

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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HULU, LLC, and  
NETFLIX, INC.,  
Petitioners,

v.

UNILOC 2017 LLC,  
Patent Owner.

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PTAB Case No. IPR2020-00008  
Patent No. 9,721,273 B2

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

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**EXHIBIT LIST**

Ex.1001	U.S. Patent No. 9,721,273 B2 (“the ’273 Patent”)
Ex.1002	Expert Declaration of Professor Michael Franz
Ex.1003	U.S. Patent No. 8,060,634 B1 (“Darnell”)
Ex.1004	U.S. Pat. App. Pub. No. US20060265518A1 (“Owens”)
Ex.1005	U.S. Pat. No. 9,473,825 B2 (“Gossweiler”)
Ex.1006	Ben Hammersley, Developing Feeds with RSS and Atom, O’Reilly 2005 (“Hammersley”)
Ex.1007	Excerpts from ’273 Patent file history
Ex.1008	Declaration of Ben Hammersley
Ex.1009	Declaration of Jacob Munford
Ex.1010	U.S. Pat. App. Pub. No. 2006/0129971 A1
Ex.1011	PCT App. Pub. No. WO 2007/076715 A1
Ex.1012	File Wrapper of U.S. Provisional App. No. 61/090,672
Ex.1013	Exhibit A to Joint Claim Construction Statement
Ex.1014	Uniloc Infringement Contentions as to Hulu
Ex.1015	Uniloc Infringement Contentions as to Netflix
Ex.1016	Sling Petition for Inter Partes Review of U.S. Patent No. 9,721,273 B2
Ex.1017	May 4, 2006 post, Build Your Own Google Homepage, archived May 6, 2006
Ex.1018	Christian Wege, Portal Server Technology, IEEE Internet Computing, May/June 2002, at 73

Ex.1019      <https://googleblog.blogspot.com/2005/12/build-your-own-google-homepage.html>

Ex.1020      December 13, 2005 post, Build Your Own Google  
Homepage, archived December 17, 2005

Pursuant to 35 U.S.C. § 311 and 37 C.F.R. § 42.100, Hulu, LLC and Netflix, Inc. request *inter partes* review (“IPR”) of claims 1-3 of U.S. Patent No. 9,721,273 B2 (the “’273 Patent”) (Ex.1001).

## **I. INTRODUCTION**

The ’273 Patent claims aggregating three collections of digital audiovisual presentations on a single webpage. But by the time the ’273 Patent was filed, programmers had been aggregating different data sources into common webpages for years. The two prior art combinations discussed below—(1) Darnell and Owens, and (2) Gossweiler and Hammersley—render the claims of the ’273 Patent obvious.

## **II. MANDATORY NOTICES**

### **A. Real party-in-interest**

Netflix, Inc. and Hulu, LLC (“Petitioners”) are the real parties-in-interest. The following entities own ten percent or more of the stock of Hulu: The Walt Disney Company, the majority owner of Hulu, and Comcast Corporation. Neither one of the parties listed above as part-owners of Hulu controlled or funded this IPR, nor did they contribute to the preparation of this IPR in any way.

### **B. Related matters**

Patent Owner alleges that Petitioners infringe the ’273 Patent in consolidated district court lawsuits captioned *Uniloc 2017 v. Hulu, LLC*, No. 8:18-cv-2058-GW-

DFM (C.D. Cal.), and *Uniloc 2017 v. Netflix, Inc.*, No. 8:18-cv-2055-GW-DFM (C.D. Cal.).

Patent Owner has also asserted the '273 Patent in *Uniloc 2017 LLC v. Sling TV, LLC*, No. 1:19-cv-278 (D. Colo.) and *Uniloc 2017 LLC v. Dailymotion, Inc.*, 1:19-cv-00181 (D. Del.).

Sling TV L.L.C. (“Sling”) filed a petition for *inter partes* review against claims 1-3 of the '273 Patent on July 19, 2019. IPR2019-01363. For the reasons set forth below, there is no overlap in grounds or prior art references between Sling’s petition and this petition.

Petitioners are unaware of any other related matters.

**C. Counsel and service information**

Lead counsel: Babak Tehranchi (Reg. No. 55,937).

Back-up counsel: Matthew C. Bernstein (*pro hac vice* to be requested), Patrick J. McKeever (Reg. No. 66,019), Martin E. Gilmore (*pro hac vice* to be requested).

These attorneys can be reached by mail at Perkins Coie LLP, 11452 El Camino Real, Suite 300, San Diego, CA 92130-2080; by phone at (858) 720-5700; and by fax at (858) 720-5799.

Petitioners consent to electronic service. All services and communications to the attorneys listed above may be sent to:

PerkinsServiceUniloc2IPRs@perkinscoie.com

Powers of Attorney are being filed concurrently.

### **III. REQUIREMENTS FOR *INTER PARTES* REVIEW**

#### **A. Grounds for standing**

Petitioners certify that the '273 Patent is available for IPR and that Petitioners are not barred or estopped from requesting IPR challenging claims of the '273 Patent on the grounds presented here.

#### **B. Overview of challenge and relief requested**

Pursuant to Rules 42.22(a)(1) and 42.104(b)(1)-(2), Petitioner requests cancellation of claims 1-3 of the '273 Patent under pre-AIA 35 U.S.C. § 103.

##### **1. Identification of prior art**

Petitioner relies upon the references listed in the Exhibit List, including:

1. U.S. Pat. No. 8,060,634 (“Darnell” (Ex.1003)), issued on November 15, 2011 from an application filed on September 26, 2007. It was therefore prior art under pre-AIA 35 U.S.C. § 102(e).

2. U.S. Pat. Pub. No. 2006/0265518 (“Owens” (Ex.1004)), filed on October 31, 2005, and published on November 23, 2006. It was therefore prior art under pre-AIA 35 U.S.C. § 102(b).

3. U.S. Pat. No. 9,473,825 (“Gossweiler” (Ex.1005)), issued in 2016 from a continuation of an application filed on March 31, 2008, and claims priority to U.S.

Provisional Application No. 60/909,384, filed on March 30, 2007. It was therefore prior art to the '273 Patent under pre-AIA 35 U.S.C. § 102(e).

4. *Developing Feeds with RSS and Atom* (“Hammersley” (Ex.1006)) was published as of April 2005. It was therefore prior art to the '273 Patent under at least pre-AIA 35 U.S.C. § 102(b).

## **2. Grounds for challenge**

<b>Ground</b>	<b>Basis</b>	<b>Reference(s)</b>	<b>Challenged Claims</b>
1	§ 103	Darnell and Owens	1-3
2	§ 103	Gossweiler and Hammersley	1-3

This Petition, supported by the declaration of Professor Michael Franz (Ex.1002), demonstrates that there is a reasonable likelihood that Petitioner will prevail with respect to cancellation of at least one challenged claim. 35 U.S.C. § 314(a).

## **3. Statutory Ground(s) of Challenge and Legal Principles**

This Petition requests cancellation of claims 1-3 of the '273 Patent under pre-AIA 35 U.S.C. § 103.

### **C. The Board Should Exercise Its Discretion to Institute Review**

Sling petitioned for *inter partes* review of claims 1-3 of the '273 Patent on July 19, 2019. Nonetheless, the Board should institute *inter partes* review on this petition, which is based on entirely separate references and grounds from Sling's



petition. The recent update to the Trial Practice Guide, and, in particular, its discussion of the *General Plastics* factors, support Petitioner's position. First, this is Petitioners' only petition against the '273 patent (Factor 1). Second, Patent Owner has not filed a preliminary response and the Board has not determined whether to institute review on Sling's petition (Factor 3). In addition, there is no relationship between Sling and Petitioners with respect to the '273 Patent (*see* Trial Practice Guide at 22 n.1), and Sling was not sued in the same court as Petitioners. Moreover, Petitioners have not communicated, directly or indirectly, with Sling regarding prior art invalidity of the '273 Patent or petitions for *inter partes* review of the '273 Patent. Patent Owner's cases against Petitioners are not sufficiently advanced to warrant non-institution; the Markman hearing is set for November 21 of this year, and no trial date has been set. Patent Owner's case against Sling is even less advanced: the *Markman* hearing is set for February 2020, with a trial date of January 2021.

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

A person of ordinary skill ("POSA") as of the alleged invention date would have had at least a bachelor's degree in computer science or a related discipline (or equivalent experience) and would have at least one year of experience working with Web technologies, e.g., HTTP, HTML, RSS, Javascript and similar technologies.

Ex.1002 ¶28. This definition is flexible; more experience could substitute for education, or vice versa.

## **V. DESCRIPTION OF TECHNOLOGY**

### **A. Overview of the technology**

The '273 Patent's basic concept is the aggregation of three audio/visual presentations on a common webpage. Webpages are designed to obtain and display content from a variety of sources. Since 1991, the basic framework for webpages is Hypertext Markup Language ("HTML"). HTML allows web browsers to aggregate text, images, video, and other material into pages for viewers to consume. Ex.1002 ¶47.

A section of the '273 Patent describes aggregating and linking presentations via "feeds." Ex.1001 10:54-12:4. In the context of web publishing, "feeds" are documents in a particular format that are designed to help syndicate updates to content—*i.e.*, to simplify the process of distributing updates to a group of users. Ex.1001 10:63-11:3; Ex.1002 ¶34. Feeds were first developed in the late 1990s and were well-known as of the '273 Patent's priority date (Ex.1002 ¶37), as also acknowledged by the '273 Patent. Ex.1001 10:63-11:3. There were three common feed formats at the time the '273 Patent was filed: RSS 1.0, RSS 2.0 and "Atom." *Id.* Ex.1002 ¶¶37-38. The '273 Patent's specification describes the existence of

known feed formats and discloses the Really Simple Syndication (“RSS”) 2.0 family of feeds as an exemplar feed format. Ex.1001 10:64-11:3.

A POSA would have known that these feed formats shared common attributes, and such standardized feeds would either contain merely text or a text description summarizing content available at an included link. Ex.1001 10:3-11:3; Ex.1002 ¶¶34-38. Notably, a feed itself does not generally contain audio-visual content—a feed is a document that contains only character data (i.e., text) and “markup” classifying the character data.<sup>1</sup> *Id.* ¶¶34-41. A feed can, however, contain links to audio-visual content. *Id.*

The ’273 Patent’s claims relate to aggregating three “collections of presentations” on a common webpage. While the claims do not provide specific details regarding how the first and the third presentations are identified or obtained, the ’273 Patent’s claims require that the second of the three presentations be accessed via feeds. The claims, however, presented nothing new; developers, for several years prior to the time of the alleged invention of the ’273 Patent, were focused on integrating information from the variety of content into a single graphical interface,

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<sup>1</sup> Feeds can contain “enclosures”, encoded in text characters, to carry graphics or audio files, but they are not suitable for directly sending audiovisual presentations. Ex.1002 ¶172 n.3. In addition, a feed aggregator would not be required to load enclosures, to avoid issues with bandwidth. *Id.*

including webpages (often called “mashups” in the relevant literature). Ex.1002 ¶¶43-51. For example, IBM published a paper in 2006 for integrating information from feeds with information from webpages and presenting the combination into a new webpage or a feed. *Id.* ¶49. Similarly, as of 2007, programmers had been developing tools to share information through APIs<sup>2</sup> and feeds so that the data could be combined in “innovative” applications (i.e., not merely in webpages). Ex.1002 ¶46.

Content integration was also a subject of interest to companies such as Google and Yahoo which integrated feeds into their customized homepages to allow users to combine feeds with other sources of information. *Id.* ¶¶55-57; Ex.1017 (Google personalized homepage includes RSS/Atom); Ex.1018 at 74 (Yahoo customized homepage). Notably, in 2005, Google included feed aggregation as part of its homepage, which also allowed users to include widgets (small programs, such as calculators and calendars) and information from other data sources, such as maps. Ex.1002 ¶102.

A POSA at the time of the alleged invention in the second half of 2008 would have been aware of the interest in, and progress on, integrating content from feeds

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<sup>2</sup> In this context, APIs, “application programming interfaces,” are the protocols by which web applications communicate with specific services and each other. Ex.1002 ¶47.

with content from other sources that had occurred in the preceding years, and would have found the '273 Patent's claims obvious.

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

The '273 Patent issued from U.S. Application No. 14/178,064, filed on February 11, 2014 as a divisional from U.S. Application No. 12/545,125, which had been filed on August 21, 2009 and claimed priority to the following provisional applications, all of which were filed on August 21, 2008:

- No. 61/090,672;
- No. 61/090,673;
- No. 61/090,678;
- No. 61/090,680;
- No. 61/090,681;
- No. 61/090,684; and
- No. 61/090,688.

Ex.1001, cover page.

Therefore, the priority date of the '273 Patent is no earlier than August 21, 2008.

The purported invention of the '273 Patent is a method of assembling and displaying together, or “aggregating” content on a computer system in the form of three collections of presentations; data from the first collection is stored locally, whereas data regarding the second collection of presentations is not stored locally but is accessed from information provided by feeds. Ex.1001 Abstract, 2:39-55, 12:39-59, Fig. 8; Ex.1002 ¶¶68-71. Regarding the third collection of presentations,

the '273 Patent merely claims storing data associated with it, and aggregating it for delivery via the common webpage. Ex.1001 12:55-59.

During prosecution of the '273 Patent, and prior to its issuance, Uniloc Luxembourg S.A., an affiliate of the current purported assignee Uniloc 2017 LLC, allegedly acquired the rights to the pending patent application from the initial Applicant, LINQware Inc. Uniloc Luxembourg S.A. conducted the remainder of the prosecution that ultimately led to issuance of the '273 Patent, including all amendments thereto. *See* Ex.1007 (June 16, 2014 Transmittal Letter). Uniloc and its affiliates have filed hundreds of patent cases against operating companies in the last 5 years.

### **1. The Alleged Problem**

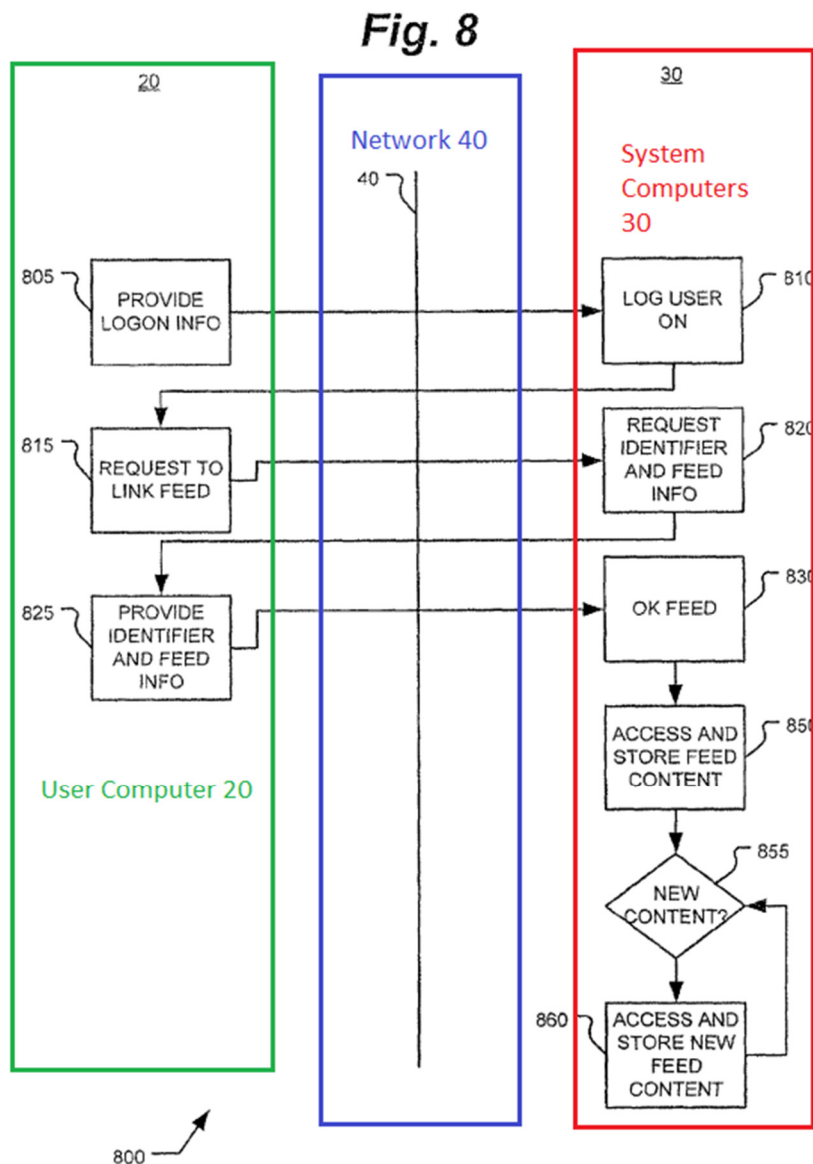
The '273 Patent purportedly solves “a need for a system and method of using the Internet as a global network to unite people with common interests.” Ex.1001 2:6-10. The '273 Patent describes the “virtually unlimited” amount of content on the Internet, stating that because of the “complex nature and nuances of human language and efforts by document authors or providers to fool or trick the indexer,” conventional search engines cannot “identify and locate content of a particular type and relating to a particular subject.” Ex.1001 1:49-2:5.

## **2. Summary of the Alleged Invention**

The '273 Patent purportedly addresses this need by aggregating “presentations” on a webpage. The claimed technique requires a computing system and a computer network, through which an aggregation of three “collections of presentations” is delivered via a common webpage. Ex.1001 12:39-40, 12:57-59; Ex.1002 ¶70.

The second of the claimed collections must be identified by a “feed.” *See* Ex.1001 12:46-51. The '273 Patent uses RSS 2.0 as an example of a feed type, but it specifies that RSS 2.0 is a non-limiting specimen and that other types of content feeds could also perform its method. Ex.1001 11:14-19. There were three major feed formats prior to the '273 Patent's priority date. All were described by standardized specifications and used structured lists of elements to classify their data. Ex.1002 ¶¶37-38.

The '273 Patent's substantive discussion of aggregating content with information from feeds is limited to columns 10-12 of the specification and Figure 8. Ex.1002 ¶73. According to the '273 Patent and Figure 8 (annotated below per Ex.1001 11:20-26), the user computer 20 provides log on information to system computers 30 through a network 40, and receives, in some cases, a webpage.



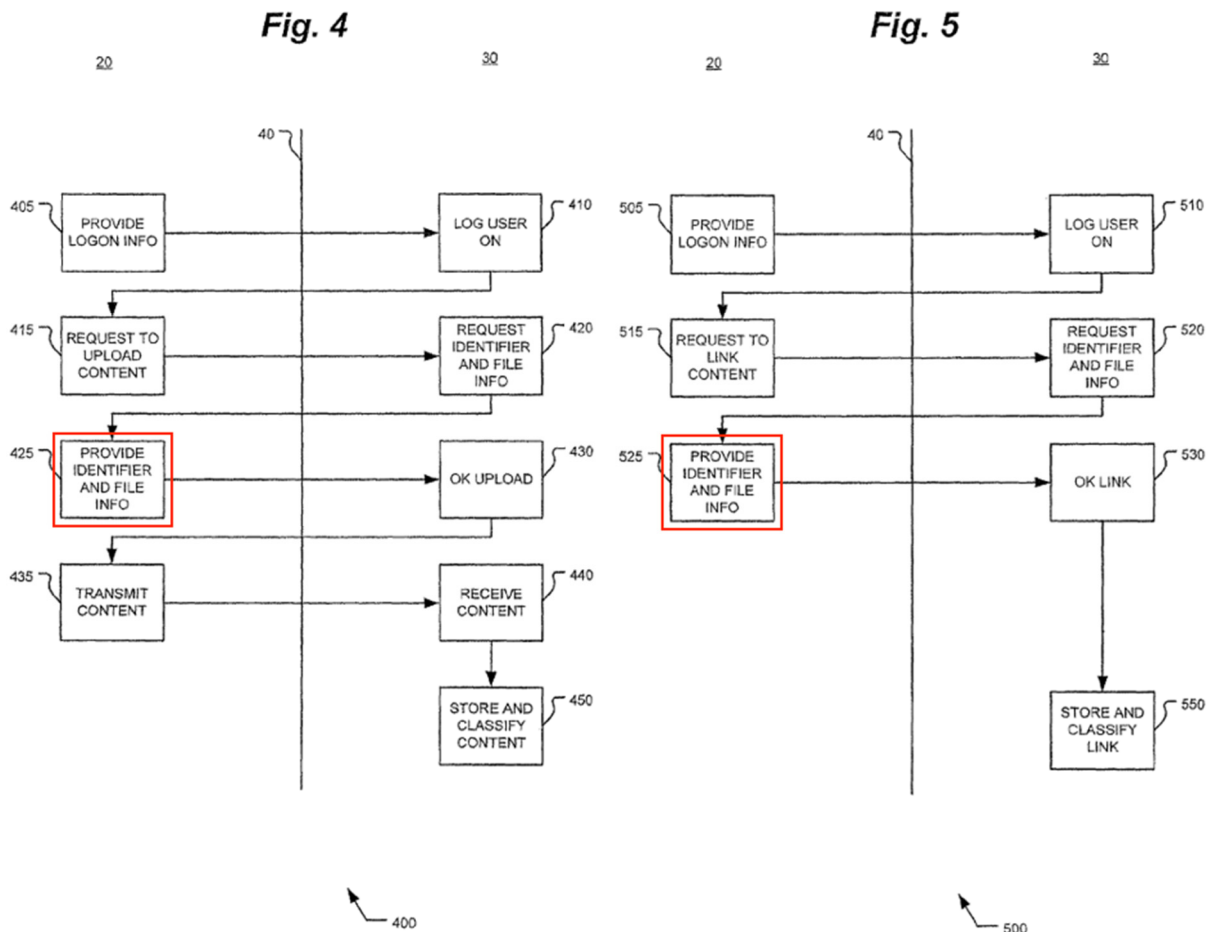
*Id.* 11:27-29. The system computers 30 then request content information in a conventional manner through the network 40; the requested information can include “content title, series information and description, akin to that displayed in a corresponding indicator,” as well as “feed identification and/or access information through which the feed may be accessed.” *Id.* 11:32-37. After the user provides the



information, the system computers 30 may store the identifier or access information “for later use in populating web pages.” *Id.* 11:49-52.

The system computers 30 may then access the feed to “acquire information regarding and/or either links to or the feed content itself then present.” *Id.* 11:52-54. The '273 Patent discloses that “this information may be automatically aggregated using computers 30 in accordance with the methods described herein-above with regard to FIGS. 4 and/or 5, where the feed information (e.g., RSS associated XML data) is used in lieu of user provided information.” *Id.* 11:54-59.

Annotated Figure 4 illustrates a process wherein users log into the system and “directly upload and enter information regarding content” (Ex.1001 6:38-42); annotated Figure 5 illustrates a process wherein users link content housed elsewhere in memory to be accessible to a computer 20 via network 40.



See Ex.1001 6:38-7:19 (discussing Figure 4’s method of uploading content from a user’s computer to the system computer); *id.* 7:20-63 (discussing Figure 5’s method of providing a link to content stored “elsewhere”). A POSA would have understood the ’273 Patent disclosure regarding Figure 8 that “information ... may be automatically aggregated ... in accordance with the methods described herein- above with regard to FIGS. 4 and/or 5, where the feed information (e.g., RSS associated XML data) is used in lieu of user provided information” to mean that the feed would replace the “identifier and file info,” highlighted in the images

above. Thus, the feed information provided to the system computers would be used to either receive the content and store and classify it (Figure 4) or receive a link to content and store and classify the link (Figure 5), in which case the content would still be stored remotely. Ex.1002 ¶76.

The '273 Patent also discloses that the system computers (shown in Figure 8 above) may check for new content in the feeds through “any of a number of conventional manner[s], including periodically checking when the feed was last updated.” *Id.* 11:63-67. A POSA would have known that feeds are not actively sent out to subscribers when updated. Instead, the feed is saved on a server, and readers are responsible for downloading the feed from the server. Therefore, periodic checking for availability of content was a well-known aspect of the feed technology that pre-dated the priority date of the '273 Patent. Ex.1002 ¶76.

### **3. The Challenged Claims**

Independent claim 1 recites a method for providing content with a computer network and system, wherein “content” includes three collections of one or more presentations. Ex.1001 12:39-59. Data “representing content” of the first collection must be stored within the system, whereas the second collection must be identified by one or more feeds identified by the system; data representing the second collection’s content cannot be stored within the feed and must be accessible via the computer network. *Id.* 12:41-43, 12:46-51. The claims provide no information

about obtaining presentation data of the first collection, nor any details regarding obtaining the third collection or its nature. *Id.* 12:55-56. Claim 1 recites:

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.

*Id.* 12:39-59. Claim 2 is identical to Claim 1 but its preamble is written in computer-readable-media form. *Id.* 12:60-13:19. Claim 3 depends from claim 2, additionally requiring that claim 2's computer to include at least one web server, at least one database server, and at least one file server. *Id.* 13:20-22. Ex.1002 ¶77.

#### **4. The Prosecution History**

The claims that matured into the '273 Patent were initially filed as claims 10-13 in a preliminary amendment on Feb. 11, 2014, and were rejected for non-statutory double patenting, for indefiniteness, and as anticipated by U.S. Pat. No. 8,386,588 to *Cooley*. Ex.1007, August 8, 2015 Non-Final Rejection 2-7. Applicant filed a terminal disclaimer over U.S. Patent No. 8,700,731, and amended claims 10-13, which would mature into claims 1 (original claims 10-11) and 2 (claim 12) of the '273 Patent. *See* Ex.1007, November 15, 2015 Response 2-4.

With respect to anticipation rejections by *Cooley*, Applicant stated that:

... Thus, claim 10 recites aggregating presentations in a feed and identifying presentations independent of any feed.

Cooley's teachings are limited to aggregation of an RSS feed and no aggregation of any content of the feed with any other presentations. Accordingly, claim 10 is allowable over Cooley.

The Examiner then issued a notice of allowance along with an Examiner's Amendment, integrating claims 10-11 to include the third collection in the independent claim; the integrated claim became claim 1 of the '273 Patent. Ex.1007, Notice of Allowance.

None of the art relied on in this Petition was before the Office during prosecution of the '273 Patent or its parent, the '731 Patent.

## **VI. OVERVIEW OF THE PRIMARY PRIOR ART REFERENCES**

The alleged invention of aggregating collections of content on a webpage was well known as of the '273 Patent's claimed priority date, August 21, 2008.

### **A. Darnell**

Similar to the '273 Patent, Darnell describes a method of aggregating presentations and delivering them through a webpage. Darnell's system used a server coupled to client systems, which displayed content; Darnell also included hosts, which were sources of content feeds (which Darnell also calls "feed streams"). Ex.1002 ¶89; *see, e.g.*, Ex.1003 2:56, 2:66-3:7, FIG. 1:

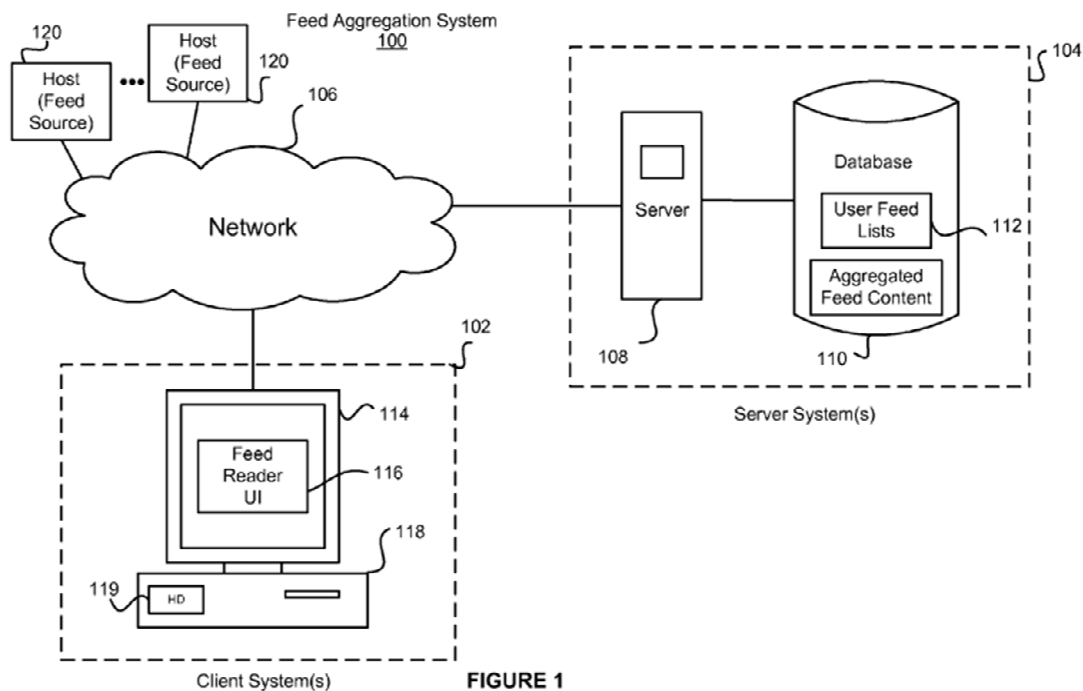


FIGURE 1

Darnell defined a feed as:

a resource or service that provides a list of content items that are present, recently added, or recently updated at a feed source 120. A content item in a content feed may include the content associated with the item itself (the actual content that the content item specifies), a title ... and/or a description of the content, a network location or locator (e.g., URL) of the content, or any combination thereof. For example, if the content item identifies a text article, the content item may include the article itself inline, along with the title (or headline), and locator. Alternatively, a content item may include the title, description and locator, but not the article content. Thus, some content items may include the content associated with those items, while others contain links to the associated content but not the full content of the items. A content item may also include additional metadata that provides additional information about the content.

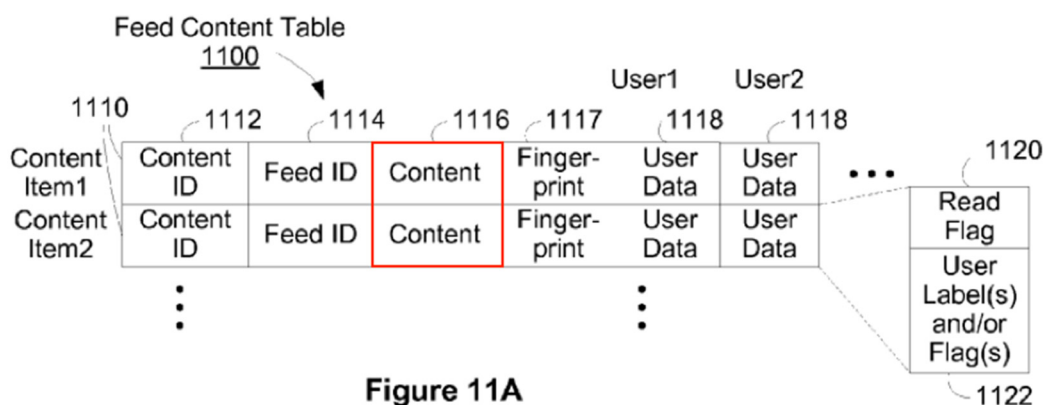
Ex.1003 3:32-58. Similar to the '273 Patent, Darnell expressly taught RSS feeds.

Ex.1003 3:62-4:1 (“RSS’ may refer to any of a family of formats based on the

Extensible Markup Language (XML) for specifying a content feed and content items included in the feed.”). A POSA at the time of the alleged invention would have known that RSS was a standardized and popular format. Ex.1002 ¶¶37-38.

Darnell taught that feed content could be handled multiple ways. The system could access feeds and store metadata from the feed and the underlying content of items. However, in other embodiments, the system could simply store the metadata from the feed and *not* the underlying content. Ex.1003 3:17-23; Ex.1002 ¶91.

Darnell stored information regarding user subscriptions in a subscriptions database. *See* Ex.1003 18:16-25 (“A user subscription information table 1150 stores feed identifications for feed streams known to the system and user data for those feed streams.”). Darnell also stored data from the feeds in tabular form in a database, with rows for each content item. *Id.* 17:39-46, Annotated Fig. 11A:



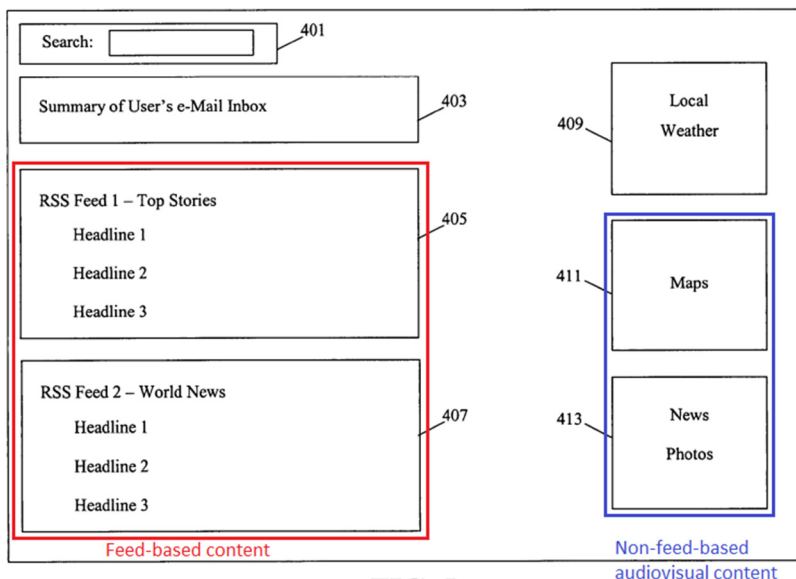
“Content” at 1116 (highlighted above) “may include the metadata of the content item (e.g., title, description, URL, date/time, and possibly other metadata), and may



further include the actual content of the content item.” Ex.1003 17:53-56. The “Feed ID” at 1114 “identifies the feed source of the content item.” *Id.* 47-51.

**B. Owens**

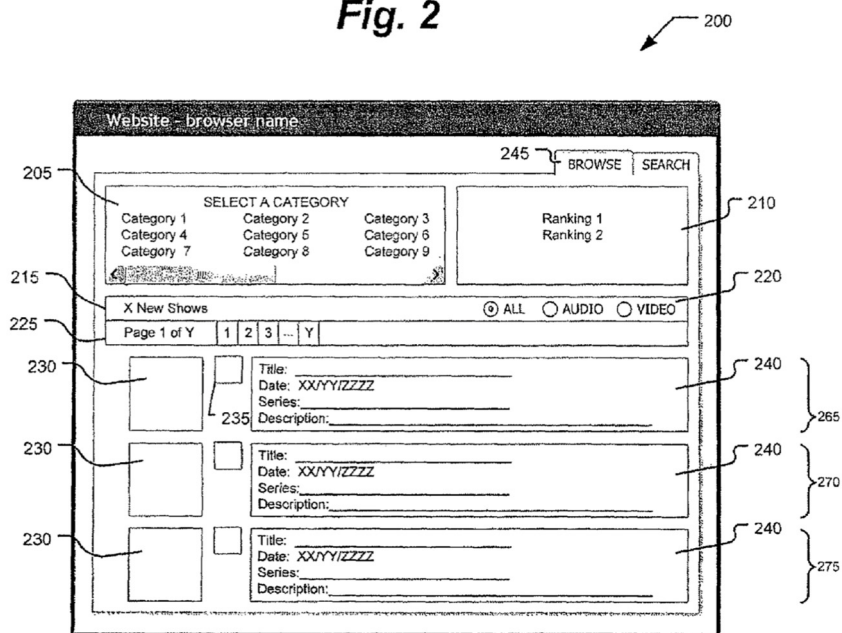
Like the '273 Patent, Owens was directed to the aggregation of RSS content with non-RSS content from the Internet. Owens was directed to “systems and methods that provide for improved access to [RSS] feeds in” network browsing-enabled applications. *See* Ex.1004 [0003]. Owens taught that existing web-based services such as my.yahoo.com allowed aggregation of different types of content including “web pages, portions of web pages, *syndication feeds*, search boxes, and *other content from anywhere on the internet*” in a customized home page. Ex.1004 [0017] (emphasis added). Annotated Figure 5 of Owens showed an example of such a customized home page aggregating feed-based content with non-feed-based content:



**FIG. 5**

Figure 5 of Owens shows functionality similar to that shown in Figure 2 of the '273 Patent below.

**Fig. 2**



**C. Gossweiler**

Gossweiler was directed to the same type of problem that the '273 purported to solve: locating desired content on the Internet. *Compare* Ex.1005 4:22-24 (“The first problem relates to finding good content from the enormous amount of content that has suddenly become available online”) *with* Ex.1001 1:51-55 (“The amount of content available via the Internet is virtually unlimited. Accordingly, it can prove difficult for a user of an Internet enabled computer to identify and locate content of a particular type and relating to a particular subject.”). Figure 1 of Gossweiler (below) disclosed aggregating a collection of presentations provided by a user, another collection of presentations by a user’s friends, and another collection recommended for the user; these collections were displayed on the page and were organized in rows (or “shelves” as described in Gossweiler). *See, e.g., id.* 5:55-6:3.

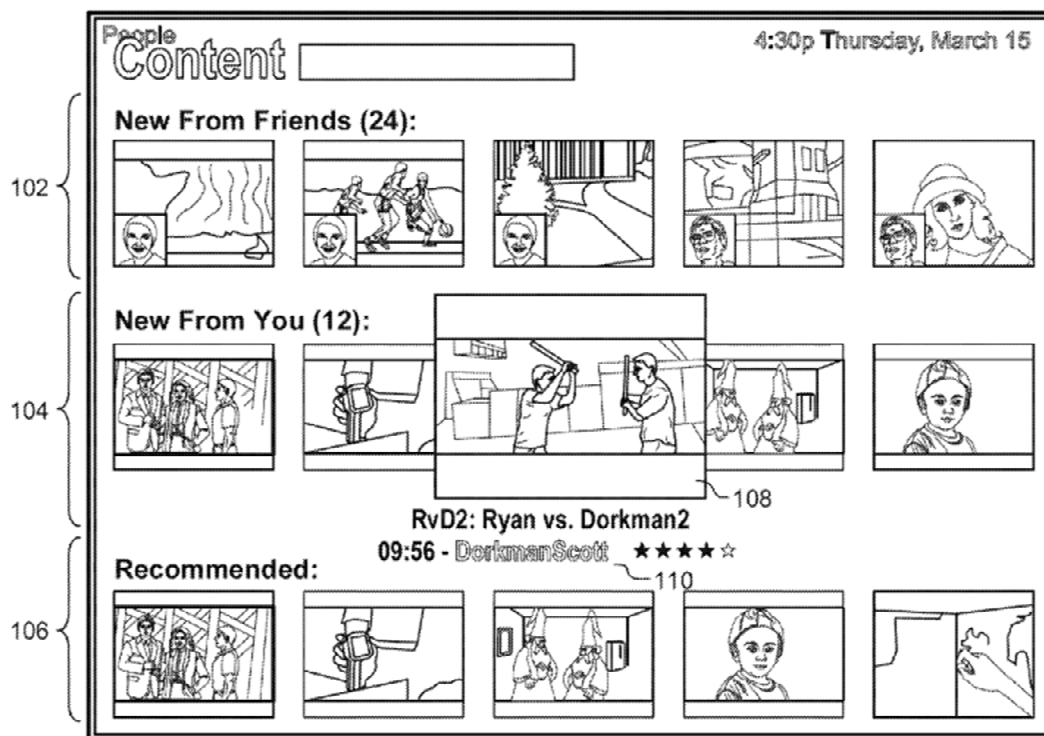


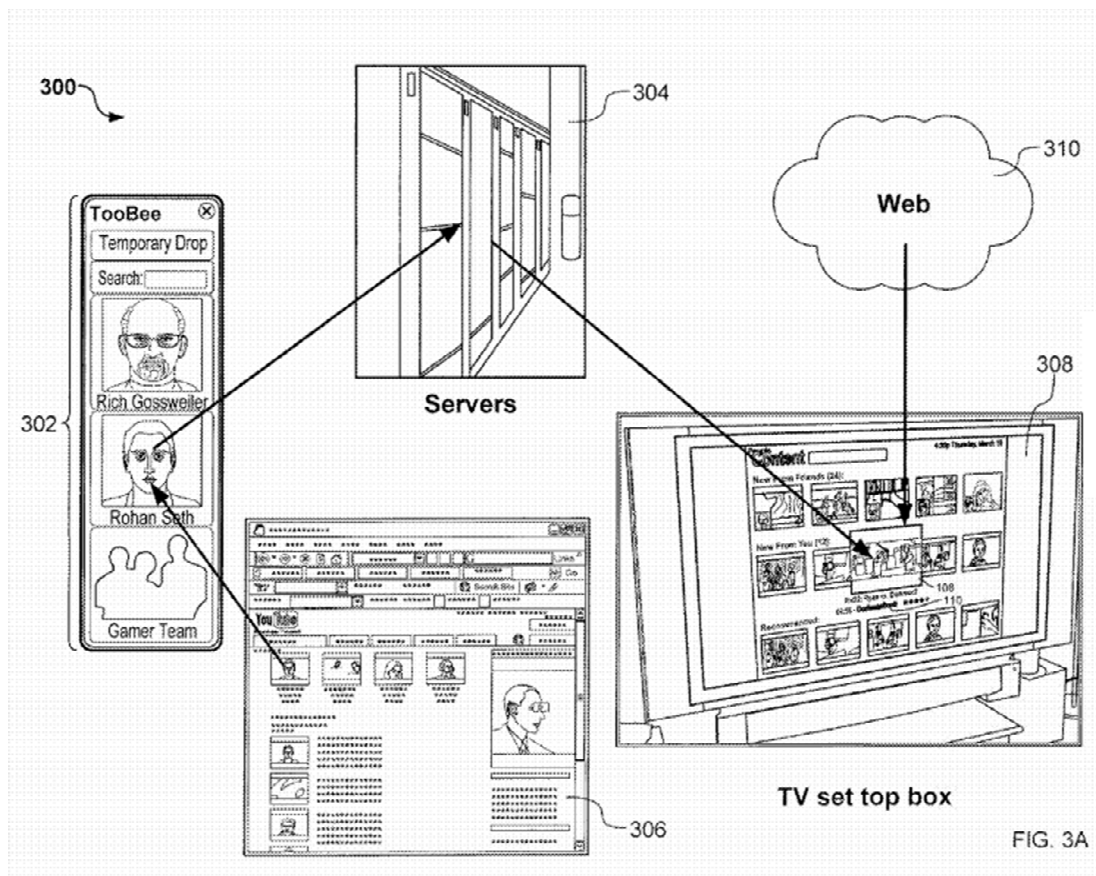
FIG. 1B

Gossweiler taught that the “friends” shelf (row 102) could obtain content from “friends that the user has identified as people who share good content” or by comparing the user’s ratings of content with the friends’ ratings and determining shared tastes. *Id.* 6:14-22. Content in the “New From You” (row 104) came from the user directly, typically loaded into the system by the user while browsing. *Id.* 6:23-32. The recommendations shelf (row 106) could contain recommendations made by the system itself, based on shared tastes with other users, or instead based on persistent searches. *Id.*

Gossweiler taught that this system (FIG. 3A, below) includes computer clients 306, television clients 308, servers 304 “that can be accessed through

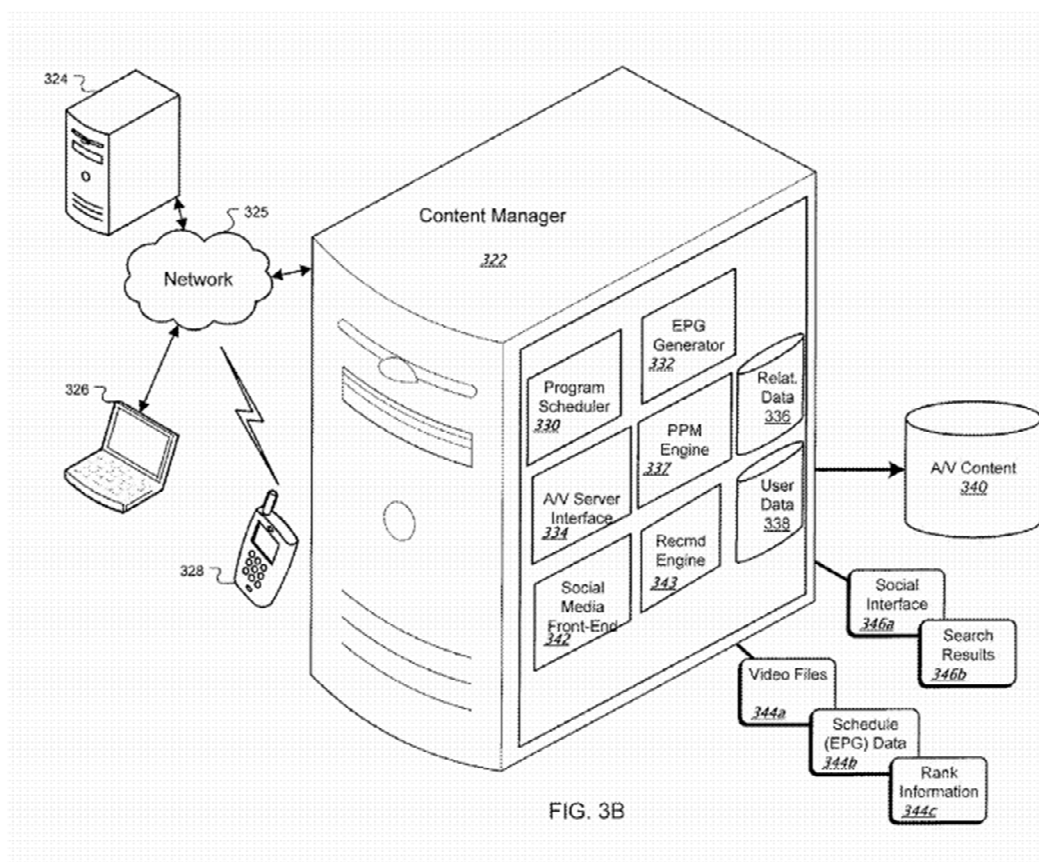
standard Internet protocols.” *Id.* 13:38 to 14:28; *see also id.* 13:38-49 (describing “a central server 304 (which may include many servers) having a web repository that stores and organizes friends, shared links, and other similar information”);

FIG. 3A:



Gossweiler further taught that the designated servers (304 in Figure 3A) “may store only simple content such as links, and can also be supplemented with a binary storage system that actually can store media files.” *Id.* 14:29-31.

Gossweiler’s content manager was responsible for collecting and aggregating content. *See* Ex.1005 Fig. 3B:



Gossweiler’s system displayed content via a browser. Ex.1005 22:42-60  
(disclosing player as part of a browser that navigates and presents content).  
Ex.1002 ¶¶149-155.

#### D. Hammersley

Hammersley was published by O’Reilly Media in 2005, after the RSS 2.0 specification discussed in the ’273 Patent was finalized. O’Reilly Media was a well-known and respected technical publisher with a focus on developers. Ex.1002 ¶156. Hammersley, entitled “Developing Feeds with RSS and Atom,” was published for “developers who want to use the content other people are syndicating,” including

“developers looking to incorporate news feeds into artificially intelligent systems or build data-sharing applications across platforms.” Ex.1006 Preface.

Hammersley explains that RSS and Atom feeds are written in Extensible Markup Language (“XML”). Ex.1006 2-3, 116, 231. At its most basic level, XML—and by extension, RSS—associates information with “tags,” also known as “elements.” *Id.* 231. RSS readers, such as aggregators, use tags to associate the data contained in the tags with the content of the item. *Id.* 1, 130; Ex.1002 ¶¶39-41.

Hammersley explains that feed documents contain lists of “items,” which contain the “primary content of the feed.” Ex.1006 30. The item can also contain “subelements,” which provide metadata about the content of the item. *Id.* These subelements are optional, with the proviso that at least one of item/title or item/description must be present.” *Id.* For instance, an item is allowed to contain only a link and a title. *Id.*; *see* Ex.1002 ¶158.

Hammersley lists a 2005 copyright registration to O’Reilly and explains that O’Reilly books may be purchased for educational, business, or sales promotional use. Ex.1006 5. As shown by the Declaration of Ben Hammersley (Ex. 1008), Hammersley’s author, the Declaration of Jacob Munford (Ex. 1009), a librarian who compared Exhibit 1006 to a copy available in the University of Pittsburgh library as of 2005, and the citations to Hammersley in U.S. Pat. App. Pub. No. 20060129971 (Ex. 1010) (published June 15, 2006) and WO 2007/076715 (Ex.

1011) (published July 12, 2007), Hammersley was published and publicly available more than a year before the '273 Patent's earliest priority date. *See, e.g., Fanduel, Inc. v. Cg Tech. Dev., LLC*, No. IPR2017-00902, 2018 WL 5269266, at \*35 (P.T.A.B. Oct. 4, 2018) (crediting Mr. Munford's expert testimony); *Facebook, Inc. v. Windy City Innovations LLC*, No. IPR2016-01155, 2017 WL 6209229, at \*8 (P.T.A.B. Dec. 6, 2017) (crediting author testimony regarding public availability).

## VII. CLAIM CONSTRUCTION

In an IPR proceeding, the challenged claims are construed “in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.” 37 C.F.R. § 42.100(b); *see Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005).

**A. “presentation data that represents content of a first collection of ... presentations / data representing content of the second collection of presentations”**

These terms are recited in claims 1 and 2 and should be construed the same way to mean “the data, or a portion of the data, of the audiovisual content itself within the first/second collection of presentations.” Ex.1002 ¶84.

“Presentation data” appears in the '273 Patent's priority document, U.S. Provisional App. No. 61/090,672 (“'672 Application”), which the '273 Patent incorporates by reference. Ex. 1012 23; Ex.1001 1:8-29; *Advanced Display Sys.*,



*Inc. v. Kent State Univ.*, 212 F.3d 1272, 1282 (Fed. Cir. 2000) (applications incorporated by reference “effectively part of” specification as though “explicitly contained therein.”). The ’672 Application discloses tracking digital media presentations while “presentation data” is streamed to the user’s computer. Ex.1012 23; *id.*[0070] (viewer listens to and/or watches a streaming presentation). The ’273 Patent itself describes “audio-visual presentations” as audio/visual content. Ex.1001 5:20-23 (downloading or streaming presentations); *id.*5:35-37. A POSA would have understood that data “representing” content must constitute at least a portion of the actual content based on the ’273 Patent’s correlation of presentations to content. Ex.1002 ¶85; Ex.1001 6:24-37:

In certain embodiments ... users may be permitted to directly upload and enter information regarding content, e.g., to file server **36** (FIG. 1). In certain embodiments ... users may be permitted to link presentations housed elsewhere in memory so as to be accessible to a computer **20** (FIG. 1) via network **40** (FIG. 1)—essentially registering them with database server **32** (FIG. 1). In certain embodiments ... presentations may be created using computers **20**, **30**. And, in certain embodiments ... presentations housed elsewhere in memory so as to be accessible to a computer **20** (FIG. 1) via network **40** (FIG. 1) may be automatically linked to—essentially registering them with database server **32** (FIG. 1).

Patent Owner asserts at the district court that this term should have its plain and ordinary meaning, which it purports to mean “data that represents to a user content of a first /second collection of [. . .] presentations.” Ex.1013 16-17. This is not “plain and ordinary”: it drops the word “presentation” from its construction

entirely and is irreconcilable with the '672 Application's use of "presentation data." See Ex.1013 16-17; *see also* Ex.1014 2-3 ("cover art and titles" identified as "presentation data that represents content"); Ex.1015 2-3 (collection of presentations in "Continue Watching Row" identified as "presentation data that represents content").

As noted earlier, Sling recently filed an IPR petition challenging claims 1-3 of the '273 patent. Sling does not construe this term, but its apparent interpretation is not entirely correct for two reasons. First, Sling describes the "first collection [of presentations]" as "one or more data files, such as music or video files, that the user accesses via the network." Ex.1016 20. Petitioners agree that presentations are data, but there is no reason to limit the "presentation" to network-accessible data; that interpretation ignores the '273 Patent's disclosure of user-uploaded content files. Ex.1002 ¶88. Second, Sling maps "thumbnails and titles" to the term "presentation data representing a presentation data that represents content of a first collection of one or more presentations." Thumbnails—"miniatures of the pictures or video"—could represent presentation data, as they are taken directly from the content data, but titles do not. *Id.*

**B. "a first collection of one or more presentations"**

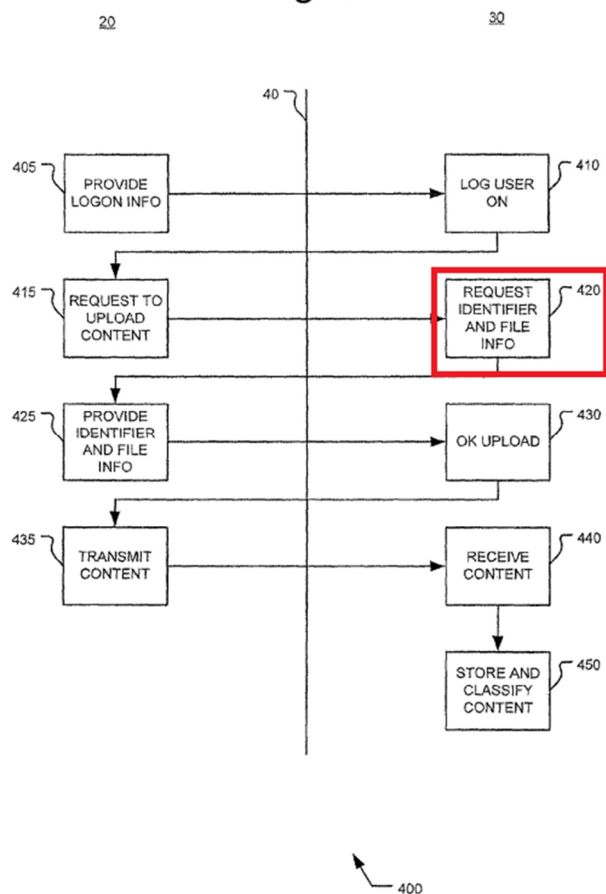
This term should be construed as "a collection of one or more presentations identified independent of any feed." Patent Owner explicitly disclaimed first

collections that do not come from a feed in order to overcome the Examiner's rejections based on the Cooley reference. Ex.1007 (November 17, 2015 Amendment) 5-6. At that time, the claim consisted of only two collections, and Patent Owner argued that the claim "recite[d] aggregating presentations in a feed [i.e., the second collection] and identifying presentations independent of any feed [i.e., the first collection]." Patent Owner agreed to this construction at the district court. Ex.1013 1.

**C. "data indicative of the first collection of [one or more] presentations so as to be associated with the presentation data"**

This term is recited in claims 1 and 2 and should be construed as "metadata describing or categorizing the audiovisual content of the first collection." Ex.1002 ¶90. As an initial matter, this term should be construed to include "[one or more]" presentations for a proper antecedent basis with the previous reference to a discussion of one or more presentations. The specification also describes "content indicative" files in a way that matches this use of the term. Ex.1001 Fig. 4 (annotated to show request for "content indicative file"), 6:49-7:19 (emphasis added):

**Fig. 4**



At block 420, computers 30 request information regarding the content to be uploaded. 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). ***The request may further include a file identifier and location of the content indicative file to ultimately be uploaded.***

At block 425, the user provides at least a portion of the requested information

...

content transmitted and received ... may take the form of media file suitable for use as a podcast ... Such a file may be received by server 34 for example, and provided to server 36 for storage 450 and later retrieval .... In such a case, server 32 may associate the stored content indicative information provided at block 425 with the file stored at block 450.

Patent Owner asserts in the district court that this term should have its plain and ordinary meaning (Ex.1013 17-18; Ex.1014 4-5), but again, its interpretation is not plain and ordinary. Contrary to Patent Owner’s interpretation, simply recording a presentation’s viewing time is not “indicative” of the collections—it is solely dependent on how long a viewer watches—and is unsupported by the specification.

Sling does not construe this term but interprets it as “keywords that characterize the content item,” which is functionally equivalent to Petitioners’ construction.

## **VIII. SPECIFIC GROUNDS FOR PETITION**

For the reasons that follow, claims 1-3 of the ’273 Patent are unpatentable on multiple bases.

### **A. Ground I: Claims 1-3 were obvious at the time of invention in view of Darnell and Owens**

Darnell teaches a detailed method of aggregating content from multiple RSS feeds and displaying it on a webpage. Darnell does not expressly disclose aggregating data sourced from an RSS feed with data from other sources. Owens, however, discloses aggregating data from multiple sources, including content from anywhere on the internet, e.g., audiovisual data such as maps and news photos, with data from RSS feeds. *See* Ex.1004 [0022], Fig. 5. A POSA would have

understood that substituting Owens’ non-feed content in place of one of the Darnell’s RSS-sourced feeds was a simple substitution with predictable consequences. Ex.1002 ¶101.

**1. A POSA would have been motivated to combine Darnell and Owens**

Both Darnell and Owens relate to integrating and presenting content including content from RSS feeds using a computer system and a common webpage. Ex.1003 2:36-38, 3:62-63; Ex.1004 [0004]. As Owens makes clear, a POSA would have known that webpages can—and were designed to—present content from a variety of sources. Ex.1002 ¶45. To combine data from feeds with locally stored data would have only required a POSA to use known methods (e.g., using uniform resource identifier calls to both remote webpages and local files) to yield predictable results—a webpage aggregating data from both sources. *Id.* 97.

Owens teaches that feed content can be aggregated alongside “portions of web pages” and other online content (*e.g.*, email, weather, maps) in a “customized home page.” Ex.1004 [0017], Fig. 5. A POSA would have appreciated the benefits of aggregating additional content types, as taught by Owens, beyond RSS-sourced content. Ex.1002 ¶¶99-100. For example, a primary purpose of RSS was enabling user subscriptions to relevant content, thereby automatically receiving it, as opposed to requiring users to actively search for content. Ex.1002 ¶98. Owens

applies that concept to a broader range of online content, which is automatically received by the user through a customized webpage. Owens' approach of aggregating feed-based content with other online content in the same webpage reduces users' need to search or browse for such content (e.g., weather, email, etc.). Ex.1002 ¶100.

A POSA reading Darnell and Owens would have recognized that additional content categories could be aggregated with Darnell's feed content as disclosed by Owens with a reasonable expectation of success. Ex.1002 ¶103. This is especially true because both describe web-based RSS feed readers wherein users view feed content via webpages using a web browser. Ex.1002 ¶¶97-103. Because the non-feed-based content described in Owens is also online content, a POSA would have recognized that it could be easily aggregated into a webpage just like Darnell's feed-based content. *Id.*

In addition, Darnell teaches an improved method of interacting with feeds in order to better focus on unread/unviewed content. Ex.1003 1:26-67. Owens teaches an improved method for discovering and subscribing to feeds. Ex.1004 [0007]-[0008]. A POSA implementing Darnell's method of improved user interfaces for feeds would have been motivated to provide ways for a user to locate and subscribe to feeds more easily, providing additional content for Darnell's method. Ex.1002 ¶100.

Owens’ aggregation of feed-sourced data and non-feed-sourced data would have been familiar to a POSA. “Mashups” and “web portals” had been a source of academic and commercial interest for several years prior to the time of the alleged invention. Ex.1002 ¶101. Moreover, Owens itself discloses examples of such aggregated webpages, including customized Yahoo webpages which were extremely popular at the time of the ’273 Patent. *Id.*

Indeed, as a POSA would have known, Owens was a Yahoo patent and was directly related to Yahoo’s “my.yahoo” customizable product. *Id.* Similarly, Darnell is a Google patent, and a POSA would have known that Google similarly allowed users to customize personalized homepages (under the “iGoogle” name) to include information from feeds as well as from other sources. *Id.* A POSA would have been motivated to combine aspects of both Google and Yahoo research given their prominence and focus on webpage aggregation at the time of the ’273 Patent. *Id.*

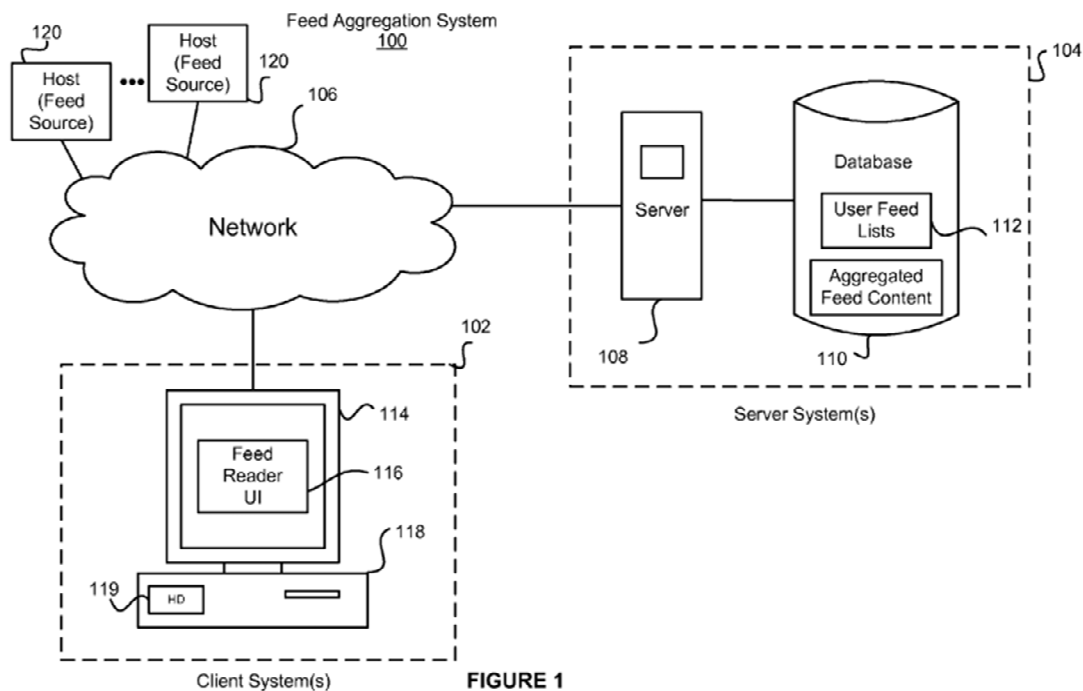
A POSA at the time of the alleged invention would have also been well aware that content can be presented using webpages regardless of where the content originated and how it is accessed by a server. Ex.1002 ¶102. A POSA would have known that other types of online content (e.g., email, weather, maps) were displayed using similar technologies such as dynamically generated webpages that incorporate data from server-side applications and/or databases. *Id.*



Accordingly, a POSA would have been motivated to modify and combine Darnell's teachings regarding feed-based content aggregation with Owens' teachings regarding aggregating feed-based content with other online content, would have done so with a reasonable expectation of success. *Id.* ¶103.

**2. Claim 1.preamble: “A method for providing content via a computer network and computing system, the method comprising”**

To the extent that the preamble is limiting, Darnell teaches it. Darnell relates to a “[a] method [that] quantifies content items for a stream subscribed to by a user.” Ex.1003 Abstract. Darnell teaches a “content feed aggregation system 100” including a computing system such as a “server system 104,” which “is coupled to one or more client systems 102 and to one or more hosts 120 (or ‘feed sources’) by a computer network such as network 106. *See* Ex.1003 2:66-3:7 (disclosing multiple types of networks), FIG. 1:



Darnell further teaches that “[t]he server system 104 accesses content feeds from the feed sources 120 [and] includes a server 108 ... which retrieves the content feeds from the feed sources 120, and also provides an interface between the server system 104 and the client systems 102.” *Id.* 3:8-16. Darnell’s server system can access and provide content feeds via a network, and thus teaches “a method for providing content via a computer network and computing system.” Ex.1002 ¶105.

In the following sections, because each individual limitation is identical between claim 1 and claim 2, with only the preamble differing, the limitations of claims 1 and 2 are analyzed together and numbered accordingly.

**a. Claim 1.a/2.a: “storing presentation data that**

**represents content of a first collection of one or more presentations using the computer system”**

As discussed above, “presentation data that represents content of a first collection” means “the data, or a portion of the data, of the audiovisual content itself within the first collection of presentations,” and the “first collection of one or more presentations” is “a collection of one or more presentations obtained independent of any feed.” As shown below, Darnell and Owens meet this limitation under both Petitioners’ construction and Sling’s interpretation.

**(i) Darnell-Owens combination teach this limitation under Petitioners’ construction**

Darnell teaches downloading and storing files using RSS feeds. *See, e.g.*, Ex.1003 3:17-21 (“[t]he server system 104 stores content items in the content feeds in the database 110.”), FIG. 1; *id.* 3:42-49 (“A content feed (or channel) is a resource or service that provides a list of content items that are present, recently added, or recently updated at a feed source 120.”).

In Darnell, a content item may include several components, as illustrated in the data structure of Figure 11A (annotated below):

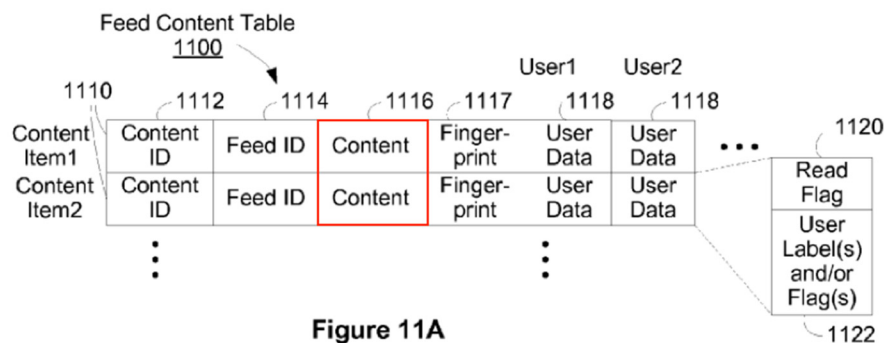


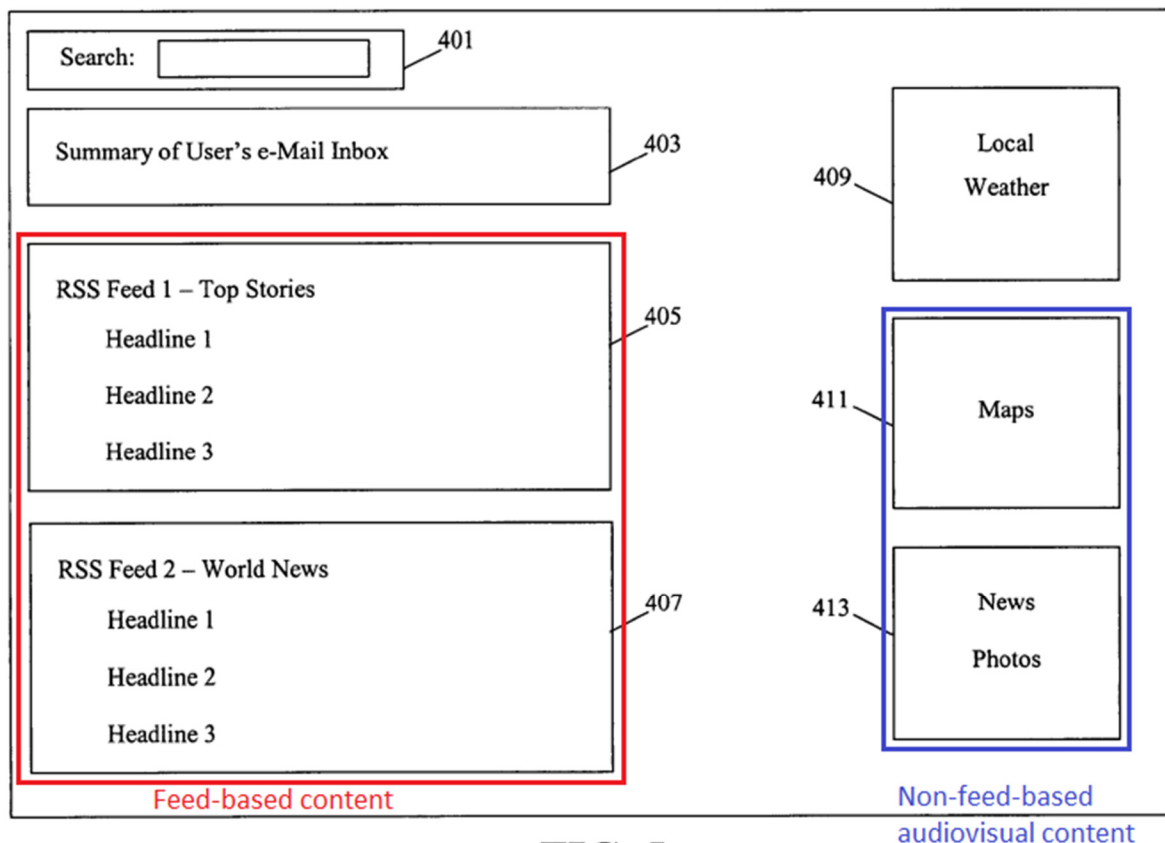
Figure 11A

In Darnell’s FIG. 11A, the content item can include the content 1116 [highlighted above] that “may include the metadata of the content item (e.g., title, description, URL, date/time, and possibly other metadata), and may further include *the actual content of the content item.*” Ex.1003 17:8-10 (emphasis added); *see also id.* 17:39-56, FIG. 11A. A POSA would have recognized Darnell’s “actual content” as “presentation data.” Ex.1002 ¶109.

During prosecution, Patent Owner appeared to disclaim a first collection with presentation data originating from an RSS feed; and may thus argue that the content 1116 in Darnell corresponds to the disclaimed content obtained via RSS feeds. Owens, however, teaches aggregating data corresponding to audio/visual presentations from both RSS and non-RSS sources, Ex.1004 [0017], and a POSA would have been motivated to combine Darnell and Owens. Ex.1002 ¶110.

Owens expressly teaches that syndication data—i.e., feed-based data—can be aggregated on a webpage with non-feed-based data. Specifically, Owens teaches that it was known in the art that aggregation could include “web pages,

portions of web pages, *syndication feeds*, search boxes, and *other content from anywhere on the internet.*” Ex.1004 [0017] (emphasis added). For example, annotated Figure 5 of Owens shows an example customized home page aggregating feed-based content with non-feed-based content:



**FIG. 5**

A POSA would have recognized maps and news photos aggregated on Owen’s webpage (shown separately from the feed-based content) were “audio-visual content” obtained from non-feed sources, because feeds are designed for frequent updates, and maps in particular would not have been frequently updated. Ex.1002 ¶113; *see also* Ex.1003 1:12-22 (content syndication is for “frequently

updated information.”). Maps are infrequently updated because their creation is time-consuming, making maps an atypical feed subject. Ex.1002 ¶113. A POSA would have found it obvious that news photos and maps—as well as other audiovisual content—could be obtained by using databases or other sources instead of feeds, and that such a substitution would yield a predictable result, because maps and news photos obtained through alternative sources would be displayed in webpages just as audiovisual data obtained through feeds. *Id.* Darnell itself also explicitly discloses aggregating audio/visual content identified by feeds. Ex.1003 3:58-61. In addition to the teachings by Owens, a POSA would have also known that the concept of these combinations was widely available in the art prior to the effective date, not least because they were offered by both Google and Yahoo, among others, to end users. Ex.1002 ¶101.

A POSA, in the combined system of Darnell and Owens, would have used the “Feed ID” illustrated in Darnell’s Figure 11A above to serve as a “Locator ID” to indicate the origin of locally stored content just as the Feed ID of Darnell indicates the feed source of the content item. Ex.1002 ¶114; Ex.1003 17:46-49.

Collections of Presentations: The stored presentation data in Darnell represents “collections” of presentations because Darnell’s system allows users to “tag or label” content items, which a POSA would have recognized as “collections.” Ex.1003 17:66-18:11; Ex.1002 ¶115; *see also* Ex.1003 7:12-16,

FIG. 3A (showing five collections of News, Sports, Tech, Humor, and Movies).

The maps, photos, and feeds of Owens would also have been recognized as “collections.” Ex.1002 ¶115. In addition, Darnell teaches “virtual streams”—streams of data derived from other content streams and identified with information such as a particular user or label. Ex.1003 18:20-40; *see also id.* 19:49-67. A POSA would also have recognized these virtual streams as “collections.” Ex.1002 ¶115.

Because Darnell contains a list of content items, each of which is associated with the corresponding collections as well as the content itself, and because the server computer stores these content items, Darnell teaches “storing presentation data that represents content of a first collection of one or more presentations using the computer system.” Ex.1002 ¶116. Moreover, the combination of Darnell and Owens teaches this limitation for presentation data that does not come from a feed. *Id.*

**(ii) Darnell-Owens Teaches This Limitation Under Uniloc’s and Sling’s Interpretations of “Titles” and/or “Thumbnails”**

To the extent that Patent Owner argues that video titles under Uniloc’s construction (Ex.1013 3) or content “thumb-nails” and presentation titles under Sling’s interpretation (Ex.1016 23) meet this limitation, Darnell teaches storing

titles in its database associated with the content (*see* limitation 1.b, below), thereby meeting either of these interpretations. Ex.1003 3:18-21.

**b. Claim 1.b/2.b: “storing data indicative of the first collection of presentations so as to be associated with the presentation data”;**

As discussed above, this term should be construed as “storing metadata describing or categorizing the audiovisual content of the first collection.” Darnell meets this limitation under two separate disclosures, (i) content ID and metadata, as well as (ii) labels.

**(i) Content ID and Metadata**

As discussed in limitation 1.a, in Darnell’s system “[t]he server system 104 stores content items in the content feeds in the database 110.” Ex.1003 3:17-18. Darnell further teaches that “[i]n some embodiments, the database 110 stores both metadata (e.g., title, description, URL, date/time, and possibly other metadata) and the content of each content item.” Ex.1003 3:18-21. Specifically, Darnell teaches a tabular data structure to store feed content items in a feed content database of a server computer, where the feed content table includes rows for each content item. Ex.1003 FIG. 11A, 17:39-46:

Each row includes one or more fields (1112, 1114) that identify the content item, such as a content ID 1112 and a feed ID 1114 (which identifies the feed source of the content item) ... Each row 1110 may further include content 1116 .... The content 1116 may include the metadata of the content item (e.g., title, description, URL, date/time, and possibly other metadata)...



Accordingly, Darnell teaches storing a content ID or metadata (e.g., title, description, URL, date/time) for the content item in a server. Ex.1002 ¶¶118-119. Darnell's content ID and enumerated metadata constitute stored "metadata describing or categorizing the audiovisual content of the first collection" and thus are "stored data indicative of the first collection of presentations so as to be associated with the presentation data." *Id.*

**(ii) Labels**

Darnell's interface includes "labels ...associated with content feeds to which a user has subscribed." Ex.1003 7:12-16. These labels are stored as "User Data" in item 1118 in Figure 11A. *See* Ex.1003 18:2-4. A POSA would have recognized these stored labels as "metadata describing or categorizing the audiovisual content of the first collection" because they are used to group the data into a collection, and they are "associated with the presentation data" because they are stored alongside the presentation data. Ex.1002 ¶120.

To the extent Patent Owner argues that content data of the first collection cannot come from feeds, Owens teaches aggregated feed-sourced data with data from "anywhere on the internet," which would apply equally to both Content ID/metadata and "labels." Ex.1004 [0017]; Ex.1002 ¶111.

**(iii) Patent Owner’s Interpretation**

Patent Owner’s infringement contentions state that “id numbers” for each presentation—unique identifiers—and the amount of time a viewer has watched a presentation meet this limitation. Ex.1014 4-5. Darnell’s content ID would meet this limitation under Patent Owner’s interpretation.

**(iv) Sling’s Interpretation**

Sling, in its IPR, advocates that tags—“keywords that characterize the content item” meet this limitation. Ex.1016 27-28. Darnell’s labels would meet the limitation for the same reasons.

**c. Claim 1.c/2.c:**

**(i) “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”**

Darnell discloses feed data that represents a collection of one or more feeds as “feed identifications for feed streams known to the system” (Ex.1003 18:16-25), as well as in its description of URL storage (Ex.1003 3:18-21). Ex.1002 ¶121. A POSA would thus have understood that Darnell’s feed identifiers and URLs identify or provide access to one or more feeds. *Id.*

Darnell stores feed data as shown in Figure 11A. Ex.1003 FIG. 11A, 3:39-56 (describing one structure for feed content items, including content metadata and feed source identifiers). Moreover, because Darnell’s server system “stores

content items in the *content feeds* in the database,” Ex.1003 3:17-18 (emphasis on plural added) (*see also id.* 17:39-43), Darnell teaches storing content from more than one content feed associated with different collections of data. In particular, Darnell illustrates aggregating *five* collections (News, Sports, Tech, Humor, and Movies), and teaches storing data associated with *all* of the collections. *See* Ex.1003 3:17-21, Fig. 3A (annotated to show second collection):

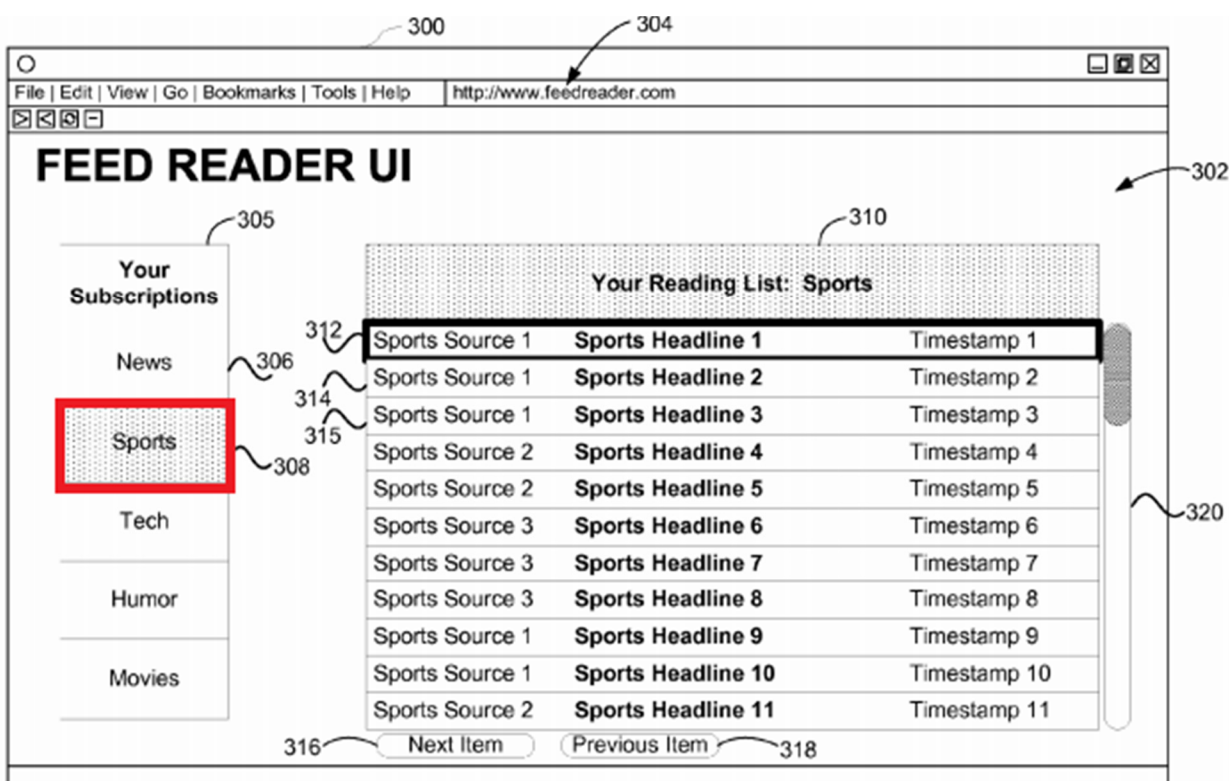


Figure 3A

To the extent that Patent Owner argues that the collection can *only* be accessible via network and may not be stored locally, Darnell still meets this limitation because in some embodiments content itself is stored in the system, and

in others only metadata is stored. Ex.1003 3:17-23. As discussed in limitations 1.a and 1.b, Darnell’s “server system 104 stores content items in the content feeds in the database 110.” Ex.1003 3:17-18. Darnell also teaches that the feed may provide metadata *without* providing content, in which case a POSA would have recognized that the content is available via the computer network. Ex.1003 3:44-56:

A content item ... may include the content associated with the item itself.... Alternatively, a content item may include the title, description and locator, but not the article content. Thus, some content items may include the content associated with those items, while others contain links to the associated content but not the full content of the items.

Accordingly, Darnell discloses that in some embodiments, the server can store feed data (e.g., RSS feeds) without storing content. *Id.*; Ex.1002 ¶¶122-126.

**(ii) “and includes no data representing content of the second collection of presentations”**

**(a) Petitioners’ Construction**As discussed above, the term “data representing content of the second collection of presentations” should be construed as “the data, or a portion of the data of the audiovisual content itself within the second collection of presentations.” A POSA would have known what Darnell teaches—a feed may merely contain links to audiovisual content that could be stored anywhere on the Internet. Ex.1002 ¶130;

*see also* Ex.1003 1:14-17, 3:44-56.

Thus, Darnell also teaches that the feeds for which it stores feed data “include[] no data representing content of the second collection of presentations.” Ex.1002 ¶¶127-128.

**(b) Sling’s Construction**

Darnell also meets this limitation under Sling’s IPR analysis, because Darnel’s “feed identifiers” are links to RSS channels, which Sling argues provide no data representing content. Ex.1016 32.

**d. Claim 1.d/2.d: “automatically and periodically accessing each of the feeds to identify each of the corresponding second collection of presentations, using the computer system”;**

As discussed in claim 1[c], Darnell teaches that the server system stores content items in the content feed and that the content feed can be an RSS feed. *See* Ex.1003 3:17-18, 3:62-63. Darnell also teaches that “[w]hen the *content feed is updated with new content items*, the new content items are reflected in the user's reader. *Id.* 1:19-21 (emphasis added). In Darnell, a feed content or channel “provides a list of content items that are present, *recently added, or recently updated.*” *Id.* 3:42-44 (emphasis added). Darnell further teaches “a feed tracker module 1016 for *retrieving content items for storage periodically and/or as content feeds are updated.*” *Id.* 17:3-4 (emphasis added). Darnell thus describes periodically updating the feed.

Owens also describes automatically and periodically accessing each RSS feed. Ex.1004 [0019] (“For load-balancing or other purposes, feed downloads can be limited to occurring only a certain number of times per day, hour, minute, or the like.”). A POSA would have recognized this cyclic downloading as “automatically and periodically accessing” an RSS feed. Ex.1002 ¶131.

A POSA would have considered it obvious that a user “subscribes” to a feed to automatically and periodically access it for updates. *Id.* ¶133. The ’273 Patent admits that RSS readers, which were known in the art, typically “check[ed] the user’s subscribed feeds at predetermined intervals.” Ex.1001 11:10-13. The ’273 Patent also admits that periodically checking a feed for updated content was conventional. Ex.1001 11:63-12:1. See Ex.1002 ¶¶129-131.

**e. Claim 1.e/2.e: “storing data associated with a third collection of one or more presentations; and”**

The term “third collection of presentations” is broad. As discussed in limitation 1.a, Darnell teaches that “[t]he server system 104 stores content items in the content feeds in the database 110.” Ex.1003 3:17-18. A content item in a content feed constitutes “data associated with a ... collection” because the content item “may include the content associated with the item itself (the actual content that the content item specifies), a title (sometimes called a headline), and/or a description of the content, a network location or locator (e.g., URL) of the content,

or any combination thereof.” Ex.1003 3:44-49; *see also id.* 3:18-21, 17:39-56,  
FIG. 11A.

As described in limitation 1.c, Darnell teaches storing data relating to, and  
aggregating, five separate collections, thus disclosing a third collection. Ex.1002  
¶134; Ex.1003 3:17-21, FIG. 3A (annotated to show third collection):

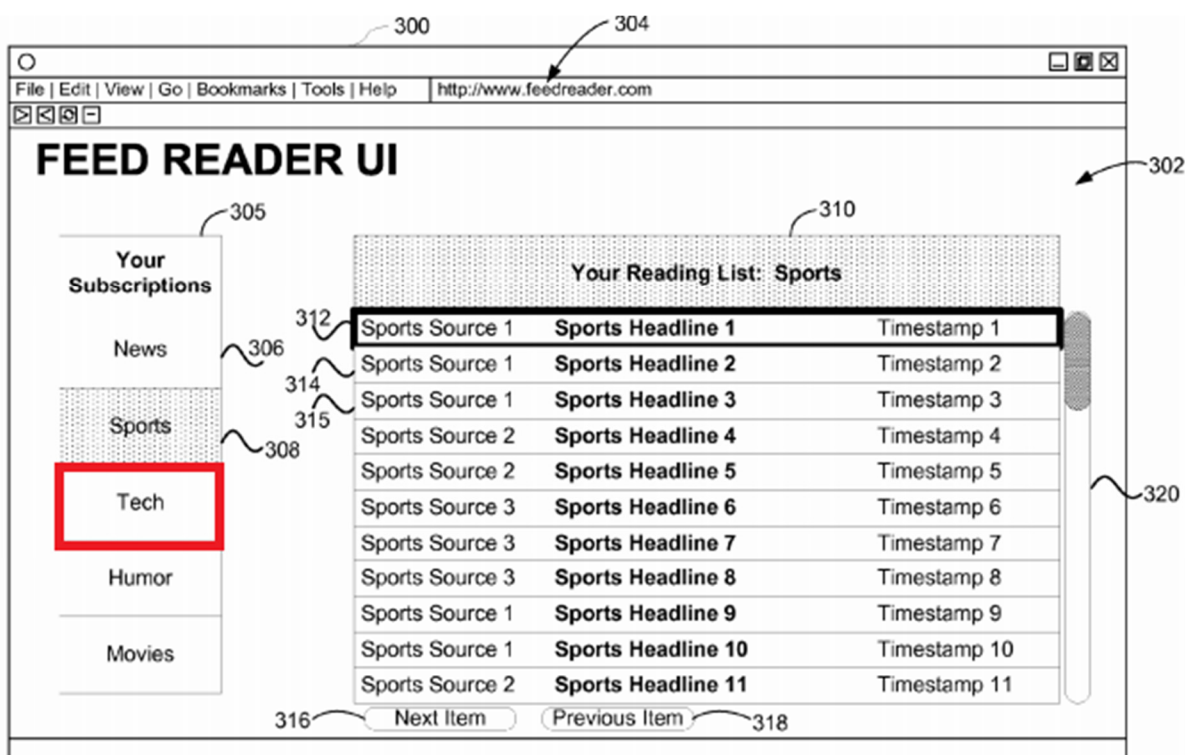


Figure 3A

As discussed in limitation 1.b, Darnell teaches storing “data indicative of the first  
collection of presentations so as to be **associated with the presentation data** [of  
the first collection]” as (i) content ID and metadata, as well as (ii) labels associated  
with the first collection. Based on similar reasoning, and as shown above with  
respect to storing of multiple feed content presentation data, Darnell also teaches

“storing data associated with a third collection of one or more presentations” as (i) content ID and metadata, as well as (ii) labels associated with the third collection. Ex.1003 FIG. 11A, 17:39-46; 7:12-16, 18:2-4; Ex.1002 ¶¶134-36.

**(i) Patent Owner’s Interpretation**

Patent Owner interprets this limitation as storing data associated with named collections in its district court infringement contentions. Ex.1016 11-12. Darnell thus meets Patent Owner’s interpretation under the same analysis; a POSA would understand the content ID and metadata, as well as labels, to be data “associated” with the collection.

**(ii) Sling’s Interpretation**

Sling interprets this limitation in its petition as storing data associated with a collection separate from the “second collection” but also obtained through a feed. Ex.1016 37. Darnell teaches multiple collections from RSS feeds with associated content ID, metadata, and labels (Ex.1003 3:17-21, Fig. 3A), thus meeting Sling’s interpretation.

**f. Claim 1.f/2.f: “aggregating each of the first, identified second, and third collections of presentations for delivery via the computer network using a common web page.”**

The method disclosed in Darnell and discussed above relates to “a content feed aggregation system,” in which “a user may subscribe to one or more content feeds and be presented with the content items included in those content feeds.”



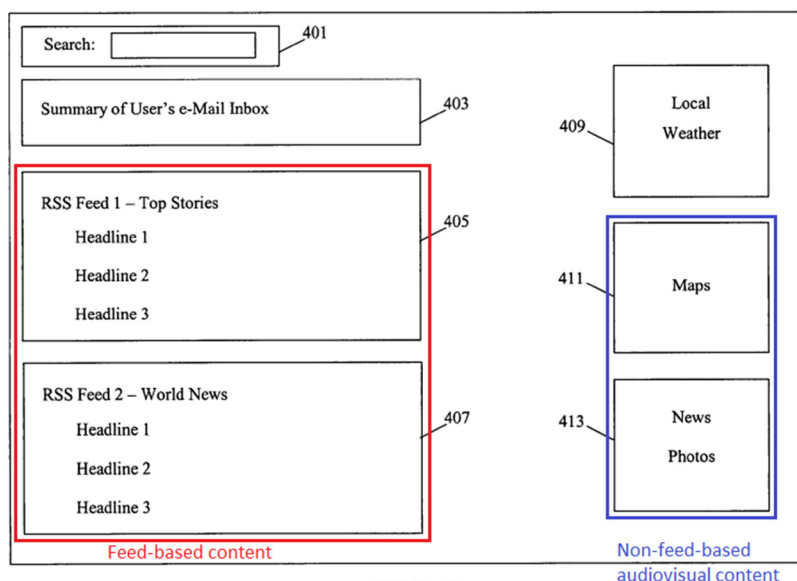
Ex.1003 2:36-38, 2:66-67. As discussed, Darnell's content feed aggregation system stores presentation or feed data associated with content feeds in a server computer. Ex.1003 3:17-21, 3:42-49, 7:12-16, Fig. 3A, 17:8-10, 17:39-56, 18:20-40, FIG. 11A.

Darnell further teaches that the server may present the content feeds to the user via "a web-based user interface" including "one or more web pages." Ex.1003 2:36-40, 4:23-25, 4:44-46. "In other words, the server system 104, including the feed reader user interface 116, provides a web-based content aggregation service. The server system 104 aggregates and stores content items in accordance with the user's content feed subscriptions." Ex.1003 4:66-5:3, Fig. 3A.

A POSA would have recognized that Darnell's Figure 3A contains five collections. Ex.1003 Ex.1002 ¶139. A POSA would also have recognized that Figure 3A illustrates the individual presentations in the "Sports" collection on the same webpage. *Id.* In addition, Darnell teaches that:

Some, but not necessarily all, content items displayed in expanded format include a link to the full content associated with those content items. The link may be activated by a user clicking on the headline in the content item, or by clicking on a link icon (not shown in FIGS. 3A-3D) displayed in the expanded format of a respective content item. ***Activation of the link typically causes the browser to open a new browser window or tab*** and to download and display the document (if any) located at the location (e.g., URL) specified by the link.

Ex.1003 8:51-59. A POSA would have been familiar with HTML and considered it obvious to display the linked content in the same webpage, rather than a new window or tab. Ex.1002 ¶140. Darnell also teaches that webpages can include frames—divisions of the page that each appear as a distinct webpage—and a POSA would have known that frames were a simple way to display multiple collections in a common webpage. *Id.* ¶141. Owens further illustrates this point with its Figure 5, showing the display of different audiovisual content, such as maps, weather and photos, on the same page as RSS items. *See* Ex.1004 Fig. 5 (annotated below); Ex.1002 ¶142.



**FIG. 5**

To the extent Patent Owner argues that Darnell only teaches RSS-sourced content, the combination of Darnell and Owens meets this limitation. In addition to the reasons provided in section VIII.A.1, a POSA would have considered it

obvious to combine Owens' disclosure of the aggregation of RSS-sourced data and non-RSS sourced data on a webpage with Darnell's aggregation system and web-based interface because a POSA would have known that content from sources other than RSS behaved indistinguishably from data those originated from an RSS feed and could easily have been obtained through other sources, including APIs. Ex.1002 ¶142. Because Darnell and Owens both teach aggregating and presenting content and feed data through a web-based interface, i.e., a webpage, the combination of Darnell and Owens teaches "aggregating each of the first, identified second, and third collections of presentations for delivery via the computer network using a common web page." *Id.*

**3. Claim 2.preamble: "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 by at least:"**

Darnell teaches a "computer readable storage medium storing one or more programs" for implementing the above discussed method. Ex.1003 1:47-58, Cl.

14. "The computer program product includes a computer readable storage medium and a computer program mechanism embedded therein." *Id.* 1:51-54. Darnell further teaches that the computer system includes "memory, one or more

processors, and one or more programs stored in the memory and configured for execution by the one or more processors.” Ex.1003 1:39-42.

**a. Claim 2.a-2.f:**

Claim limitations 2.a-2.f are identical to claim limitations 1.a-1.f; Darnell and Owens satisfy them as explained in Section VIII.A.2. Ex.1002 ¶143.

**4. Claim 3: “The 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”**

As a general rule, servers need not be limited to single computers. *See, e.g., 01 Communique Lab., Inc. v. LogMeIn, Inc.*, 687 F.3d 1292, 1297 (Fed. Cir. 2012). A POSA would have known that “server” may refer to either or both of software components that run a service, or hardware components on which the software runs. *See, e.g., SBJ IP Holdings I, LLC. v. Blockbuster Inc.*, 2011 WL 903194, \*20–\*21 (E.D. Tex. 2011). Darnell recognizes that its server can be “implemented on a distributed system of multiple computers.” Ex.1003 3:36-41; *see also id.* 17:29-38. Ex.1002 ¶144.

**a. Web server**

A POSA would have found it obvious that Darnell’s system included a web server because it discloses the ability to interact with web-based user interfaces. *See, e.g.,* Ex.1003 4:44-46 (“In some embodiments, the feed reader user interface 116 may be a web-based user interface. That is, the feed reader user interface 116

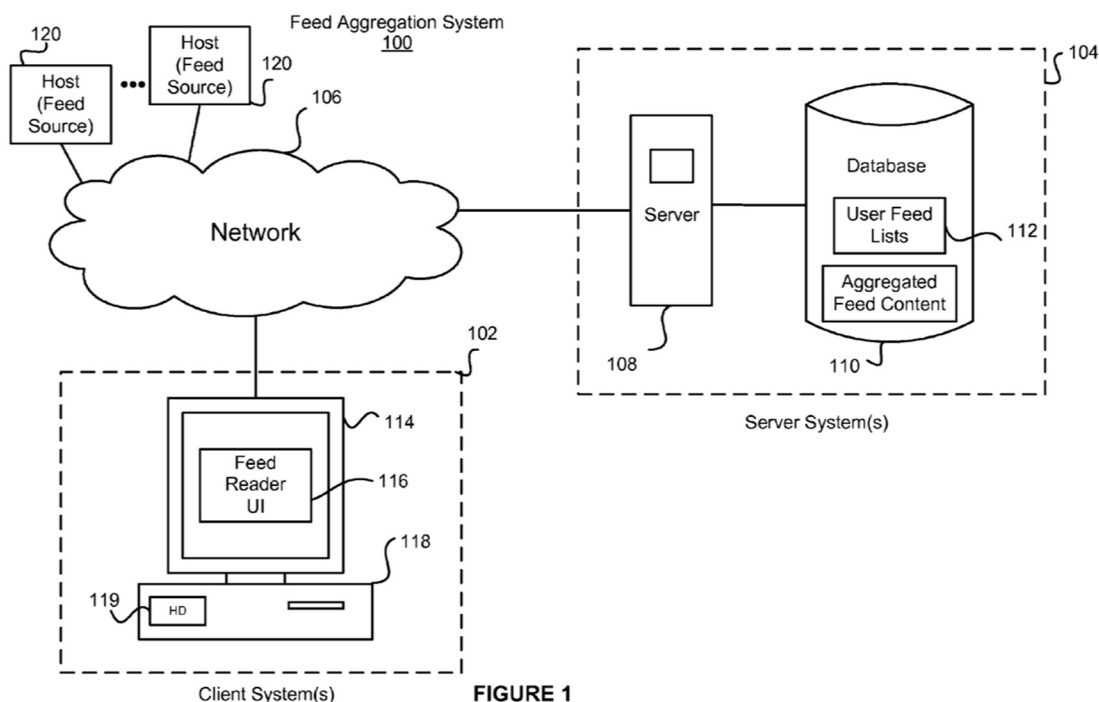
includes one or more web pages.”). Owens also teaches a web server. Ex.1004 FIG. 2 (disclosing “standard web server 16”); Ex.1002 ¶145.

**b. Database server**

The '273 Patent's database server contains information about which presentations to provide and stores metadata. Ex.1001 5:44-48 (“... when a user selects a category in selector 205, content server 34 may request database server 32 identify which presentations should be used to populate page 200 according to the selected category.”); Ex.1001 6:26-31 (“...users may be permitted to link presentations housed elsewhere in memory so as to be accessible to a computer 20 (FIG. 1) via network 40 (FIG. 1)—essentially registering them with database server 32 (FIG. 1).”); *see also id.* 7:32-56 (database server stores information about content, such as title, date, series information, and description), as well as feed identifier or access information; *id.* 6:24-31 (registering locations for presentations that are housed “elsewhere in memory”).

Darnell's teaches a “database server” because it describes a server and a database to populate pages. Ex.1002 ¶146; Ex.1003 3:9-10 (“[t]he server system 104 includes a server 108 and a database 110.”); *id.* 4:30-36 (“The feed reader user interface transmits a list of content feed subscriptions, or modifications to a list of content feed subscriptions, to the server system 104 for storage at the database 110.

The feed reader user interface 116 presents content items stored at the database 110 to the user based on the user's list of content feed subscriptions.”); *id.* FIG. 1.



### c. File server

The '273 Patent's file server contains data that can be transmitted to the user's computer. Ex.1001 5:28-32 (“[D]ownloading,’ as used herein, generally refers to a technique for transmitting data (e.g., an entire data file) between computers, such as between file server 36 (FIG. 1) and a computing device 22 (FIG. 1).”); *id.* 6:1-6 (“...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.”).

Darnell teaches computing devices that contain content that can be transmitted to the user's computer, and thus it would have been obvious to a POSA that it discloses "file servers." *See* Ex.1003 3:2-4 ("The server system 104 is coupled to one or more client systems 102 and to one or more hosts 120 (or "feed sources") by a network."); *id.* 3:8-14 ("The server system 104 accesses content feeds from the feed sources 120. The server system 104 includes a server 108 and a database 110. Server 108 serves as a front-end for the server system 104. Server 108, sometimes called a front end server, retrieves the content feeds from the feed sources 120, and also provides an interface between the server system 104 and the client systems 102"); Ex.1002 ¶147. Moreover, Darnell acknowledges that its server system can be divided or allocated between two or more servers. Ex.1003 3:36-41. Figure 2 illustrates that the database 110 contains both feeds and content; a POSA would have recognized that providing content to the client system is the file server's function. Ex.1002 ¶148.

**B. Ground II: Claims 1-3 were obvious in view of the combination of Gossweiler and Hammersley**

Gossweiler teaches a system of aggregating collections of presentations from various sources, including presentations uploaded by users, presentations submitted by other users, and system recommendations. However, although Gossweiler describes "subscriptions" to "channels" that can be updated, it does not expressly

teach the use of feeds, e.g. RSS feeds, as a way for presentations from other users to reach the system. Hammersley teaches developers how to implement feeds to share data, such as links to audiovisual presentations. A POSA at the time of the alleged invention would have understood that implementing feeds into Gossweiler’s system would have been an obvious and simple combination of prior art elements according to known methods to yield predictable results – webpages aggregating content from feeds and stored content. Ex.1002 ¶161.

**1. A POSA would have been motivated to combine Gossweiler and Hammersley**

Gossweiler teaches sharing and organizing data from disparate sources to present them in logical groups to facilitate browsing and viewing, including the use of “subscriptions” to “channels” corresponding to particular viewing topics. Ex.1005 2:48-3:25, 8:20-22, 11:58-12:6. Gossweiler’s references to “subscriptions” and “channels” would have strongly suggested the use of a syndication tool such as RSS, which a POSA would have known was the dominant technology used for syndicating online content. *See* Ex.1005 8:18-22 (“For example, a user can ‘subscribe’ to the Jon Stewart shelf and see what videos he recommends.”); *id.* 11:62-64 (channels); Ex.1002 ¶158. A POSA would have known that users “subscribe” to RSS feeds, and specific RSS feeds were called “channels.” Indeed, “channel” is a required element in the RSS 2.0 format; it



describes the RSS feed with information such as title and description. Ex.1006 26-30; Ex.1002 ¶158. As a result, a POSA would have understood Gossweiler’s references to “subscriptions” and “channels” as suggestive of using RSS feeds. Ex.1002 ¶¶158-162.

Further, Gossweiler is a Google patent, and it was well-known at the time the ’273 patent filing that Google had acquired YouTube. Ex.1005 cover page; Ex.1002 ¶159. In fact, Gossweiler discusses the relevance of his invention to YouTube which included a vast and constantly growing collection of video content. Ex.1005 4:29-38. A POSA would also have known that YouTube actually supported RSS feeds as of 2006, providing further motivation for a POSA to use RSS feeds to share video content. Ex. 1002 ¶159.

Hammersley is written for “developers looking to incorporate news feeds into artificially intelligent systems or build data-sharing applications across platforms.” Ex.1006 Preface. Data sharing, in particular content sharing, is a key focus of Gossweiler. Ex.1005 1:18-20 (“This document discusses *systems and methods for displaying and sharing media content and other objects* for television viewing”) (emphasis added). A POSA considering Gossweiler’s teachings would have been motivated to review references such as Hammersley to understand how syndication feeds—such as RSS—could facilitate the multimedia syndication Gossweiler describes. Ex.1002 ¶160. In particular, O’Reilly

programming books were well-known to software developers, and a POSA would naturally have looked to O'Reilly books—such as Hammersley—for guidance for syndicating content. *Id.*

A POSA would have understood that RSS could be used to augment or even implement specific features in Gossweiler. Ex.1002 ¶160. For instance, Gossweiler shares lists of recommended URLs between friends, and states “[i]f the ‘friend’ is actually a device associated with the recommending user, the URL may be added to a list of programs for the device, and the device or a main system may initiate downloads to the device, such as at a prescribed time each day.” Ex.1005 26:66-27:15. This arrangement, in which a URL is accessed on a daily basis to obtain a list of recommended content that is automatically downloaded, is the quintessential use case for RSS feeds. Ex.1002 ¶161. As a result, a POSA would have found it obvious that a proven technology such as RSS could be used to implement the type of system and features described in Gossweiler to produce to predictable result. *Id.*

**2. Claim 1.preamble: “A method for providing content via a computer network and computing system, the method comprising”**

Gossweiler teaches methods and systems for displaying and sharing media content (providing content). Ex.1005 1:18-20. Gossweiler’s computing system can include “a back-end component (e.g., as a data server), or [] a middle ware

component (e.g., an application server), or [] a front-end component (e.g., a client computer having a graphical user interface or a Web browser through which a user can interact with an implementation of the systems and techniques described here), or any combination of such back end, middleware, or front-end components” (a computing system). Ex.1005 33:37-44.

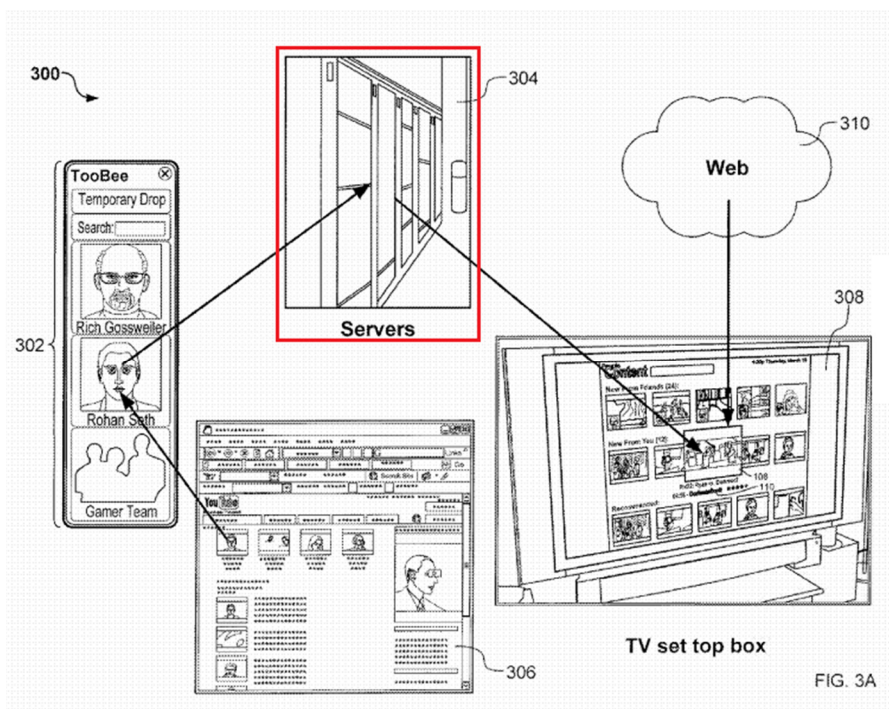
The components of the system are tied together by a computer network: they are “interconnected by any form or medium of digital data communication (e.g., a communication network)” for example, “a local area network (LAN), a wide area network (WAN), and the Internet” (a computer network). Ex.1005 33:44-49. Thus, Gossweiler teaches “[a] method for providing content via a computer network and computing system.” Ex.1002 ¶162.

**a. Claim 1.a/2.a: “storing presentation data that represents content of a first collection of one or more presentations using the computer system”**

As discussed above, “presentation data that represents content of a first collection” means “the data, or a portion of the data, of the audiovisual content itself within the first collection of presentations,” and the “first collection of one or more presentations” is “a collection of one or more presentations obtained independent of any feed.” Ex.1002 ¶163.

**(i) Petitioners' construction**

Gossweiler teaches a system with an “internet component” that includes a central server. Ex.1005 13:38-49; *see also* FIG. 3A (annotated at the central server):



Gossweiler further teaches that the servers shown at FIG. 3A “can also be supplemented with a binary storage system that actually can store media files.” *Id.* 14:29-31. A POSA would have recognized “media files” as including the “data of the audiovisual content.” Ex.1002 ¶¶163-65.

Gossweiler also teaches that media can be organized in the form of shelves. Annotated Figure 1B below shows three shelves, each of which a POSA would have recognized as a collection. Ex.1002 ¶166.

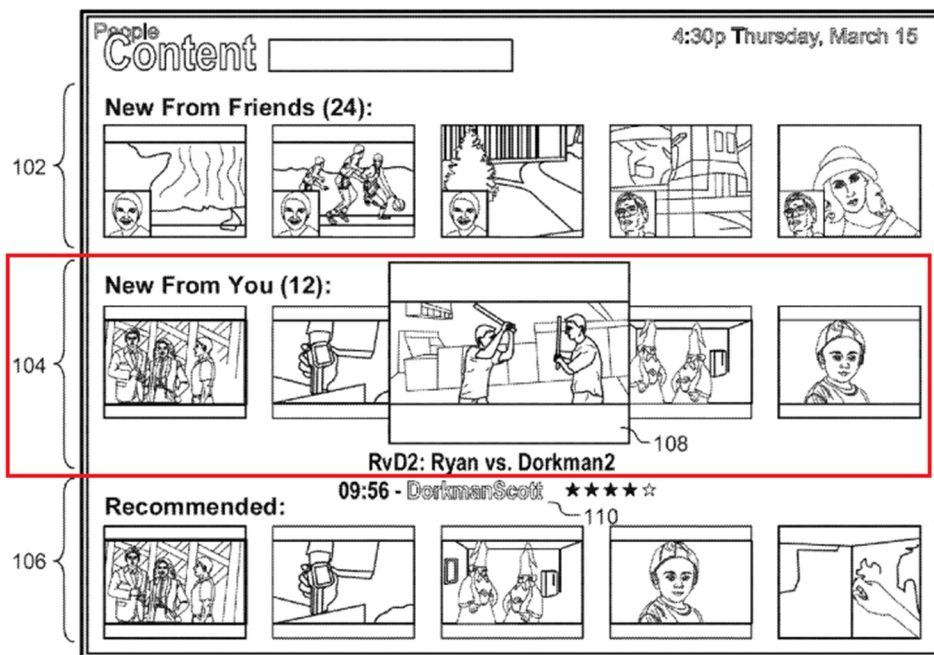


FIG. 1B

Gossweiler teaches that a user may upload content. Ex.1005 14:31-35 (“the related binary storage system may hold files that have been uploaded form [sic] client devices because they were not available elsewhere.”) In Gossweiler’s Figure 1B, the shelf designated 104 (highlighted above) includes content “the user himself provided.” Ex.1005 6:23-27. A POSA would have understood that this shelf could contain data uploaded by the user. *See, e.g., id.*, 14:31-35 (“system may hold files that have been uploaded form [sic] client devices because they were not available elsewhere”); Ex.1002 ¶167.

A POSA would have recognized that Gossweiler’s storage of a collection of user-uploaded presentations as “storing presentation data that represents content of

a first collection of one or more presentations using the computer system.”

Ex.1002 ¶168.

**(ii) Sling’s and Patent Owner’s Interpretations**

Patent Owner argues at the district court that titles meet this limitation.

Ex.1015 3. Sling did not construe this term in its IPR petition but contended that content “thumbnails” and presentation titles meet this limitation. Ex.1016 23.

Gossweiler’s shelf display includes “a horizontal row of still frames from the relevant content (audio content may show meta data about the audio file such as title, artist, and length).” Ex.1005 6:9-14. A POSA would have understood that still frames, like thumbnails, represent the underlying content of the audiovisual presentation, thus meeting Sling’s interpretation. In addition, Gossweiler stores titles, meeting Patent Owner’s interpretation. Ex.1005 6:9-14, 7:11-12, 12:51-56, 14:10-14.

**b. Claim 1.b/2.b: “storing data indicative of the first collection of presentations so as to be associated with the presentation data”;**

This term means “storing metadata describing or categorizing the underlying content of the first collection.” Gossweiler teaches that content may have associated metadata that describes it. Ex.1005 6:12-13 (“audio content may show meta data about the audio file such as title, artist, and length”); *id.* 16:37-39 (“For example, a particular program may include metadata that associates the program with a particular demographic group, such as retired females”). Gossweiler also

discloses other data “associated” with content, “such as the program length and a composite rating level the program has received from other users, a URL for the program or a web site associated with the program, and tags that have been attached to the program.” Ex.1005 7:15-20. To the extent that the data “indicative of the first collection of presentations” describes the collection as a whole, Gossweiler’s “tags” and “metadata associating the program with a particular demographic group” both indicate information about the collection as a whole as well as indicating information about individual presentations. Ex.1002 ¶169.

**(i) Patent Owner’s Interpretation**

Patent Owner advocates that “id numbers” for each presentation—unique identifiers—and the amount of time a viewer has watched a presentation both meet this limitation. Ex.1014 4-5. Gossweiler teaches using unique identifiers such as pointers or URLs, to access programs, and a POSA would have recognized that unique identifiers were necessary to access remotely stored programs. Ex.1005 16:3-19. Gossweiler also describes “DVR”- like functionality, allowing pause, fast-forward, and rewind, which require storing viewing time. Ex.1005 7:35-38.

**(ii) Sling’s Interpretation**

Sling argues in its petition that tags—“keywords that characterize the content item” meet this limitation. Ex.1016 27-28. Gossweiler’s tags and

“metadata associating the program with a particular demographic group” would meet this limitation.

**c. Claim 1.c/2.c:**

**(i) “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”**

While Gossweiler does not expressly disclose feeds, it describes “channels” wherein “users who like the style of [another] user may ... subscribe to the first user's ‘channel.’” Ex.1005 11:62-64; *see also id.* 3:7-9 (“representations of content recommended by the one or more friends can also be displayed in one or more shelves.”). Ex.1005 3:7-9, *id.* FIG. 1B (highlighting second collection):

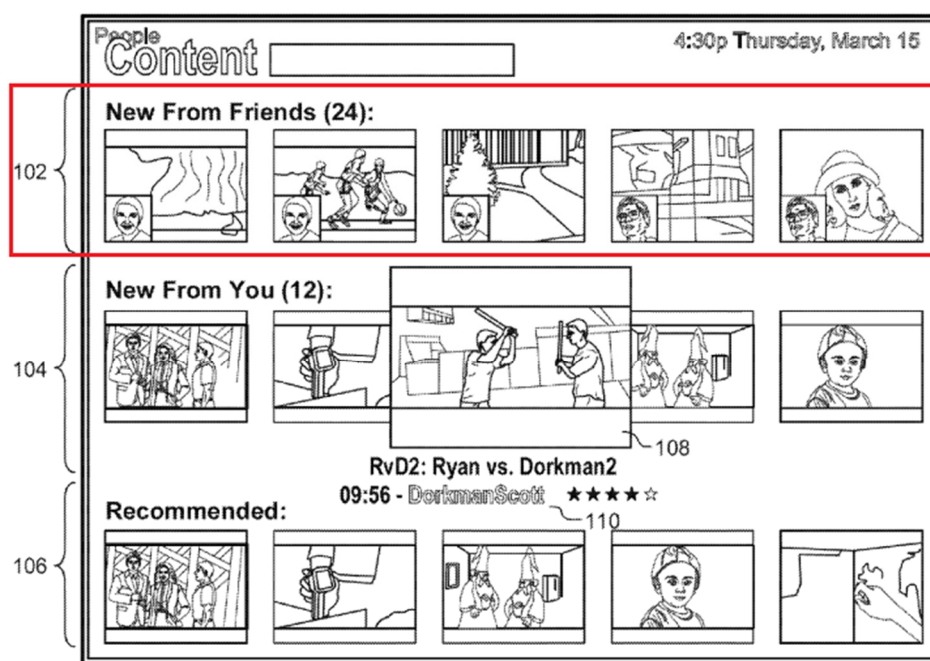


FIG. 1B



As described above, a POSA would have been motivated to combine Gossweiler's system with RSS feeds described in Hammersley to implement Gossweiler's "subscriptions" to friends' "channels." Gossweiler further contemplates presenting a user with "content as an option ... without the content having been previously downloaded to their device ... in such a situation, when sharing with a friend occurs, only links to the content may be created in a profile associated with the user ... accessed from a central system." Ex.1005 11:1-15. Hammersley explains—and a POSA would have understood—that RSS feeds typically do not contain audiovisual content<sup>3</sup>; instead, they contain links to content, along with metadata describing the content. Ex.1006 30-33. Therefore, a POSA would have understood that the RSS feeds, as described in Hammersley, were an obvious way to implement subscriptions to feeds from friends, as Gossweiler contemplates. Ex.1002 ¶171.

Hammersley expressly teaches using RSS feeds to provide information about updated media files in a shared directory, constituting a collection. Ex.1006 198-200. To implement this application, Hammersley uses a simple common gateway interface ("CGI") script to generate a feed, which a POSA would have

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<sup>3</sup> As described above, while RSS feeds can encode small graphical files, it would be very out of the ordinary, and contrary to the purpose of "feeds," to include an entire audiovisual file in the body of a feed.

known how to modify to include metadata regarding the files. Ex.1002 ¶172.

Similarly, Hammersley teaches that feed documents are typically accessible as URL links. Ex.1006 19. It would have been obvious to a POSA that Hammersley's feeds would have met Gossweiler's objective for easy sharing of media files and use of URL links (*i.e.*, feed data). Ex.1002 ¶¶171-72; Ex.1005 10:10-27. The combined system would thus include the identification and storage of feeds (storing feed data that represents a collection of one or more feeds using the computer system), where the feeds identify presentations recommended by friends (wherein each of the feeds identifies a corresponding second collection of one or more presentations being accessible via the computer network). Ex.1002 ¶172.

**(ii) “and includes no data representing content of the second collection of presentations”**

**(a) Petitioners' Construction**

As discussed above, “data representing content of the second collection of presentations” should be construed as “the data, or a portion of the data of the audiovisual content itself within the second collection of presentations.” A POSA would have understood that feeds, including RSS 2.0 feeds—the only feed the '273 Patent discloses—are simply text documents that generally contain links and metadata without any audiovisual content. Ex.1002 ¶173. A POSA would thus

have understood that the feeds would generally include no data representing content of the second collection of presentations. *Id.*

**(b) Sling's Interpretation**

The combination of Gossweiler and Hammersley also meets this limitation under Sling's interpretation advanced in its IPR petition. This is because the combination of Gossweiler and Hammersley would store links to RSS channels, and a POSA would have known that links to RSS channels provide no data representing content, which is Sling's interpretation for this term. Ex.1016 32.

**d. Claim 1.d/2.d: "automatically and periodically accessing each of the feeds to identify each of the corresponding second collection of presentations, using the computer system"**

A POSA at the time of the alleged invention of the '273 Patent would have known that feed formats, such as RSS, require the feed-reading application to reload the page in order to access the updates rather than providing the updates without any action from the user or the user's computer. Ex.1002 ¶175. A POSA would have understood that "subscribing" to a feed means automatically and periodically accessing it to check for updates. *Id.* The '273 Patent admits that RSS readers, which were known in the art, typically "check[] the user's subscribed feeds at predetermined intervals." Ex.1001 11:10-13. The '273 Patent also admits that periodically checking a feed for updated content was conventional. Ex.1001 11:63-12:1.

Hammersley also contemplates periodic downloads of the feeds; in fact, it explains how often a user should set a reader to request the feed but warns that requesting a feed too frequently could be a waste of bandwidth. *See, e.g.*, Ex.1006 152 (in section “How Often to Read the Feed”, noting that readers should only download every 60 minutes absent specific instruction to the contrary), 29-30 (noting that RSS 2.0 permits authors to instruct readers when not to retrieve an updated feed); Ex.1002 ¶176.

**e. Claim 1.e/2.e: “storing data associated with a third collection of one or more presentations”**

As described in limitation 1.a, Gossweiler’s “internet component” includes a central server that “can also be supplemented with a binary storage system that actually can store media files.” Ex.1005 13:38-49, 14:29-31. A POSA would have recognized “media files” as “data representing content.” Ex.1002 ¶¶163-65.

As also described in limitation 1.a, Gossweiler teaches organizing content by “shelves.” Annotated Figure 1B shows a display of three shelves:

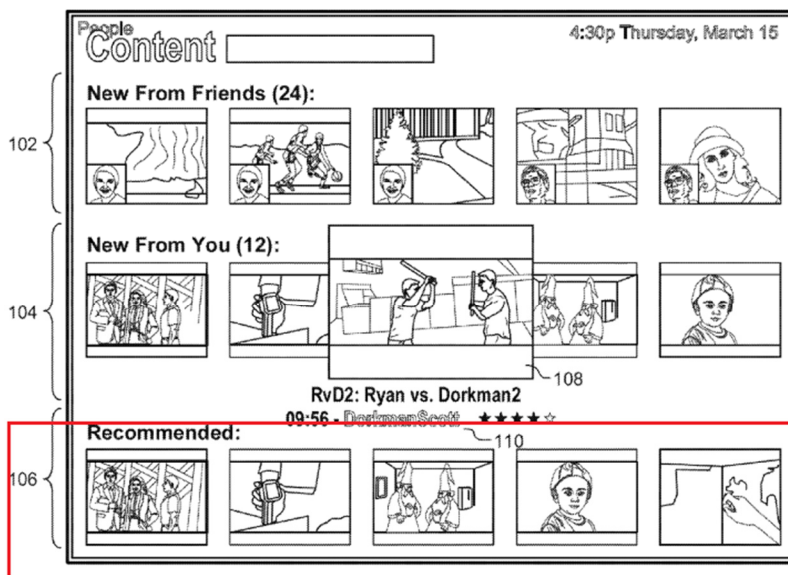


FIG. 1B

Row 104 contains the “first collection” of limitation 1.a, described above, and row 102 contains the “second collection” of limitation 1.b, described above. Row 106 (highlighted) illustrates the “third collection.” Gossweiler teaches additional information stored with respect to “recommended” presentations, such as data from “content analysis” or “persistent searches,” which POSA would have recognized as “data associated with the third collection.” Ex.1005 6:8-10; Ex.1002 ¶178. A POSA would thus have recognized that Gossweiler discloses “storing data associated with a third collection of one or more presentations.” Ex.1002 ¶178.

### (i) Patent Owner’s Interpretation

Patent Owner has interpreted this limitation as storing data associated with named collections. Ex.1015 11-12. Gossweiler thus meets Patent Owner’s interpretation under the same analysis, because a POSA would have understood

that stored data from Gossweiler's content analysis or persistent searches that triggered the recommendations would be data "associated" with the third collection.

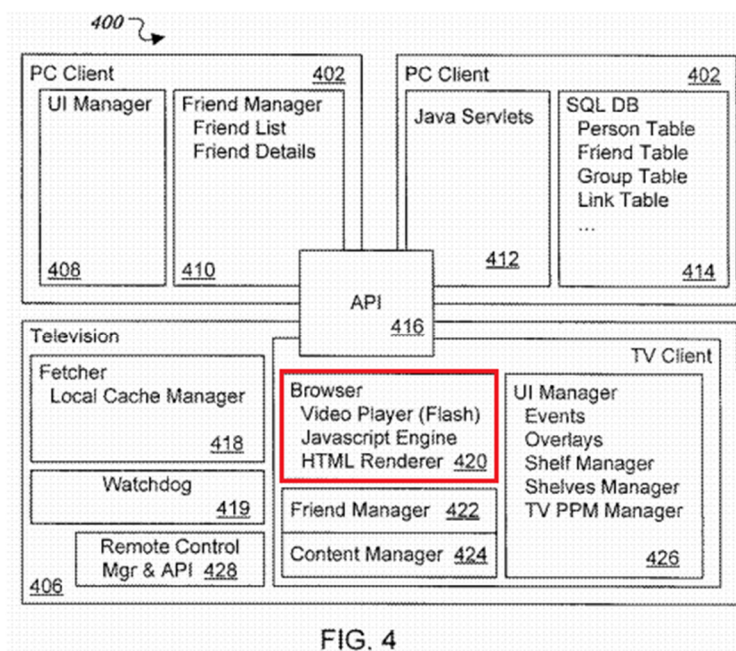
**(ii) Sling's Interpretation**

In its petition, Sling interprets this limitation as storing data associated with a collection separate from the "second collection" but also obtained through a feed. Ex.1016 37. Hammersley teaches how to implement feeds for more than a dozen use cases, including automatically generated logfiles. Ex.1006 179-217. A POSA would have known that machine-based recommendations could be delivered via feed, and it would have been obvious to a POSA to use a script to generate feeds that included automatically generated metadata.

**f. Claim 1.f/2.f: "aggregating each of the first, identified second, and third collections of presentations for delivery via the computer network using a common web page."**

Gossweiler teaches aggregating the three collections of presentations listed in limitations 1.a (user-uploaded presentations), 1.c (presentations obtained from friends), and 1.e (recommendations). Ex.1005 FIG. 1B, 6:9-14, 6:23-32, 6:33-48.

Gossweiler also teaches a common webpage for delivering the three collections through a network, stating that content may be navigated and presented through "a player as part of a web browser 420." See Ex.1005 22:45-46, Fig. 4 (annotated):



Ex.1002 ¶179.

3. **Claim 2.preamble: “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 by at least”**

To the extent the preamble is limiting, Gossweiler teaches it. Ex.1002 ¶180.

Gossweiler teaches a computer-readable medium including instructions for its method. Ex.1005 30:63-31:3 (disclosing a computer program in a computer- or machine-readable medium). Gossweiler also teaches an interconnected “processor” and “memory.” Ex.1005 30:15-34. Gossweiler further teaches that the processor “can process instructions for execution within the computing device.” *Id.* 30:37-41.

**a. Claim 2.a-2.f:**

Claims 2.a-2.f are identical to claims 1.a-1.f. As such, Gossweiler and Hammersley teach them for the same reasons as explained in Section VIII.B.2. Ex.1002 ¶181.

**4. Claim 3: “The 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.”**

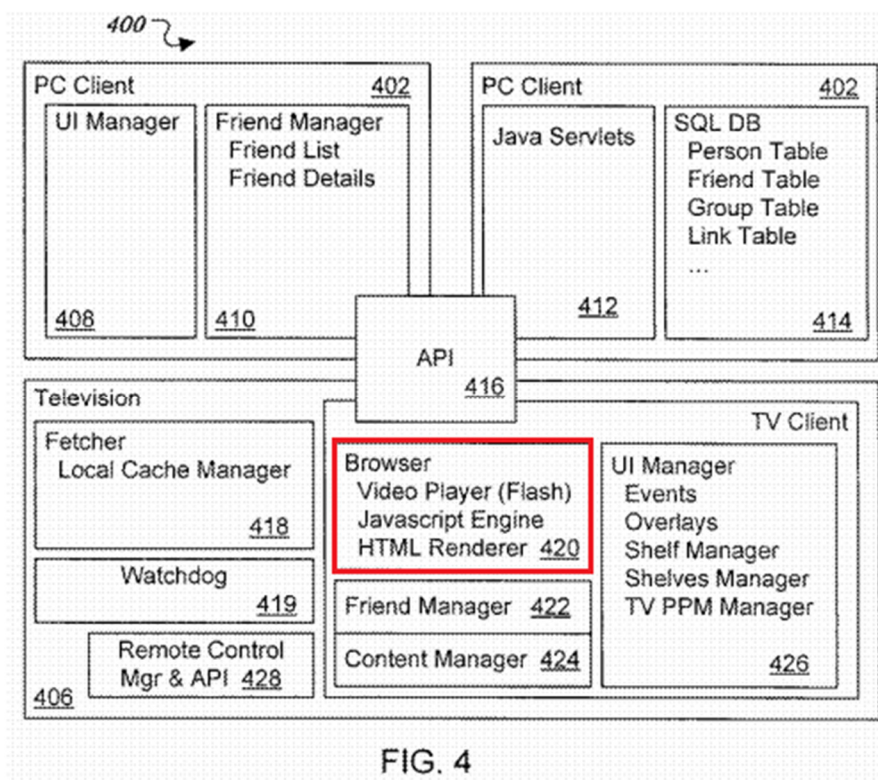
Gossweiler teaches each of at least one webserver, at least one database server, and at least one file server.

**a. Web server**

The plain meaning of “web server” is a server that distributes webpages to client systems and devices. Ex.1002 ¶182. The ’273 Patent also describes a “web server” as a “content server” and states that a content server may receive a request from a user for a page “in a conventional manner” and also provide pages to the user. *Id.*; Ex.1001 4:59, 5:38-43.

A POSA would have found it obvious that Gossweiler includes a web server because Gossweiler’s content is navigated and presented through “a player as part of a web browser 420.” *See* Ex.1005 22:45-46, Fig. 4 (annotated below), Ex.1002 ¶¶182-83:





#### b. Database server

The '273 Patent's database server stores metadata, such as title, date, series information, and description, as well as other functions. Ex.1001 7:32-56; Ex.1002 ¶185.

A POSA would have found it obvious that Gossweiler teaches this limitation because it stores metadata about its content, i.e., presentations. Gossweiler can present still frames from video (Ex.1005 5:63-67), metadata about audio files such as "title, artist, and length" (*id.* 6:9-14), and demographic information associated with particular programs (*id.* 16:37-39). A POSA would have recognized that this

data must be stored, meeting the '273 Patent's functional description of a "database server." Ex.1002 ¶186.

**c. File server**

The '273 Patent's file server contains data that is transmitted to the user's computer. Ex.1001 5:28-32 ("downloading," as used herein, generally refers to a technique for transmitting data (e.g., an entire data file) between computers, such as between file server 36 (FIG. 1) and a computing device 22 (FIG. 1)."); *id.* 6:1-6 ("... 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.").

Gossweiler teaches this limitation. *See, e.g.*, Ex.1005 11:3-6 (streaming presentations), 14:29-35 (storage of media files in "binary storage"), 16:3-8 (an "audio-visual content database from which the system can fetch "audio-visual content for programs"). Ex.1002 ¶188.

**IX. CONCLUSION**

Claims 1-3 of the '273 Patent recite unpatentable subject matter. Petitioner requests *inter partes* review and cancellation of these claims.

Dated: October 11, 2019

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Attorneys for Petitioners

**CERTIFICATION OF WORD COUNT 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 for the foregoing *Petition for Inter Partes Review* of U.S. Patent No. 9,721,273 totals 13,636, excluding the parts exempted by 37 C.F.R. § 42.24(a). Accordingly, this Petition is under the word count limit of 14,000 words.

This word count was calculated by using the built-in word-count tool in Microsoft Word 2016, the software used to prepare the document.

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## CERTIFICATE OF SERVICE

The undersigned hereby certifies that a true copy of the foregoing PETITION FOR *INTER PARTES* REVIEW OF U.S. PATENT NO. 9,721,273 and supporting materials (CD of Exhibits 1001-1020 and Powers of Attorney) have been served this 11th day of October 2019, by FedEx® delivery service on Patent Owner at the correspondence address for the attorney of record for the '273 Patent shown in USPTO PAIR:

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