

Petition for *Inter Partes* Review of
U.S. Patent No. 10,839,427 B2

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

META PLATFORMS, INC.
Petitioner

v.

MOBILE DATA TECHNOLOGIES, INC.,
Patent Owner

Case IPR2024-00251
U.S. Patent No. 10,839,427 B2
Issue Date: November 17, 2020

Title: METHOD, APPARATUS AND SYSTEM FOR MANAGEMENT OF
INFORMATION CONTENT FOR ENHANCED ACCESSIBILITY OVER
WIRELESS COMMUNICATION NETWORKS

**PETITION FOR *INTER PARTES* REVIEW
OF U.S. PATENT NO. 10,839,427 B2**

Table of Contents

	Page
I. MANDATORY NOTICES UNDER §42.8(A)(1)	1
A. Real Party-In-Interest under §42.8.(b)(1).....	1
B. Related Matters under §42.8(b)(2)	1
C. Lead and Back-Up Counsel under §42.8(b)(3)	1
D. Service Information	2
II. FEE PAYMENT	2
III. REQUIREMENTS UNDER §§ 42.104 AND 42.108 AND CONSIDERATIONS UNDER §§ 314(A) AND 325(D).....	2
A. Grounds for Standing	2
B. Identification of Challenge and Statement of Precise Relief Requested	2
C. Considerations Under §§ 314(a) and 325(d).....	3
IV. OVERVIEW OF THE PATENT.....	5
A. Level of Ordinary Skill	5
B. Specification Overview	6
V. CLAIM CONSTRUCTION	8
VI. THE CHALLENGED CLAIMS ARE UNPATENTABLE.....	9
A. Overview of Grounds	9
B. Prior Art Status of Relied-Upon References	10
C. Ground 1: Claims 1-3 and 5-9 Are Obvious Over Neibauer In View Of Cheng.....	11
1. Independent Claim 1	11

Table of Contents
(continued)

Page

(a)	“providing content management resources at a first uniform resource locator hosted at a first set of one or more servers and accessible to a user of the data communication network, the content management resources being configured to permit the user to designate data from one or more data sources external to the first set of one or more servers;” (1[a])	13
(b)	“uploading external data to a second set of one or more servers for use in the data communication network;” (1[b])	21
(c)	“reformatting the external data for mobile device use;” (1[c])	21
(d)	“automatically generating mobile resources at a location different from the first uniform resource locator, the mobile resources being accessible independent of the content management resources via one or more mobile devices, the mobile resources automatically including the reformatted external data from a third set of one or more servers in the data communication network.” (1[d])	32
2.	Claim 2: “The method of claim 1 wherein the second set of one or more servers and the third set of one or more servers are the same.”	41
3.	Claim 3: “The method of claim 1 wherein at least one of the servers in the second set of servers is also one of the servers in the third set of one or more servers.”	41
4.	Claim 5: “The method of claim 1 wherein at least one of the one or more external data sources comprises a file source.”	42
5.	Claim 6: “The method of claim 1 wherein at least one of the one or more external data sources comprises a device-captured data source.”	42

Table of Contents
(continued)

	Page
6. Claim 7: “The method of claim 6 wherein device-captured data from the device-captured data source comprises one or more digital photographs.”	42
7. Claim 8: “The method of claim 1 wherein the content management resources allow the user to select the one or more external data sources from a listing of a plurality of external data sources, and wherein the mobile resources include data from user-selected ones of the plurality of external data sources but do not include data from ones of the plurality of external data sources not selected by the user.”	43
8. Claim 9: “The method of claim 1 wherein the content management resources permit the user to enter a message, and wherein the mobile resources automatically include the entered message.”	45
D. Ground 2: Claim 4 Is Obvious Over Ground 1 Prior Art In View Of Balabine.....	46
1. Claim 4: “The method of claim 1 wherein at least one of the one or more external data sources comprises a database source.”	46
E. Grounds 3-4: Obviousness of Claims 1, 4-9 in Further View of Yates	51
VII. CONCLUSION.....	57
CERTIFICATE OF SERVICE	60

Petition for *Inter Partes* Review of
U.S. Patent No. 10,839,427 B2

List of Exhibits

Exhibit No.	Description of Document
1001	U.S. Patent No. 10,839,427 B2 to David Walker Harper et al. (filed February 6, 2018, issued November 17, 2020) (“427” or “427 patent”)
1002	Declaration of Vijay K. Madiseti, Ph.D. (“Madiseti”)
1003	Excerpts from Alan Neibauer, <i>How to Do Everything With Yahoo!</i> (2000) (“Neibauer”)
1004	<i>RESERVED</i>
1005	U.S. Patent No. 7,574,486 B1 to Yin Cheng et al. (filed November 8, 2000, issued August 11, 2009) (“Cheng”)
1006	U.S. Patent No. 6,434,403 B1 to Michiel R. Ausems et al. (filed February 19, 1999, issued August 13, 2002) (“Ausems”)
1007-1011	<i>RESERVED</i>
1012	Excerpts from Uwe Hansmann et al., <i>Pervasive Computing Handbook</i> (2001) (“Hansmann”)
1013	Excerpts from David Fox & Troy Downing, <i>HTML Web Publisher’s Construction Kit</i> (1995) (“Fox”)
1014	<i>RESERVED</i>
1015	U.S. Patent No. 5,937,406 to Igor V. Balabine et al. (filed January 31, 1997, issued August 10, 1999) (“Balabine”)
1016	U.S. Patent No. 6,167,438 to David J. Yates et al. (filed May 22, 1997, issued December 26, 2000) (“Yates”)
1017-1021	<i>RESERVED</i>

Petition for *Inter Partes* Review of
U.S. Patent No. 10,839,427 B2

List of Exhibits

Exhibit No.	Description of Document
1022	File history of U.S. Patent No. 10,839,427 B2
1023	<i>RESERVED</i>
1024	Excerpts of file history of <i>Inter Partes</i> Reexamination of U.S. Patent No. 8,135,801 B2
1025	Joint Claim Construction Statement, Dkt. 51, <i>Mobile Data Technologies LLC v. Meta Platforms, Inc.</i> , Case No.7:22-cv-00244-ADA-DTG (W.D. Tex. filed September 13, 2023)
1026	Declaration of Sylvia D. Hall-Ellis, Ph.D. (“Hall-Ellis”)
1027	Proof of Service of Complaint

I. MANDATORY NOTICES UNDER §42.8(A)(1)

A. Real Party-In-Interest under §42.8.(b)(1)

Meta Platforms, Inc. is the real party-in-interest to this IPR petition.

B. Related Matters under §42.8(b)(2)

The '427 patent is the subject of pending litigation involving Petitioner:
Mobile Data Technologies LLC v. Meta Platforms, Inc., Case No.7:22-cv-00244-
ADA-DTG (W.D. Tex.). Petitioner was served on December 6, 2022. (EX1027.)

C. Lead and Back-Up Counsel under §42.8(b)(3)

Petitioner provides the following designation of counsel.

LEAD COUNSEL	BACK-UP COUNSEL
Heidi L. Keefe (Reg. No. 40,673) hkeefe@cooley.com COOLEY LLP ATTN: Patent Group 1299 Pennsylvania Ave. NW, Suite 700 Washington, DC 20004 Tel: (650) 843-5001 Fax: (650) 849-7400	Phillip E. Morton (Reg. No. 57,835) pmorton@cooley.com COOLEY LLP ATTN: Patent Group 1299 Pennsylvania Ave. NW, Suite 700 Washington D.C. 20004 Tel: (202) 728-7055 Fax: (202) 842-7899
	Andrew C. Mace (Reg. No. 63,342) amace@cooley.com COOLEY LLP ATTN: Patent Group 1299 Pennsylvania Ave. NW, Suite 700 Washington D.C. 20004 Tel: (650) 843-5287 Fax: (650) 849-7400
	Mark R. Weinstein (Admission <i>pro hac vice</i> to be requested)

Petition for *Inter Partes* Review of
U.S. Patent No. 10,839,427 B2

LEAD COUNSEL	BACK-UP COUNSEL
	mweinstein@cooley.com COOLEY LLP ATTN: Patent Group 1299 Pennsylvania Avenue NW Suite 700 Washington D.C. 20004 Tel: (650) 843-5007 Fax: (650) 849-7400

D. Service Information

This Petition is being served by Federal Express to the attorney of record for the '427 patent, 31825 - RYAN, MASON & LEWIS, LLP, 48 South Service Road, Suite 100, Melville, NY 11747. Petitioner consents to electronic service at the addresses provided above for lead and back-up counsel.

II. FEE PAYMENT

Petitioner requests review of 9 claims, with a \$41,500 payment.

**III. REQUIREMENTS UNDER §§ 42.104 AND 42.108 AND
CONSIDERATIONS UNDER §§ 314(A) AND 325(D)**

A. Grounds for Standing

Petitioner certifies that the '427 patent is available for IPR and that Petitioner is not barred or otherwise estopped.

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

Petitioner requests IPR institution based on:

Petition for *Inter Partes* Review of
U.S. Patent No. 10,839,427 B2

Ground	Claims	Basis for Challenge under §103
1	1-3, 5-9	Neibauer (EX1003), Cheng (EX1005)
2	4	Ground 1 Prior Art + Balabine (EX1015)
4	1-3, 5-9	Ground 1 Prior Art + Yates (EX1016)
5	4	Ground 2 Prior Art + Yates

Submitted with this Petition is the Declaration of Vijay K. Madiseti (EX1002) (“Madiseti”), a qualified technical expert. (EX1002, ¶¶1-11, Ex. A.)

C. Considerations Under §§ 314(a) and 325(d)

§314(a): The *General Plastic* factors are not relevant as this is the first and only IPR petition filed by Petitioner with respect to the ’427 patent.

Nor do the *Fintiv* factors support discretionary denial under §314(a). The pending litigation against Petitioner is in relatively early stages, with no substantive discovery having taken place to date. Nevertheless, to allay concerns over duplication of efforts, Petitioner represents that, in the event of institution, it will not pursue in litigation any invalidity defense that was or could have been raised in IPR.

§325(d): The two-part *Advanced Bionics* framework considers: **(1)** whether the same or substantially the same art was previously presented to the Office and if so **(2)** whether Petitioner has demonstrated that the Examiner erred in a manner material to the patentability of challenged claims. *Advanced Bionics* does not apply

Petition for *Inter Partes* Review of
U.S. Patent No. 10,839,427 B2

to Balabine (**EX1015**) and Yates (**EX1016**), as they were not presented during prosecution of the '427 patent.

But two relied-on references were considered during prosecution – Neibauer (**EX1003**) and Cheng (**EX1005**). But the sole mention of these references during prosecution was their inclusion on Information Disclosure Statements filed by the Applicants that were considered by the Examiner. (EX1022, 00289 & 00325 (excerpts of Neibauer), 00302 (Cheng).) These references were cited along with hundreds of other prior art references cited during prosecution.

Petitioner respectfully submits that the Examiner's consideration of Neibauer and Cheng does not raise § 325(d) issues in light of the uneventful prosecution history. An initial Office Action issued on February 3, 2020, rejecting claims 1-20 based on double-patenting grounds based on an earlier patent in the same family, U.S. Patent No. 9,922,348 B2. (EX1022, 00268-00270.) No rejections were entered based on prior art. The applicants responded by cancelling all original claims proposing new claims 21-42. (EX1022, 00341-00347.)

The Examiner subsequently issued a Notice of Allowance. (EX1022, 00348-00354.) In his statement of reasons for allowance, the Examiner identified U.S. Patent Application Pub. No. 2013/0254314 A1 to Edmond Chow as the closest prior

art,¹ but stated that it did not disclose the “**uploading**,” “**reformatting**,” and “**automatically generating**” limitations in the independent claims. (EX1022, 00357.) Chow was not otherwise mentioned during prosecution.

Petitioner respectfully submits that the Examiner materially erred in failing to rely on Neibauer and Cheng to reject the challenged claims. These references confirm that all limitations of the challenged claims were disclosed by and rendered obvious in view of the prior art— including the uploading, reformatting, and automatically generating limitations that the Examiner found missing from Chow. (EX1002, ¶¶97-125.) In fact, the PTO actually cited and relied on both Neibauer and Cheng in the reexamination of U.S. Patent No. 8,135,801 B2, a parent in the same family as the ’427 patent, which resulted in cancellation of all claims of that patent. (EX1024, 004 (PTAB decision affirming prior art rejections based on Cheng and Neibauer), 0018-0019 (Federal Circuit affirmance).)

IV. OVERVIEW OF THE PATENT

A. Level of Ordinary Skill

A person of ordinary skill would have possessed a bachelor’s degree in electrical engineering, computer science, or similar field, with two years of experience in developing and implementing network-based computer systems that

¹ The Examiner’s statement of reasons for allowance erroneously identified the inventor on U.S. Patent Application Pub. No. 2013/0254314 as “KIM et al” (EX1022, 00353), but the correct inventor was Edmond Chow. (EX1022, 00355.)

interact with mobile devices, such as systems for storing and retrieving information over the Internet or communicating using the Web using wireless mobile devices.

(EX1002, ¶¶14-18.)

B. Specification Overview

In one embodiment, the '427 patent describes a technique in which a user, through a website referred to in the patent as a *content management* website, can activate mobile information channels (or M-channels) for a *mobile* website. “The content management site permits the user to enter information in accordance with a specified format comprising a plurality of selectable mobile information channels each corresponding to an information category. The mobile information channels are also referred to as ‘M-channels’ herein....” ('427, 5:35-44.) Figure 8 shows an exemplary page of a content management website that can be used to activate mobile information channels for a mobile website:

FIG. 8

Welcome username. If you are not username. [click here](#) | [Logout](#)

WEB SITE LOGO

LOGOUT

ADMINISTRATION

MY WINKSITE ACCOUNT

METRICS

USERNAME:
username
MEMBER SINCE:
DD Mon YYYY 00:00 AM/PM
NUMBER OF LOGINS:
X
LAST LOGIN:
DD Mon YYYY 00:00 AM/PM

MOBILE SITES

01. ancillary mobile site name
02. ancillary mobile site name
03. ancillary mobile site name

HOME **MY WINKSITE** **DIRECTORY** **FUN & GAMES** **HELP**

[Start Page](#) > [Main Menu \(ancillary mobile site name\)](#)

MAIN MENU

MOBILE SITE INFORMATION

Here you can manage mobile site content for "ancillary mobile site name"

ancillary mobile site name | [edit](#)
Your site can be viewed on the mobile Internet at the following address:
<http://www.sitedomain.com/username/usercreateddirectory> | [announce site](#)
Site Status: [Online](#) Password Protection: [Off](#)

PREVIEW SITE ☐ 812

username's M-Channels (mobile content and communication channels)

D About	manage about content	☒ ON
D Announcements	manage announcement content	☐ OFF
D Core	manage core content	☐ OFF
D Agenda	manage agenda content	☐ OFF
D Notes	manage notes content	☒ ON
D Zine	manage zine content	☐ OFF
D Rant&Rave	manage rant&rave content	☐ OFF
D Surveys	manage surveys content	☐ OFF
D Chat	manage chat content	☒ ON
D Journal	manage journal content	☐ OFF
D Guestbook	manage guestbook content	☐ OFF
D Links	manage links content	☐ OFF
D M-Card	manage m-card content	☒ ON

Icon Legend:
☒ ON : M-Channel is visible to site visitors.
☐ OFF : M-Channel is not visible to site visitors.
Click on the icon in the same row as the M-Channel you wish to turn On or Off.

ALERT: DELETING A SITE CAN NOT BE UNDONE **DELETE SITE** ☐ 810

[Start Page](#) > [Main Menu \(ancillary mobile site name\)](#)

© Copyright 2001-2002 WINK Interactive, LLC. All Rights Reserved.

(’427, Fig. 8.) “FIG. 8 shows an example of a main menu page of the content management site for managing a given mobile site associated with a system user.”

(’427, 14:1-3.) Figure 8, as shown, includes mobile website information **806** and M-channel information **808** making mobile information channels visible on the mobile website. (’427, Fig. 8, 14:1-11.) These M-channels are “utilized at the content management site... to facilitate the generation of mobile sites and the management of associated content.” (’427, 8:30-33.) Mobile information channels thus “allow unsophisticated users to easily and efficiently author message data or

other types of information content to be made accessible via a collaborative workspace, a data mailbox, a collaborative community, or other type of mobile site or portion thereof generated or otherwise managed in the system **10**.” (’427, 8:33-39; *see also id.*, 8:49-63 (listing exemplary M-channels).)

Information and selections provided by the user through the content management website are “processed to generate a mobile web site comprising information content that is accessible via one or more of the mobile devices **15** over the wireless network **12** of the system **10**.” (’427, 5:44-47.) An example screen display from a mobile website is shown in Figure 24a (at right). (’427, 3:43-45,

15:30-33.) In one embodiment, a mobile device for use with the alleged invention may be “a web-enabled mobile phone,” but the patent “does not require use of any particular type or configuration of mobile device.” (’427, 15:21-25.)

V. CLAIM CONSTRUCTION

Petitioner does not believe express claim construction is necessary at this time. As discussed in **Part VI** below, the parties to the pending litigation have proposed certain constructions for terms recited in the challenged claims. (EX1025.) The prior art cited herein, as demonstrated below, renders the challenged claims obvious under each of the proposed constructions or under any other reasonable

FIG. 24a

WINKsite	
WINKsite 1 About (OK) 2 Directory (OK) 3 Go to... (OK) 4 Sign Up (OK) 5 Help (OK)	
----	Login

construction. Petitioner therefore respectfully submits that, for purposes of this IPR, express constructions are not required.

VI. THE CHALLENGED CLAIMS ARE UNPATENTABLE

A. Overview of Grounds

The challenged claims attempt to lay claim to techniques for allowing users to share information with other mobile device users over the Internet, in which the information is converted into a format suitable for viewing on a mobile device. But these techniques were well-known before the '427 patent.

All grounds rely on Neibauer (**EX1003**), which describes features of the popular Yahoo! website and service. (EX1002, ¶¶48-50.) Neibauer discloses a feature called Yahoo! Clubs that allows users to create web-based communities for users to share information through club photo sharing and other features. (EX1002, ¶51; Neibauer, pp.477-480.) Neibauer also discloses the ability to access Yahoo! services via mobile devices such as cell phones. (EX1002, ¶56; Neibauer, pp.166-174.) Neibauer is a strong reference that discloses the majority of the claim limitations and, as explained in **Part III.C** above, was relied upon by the PTO in a reexamination rejecting all claims of a patent in the same family.

All grounds also cite to Cheng (**EX1005**), which demonstrates why it would have been obvious to provide the Yahoo! Clubs features from Neibauer to users via mobile devices. (EX1002, ¶¶59-60.) Cheng describes a proxy server that can

convert any existing (non-mobile) webpage for use on a mobile device, including images on the webpage. (EX1002, ¶¶61-65, 98-106.) As noted in **Part III.C** above, Cheng was also cited in the successful reexamination of a parent to the '427 patent.

The additional references are cited primarily for ancillary features or to account for potential claim construction positions that may arise. Balabine (EX1015) is cited solely in Ground 2 to disclose the database data source recited in dependent claim 4. (EX1002, ¶¶68, 133.) Yates (EX1016) is cited in Grounds 3-4 solely to account for a potential narrow construction of a limitation recited in limitation [d] of claim 1. (EX1002, ¶¶74, 143.) If the Board chooses not to adopt that construction here, it need not consider Grounds 3-4.

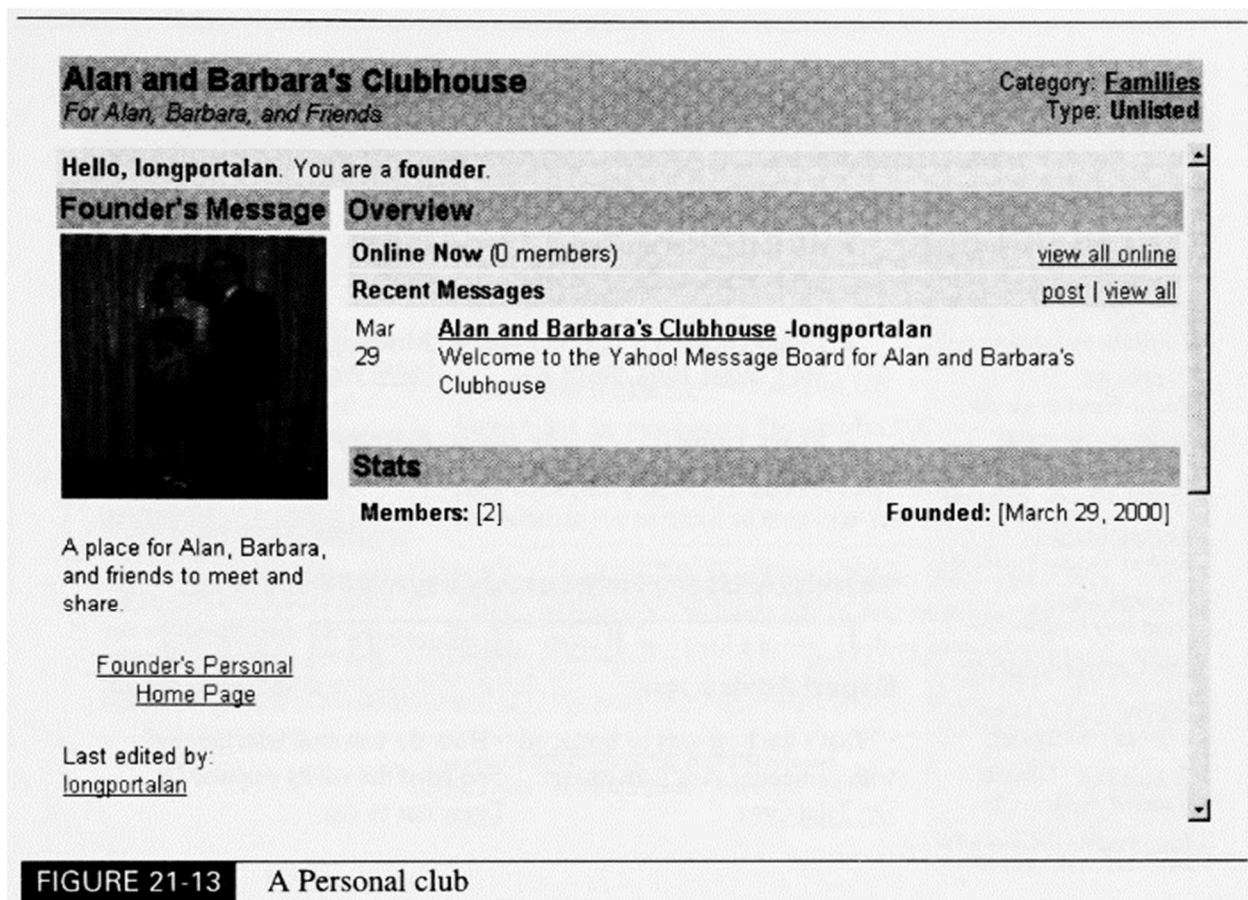
B. Prior Art Status of Relied-Upon References

Pre-AIA law applies to the challenged claims, and each reference cited in the grounds listed in **Part III.B** qualifies as prior art to the '427 patent. Neibauer qualifies as prior art under § 102(b) because it was published more than one year before the priority date, as evidenced by public library availability. (Hall-Ellis, EX1026, ¶¶40-46.) Cheng qualifies as prior art under § 102(e) because it issued from an application filed before the priority date. Balabine and Yates qualify as prior art under § 102(b) because they issued more than one year before the priority date.

C. Ground 1: Claims 1-3 and 5-9 Are Obvious Over Neibauer In View Of Cheng.

1. Independent Claim 1

As explained in detail below, Neibauer discloses features of a Yahoo! service known as Yahoo! Clubs. (Neibauer, pp.473-483.) As Neibauer explains, “[a] *club* is a group of Yahoo! members who share a common interest. Each club has its own message board, chat room, as well as places to share photographs, news, addresses, and links.” (Neubauer, p.473 (italics in original).) Yahoo! members could also create their own clubs, as described in more detail for limitation 1[a]. (Neibauer, pp.480-82.) An exemplary club created by a member is shown in Figure 21-13:



(Neibauer, p.483, Fig. 21-13.)

To the extent the preamble is limiting, Neibauer discloses “[a] **method for managing information content in a data communication network.**” Neibauer discloses a method for “**managing**” information content because a club founder can create and manage the information on a club such as messages and photos shared with other members of the club. For example, the club founder can “control the contents of photo albums, and customize the photo and messages on the club’s home page,” among other capabilities. (Neibauer, p.480; *see also id.*, pp.478-479.) Neibauer also discloses managing information content “**in a data communication network,**” *i.e.*, the Internet. (EX1002, ¶86; Neibauer, p.4 (explaining that Yahoo! members need access to an Internet connection), p.473 (“Access Yahoo! clubs by clicking Clubs on the Yahoo! home page or by going directly to <http://clubs.yahoo.com> to open the page shown in Figure 21-6.”), p.64 (“**http://** This is the prefix for the standard type of Internet Web site. The letters stand for Hypertext Transfer Protocol.”) (bold in original).)

- (a) **“providing content management resources at a first uniform resource locator hosted at a first set of one or more servers and accessible to a user of the data communication network, the content management resources being configured to permit the user to designate data from one or more data sources external to the first set of one or more servers;” (1[a])**

The term **“content management resources”** is not defined in the '427 patent or even recited outside the claims. The written description instead refers to a “content management site,” which generally refers to a site that allows a user to enter content that will be made available on a mobile site. ('427, *e.g.*, 5:31-54, 6:1-8, Fig. 8.) Nevertheless, for purposes of limitation 1[a], the **“content management resources”** in Neibauer takes the form of a web-based user interface for creating a new Yahoo! club and managing content on the club, including adding a club picture to it. The club founder (**“a user of the data communication network”**) can cause a web form to be displayed that solicits options for creating a new club:

Creating a Club

If you cannot find a club where your interests are discussed or you want to share information privately by means of a club, create your own club. As the club founder, you can invite others to join, delete members, control the contents of photo albums, and customize the photo and messages on the club's home page.

To create a club, follow these steps:

1. Navigate to the category in which you want the club to be listed.
2. Click Create Club.

3. In the form that appears, choose the identity you want to use as the club founder and Click Here to Continue. You see the form shown in Figure 21-12.
4. Enter a name for the club.
5. Optionally, enter your zip code. Choose the country if you are outside of the United States.
6. Choose to create a Listed or Unlisted Club.
7. Click Yes! I Accept.

You'll see a page that tells you the club has been created. The page shows the club name and its Web address.

(Neibauer, pp.480-481 (bold in original).) The form shown in Figure 21-12 referenced in step (3) above, is reproduced below:

YAHOO! CLUBS [Help?](#)

Yahoo! Clubs: Create a Club

Step 1: Name Your Club
Keep the name short, as it will be in your Web address.

Name: (ex: Joe's Sports Dugout)

Step 2: Your Club's Location (optional)
Is your Club located in a specific neighborhood, city, state or country? Fill it in below.
(Zip codes and countries are used to help categorize the them based on location, allowing users to find Club(s) in their region.)

In USA, enter 5-digit ZIP code: (example: 90210)

Outside USA, select country:

Canada
Afghanistan
Albania

FIGURE 21-12 Creating a club

(Neibauer, p.481, Fig. 21-12.) After the user selects between a listed or unlisted club, and then clicks “**Yes! I Accept**,” as Neibauer explains:

You’ll see a page that tells you the club has been created. The page shows the club name and its Web address. You also get these options:

- **Invite Friend** Lets you invite others to join the club.
- **Fix It Up** Lets you add text and a photo to the club’s home page.
- **Let Me See It** Opens the club’s home page.

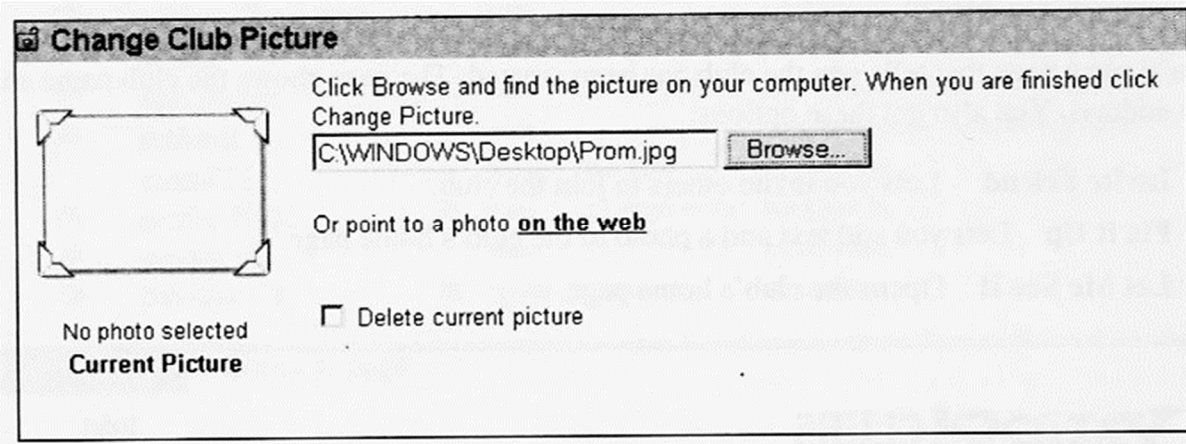
(Neibauer, p.481 (boldface in original).)

The second bullet point listed above (“**Fix It Up**”), as shown, allows the club founder to add text and a photo to the club’s home page:

Click Fix It Up to see the Edit Club Settings options, and then follow these steps to personalize the club page:

1. Enter eight words or less to describe the club. These words will appear under the club name in the banner.
2. Enter a three- to four-sentence founder’s message.
3. Enter the Web address of your home page if you have one.
4. Click Submit Changes.

If you want to add a photograph to the club page, click Change Picture in the Admin Tools section of the page that appears. You see these options:



To load a photograph that is on your computer, either enter its path and name or click Browse to locate the photograph. Use the On The Web link to specify the location of a photograph on the Internet. Click Change Picture to add the photograph to your page.

(Neibauer, pp.481-482 (bold in original; underlining added).)

For purposes of claim 1, the “**content management resources**” include the web-based resources identified above that allow a club founder to create a club and add content to it, including a club picture. These resources are “**at a first uniform resource locator hosted at a first set of one or more servers and accessible to a user of the data communication network,**” as claimed, because they are hosted on at least one Yahoo! server accessible via a uniform resource locator or URL (*i.e.* <http://clubs.yahoo.com>), whose domain name points to at least one yahoo.com server. (See Neibauer, p.473 (“Access Yahoo! clubs by clicking Clubs on the Yahoo! home page or by going directly to <http://clubs.yahoo.com> to open the page shown in Figure 21-6.”), p.64 (“**http://** This is the prefix for the standard type of

Internet Web site. The letters stand for Hypertext Transfer Protocol.”) (bold in original), p.22 (“Each Yahoo! member gets 3MB of mail space on the Yahoo! server to store messages.”).) It was basic knowledge of an ordinarily skilled artisan and even laypersons familiar with casual usage of the Web that the second part of a URL (e.g., “yahoo.com”) identifies the server on the Internet where the page is hosted. (EX1002, ¶90; David Fox et al., *HTML Web Publisher’s Construction Kit* (1995) (EX1013), p.13 (“A *URL* (or *Universal Resource Locator*) is the address of a document, file or other Internet resources... The World Wide Web gives every article, newsgroup, database, computer file, or other Internet fragment its very own URL.”); *id.* (noting that second part of URL identifies “[t]he name of the *host* computer on which the resource is stored”) (italics in original).) The claimed “**first set of one or more servers accessible to a user of the data communication network**” thus corresponds to one or more Yahoo! servers accessible to users via the Internet that provide the content management resources described above, *i.e.*, the web-based resources for creating a new club and adding content to it.

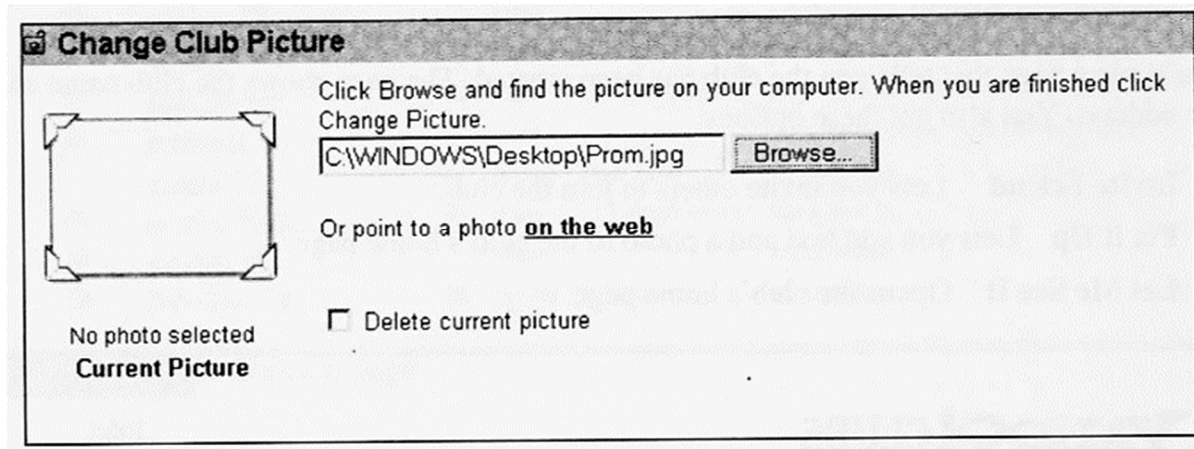
The content management resources as described above appear to be presented across multiple web pages, each of which may have been located at its own distinct URL pointing to the yahoo.com server. (EX1002, ¶91.) But nothing in claim 1 requires that the claimed “**content management resources**” be confined to a single web page accessible through a single URL. The ’427 patent, for example, describes

the content management website as including multiple separate web pages. ('427, 10:28-30 ("Related screenshots of the web pages associated with the content management site will be described with reference to FIGS. 6 through 17.").)

Nevertheless, even if the claim were construed to require that the **"content management resources"** be confined to a single page accessible through a single URL, this would still have been obvious, as the **"content management resources"** could instead be mapped to the single webpage described above that includes the "Change Club Picture" feature described in Neibauer above, which as a single webpage, would have been accessible through a single URL. (Neibauer, p.482 ("If you want to add a photograph to the club page, click Change Picture in the Admin Tools section of the page that appears.").) Under either theory, the claimed **"content management resources"** would have been **"at a first uniform resource locator,"** as recited in limitation 1[a]. (EX1002, ¶92.)

Neibauer further discloses that **"the content management resources [are] configured to permit the user to designate data from one or more data sources external to the first set of one or more servers."** As discussed, the content management resources allow the club founder (**"the user"**) to identify a club picture (**"to designate data"**). That club picture, as discussed above, is **"external to the first set of one or more servers,"** because at the time of designation, it is located on the club founder's local computer and not on the Yahoo! server. This is

confirmed by the figure from Neibauer below:



(Neibauer, p.482.)

As shown, the “**Change Club Picture**” interface allowed the club founder to designate a photo by selecting a file on their local computer. This is confirmed by the name of the exemplary file provided in the interface, *i.e.* C:\WINDOWS\Desktop\Prom.jpg, which an ordinarily skilled artisan would have recognized as a pathname referencing a JPEG file on the user’s local Windows-based computer, which is “**external**” to the Yahoo! servers that host the clubs feature that correspond to the content management resources. (EX1002, ¶93.)

The claimed “**data source**” therefore corresponds to a photo file located on the club founder’s local computer. The ’427 patent also confirms that a “**data source**” can include a file. Dependent claim 5, addressed below, expressly recites that the one or more external data sources “**comprises a file source.**”

Addressing Proposed Constructions in Pending Litigation: The term

“**content management resources**” in limitation 1[a] is subject to an ongoing dispute in the pending litigation. As noted in **Part V** above, Petitioner does not contend that any term in the ’427 patent requires construction for this IPR.

Patent Owner contends in the litigation that this term should be given its plain and ordinary meaning, and if necessary, construed in pieces such that “content” means “*data*,” “management” means “*administration*,” and “resources” means “*any part of a computer system or network*.” (EX1025, at 3.) In order to streamline the Board’s consideration of the prior art, to the extent any construction is deemed necessary, Petitioner for purposes of this IPR only is willing to adopt Patent Owner’s construction. *E.g., Glux Visual Effects Tech (Shenzhen) v. Ultravision Techs*, IPR2020-01052, Paper 28, p.33 (PTAB Nov. 17, 2021) (“*Western Digital* states, and we agree, that ‘37 C.F.R. § 42.104(b)(3) does not require [a p]etitioner to express its subjective agreement regarding correctness of its proffered claim constructions or to take ownership of those constructions,’ such as in a district court proceeding.”) (citation omitted). Patent Owner contends that this construction represents the plain and ordinary meaning, as it merely replaces “content,” “management” and “resources” with synonyms. This construction is satisfied by the prior art because, as discussed, the features described above in Neibauer provide a part of the functionality of the clubs feature (which is provided by at least one server computer system), which allow a club founder to create and administer data that will be

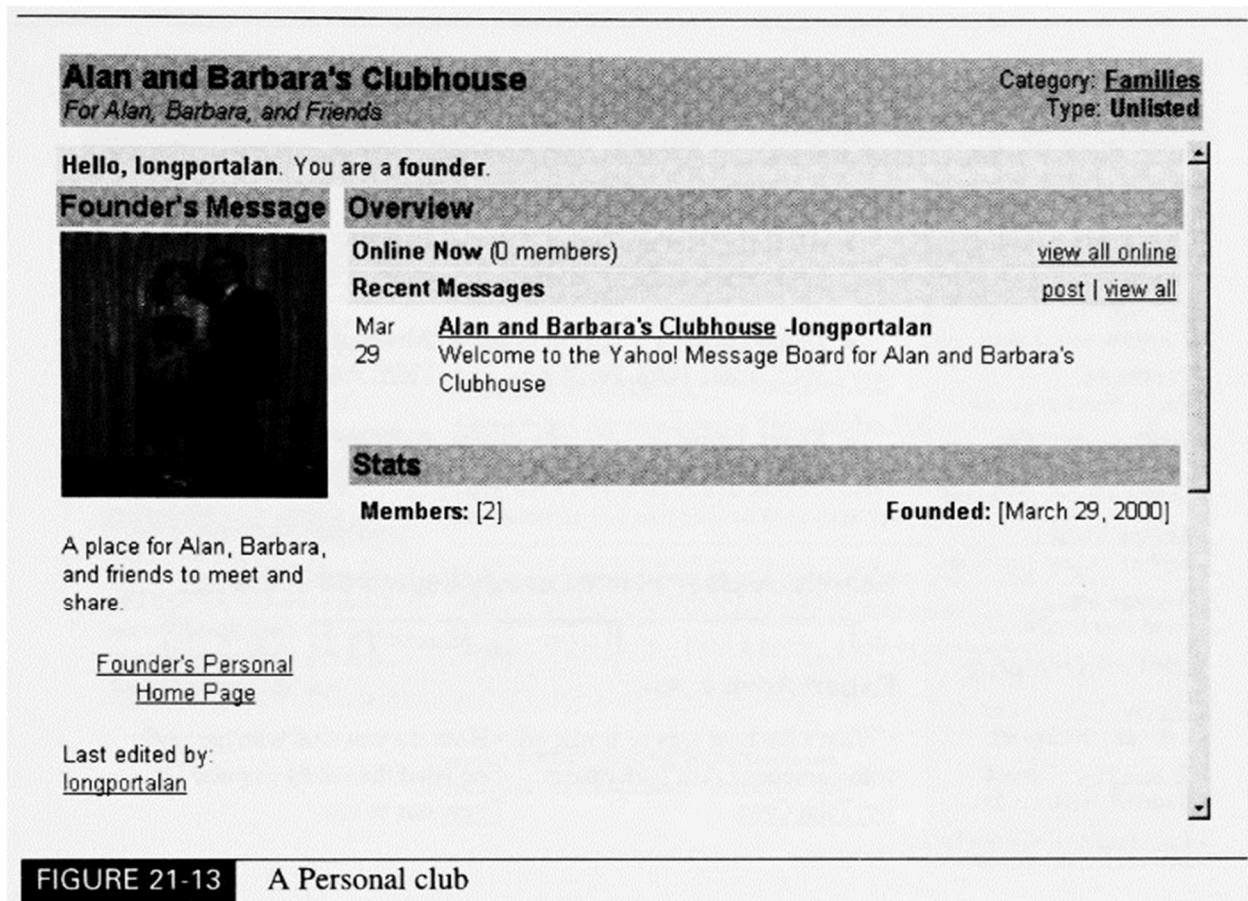
presented on a club to club members.

Petitioner has argued in the litigation that “**content management resources**” should be construed as “content management web site,” which Petitioner defines as “*a web site that allows a user without programming to create and manage content on a mobile web site, or a portion thereof.*” (EX1025, at 3.) This construction is also satisfied by the prior art because, as discussed above, Neibauer discloses a website that allows a user (without programming) to create a club and create and manage content for it, including designating a club picture and entering other information. This content would also have been made available on a “*mobile web site,*” *i.e.*, a website designed to be accessed by a mobile device, based on the combination with Cheng as explained in detail below for later limitations of claim 1, because the created club would have been translated into a suitable format and transmitted to a mobile device. (EX1002, ¶¶106-108, 115-116.)

- (b) “**uploading external data to a second set of one or more servers for use in the data communication network;**”
(1[b])
- (c) “**reformatting the external data for mobile device use;**”
(1[c])

These two steps of claim 1 are closely-related and thus will be addressed together. These steps are obvious over the disclosures in Neibauer in combination with Cheng. In summary and as detailed below, after the club founder designates a club picture from its local computer, that picture will be added to the club home

page, an example of which is shown in Figure 21-13:



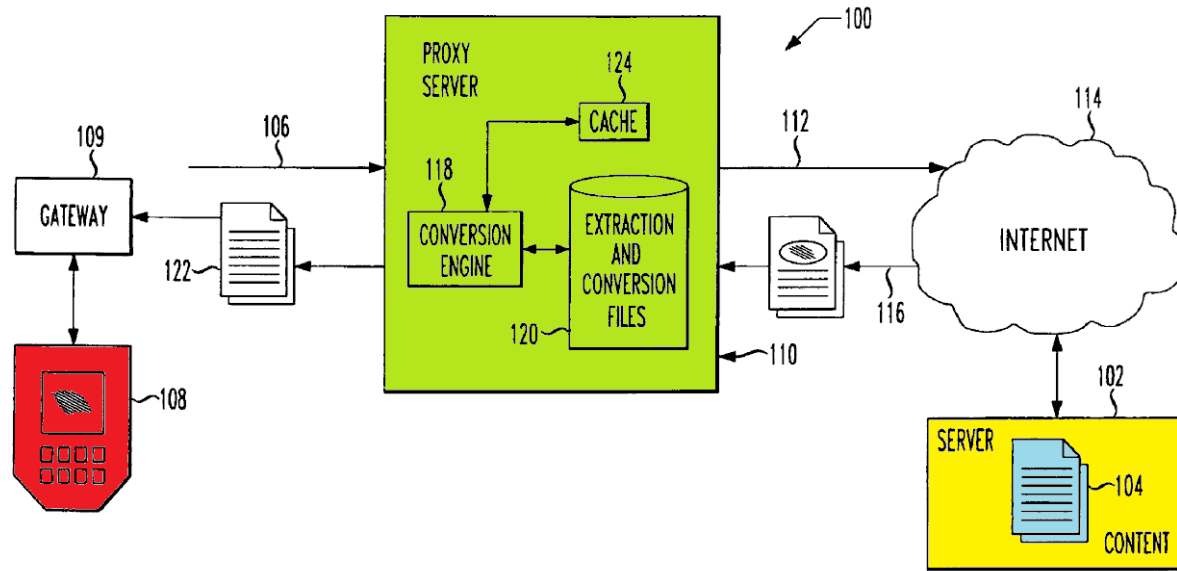
(Neibauer, p.483, Fig. 21-13.) “Figure 21-13 shows an example of a personal club page. The page contains all of the elements found on other club pages.” (Neibauer, p.482.) Although it is not entirely clear from Figure 21-13, the picture designated by the founder would have appeared on the home page (in this case below the “Founder’s Message” title). (Neibauer, p.481 (“**Fix It Up** Lets you add text and a photo to the club’s home page.”) (boldface in original).) The club picture would thus have been visible to members who visit the club home page. (EX1002, ¶97.)

But Neibauer does not expressly disclose “**uploading external data to a**

second set of one or more servers for use in the data communication network,” and then “**reformatting the external data for mobile device use,**” but this would have been obvious in further view of Cheng, which discloses a technique for translating the pages of existing websites into a format suitable for display on a mobile device. (Cheng, *e.g.*, 2:19-32, 3:21-26.) In summary as described below, it would have been obvious to combine Neibauer with Cheng, such that the club home page including the club picture (“**external data**”) would have been uploaded to a second set of servers where it would have been reformatted for mobile device use.

Cheng relies on an established technology known as “proxy servers,” which were commonly used to provide security and interoperability between devices. (EX1002, ¶63.) Cheng relies on this proxy server concept to convert non-mobile webpages and webpage content into a format accessible by mobile devices. Figure 1 illustrates one embodiment:

FIG. 1



(Cheng, Fig. 1 (color annotation added).)

The right side of Figure 1 above shows an origin web server **102** that contains original web page **104**. (Cheng, 3:36-37.) “The web page **104** is typically an HTML file with references to any component .wav, .mov, and/or Joint Photographic Experts Group (JPEG) files, which together comprise the web page **104**.” (Cheng, 4:10-13.) “It is envisioned that each instance of web content **104** each have associated therewith a URL.” (Cheng, 3:56-57.) Web page **104** in Cheng could have been any web page in HTML format reachable via the Internet, such as any web page from the Yahoo! website as described in Neibauer. Origin web server **102**, therefore, would have represented the “**first set of one or more servers**” for limitation 1[a], *i.e.*, the server(s) providing the features of Neibauer. (EX1002, ¶100.)

The left shows a mobile device **108** connected to proxy server **110**, optionally

through gateway **109**. (Cheng, 3:33-36.) “Mobile devices **108** generally come in a variety of different sizes and have a variety of different screen interfaces... [T]he present invention provides the ability to uniquely tailor web page **104** content for specific mobile devices **108**.” (Cheng, 5:11-15.) Cheng explains that, in one example, mobile device **108** could be a mobile device with a Palm operating system that includes a web browser. (Cheng, 5:17-23, 2:8-15.)

The middle of Figure 1 shows proxy server **110** – the key feature of Cheng here. Proxy server **110** “‘sits’ between the clients (e.g., the mobile device(s) **108**) and the origin web server(s) **102** that provide Web content **104**.” (Cheng, 3:31-33.) Cheng explains that proxy server **110** “obtains the code (e.g., HTML) of the user requested web page **104**, and modifies it at the proxy server **110** (once obtained),” which can include “reformatting and/or converting an entire web site or request specific Web content that is needed from the origin web server **102**.” (Cheng, 3:41-48.) Proxy server **110** can also store a device profile for mobile device **108** based on the device and web browser types. (Cheng, 5:20-23.)

The general operation of proxy server **110** in Cheng is straightforward. As shown in Figure 1, mobile device **108** can issue a request **106** for an original web page **104** using standard HyperText Transport Protocol (HTTP), as was well-known in the art, with the request **106** being received by proxy server **110**. (Cheng, Fig. 1, 2:19-21, 3:58-67, 7:65-8:2; EX1002, ¶65.) “Upon determining that the requested

page **104** resides at the server **102**, the proxy server **110** makes a request **112** for the page. As shown, the proxy server **110** and the server **102** are connected via a network **114** such as the Internet.” (Cheng, 3:65-4:2; *see also id.*, 2:21-24.)

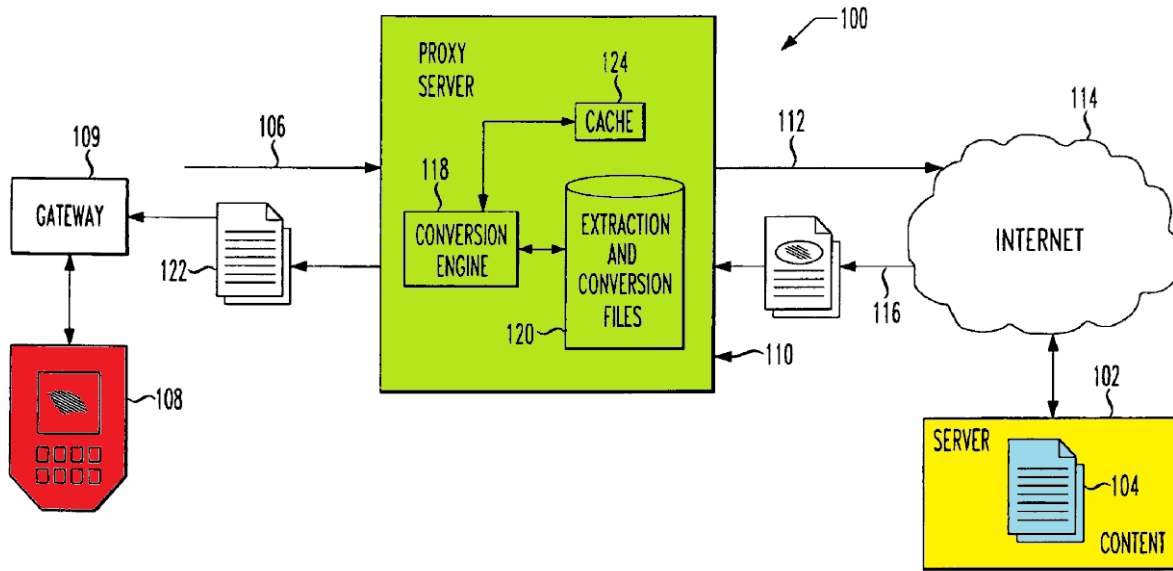
Proxy server **110** then converts and/or reformats original web page **104** into reformatted web page **122** (shown in Figure 1), which is transmitted to mobile device **108**. (Cheng, *e.g.*, 2:24-29, 5:46-49, 4:56-60.) “The designated HTML content of the retrieved web page **104** is extracted, subsequently and/or converted, and transmitted as a reformatted web page **122** to the mobile device **108**.” (Cheng, 5:46-49; *see also id.*, 3:22-26 (“Referring now to FIG. 1, it is envisioned that a proxy server **110** reformats/converts web content **104** on an origin web server **102** into a format **122** readable on any mobile device **108** (which can be any number of different mobile device types).”).) The proxy server can also reformat images on the web page to enable viewing on mobile device **108**, for example, by scaling the images and reducing their colors and resolution. (Cheng, Fig. 7 (704, 706, 708), 10:60-11:8.) The images can also be reformatted into a specific image file format, such as JPEG or GIF. (Cheng, 11:10-12 (“In step **712**, the file format of images can be selected (*e.g.*, .gif or JPEG). In step **714**, the quality of JPEG conversion is specified.”), 12:60-62 (“Potential conversions include, for example... encoding images as GIF, and converting any color header images to gray scale.”).)

Rationale and Motivation to Combine (Neibauer with Cheng): It would

have been obvious to combine Neibauer with Cheng, predictably resulting in the club described above being delivered to mobile devices over the Internet. Under the proposed combination, therefore, the club home page in Neibauer discussed above – including the club picture designated by the club founder in limitation 1 [a] – would have been reformatted and delivered to users with mobile devices, via the proxy server conversion techniques disclosed in Cheng. (EX1002, ¶105.)

Under the proposed combination, therefore, the step of “**uploading external data to a second set of one or more servers for use in the data communication network,**” would have occurred when origin web server **102**, which would have performed the club functions of the server in Neibauer discussed above for limitation 1 [a], uploads the club home page (with club picture) to proxy server **110** (“**a second set of one or more servers for use in the data network**”) over the Internet, as shown in Figure 1 of Cheng:

FIG. 1



(Cheng, Fig. 1 (color annotation added).)

Cheng explains, with reference to Figure 1, that “[u]pon determining that the requested page **104** resides at the server **102**, the proxy server **110** makes a request **112** for the page. As shown, the proxy server **110** and the server **102** are connected via a network **114** such as the Internet.” (Cheng, 3:65-4:2.) The claimed upload is shown in **116** above; as Cheng explains, “[t]he server **102** responsively returns **116**, via the network **114**, the requested web page **104** to the proxy server **110**.” (Cheng, 4:8-10.) The requested page **104** of Figure 1, under the proposed combination, would have corresponded to the club home page requested by the mobile device that would have included the club picture; as also noted, origin web server **102** would have corresponded to the Yahoo! web server from which that page was uploaded to proxy server **110**. (EX1002, ¶106.)

Petitioner notes that limitation 1[b] merely recites the step of “**uploading external data**,” and thus does not require that “external data” be the same external data designated in limitation 1[a]. Nevertheless, for purposes of limitation 1[b], “**external data**” can readily be mapped to the club picture on the club home page designated by the club founder in limitation 1[a]. Alternatively, “**external data**” can be mapped more broadly to the club home page itself (which includes the club picture), which is likewise “external” to the proxy server 110 (“**a second set of one or more servers**”), as it instead resides on origin server 102. In either case, under the proposed combination, once “**external data**” is uploaded by origin server 102 to proxy server 110, it would have been “**reformatted... for mobile device use**,” by reformatting the web page and any images on the page (including the club picture designated by the founder) into a format suitable for mobile device viewing.

The proposed combination would have been exceedingly straightforward as Cheng provides “bolt-on” functionality, with the proxy server capable of converting and reformatting any existing HTML-based web page into a format suitable for display on a mobile device. (EX1002, ¶¶108, 110-111; Cheng, *e.g.*, 2:30-32 (“The [reformatting] may be done for at least one of groups of devices, individual devices, web site-specific conversions, or for all web sites.”).) It would have been obvious that proxy server 110, under the proposed combination, could have been operated by the same or a different entity from the operator of the origin web server.

(EX1002, ¶108.) In any case, the proposed combination would not have required changing the underlying functionality in Neibauer – a feature that provides a further motivation to combine as discussed below. (EX1002, ¶¶108, 110-111.)

Neibauer and Cheng are both analogous references to the '427 patent. Neibauer is an analogous reference that discloses similar functionality for managing information content accessible and the ability to exchange messages and collaborate among users in a web-based system, and would have been reasonably pertinent to problems facing the inventors including how to implement such a system. (EX1002, ¶109.) Cheng is also an analogous reference in the field of network-based communications systems, including the ability to make web-based information content available on mobile devices, and would have been reasonably pertinent to problems facing the inventors. (*Id.*)

An ordinarily skilled artisan would have been motivated to combine. Neibauer itself suggests the proposed combination by disclosing services such as “Yahoo! Mobile” and “Yahoo! To Go” that enable content from Yahoo! services to be provided to mobile devices such as pagers, cell phones, web phones, and personal digital assistants (PDAs). (Neibauer, pp.166-174.) “Yahoo! To Go lets you receive Yahoo! information on your mobile device.” (Neibauer, p.167.) For example, one option referred to as “Yahoo! On Your PDA” allowed users of browser-enabled PDAs, such as Palm, Windows CE and smartphone devices, to select particular types

of Yahoo! content accessible from their PDA. (Neibauer, pp.171-174.) It would have been obvious, based on Neibauer in further view of Cheng, to also make the Yahoo! Clubs features described above available to users through mobile devices. This would have been viewed as a logical (and obvious) extension of the existing Yahoo! mobile features and capabilities described in Neibauer. (EX1002, ¶110.)

A skilled artisan would also have been motivated to make the club features available to mobile devices to take advantage of growing popularity of mobile computing and mobile devices. (EX1002, ¶¶111-112.) Cheng explains that “users of wireless devices now demand that businesses deliver web content for viewing on desktop, or mobile/portable (e.g., handheld) devices.” (Cheng, 1:18-22.) The ’427 patent itself admits that “[o]ne of the most rapidly expanding aspects of wireless networking involves the accessing of information content over wireless networks via web-enabled mobile devices,” such as “mobile telephones, personal digital assistants (PDAs), palmtop computers, etc.” (’427, 1:37-41.) Market forces would thus have motivated a skilled artisan to combine Neibauer with Cheng in order to provide the club functionalities described above to users of mobile devices. (EX1002, ¶111.)

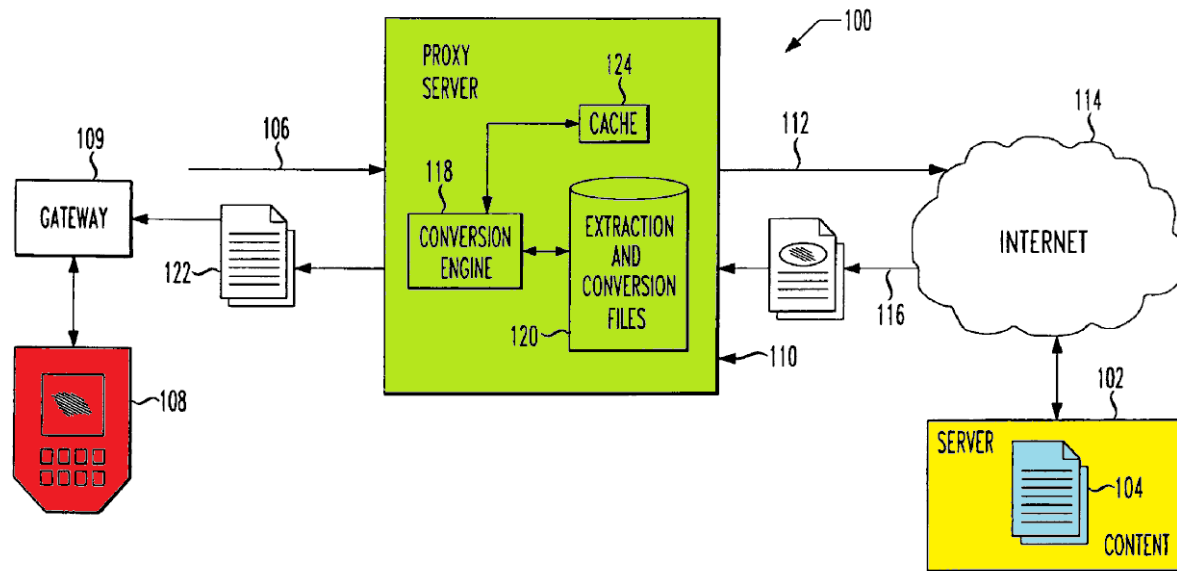
Cheng provides a further express motivation to combine by explaining that the proxy server conversion method provides a “create-once, deliver anywhere approach” that eliminates the need to build and maintain separate web pages for different types of mobile devices and browsers. (Cheng, 2:8-19.) This would have

provided a clear technological advantage by obviating the need to generate multiple different mobile versions of club-related pages, thus simplifying the implementation. (EX1002, ¶112.) As a further motivation to combine, the proxy server transcoding techniques in Cheng were already well-known and had already been deployed for the very purpose of converting web page content into formats suitable for mobile devices. (EX1002, ¶¶112-113.) An ordinarily skilled artisan would also have had a reasonable expectation of success, as Cheng relies on known and industry-standard and well-known technologies. (EX1002, ¶114.)

- (d) **“automatically generating mobile resources at a location different from the first uniform resource locator, the mobile resources being accessible independent of the content management resources via one or more mobile devices, the mobile resources automatically including the reformatted external data from a third set of one or more servers in the data communication network.”**
(1[d])

Under the proposed combination of Neibauer and Cheng, the proxy server **110** automatically generates mobile resources, *e.g.*, a mobile version of the requested web page (*e.g.* club home page in Neibauer). This is shown in Figure 1:

FIG. 1



(Cheng, Fig. 1 (color annotation added).) As shown, after proxy server **110** performs the reformatting process as described above for limitation 1[b]-[c], it transmits “a reformatted web page **122** to the mobile device **108**.” (Cheng, 5:46-49; *see also id.*, 9:49-53.) The proposed combination therefore renders obvious “**generating mobile resources**,” *i.e.*, a reformatted mobile version of the club home page in Neibauer. The mobile resources would have “**automatically include[ed] the reformatted external data**” *i.e.*, reformatted web page **122** that includes a reformatted version of the club picture, based on the combination with Cheng as discussed.

Limitation 1[d] occurs “**automatically**” because proxy server **110** performs the reformatting and conversation discussed above without requiring user action. (EX1002, ¶116.) Cheng does not suggest that any user action was required by proxy server **110** to generate mobile versions of requested web pages. The only potential user action would have occurred when mobile device **108** requested webpage **104**

from origin server **102**, for example, in response to a request from a user via their browser – but such a step is not recited in claim 1. The actual claimed step of generating mobile resources would have occurred, under the proposed combination of Neibauer and Cheng, without requiring user action. (*Id.*)

The mobile resources are also generated “**at a location different from the first uniform resource locator**,” under at least two separate and independent theories. First, as explained, the “**content management resources**” at the first URL correspond to the resources for creating a club and/or adding a club picture to the club, as described for limitation 1[a]. The generated “**mobile resources**” for limitation 1[d], on the other hand, correspond to the club home page that includes the club picture. It would have been obvious that because the club home page is not part of the “**content management resources**,” the club home page would have been accessible from a URL different from the URL for the content management resources. (David Fox et al., *HTML Web Publisher’s Construction Kit* (1995) (**EX1013**), p.13 (“A URL (or *Universal Resource Locator*) is the address of a document, file or other Internet resources... The World Wide Web gives every article, newsgroup, database, computer file, or other Internet fragment its very own URL.”).) In other words, because there is no overlap between the webpages and resources that correspond to the “**content management resources**” and “**mobile resources**,” they would have been accessed via different URLs. (**EX1002**, ¶118.)

This is further confirmed by the fact that the club home page reformatted for a mobile device (“**mobile resources**”) cannot even exist until the club itself is created, which occurs after the founder created the club via the “**content management resources**,” further confirming that the two resources would have been provided on different webpages with different URLs. (Neibauer, p.481 (“Click Yes! I Accept.. You’ll see a page that tells you the club has been created. The page shows the club name and its Web address.”).) The Web address (or URL) for the newly-created club, in fact, includes the name selected by the club founder via the “**content management resources**,” further confirming that mobile resources did not exist at the time the content management resources were used. (Neibauer, p.481 Fig. 21-12 (“**Step 1: Name Your Club** [] Keep the name short, as it will be in your Web address.”) (bold in original).) And similarly, the club home page could not include the club picture designated by the club founder in limitation 1[a] until after the founder designated that photo, again using the “content management resources.” (Neibauer, p.481 (“**■ Fix It Up** Lets you add text and a photo to the club’s home page.”) (boldface in original).) It therefore would have been obvious that the “**content management resources**” and “**mobile resources**” would have been different and accessed via different URLs. (EX1002, ¶118.)

As a second and independent theory, Cheng discloses that when accessing webpages via the mobile device **108**, Cheng can make those webpages available to

the mobile device via a different “decorated” URL, which includes both the host name of the proxy server, and the web address of the original website to be accessed.

(Cheng, 6:43-7:49.) As explained in Cheng:

Embodiments of the present invention contemplate that in the event that a particular mobile device **108** does not enable a proxy server **110** to be used, the present invention enables mobile devices to be redirected to proxy through the proxy server **110** by typing (or in some way, entering or implementing) the proxy server **110** address (location) and the URL of the desired web site **104** in, for example, an address field of the mobile device **108** browser. This type of address is commonly referred to as a “decorated URL. A decorated URL contains, for example, the proxy server **110** host name and port number, and the web address of the web site **104** that is to be accessed. With the present invention, the above-identified URL decoration can be used to make an un-secure (http://) request or a secure (https://) request. Regardless of what type of connection is made, after an initial decorated URL is typed in, the proxy server retrieves the desired web page **104**. For example, the proxy server automatically re-writes all of the other links within the site that are initially proxied to via the decorated URL. That is, if one or more links are embedded within a first web site, and a user clicks on one of the links, the link that the user clicks on will also be “rewritten” in decorated form in accordance with the invention.

(Cheng, 6:43-65.) The decorated URL technique described in Cheng was well-known and commonly used to route web requests through intermediate proxy servers. (EX1002, ¶119.) Cheng discloses an exemplary decorated URL:

As indicated above, embodiments of the present invention contemplate that a decorated URL contains the proxy server **110** host name and port number, and the web address of the site that is to be accessed. For example, a decorated URL for the Aether Software Web (www.aethersystems.com) site may look like:

http://yourscoutweb domain name:port number/?
url=http://www.aethersystems.com.

(Cheng, 7:4-11.)

The application of these concepts to Neibauer is straightforward. (EX1002, ¶103.) Under the proposed combination, during limitation 1[a], a club founder would have accessed the “**content management resources**” in Neibauer, for example, by using their non-mobile (desktop) computer and web browser – and thus without having to go through proxy server **110** of Cheng. Nothing in claim 1 requires that the “**content management resources**” be accessed from a mobile device; in fact, the written description of the ’427 patent makes clear that a content management site can be accessed from a non-mobile device such as a PC. (’427, 5:35-38 (“The content management site may be supported by one or more of the servers **16**, and may be accessed by the user over Internet **14** via one of the user

terminals 18.”), 4:66-5:3 (“Also, a given one of the user terminals 18 may comprise a non-mobile device, including, by way of example, a desktop personal computer, a workstation, a minicomputer, a mainframe computer, a television, a set-top box, a kiosk, etc.”), Figs. 6-17b (showing images from content management site using non-mobile desktop web browser).) The content management resources would thus, in this example, have been accessed using a “yahoo.com” URL, as discussed for limitation 1[a], for example from a club founder using a non-mobile desktop PC.

But during performance of limitation 1[d], when the club home page is later accessed using a mobile device under the combination with Cheng, access to the Yahoo! server would have been intermediated using proxy server **110** through the URL decorating technique described above. Under the proposed combination, therefore, the URL for the “**mobile resources**” would have been different from the URL for the “**content management resources**” because the mobile resources URL would have been a “decorated” URL including both the host name for proxy server **110** and the yahoo.com web address of the origin server **102**. (Cheng, 6:43-7:11.) An exemplary decorated URL for the “**mobile resources**” under the combination of Neibauer and Cheng would have looked something like this:

http://yourscoutweb domain name:port number?
url=http://clubs.yahoo.com.

(EX1002, ¶121.) In this example, the URL includes both the host name for proxy

server **110**, as well as the name for the underlying origin web server **102**. Because the URL for the “**content management resources**” did not include at least the proxy server **110** part, the URLs for the content management and mobile resources would have been different from each other. (*Id.*)

Continuing, the generated mobile resources would also have been “**accessible independent of the content management resources via one or more mobile devices**,” because the club home page could have been accessed by mobile device users without having to access the content management resources identified for limitation 1[a]. This is further evidenced by the fact that the “**content management resources**” for limitation 1[a] are administrative tools accessible only to the club founder. (Neibauer, p.480 (“As the club founder, you can invite others to join, delete members, control the contents of photo albums, and customize the photo and messages on the club’s home page.”), p.482 (“As the founder of the club, you’ll also see these options in the Admin Tools section... ■ **Edit Settings** Lets you change the founder’s message and the photograph.”).) The club home page that shows the club picture, on the other hand, is accessible to any member of the club. (Neibauer, p.473 (“Click a club that you are interested in to see its home page, as shown in Figure 21-8.”).) It therefore would have been obvious that the club home page could have been accessed via a mobile device independently of the “**content management resources**.” Moreover, the fact that the content management resources can be

accessed using non-mobile devices, and the mobile devices are accessed using mobile devices, further confirms that the mobile resources could have been accessed independently of the content management resources. (EX1002, ¶122.)

The generated mobile resources would also have “**automatically includ[ed] the reformatted external data from a third set of one or more servers in the data communication network,**” as explained above, because proxy server 110 would have transmitted “a reformatted web page 122 to the mobile device 108.” (Cheng, 5:46-49; *see also id.*, 9:49-53.) As noted previously, this process occurs in Cheng without requiring user action. (EX1002, ¶¶116, 123.)

With respect to the claimed “**third set of one or more servers,**” the claim does not require that the claimed third set be different from the claimed “**second set of one or more servers.**” This is confirmed by dependent claim 2, which depends from claim 1 and is addressed below, expressly specifies that “**the second set of one or more servers and the third set of one or more servers are the same.**” (’427, Claim 2.) Because a dependent claim cannot be broader than the claim from which it depends, claim 1 must at least cover a scenario in which the claimed “**second**” and “**third**” sets are the same set. *See, e.g., Littelfuse, Inc. v. Mersen USA EP Corp.*, 29 F.4th 1376, 1380 (Fed. Cir. 2022) (“By definition, an independent claim is broader than a claim that depends from it, so if a dependent claim reads on a particular embodiment of the claimed invention, the corresponding independent claim must

cover that embodiment as well.”).²

Under this interpretation, the “**third set of one or more servers**” corresponds to proxy server **110**, mapped to the claimed “**second set**” above. As noted, the reformatted web page comes from this server. Petitioner notes that, even if claim 1 were interpreted to require that the claimed second and third sets of one or more servers be different from each other, Petitioner has provided separate Grounds 3-4 below which further rely on Yates, to account for such a requirement.

2. **Claim 2: “The method of claim 1 wherein the second set of one or more servers and the third set of one or more servers are the same.”**
3. **Claim 3: “The method of claim 1 wherein at least one of the servers in the second set of servers is also one of the servers in the third set of one or more servers.”**

As just explained, under the proposed combination, the second and third set of one or more servers are the same as recited in claim 2. And for the same reasons under claim 3, proxy server **110** (“**at least one of the servers in the second set of servers**”) is also one of the servers in the third set.

² Petitioner also notes that claim 1 does not use the word “different” in connection with the second and third sets of servers, whereas it does use that word in differentiating the locations for the content management and mobile resources in limitations 1[a] and 1[d], respectively. This confirms that the applicants knew how to expressly require that the claimed elements be different from each other.

4. **Claim 5: “The method of claim 1 wherein at least one of the one or more external data sources comprises a file source.”**

As explained for limitation 1[a], under the proposed combination, the external data source comprises a file source, *e.g.*, a source of data that is a file.

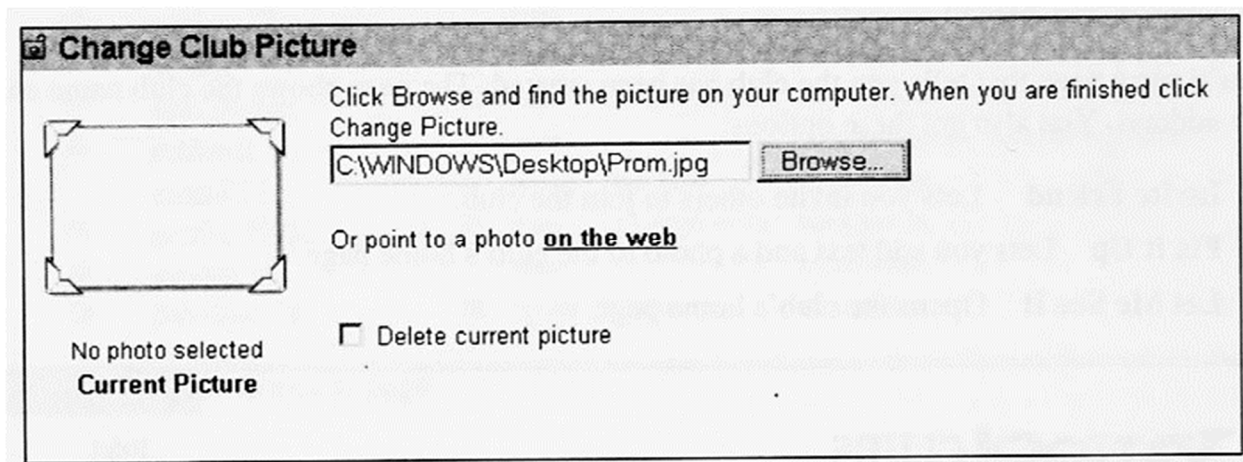
5. **Claim 6: “The method of claim 1 wherein at least one of the one or more external data sources comprises a device-captured data source.”**
6. **Claim 7: “The method of claim 6 wherein device-captured data from the device-captured data source comprises one or more digital photographs.”**

It also would have been obvious that the external data source would have comprised a “**device-captured data source**” (claim 6) such as “**one or more digital photographs**” (claim 7). Neibauer depicts examples of user-provided photos that were digital photographs. (Neibauer, p.478, Fig. 21-10 (showing exemplary club photo album having photos of Denise Richards and Famke Janssen).) It was also known, as of June 2002, that portable communications devices included digital cameras for capturing and storing images. It therefore would have been obvious for the club picture provided by the club founder (as described for limitation 1[a]) to have comprised a device-captured digital photograph. (EX1002, ¶128.)

7. **Claim 8:** “The method of claim 1 wherein the content management resources allow the user to select the one or more external data sources from a listing of a plurality of external data sources, and wherein the mobile resources include data from user-selected ones of the plurality of external data sources but do not include data from ones of the plurality of external data sources not selected by the user.”

When the club founder selects one or more external data sources (*i.e.* a digital image file), as described for limitation 1[a], it may be presented with a listing of other files from which the founder can choose:

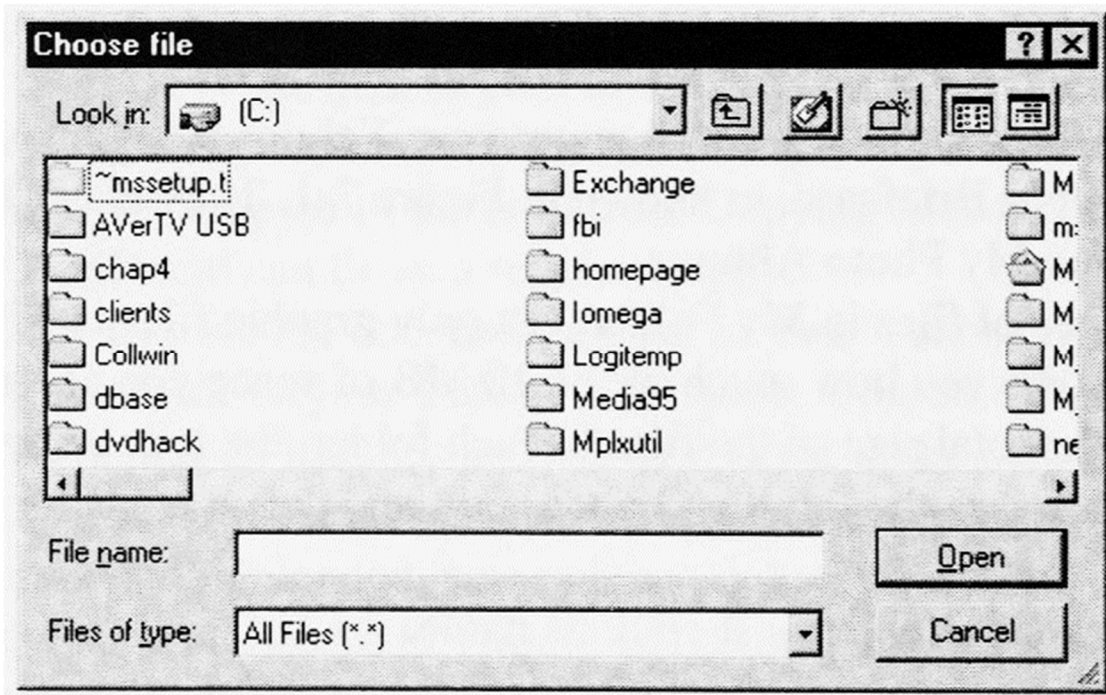
If you want to add a photograph to the club page, click Change Picture in the Admin Tools section of the page that appears. You see these options:



To load a photograph that is on your computer, either enter its path and name or click Browse to locate the photograph.

(Neibauer, pp.481-482 (bold in original; underlining added).) As shown, the club founder can either enter the pathname of the image file on their computer, or can press the “**Browse...**” button to locate the photograph on their computer.

An ordinarily skilled artisan would have recognized the “**Browse...**” button as a well-known and familiar file selection dialog box that allows a user to select a file to upload to the server. (EX1002, ¶130.) Neibauer, p.158 (“To locate the file, click Browse to open the Choose File dialog box.”).) Neibauer discloses an example of the familiar Choose File dialog box when uploading a file when using a Microsoft Windows-based computer:



(Neibauer, p.158.; *see also id.* (“Then, use standard Windows techniques to locate and select the file.”).) The “Choose File” dialog box would have been familiar not only to ordinarily skilled artisans, but to laypersons who had ever used a browser to upload a file to a website or remote server. The “Choose File” dialog box is also widely used in applications outside of web browsers. (EX1002, ¶130.)

Under the proposed combination, therefore, the “**content management resources**” would have permitted the club founder “**to select the one or more external data sources from a listing of a plurality of external data sources,**” by presenting the Choose File dialog box in response to pressing the “**Browse...**” button on the club picture webpage, this allowing the founder to select an image file on their computer from the list of files provided. After the club founder selected the desired file for the club picture, “**the mobile resources [would have] include[d] data from user-selected ones of the plurality of external data sources but [would] not [have] include[d] data from ones of the plurality of external data sources not selected by the user,**” as claimed, because only the image file selected by the founder would have been used for the club picture, and thus incorporated into the club home page delivered to club members. (EX1002, ¶131.)

8. Claim 9: “The method of claim 1 wherein the content management resources permit the user to enter a message, and wherein the mobile resources automatically include the entered message.”

As explained for limitation 1[a], the “**content management resources**” in Neibauer also allow the club founder to enter a message. (Neibauer, p.482, ¶2 (“2. Enter a three- to four-sentence founder’s message.”).) The founder’s message is automatically included on the club home page presented to club visitors. (Neibauer, p.473 (“Click a club you are interested in to see its home page... The page includes a message from the founder....”), p.483, Fig. 21-13 (showing founder’s message:

“A place for Alan, Barbara, and friends to meet and share.”).) Under the proposed combination therefore, **“the mobile resources automatically include the entered message,”** because the club home page, after being automatically reformatted and delivered to a mobile device using the proxy server techniques in Cheng, would have included the entered founder’s message. (EX1002, ¶132.) As noted for limitation 1[d], the mobile resources would have automatically included the content of the club web page (including the founder’s message), with no user action required.

D. Ground 2: Claim 4 Is Obvious Over Ground 1 Prior Art In View Of Balabine.

1. Claim 4: “The method of claim 1 wherein at least one of the one or more external data sources comprises a database source.”

Under the proposed combination as described for Ground 1 above, the **“external data source”** comprises an image file located on the club founder’s local computer. Neibauer does not disclose that this comprises **“a database source,”** as recited in claim 4. But this feature would have been obvious in view of Balabine. Under the proposed combination with Balabine, as detailed below, the image file obtained from the club founder’s local computer in Neibauer would have been obtained from a database (such as an object-oriented database) on that computer, thus providing an **“external data source”** that **“comprises a database source.”**

Balabine discloses a technique for “transforming a file system request from an application into a database query and retrieving information corresponding to the

database query from the database.” (Balabine, Abstract.) Balabine explains, as was well-known, that information is often stored in databases such as object oriented and or object-relational databases. (Balabine, 1:11-17.) An object oriented data base (OODB), as Balabine explains, “can store data of virtually any type (text, 3D graphic images, video clips, etc.).” (Balabine, 1:44-47.)

Balabine explains that information within a database is typically accessed using a special computer language known as the Structured Query Language (SQL), and “database-aware” software can access information in the database using SQL. (Balabine, 1:23-27, 1:66-2:14.) But according to Balabine, “[m]ost application programs, in contrast, are ‘database unaware’ meaning that they cannot access information stored in a database.” (Balabine, 2:15-17.) These applications instead rely on file systems that store and retrieve information in files stored within directories or subdirectories. (Balabine, 2:17-47.)

Balabine thus discloses a technique for bridging the gap between file systems and databases by “making one or more database objects (e.g., a table or a row) available as one or more file system objects (e.g., directories, files or links) to an application, for example, a database-unaware application.” (Balabine, 2:51-55.)

The file system interface described here, dubbed the Informix® File System (IXFS) interface, provides computer system users with the best of both worlds by enabling database-unaware applications to access (i.e., read and write) information in a database in a manner that is

entirely transparent to the application. No changes need to be made to the application or to the database. IXFS presents the contents of a database to the application as “file system objects” such as directories, sub-directories, files or links. These file system objects appear to the application to be no different in form or character from the file system objects that the application handles in the ordinary course of storing and retrieving data. IXFS enables a user of a database-unaware application to access the contents of a database by performing the desired operations on the file system objects that represent the database’s contents.

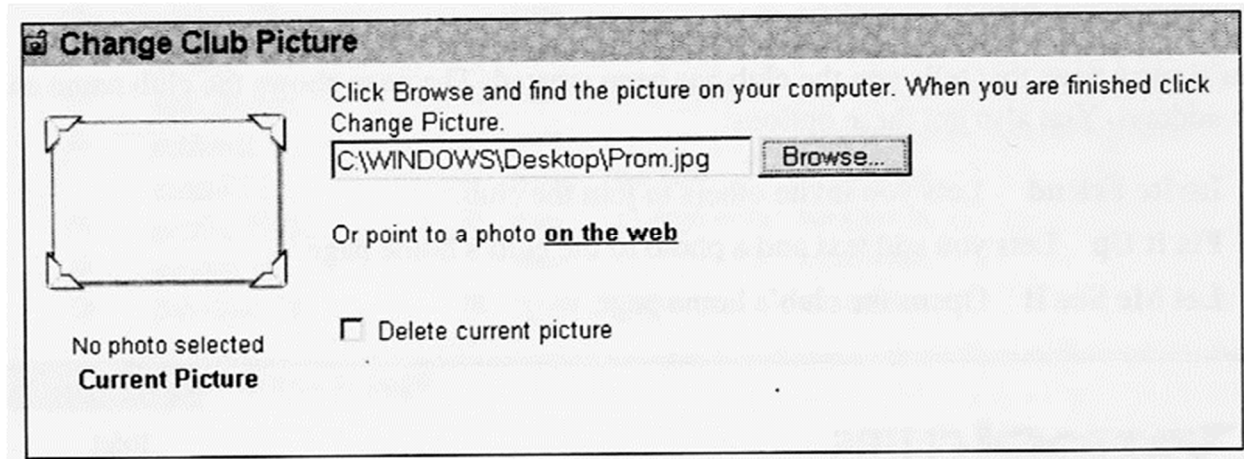
(Balabine, 5:5-20.) Balabine thus discloses a technique for making objects in a database accessible in the same way as files on user’s computer. (EX1002, ¶136.)

Rationale and Motivation to Combine (Ground 1 Prior Art with Balabine):

It would have been obvious to combine the prior art for Ground 1 with Balabine, which would have predictably resulted in the proposed combination for Ground 1 with the further ability of a club founder to designate a club picture from a database on the founder’s local computer. (EX1002, ¶137.)

The proposed combination would have been easily understood. As explained for limitation 1[a], Neibauer allows the club founder to designate a club picture by selecting an image file from its local computer:

If you want to add a photograph to the club page, click Change Picture in the Admin Tools section of the page that appears. You see these options:



To load a photograph that is on your computer, either enter its path and name or click Browse to locate the photograph.

(Neibauer, pp.481-482 (bold in original; underlining added).) As shown, the club founder can either enter the pathname of the image file on their computer, or can press the “**Browse...**” button to locate the picture on their computer. As explained for claim 8 above, the “**Browse...**” button when pressed would have presented the familiar file selection dialog box that allows a user to select a file to upload to the server. (Neibauer, p.158.)

Under the proposed combination with Balabine, these features would have continued to function in the same way, but with the *further* ability to select a club picture from a database accessible to the club founder. Instead of selecting an image file using the computer file system, the club founder would instead have used the same techniques in Neibauer (*i.e.* either entering the name of the picture or pressing “**Browse...**”) to select the desired image from a database. As explained, Balabine confirms that a database “can store data of virtually any type,” including “3D graphic

images,” among other types of data. (Balabine, 1:44-47.) Under the proposed combination, therefore, the club founder would have selected a club picture from a graphic image stored in a database. As such, **“at least one of the one or more external data sources comprises a database source.”** (EX1002, ¶¶137-138.)

Balabine is an analogous reference in the same field of the ’427 patent of managing information, and would have been reasonably pertinent to problems facing the inventors. For example, Balabine would have been reasonably pertinent to the problem of how to use a database to provide an external data source, one of the features of the ’427 patent and expressly recited in claim 4. (EX1002, ¶139.)

An ordinarily skilled artisan would have been amply motivated to combine. As noted, databases were exceptionally well-known and, as Balabine confirms, provided distinct advantages over storing data as files in a file system. (Balabine, 4:49-51 (“The use of a database to store persistent data provides several advantages that are not available when a file system is used as a data repository.”); EX1002, ¶140.) These advantages include (among others) a more structured organization of data and the ability to perform fast and arbitrarily complex queries. (Balabine, 4:51-54.) An ordinarily skilled artisan would thus have been motivated to combine in order to enhance the method described in Neibauer, in the discussion of Ground 1 above, by allowing it to draw from content (such as images) stored on a club founder’s database. (EX1002, ¶141.) This would have further expanded the

universe of external data sources available for incorporation into the club features of Neibauer, thus providing more diverse and interesting content to club. (*Id.*)

Balabine provides a further motivation to combine by explaining that a database-unaware application – such as the web browser on the club founder’s computer in Neibauer – would have been “enabled to access information in a database in a transparent manner.” (Balabine, 3:44-49.) For example, “a database may appear to an application as just another local or remote file system that is no different in form or character from the other file systems available to the application. No change to the application's program code, the database or the database engine is required.” (Balabine, 3:52-56.) This would have provided a further motivation to combine, as using a database source would not have required no modification to the existing functionality of Neibauer, as explained previously. (EX1002, ¶141.)

An ordinarily skilled artisan would also have had a reasonable expectation of success. As Balabine makes clear, databases, file systems, and techniques for accessing data from them were already well-known before June 2002. An ordinarily skilled artisan would have found the disclosures of Balabine sufficiently detailed to implement the techniques on which Ground 2 relies, using conventional programming techniques, without undue experimentation. (EX1002, ¶142.)

E. Grounds 3-4: Obviousness of Claims 1, 4-9 in Further View of Yates

Grounds 3-4 are substantially the same as Grounds 1-2, respectively, except

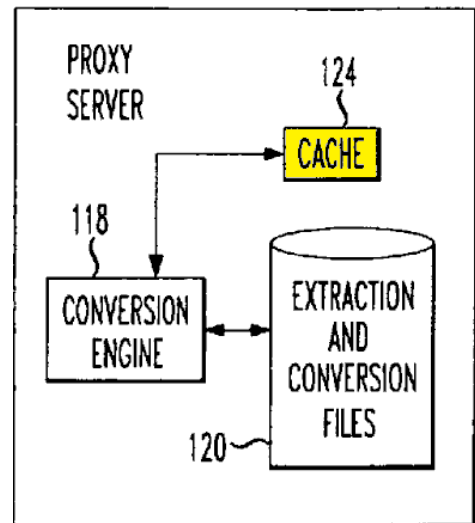
that they add Yates (**EX1016**) to account for a claim construction issue involving claim 1. As explained in Ground 1 for limitation 1[d] above, the '427 patent makes clear that the “**third set of one of one or more servers**” need not be different from the “**second set of one or more servers**” recited in limitation 1[b]. Ground 1 thus identifies, for purposes of claim 1, the same set of servers for both the second and third sets. Nevertheless, in the event Patent Owner argues or the Board were to determine that claim 1 requires that the second and third sets be different, such a requirement would have been obvious in further view of Yates. For all other limitations of claims 1 and 4-9, the analysis for Grounds 1-2 applies.

Yates discloses a well-known technique known as “caching” that improves data retrieval performance of computer networks. In the context of networking, caching generally refers to a technique of storing a copy of data that may be repeatedly requested by client computers, in a memory known as a cache, in order to reduce the amount of time required to retrieve that data when requested. When the cache receives the request for the data, it can deliver the data using the stored cache copy without having to obtain the data from the original server where it was stored. Because the cache is typically “closer” to the requesting client than the original server, data retrieval speed is increased. (EX1002, ¶75.)

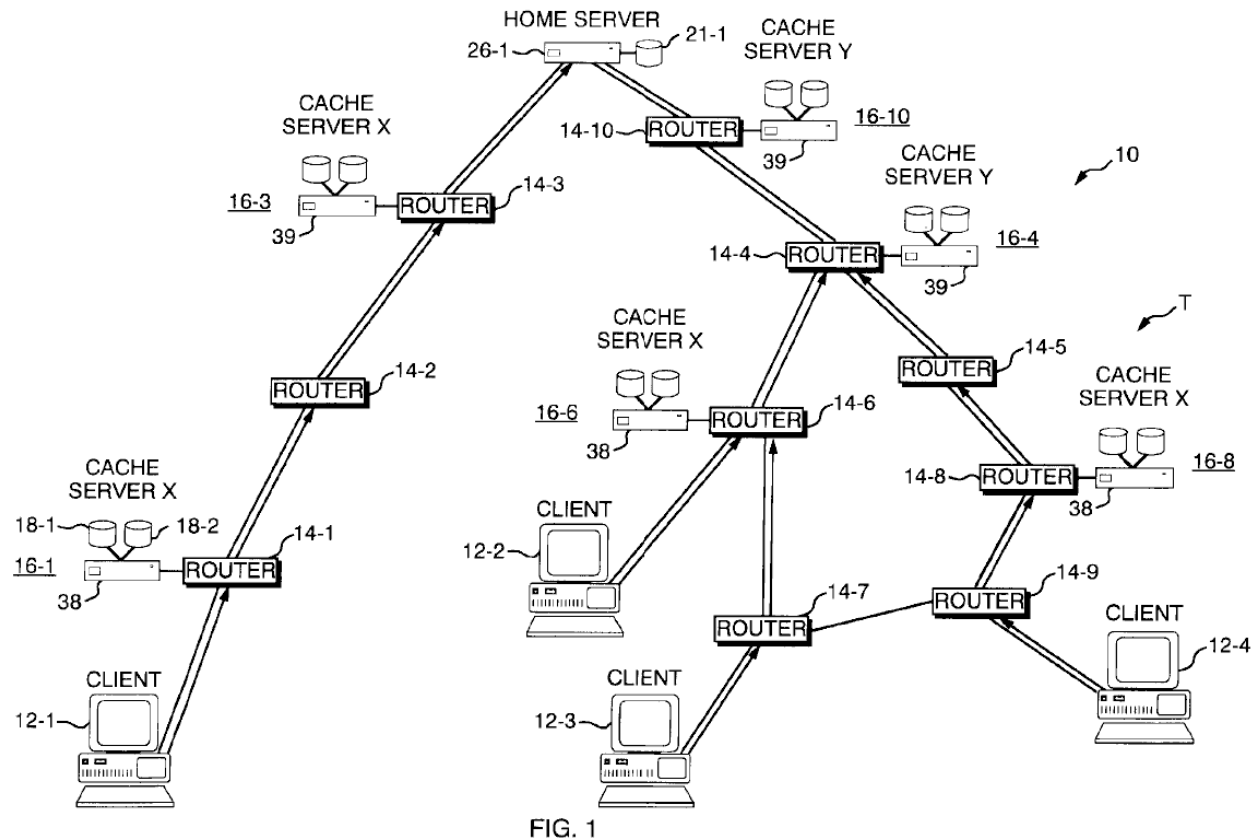
In everyday terms, a cache is analogous to a lawyer’s desk that holds their most frequently-used books for faster access, while less frequently-used books sit

on a bookshelf across the room. Yates explains, “[c]aches are an attempt to reduce the waste of repeated requests for the same document from many clients to a particular home server. By intercepting parallel requests, a cache may be used to serve copies of the same document to multiple client locations.” (Yates, 2:29-34.)

Caching techniques were well-known in computer networking. The Cheng reference discussed above for Ground 1, for example, discloses proxy server **110** that receives original web page **104** from origin server **102** over the Internet, and converts it into reformatted web page **122** for delivery to a mobile device. (Cheng, *e.g.*, Fig. 1, 2:19-29, 3:22-26, 3:58-4:2, 5:46-49, 7:65-8:2.) Cheng further explains that proxy server **110** includes a local cache **124** (shown at right) that can improve performance by storing copies of reformatted web page **122**. (Cheng, 5:50-59, Fig. 1 (partial figure shown at right).) “When a user of a mobile device **108** wants to access the web page **122**, the conversion engine retrieves it from the cache **124**, which reduces online time.” (Cheng, 5:57-59.)



Yates discloses a technique of taking the elementary local caching technique such as Cheng to the next level, by distributing multiple cache servers at various points across a computer network as shown in Figure 1:



(Yates, Fig. 1.)

Figure 1 shows a computer network **10** such as the Internet that “consists of a number of network entities including client computers **12-1**, **12-2**, **12-3**, **12-3**, **12-4** (collectively, clients **12**), routers **14-1**, **14-2**,..., **14-10**, cache servers **16-1**, **16-3**, **16-4**, **16-6**, **16-8**, and **16-10**, and home server **20**.” (Yates, 5:59-65.) Yates explains that a client **12** on the network may issue a request for a document on home server **20**, which may travel through a large number of different routers as the request makes its way all to home server **20**. (Yates, 6:31-45, 3:23-27.) To improve performance, “copies of documents are located at cache servers **16**.” (Yates, 7:9-10.) Accordingly, if a cache server **16** receives a request from a client **12** and the

requested document is stored in its cache, “then that copy is returned to the client **12**, and the request message is not permitted to continue on its way to the home server **20**.” (Yates, 7:39-42; *see also id.*, 3:29-34.) Conversely, if a copy of the document is not stored in the cache, the request continues on the path toward home server **20**. (Yates, 7:42-45.)

Yates explains that by having multiple cache servers across the network, the system, “permits cache copies of documents to diffuse through the network as needed, which in turn diffuses bottlenecks at the caches and well as along the communication paths.” (Yates, 4:9-12.) “There is also a corresponding reduction in network bandwidth consumption and response time, because cache copies are always placed nearer to the original server than to the client[.] Document request messages and the documents themselves therefore typically do not need to travel the full distance between the server and each client every time they are requested. Hence, overall network bandwidth is conserved, response times are reduced, and load is more globally balanced.” (Yates, 4:13-21.)

Rationale and Motivation to Combine (with Yates): It would have been obvious to combine the prior art cited for Grounds 1-2 with Yates, predictably resulting in the proposed combination of Neibauer and Cheng, with the *further* ability to provide cache servers on the network, separate from proxy server **110**, that store previously reformatted web pages **122** that were reformatted by proxy server

110 of Cheng. (EX1002, ¶149.) As a result, when mobile device **108** issues a request for data or a webpage over the Internet, if the requested data was stored in a cache server, the data would have been provided by the cache server instead of proxy server **110**. In this scenario, therefore, the “**mobile resources**” in limitation 1[d] would have been provided to mobile devices “**from a third set of one or more servers in the data communication network,**” *i.e.*, one or more cache servers separate from proxy server **110** (the “**second set of one or more servers**”). (*Id.*)

Yates is an analogous reference in the same field of network communications and would have been reasonably pertinent to problems facing the inventor, including how to provide requested resources from multiple sets of servers across the Internet. And more broadly, Yates would have been reasonably pertinent to the problem of how to scale a large web-based system to a larger number of users while maintaining acceptable levels of network performance. (EX1002, ¶150.)

An ordinarily skilled artisan would have been motivated to combine in order to improve network performance. Yates expressly notes, as noted, that providing for distributed cache servers results in “a corresponding reduction in network bandwidth consumption and response time, because cache copies are always placed nearer to the original server than to the client,” meaning that “[d]ocument request messages and the documents themselves therefore typically do not need to travel the full distance between the server and each client every time they are requested. Hence,

overall network bandwidth is conserved, response times are reduced, and load is more globally balanced.” (Yates, 4:13-21.) These benefits would have become even more pronounced with an increase in the number of users and greater diversity of geographic locations of those users. (EX1002, ¶151.)

As noted, Cheng already discloses local cache **124** within proxy server **110** for caching copies of reformatted web pages **122**. That technique would have been improved by allowing for further caching by external cache servers that are closer to the requesting mobile device **108**. This would have beneficially resulted in an increase in the speed that commonly-requested reformatted web pages **122**, such as the home pages of popular clubs as discussed in Neibauer, are delivered to mobile devices, thus improving performance and user experience. (EX1002, ¶152.)

An ordinarily skilled artisan would have had at least a reasonable expectation of success, as Yates relies on industry-standard Internet protocols including HTTP, TCP/IP, among others. (Yates, 6:18-30.) In fact, distributing caching services were already popular and commercially available by June 2002, with companies such as Akamai (the current assignee of Yates) offering such services to websites to increase network performance. (EX1002, ¶153.)

VII. CONCLUSION

Petitioner respectfully requests IPR institution.

Petition for *Inter Partes* Review of
U.S. Patent No. 10,839,427 B2

Dated: December 6, 2023

Respectfully submitted,

COOLEY LLP
ATTN: Patent Group
1299 Pennsylvania Avenue NW
Suite 700
Washington, DC 20004
Tel: (650) 843-5001
Fax: (650) 849-7400

By: / Heidi L. Keefe /
Heidi L. Keefe
Reg. No. 40,673
Counsel for Petitioner

CERTIFICATE OF COMPLIANCE WITH WORD COUNT

Pursuant to 37 C.F.R. § 42.24(d), I certify that this petition complies with the type-volume limits of 37 C.F.R. § 42.24(a)(1)(i) because it contains 11,550 words, according to the word-processing system used to prepare this petition, excluding the parts of this petition that are exempted by 37 C.F.R. § 42.24(a) (including the table of contents, a table of authorities, mandatory notices, a certificate of service or this certificate word count, appendix of exhibits, and claim listings).

DATED: December 6, 2023

COOLEY LLP
ATTN: Patent Docketing
1299 Pennsylvania Avenue NW
Suite 700
Washington, D.C. 20004
Tel: (650) 843-5001
Fax: (650) 849-7400

/ Heidi L. Keefe /
Heidi L. Keefe
Reg. No. 40,673

CERTIFICATE OF SERVICE

I hereby certify, pursuant to 37 C.F.R. Sections 42.6 and 42.105, that a complete copy of the attached **PETITION FOR INTER PARTES REVIEW OF U.S. PATENT NO. 10,839,427 B2**, including all exhibits (**Nos. 1001-1003, 1005-1006, 1012-1013, 1015-1016, 1022, 1024-1027**) and related documents, are being served via Federal Express on the 6th day of December, 2023, the same day as the filing of the above-identified document in the United States Patent and Trademark Office/Patent Trial and Appeal Board, upon Patent Owner by serving the correspondence address of record with the USPTO as follows:

31825 - RYAN, MASON & LEWIS, LLP
48 South Service Road
Suite 100
Melville, NY 11747
UNITED STATES

And, via Federal Express upon counsel of record for Patent Owner in the litigation pending before the U.S. District Court for the Western District of Texas entitled *Mobile Data Technologies LLC v. Meta Platforms, Inc.*, Case No.7:22-cv-00244-ADA-DTG (W.D. Tex.) as follows:

Erick S. Robinson
Texas Bar No. 24039142
Spencer Fane LLP
3040 Post Oak Boulevard, Suite 1300
Houston, TX 77056
Telephone: (713) 212-2638
Mobile: (713) 498-6047
Fax: (713) 963-0859
erobinson@spencerfane.com

DATED: December 6, 2023

/ Heidi L. Keefe /
Heidi L. Keefe
Reg. No. 40,673
COOLEY LLP
1299 Pennsylvania Ave. NW,
Suite 700
Washington, D.C. 20004
Tel: (650) 843-5001