BOTTS L.L.P.

910 Louisiana St.

Houston, TX 77002

713.229.1108

Attorneys for Petitioner, Sling TV L.L.C.