

**UNITED STATES PATENT AND TRADEMARK OFFICE**

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**BEFORE THE PATENT TRIAL AND APPEAL BOARD**

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SAMSUNG ELECTRONICS CO. LTD. and SAMSUNG ELECTRONICS  
AMERICA, INC.,  
Petitioners,

v.

MOBILE DATA TECHNOLOGIES LLC,  
Patent Owner

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IPR2025-00544  
U.S. Patent No. 9,619,578

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**PETITION FOR *INTER PARTES* REVIEW OF  
U.S. PATENT NO. 9,619,578**

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**EXHIBIT LIST**

| <b>Exh.</b> | <b>Reference</b>                                                                                                                                         |
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| 1001        | U.S. Patent 9,619,578 to Harper (“the ’578 patent”)                                                                                                      |
| 1002        | File History of U.S. Patent 9,619,578                                                                                                                    |
| 1003        | Declaration of Dr. Henry Houh in Support of Petition for <i>Inter Partes</i> Review of U.S. Patent 9,619,578                                             |
| 1004        | Curriculum Vitae of Dr. Henry Houh                                                                                                                       |
| 1005        | WO 02/17652 to Randall, et al. (“Randall”)                                                                                                               |
| 1006        | U.S. Patent 7,047,030 to Forsyth (“Forsyth”)                                                                                                             |
| 1007        | U.S. Patent 7,056,217 to Pelkey, et al. (“Pelkey”)                                                                                                       |
| 1008        | U.S. Patent 6,716,103 to Eck, et al. (“Eck”)                                                                                                             |
| 1009        | Joint Claim Construction Statement from <i>Mobile Data Techs. LLC v. Meta Platforms, Inc.</i> , No. 7:22-cv-00244-ADA-DTG (E.D. Tex.)                    |
| 1010        | Patent Owner’s Response to Petition (Paper 26) from <i>Mobile Data Techs. LLC v. Meta Platforms, Inc.</i> , IPR2024-00249                                |
| 1011        | Petitioner’s Reply (Paper 33) from <i>Mobile Data Techs. LLC v. Meta Platforms, Inc.</i> , IPR2024-00249                                                 |
| 1012        | “Wireless Java for Symbian Devices” by Allin (September 2001) (“Allin”)                                                                                  |
| 1013        | WAP Architecture (Version 12): “Wireless Application Protocol Architecture Specification, WAP-210-WAPArch-20010712” (July 12, 2001) (“WAP Architecture”) |
| 1014        | Wireless Datagram Protocol (Version 14): “Open Mobile Alliance, WAP-259-WDP-20010614-a” (June 14, 2001) (“WDP”)                                          |
| 1015        | ETSI TS 123 040—Digital cellular telecommunications system (Phase 2+) (GSM); Universal Mobile Telecommunications System (UMTS);                          |

| Exh. | Reference                                                                                                                                                                                                                                                                                  |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      | Technical realization of the Short Message Service (SMS) (3GPP TS 23.040 version 3.6.0) (September 2001) (“GSM SMS Standard”)                                                                                                                                                              |
| 1016 | “Symbian OS Communications Programming” by Michael J. Jipping (June 2002) (“Jipping”)                                                                                                                                                                                                      |
| 1017 | “Symbian Home Page,” (January 24, 2002),<br><a href="https://web.archive.org/web/20020124070457/http://www.symbian.com:80/">https://web.archive.org/web/20020124070457/http://www.symbian.com:80/</a>                                                                                      |
| 1018 | “Symbian: OS Technology,” (February 2, 2002),<br><a href="https://web.archive.org/web/20020202090443/http://www.symbian.com/technology/technology.html">https://web.archive.org/web/20020202090443/http://www.symbian.com/technology/technology.html</a>                                   |
| 1019 | “Symbian: OS Technology – Symbian OS phones and PDAs,” (February 2, 2002)<br><a href="https://web.archive.org/web/20020202133445/http://www.symbian.com/technology/symbos-phones.html">https://web.archive.org/web/20020202133445/http://www.symbian.com/technology/symbos-phones.html</a> |
| 1020 | U.S. Patent 6,947,396 to Salmi (“Salmi”)                                                                                                                                                                                                                                                   |
| 1021 | U.S. Patent 7,031,718 to Jouppi, et al. (“Jouppi”)                                                                                                                                                                                                                                         |
| 1022 | U.S. Patent 7,092,495 to Kraft, et al. (“Kraft”)                                                                                                                                                                                                                                           |
| 1023 | U.S. Patent 6,788,949 to Bansal (“Bansal”)                                                                                                                                                                                                                                                 |
| 1024 | U.S. Patent 7,802,207 to Agboatwalla, et al. (“Agboatwalla”)                                                                                                                                                                                                                               |
| 1025 | U.S. Patent 7,574,486 to Cheng, et al. (“Cheng”)                                                                                                                                                                                                                                           |
| 1026 | “Operating System Concepts” (Fourth Edition) by Silberschatz et al. (January 1994) (“Silberschatz”)                                                                                                                                                                                        |
| 1027 | U.S. Patent 6,937,588 to Park (“Park”)                                                                                                                                                                                                                                                     |
| 1028 | Excerpt from Webster’s Dictionary of Computer Terms (page 98)                                                                                                                                                                                                                              |

| Exh. | Reference                                                                                                                                                   |
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| 1029 | PO's Infringement Contentions for the '578 Patent in <i>Mobile Data Techs. LLC v. Samsung Electronics Co., Ltd.</i> , No. 2:24-cv-00435-JRG-RSP (E.D. Tex.) |
| 1030 | Patent Owner's Response to Petition (Paper 26) from <i>Mobile Data Techs. LLC v. Meta Platforms, Inc.</i> , IPR2024-00248                                   |
| 1031 | RESERVED                                                                                                                                                    |

## **I. Introduction**

Samsung Electronics Co. Ltd. and Samsung Electronics America, Inc. (“Petitioners”) petition for IPR of claims 1, 6-12, 15-19, 21, and 22 of U.S. Patent 9,619,578 (“the ’578 patent,” EX-1001).

## **II. Grounds for Standing**

Petitioners certify the ’578 patent is available for IPR and Petitioners are not barred or estopped.

## **III. Identification of Challenge**

### **A. Prior Art**

The ’578 patent, filed July 7, 2014, claims priority through continuations to U.S. Patent 7,599,983, filed June 18, 2003, which claims priority to Provisional 60/389,430 filed June 18, 2002. Petitioners do not acquiesce the ’578 patent is entitled to priority of the provisional or any listed priority patent. Regardless, each applied reference was filed or published before June 18, 2002.

1. **WO 02/17652 to Randall, et al.** (“Randall”; EX-1005), published February 28, 2002, is prior art under 35 U.S.C. §102(a).

2. **U.S. Patent 7,047,030 to Forsyth** (“Forsyth”; EX-1006) is a National Stage Entry of PCT/GB02/02046, filed May 2, 2002, and is prior art under 35 U.S.C. §102(e).

3. **U.S. Patent 7,056,217 to Pelkey** (“Pelkey”; EX-1007), filed November 28, 2000, is prior art under 35 U.S.C. §102(e).

4. **U.S. Patent 6,716,103 to Eck** (“Eck”; EX-1008), filed September 11, 2000, is prior art under 35 U.S.C. §102(e).

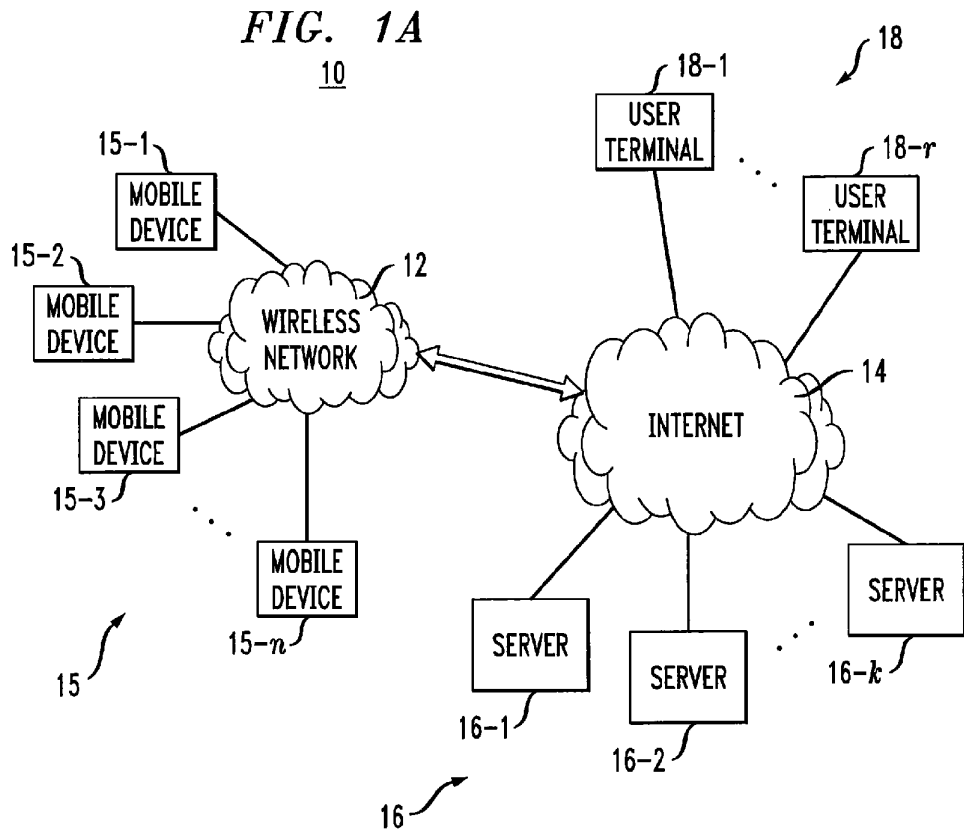
**B. Grounds For Challenge**

| Ground |     | Claims                | Prior Art        |
|--------|-----|-----------------------|------------------|
| 1      | 103 | 1, 6-12, 15-19, 21-22 | Randall, Forsyth |
| 2      | 103 | 1, 6-12, 15-19, 21    | Pelkey, Eck      |

**IV. The '578 Patent**

**A. Patent Overview**

The '578 patent identifies “accessing of information content over wireless networks via web-enabled mobile devices” as among “the most rapidly expanding aspects of wireless networking.” (EX-1001, 1:32-34.) Figure 1A (below) shows an example network-based communication system 10 including “wireless network 12 coupled to the Internet 14, a set of mobile devices 15, a set of servers 16 and a set of user terminals 18.” (EX-1001, 3:59-64.)



**'578 Patent, Figure 1A**

System 10 “provides at least one content management site accessible to a system user” including “M-channels” which “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.” (EX-1001, 5:27-29, 8:30-36.) Such mobile sites may be associated, e.g., with “a group comprising multiple members having a common interest”, “an event” or “a game”. (EX-1001, 6:39-8:25.)

### **B. Level of Ordinary Skill**

A person of ordinary skill in the art (“POSITA”) would have had 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 interact with mobile devices, such as systems for storing and retrieving information over the Internet or communicating using the Web using wireless mobile devices. Additional education might compensate for less experience and vice versa.<sup>1</sup> (EX-1003, ¶¶31-32.)

### **C. Prosecution History**

During prosecution, the Examiner rejected all pending claims as anticipated by U.S. Publication 2001/0027422 to Brandrud and under obviousness-type double patenting over U.S. Patent 8,825,801. (EX-1002, 245-52.) In response, Applicant amended the claims to specify the content comprises “media data captured by the mobile device” and to include generation and insertion of “integrated content” into the “application-based information channel.” (EX-1002, 340.) The Examiner subsequently allowed the claims, stating the prior art of record did not teach the “integrating” and “inserting” limitations. (EX-1002, 354.)

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<sup>1</sup> PO did not dispute this POSITA definition in the Meta-MDT-IPR.

## **D. Claim Construction**

In *Mobile Data Techs. LLC v. Meta Platforms, Inc.*, No. 3:24-CV-00896-WHA (N.D. Cal.) (“MDT-Meta-Litigation”) and *Meta Platforms, Inc. v. Mobile Data Techs. LLC*, IPR2024-00249 (“Meta-MDT-IPR”), the parties identified the following terms for construction. (See EX-1009, 2-3; EX-1010, 21-31; EX-1011, 2-10.) The Board need not expressly construe any term for purposes of this proceeding because Petitioners establish the challenged claims are unpatentable under the constructions proposed in these proceedings and the claims’ plain meaning, where different. See *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999).

### **1. Mobile Device**

Petitioners dispute PO’s narrow Meta-MDT-IPR construction which is contrary to the express definition in the specification. (See, e.g., EX-1001, 4:45-48.) Petitioners apply the plain meaning which is consistent with Meta’s Meta-MDT-IPR and MDT-Meta-Litigation constructions. (EX-1003, ¶¶38-39.)

| MDT-Meta-Litigation |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| PO                  | plain and ordinary meaning; alternatively, “a piece of handheld equipment”                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Meta                | “any type of portable information processing device capable of being configured for communication over a network, including but not limited to a mobile telephone, a personal digital assistant (PDA), a palmtop computer, a hand-held computer, a laptop computer, a tablet computer, a global positioning system (GPS) receiver or other GPS-based navigational device, an MP3 player or other type of audio player, a pager, a watch or other timepiece, a camera, or a portable game player” |
| Meta-MDT-IPR        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| PO                  | “a portable device with limited display space and limited navigational capabilities that connects to a mobile site and/or mobile channel via a wireless network”                                                                                                                                                                                                                                                                                                                                 |
| Meta                | construed based on express definition: “The term ‘mobile device’ as used herein is intended to include, without limitation, any type of portable information processing device capable of being configured for communication over a network”                                                                                                                                                                                                                                                     |

## 2. “Application-Based Information Channel”

Meta agreed to PO’s construction in the MDT-Meta-Litigation of “a computer program-based medium for transferring information” for the purpose of the Meta-MDT-IPR. (EX-1011, 6.) PO however proposed a different construction for the term in the Meta-MDT-IPR (“a component of a mobile site configured to permit a wide variety of mobile devices to send and receive content over a wireless network”). Notably, PO’s Meta-MDT-IPR construction differs from the construction it proposed for the same term in the *Meta Platforms, Inc. v. Mobile*

*Data Techs. LLC*, IPR2024-00248. PO did not explain why it is advocating for two different constructions of the identical phrase.

### 3. “Wireless Networking Functionality of the Mobile Device”

In the Meta-MDT-IPR, the parties dispute whether the wireless network is “independent” or “separate” from the Internet. (EX-1010, 30-31; EX-1011, 7-9.)

While Petitioners dispute PO’s construction, construction of this term is not needed because the prior art discloses this term under both constructions.

| Meta-MDT-IPR |                                                                                                               |
|--------------|---------------------------------------------------------------------------------------------------------------|
| PO           | “functionality implementable by the mobile device via the wireless network independent of the Internet”       |
| Meta         | to the extent the phrase requires express construction, “functionality implementable over a wireless network” |

While the term “wireless network” was not explicitly identified in the Meta-MDT-IPR for construction, the parties nevertheless appear to dispute its meaning. (*Compare* EX-1010, 31 (“wireless network 12 ... is separate from Internet 14”), *with* EX-1011, 9 (“a network that allows a device to communicate wirelessly over a network”).) Meta contends PO applies the construction, “wireless network separate from the Internet,” in its arguments. (EX-1011, 9.) Meta further contends the term should be construed as “a network that allows a device to communicate wirelessly over a network.” (EX-1011, 9.) Regardless, Petitioners’ grounds disclose the term under both interpretations.

**V. GROUND 1: Randall-Forsyth Combination Renders the Challenged Claims Obvious**

**A. Combination Overview**

Randall and Forsyth, both originally assigned to Symbian Limited (“Symbian”), describe the Symbian Forums service and different aspects of the network infrastructure supporting Forums. (See EX-1003, ¶¶45-74.) Forums at its most basic provides “chat rooms”, “allow[ing] several people to be part of a ‘channel’ or room, which is usually themed; for instance supporters of a football team may meet in a channel devoted to that team to discuss the team.” (EX-1005, 40:16-19.)

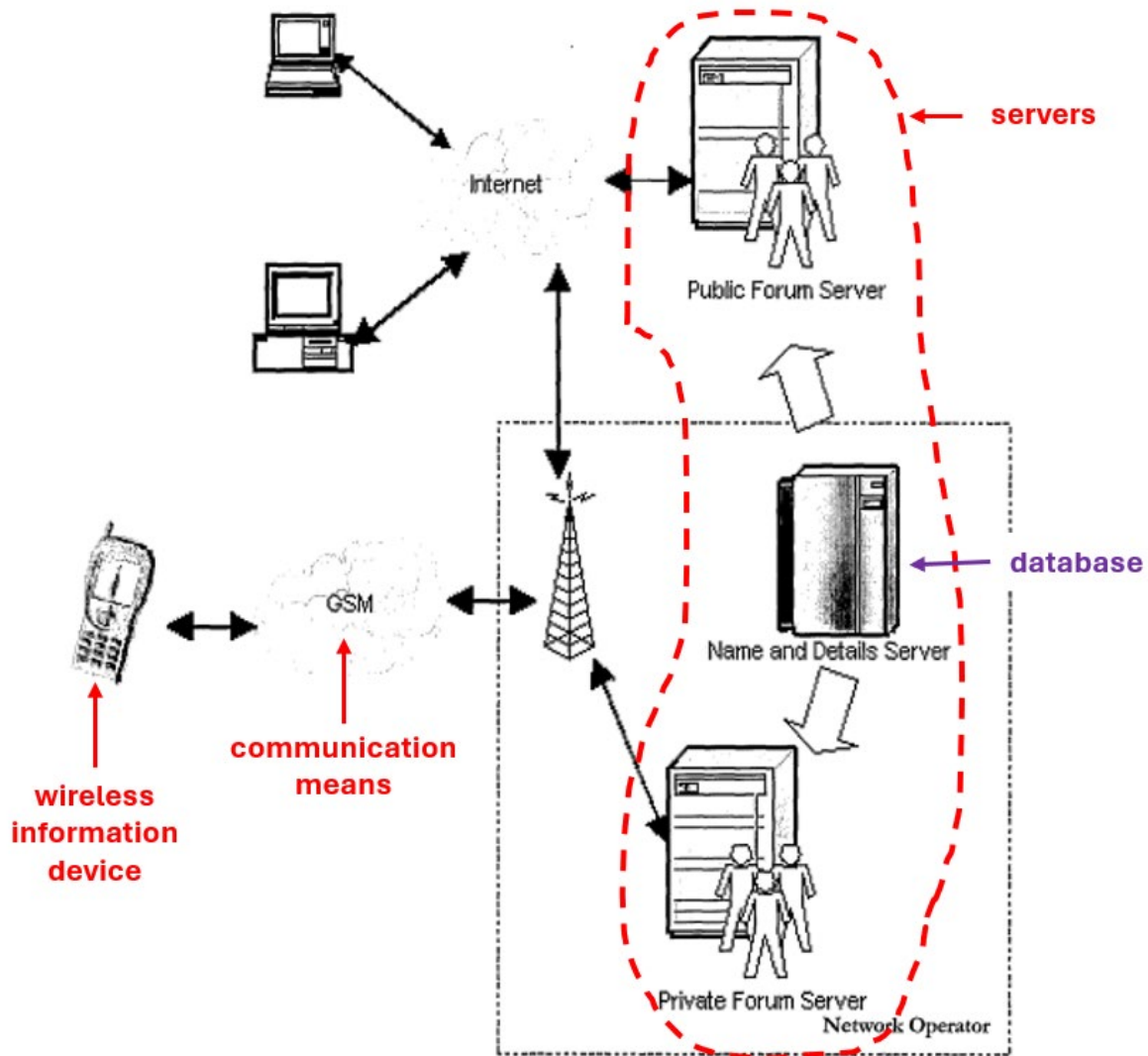
**1. Randall**

Randall describes the Forums’ network infrastructure used in its Figure 4 (below).<sup>2</sup> Forums uses a client/server model with a program component on the wireless devices (clients) and a program component on the server. (See EX-1005, 7:16-19.) Randall’s servers “use standard data transports such as WAP or http for data access” within Forums; meaning wireless devices access servers via WAP, which is based on WWW protocols and content formats, and non-mobile computing devices access servers via HTTP over the Internet. (See EX-1003, ¶¶56-66.) Randall introduces into this network “an open, universal data infrastructure for

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<sup>2</sup> All emphasis by bold and figure annotations added unless otherwise noted.

wireless information devices” which “extend[s] the attributes of the database using a *standard protocol*.” (EX-1005, 3:10-13 (*italics in original*).)



**Forums—Randall, Figure 4**

Randall’s extensible database “contains information from or relating to many different entities” and “is organised into information fields which an entity can complete or have completed.” (EX-1005, 8:26-28.) The database is structured

so its information “can be readily shared with other entities: the database in effect represents a web page containing information specific to that entity.” (EX-1005, 8:29-31.) The infrastructure allows users to view, personalize, and/or manage access rights to their shared data through a view (e.g., via a website). (See EX-1005, 66:19-20, 66:25-26 (associating Alice’s view to [www.indirect.com/Alice](http://www.indirect.com/Alice).) Each piece of stored data, illustrated in Table 1 for a user’s (Alice) record, is associated with a tag and a listing of groups “allowed access to the data.” (EX-1005, 66:3-10.)

Table 1

| Alice's iData       |             |                                                       |                     |
|---------------------|-------------|-------------------------------------------------------|---------------------|
| Field/Attribute     | Category    | Details                                               | i-Groups            |
| First name          | personal    | Alice                                                 | all                 |
| Family name         | personal    | Edwards                                               | all                 |
| Title               | work        | European Marketing Manager                            | all                 |
| Company Name        | work        | Wireless Information Device gets R Us                 | all                 |
| Company Address     | work        | 1 Science Park Rd, London, N1                         | all                 |
| Company E-mail      | work        | alice.edwards@Wireless Information Device getsrus.com | business 1          |
| Company switchboard | work        | 0207 200 2000                                         | all                 |
| Company Direct      | work        | 0207 200 2012                                         | business 1          |
| Mobile Phone        | work        | 0840 1234 567                                         | business 1, friends |
| Home Phone 1        | work        | 0208 341 1234                                         | friends, family     |
| Home Address        | work        | 25 The Gables, Hampstead, London, NW3                 | family              |
| My photo            | photos      |                                                       | friends             |
| Childhood photo     | photos      |                                                       | family              |
| Home note           | notice      | Sorry about dinner ☹                                  | partner             |
| Work note           | notice      | In a meeting with Tim till 7pm                        | work 1              |
| My mood now         | mood        | Very tired                                            | all                 |
| Tel Call Subject    |             | "Dinner Tonight"                                      |                     |
| Bluetooth           | location    | Bluetooth pods 1000-1020 ...Sentinel room 2...        |                     |
| GPS                 | location    | London W1, Seymour St.                                | partner             |
| Hobby               | preferences | Photography, travel                                   | friends             |
| Book                | preferences | Maverick                                              | friends             |
| AlbumOfTheWeek      | InstaPoll   |                                                       | friends             |

Randall, Table 1

Randall introduces Forums as a service utilizing its extensible data infrastructure. (EX-1005, 40:28-41:2.) Forsyth further enhances Forums, as discussed below.

## **2. Forsyth**

Forsyth introduces application-independent group objects which provide “a group communication method for a wireless information device.” (EX-1006, 1:15-16.) Forsyth’s group objects, created by a first application, can be used by other, unrelated, applications running on a device. (EX-1006, 2:10-16.) Forsyth specifically describes enhancements to Forums achievable through the use of these group objects. (EX-1003, ¶¶71-74.) Forsyth also describes several Scenarios illustrating the operation of group-object enhanced Forums: Group Based Text Messaging, (5:35-7:13), Discussion of Photos (7:18-57), Social Scheduling (7:58-9:4) and Digital Memento from a User’s Birthday (9:5-35) as well as numerous features and functions that can be used within Forums to further enhance the user experience.

## **3. Motivation to Combine**

A POSITA would have been motivated to combine Forsyth’s teachings regarding use of group objects and additional features and functions to enhance the Forums service taught by Randall which uses Randall’s network infrastructure with extensible database. (EX-1003, ¶¶75-81.) Randall and Forsyth are both in the

same field of the '578 patent—"network-based communication systems." (*See* EX-1001, 1:26-28; EX-1005, 40:16-18; EX-1006, 1:15-16; EX-1003, ¶76.) Randall and Forsyth are also reasonably pertinent to problems addressed by the '578 patent, namely "overcom[ing] one or more of the drawbacks of" conventional techniques for content sharing for mobile devices. (*See, e.g.* EX-1001, 2:3-6; EX-1003, ¶76.)

A POSITA would have been motivated to make the above combination because Forsyth explicitly motivates the combination. (EX-1003, ¶¶77-81.) Forsyth stresses the benefits of group objects noting its "invention is founded on the insight of providing an object which defines solely the identities of members of a group." (EX-1006, 2:24-27.) As such, "a group created in one application (e.g. for text based instant messaging) can immediately be used in other applications (e.g. a diary/agenda application could use that same group as the recipient list for an invitation to a meeting)." (EX-1006, 2:27-37.) Forsyth further describes "strengths" of a Forums application utilizing group objects "over conventional communications," as summarized in Table 1 (below). (EX-1006, 2:54-57.)

| <b>Capability:</b>            | <b>Can you create a discussion between group members on your own device?</b><br><br>(Important since it facilitates setting up a group discussion) | <b>Push delivery?</b><br><br>(Push is more convenient to mobile users) | <b>Is it possible to retain a long term record of exchanges between group members?</b><br><br>(An important attribute for many new kinds of services) | <b>Can you deliver messages to all members of a group, or is it restricted to one to one?</b><br><br>(Clearly critical to group based messaging) | <b>Do all group members see the same, unitary message thread, or are there instead many separate individual messages?</b><br><br>(A single, unitary message entity (e.g. a thread) makes message organisation and navigation far easier.) | <b>If a recipient is off-line (e.g. messaging app not open), are they alerted anyway?</b><br><br>Potentially very important for mobile useage because of the high proportion of time users may not be on-line (i.e. actively using their messaging application). |
|-------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Web bulletin board</b>     | No                                                                                                                                                 | No                                                                     | Yes                                                                                                                                                   | Yes                                                                                                                                              | Yes                                                                                                                                                                                                                                       | No                                                                                                                                                                                                                                                               |
| <b>Chat/instant messaging</b> | Yes                                                                                                                                                | Yes                                                                    | No                                                                                                                                                    | Yes                                                                                                                                              | Awkward                                                                                                                                                                                                                                   | No                                                                                                                                                                                                                                                               |
| <b>Group e-mail</b>           | Yes                                                                                                                                                | No                                                                     | Awkward                                                                                                                                               | Yes                                                                                                                                              | No                                                                                                                                                                                                                                        | No                                                                                                                                                                                                                                                               |
| <b>SMS</b>                    | Awkward                                                                                                                                            | Yes                                                                    | No                                                                                                                                                    | Awkward                                                                                                                                          | No                                                                                                                                                                                                                                        | Yes                                                                                                                                                                                                                                                              |
| <b>Forums</b>                 | Yes                                                                                                                                                | Yes                                                                    | Yes                                                                                                                                                   | Yes                                                                                                                                              | Yes                                                                                                                                                                                                                                       | Yes                                                                                                                                                                                                                                                              |

Table 1

### Forsyth, Figure 1

Therefore, a POSITA would have been motivated to combine Randall and Forsyth to obtain the advanced capabilities provided by Forsyth. (EX-1003, ¶¶77-78.) Moreover, a POSITA, when considering Randall's Forums service, would have been motivated to search for references describing Forums and its enhancements, particularly those published by or associated with Symbian and

would have been led to Forsyth. (EX-1003, ¶79.) Finally, the combination is nothing more than the application of a known technique (Forsyth's group objects, features and functions) to a known method/product (Randall's Forums service implemented with extensible database infrastructure) which was ready for further improvement. (EX-1003, ¶80.)

A POSITA would have had a reasonable expectation of success in the combination and the results of the combination would have been predictable because both references are directed to the same service, Forums; are based on devices using Symbian OS; and use features and functionality associated with Symbian. (EX-1003, ¶81.) The Symbian operating system was well-known and Symbian offered many technical developer resources prior to the earliest possible priority date of the '578 patent. (*See, e.g.*, EX-1017; EX-1012, EX-1016, EX-1018.)

#### **B. Independent Claims 1 and 9**

Method claim 1 and apparatus claim 9 recite substantially overlapping processing limitations ([1A]-[1C]/[9C]-[9E]). (EX-1003, ¶82.) Petitioners address these claims together.

**1. Preambles [1P]/[9P] and Processor Element [9A]**

**a. [1P]: “method”**

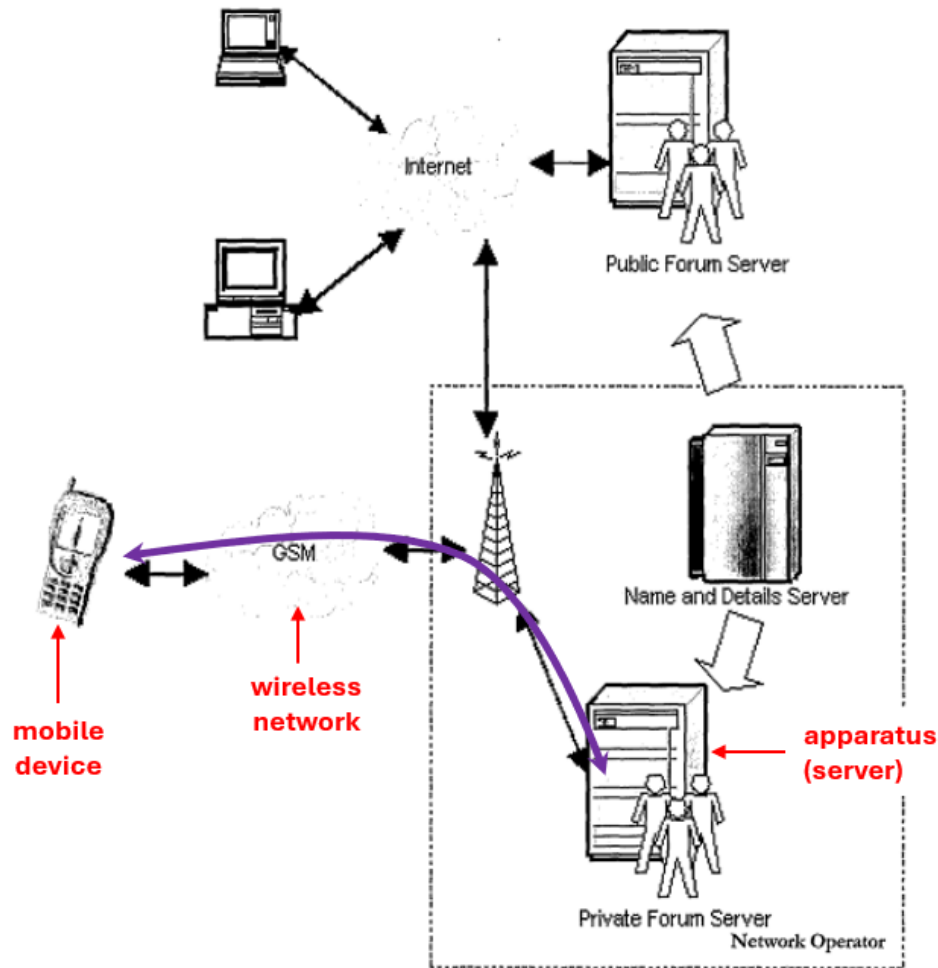
The Randall-Forsyth combination discloses a method for performing the steps of limitations [1A]-[1C]. (*See* §§V.B.2-4.)

**b. [9P]: “apparatus”**

The Randall-Forsyth combination discloses a server, which is an “*apparatus*<sup>3</sup>” [9P]. (EX-1003, ¶84.) As illustrated in Randall’s Figure 4, the Forums network infrastructure includes a server hosting Forums (e.g., Private Forum Service). In Forums, the server “handles contacting each group member, storing messages, allowing message to be read, sending, receiving and distributing messages.” (EX-1006, 3:28-33.)

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<sup>3</sup> Claim language is indicated by italics throughout.



**Forums—Randall, Figure 4**

**c. “Processing Element” [9A]**

The Randall-Forsyth combination, as informed by a POSITA’s general knowledge, teaches or suggests the server includes “*a processing element comprising a processor coupled to a memory.*” (EX-1003, ¶¶85-93); *Philips v. Google*, 948 F.3d 1330, 1337-38 (Fed. Cir. 2020) (finding claims obvious over a reference “in light of the general knowledge of a skilled artisan”).

The Forums server performs processing and therefore has a “*processing element*.” (EX-1003, ¶87.) Forsyth teaches the server “handles contacting each group member, storing messages, allowing message[s] to be read, sending, receiving and distributing messages.” (EX-1006, 3:28-31.) Randall specifically mentions “server side **software**” (EX-1005, 57:4) and “server side message handling **applications**” (EX-1005, 38:24).

Both Randall and Forsyth disclose or suggest the “*processing element*” in the server includes “*a memory*.” (See EX-1003, ¶87.) Specifically, the Forums server acts as “a store for resources which group-members may wish to discuss and share (e.g., personal information, personal photographs, music, web sites, etc.).” (EX-1006, 3:31-34.) The storage at the server is a “*memory*.” (EX-1006, 3:31-34; EX-1001, 4:60-63 (memory includes “any other type of storage device”).) Additionally, a POSITA would have understood that software and applications execute on “*a processor*” within the “*processing element*” and are stored in a memory. (EX-1003, ¶¶87-88.)

Should PO contend “*memory*” of the “*processing element*” must store instructions executed by the processor, such memory would have been obvious, if not inherent in Randall and Forsyth which both teach software running on the server. (§V.F.) Because the software/applications executing on a processor are stored in memory and also access information stored in memory, a POSITA would

have understood Randall and Forsyth further disclose or suggest the “*processor [is] coupled to a memory.*” (EX-1003, ¶88.)

Moreover, the general architecture of a server (processor coupled to memory and a network interface) was within a POSITA’s general knowledge by June 2002. (EX-1003, ¶¶89-93.) For example, U.S. Patent 7,802,207 to Agboatwalla et al. (“Agboatwalla”)(5:40-55), U.S. Patent 7,574,486 to Cheng et al. (“Cheng”)(23:26-51), Bansal (“Bansal”)(6:66-7:5), Pelkey and Eck (§VI.B) each discloses the claimed arrangement.

## 2. “Providing” Limitations [1A]/[9B]

The Randall-Forsyth combination discloses the “*provid[ing]/[e]*” limitations [1A]/[9B]. (EX-1003, ¶¶94-155.)

### a. “Application-Based Information Channel”

The Randall-Forsyth combination discloses a “*application-based information channel*” under both Meta’s and PO’s Meta-MDT-IPR constructions. (EX-1003, ¶¶95-99; *supra* §IV.D.) Forums, described by Randall and Forsyth, is an “*application*” with a wireless device component and a server component: “FIGS. 2-11 are screen shots of the display of a wireless information device running the **Forums application.**” (EX-1006, 4:62-63; *see also*, EX-1006, 4:64-65, 2:46-47, 9:11-13; EX-1005, 3:17-19, 40:15-41:14, 43:23-24 (describing Forums application).) Forums “offers many advantages to group communication

since it is an easy to understand messaging tool that facilitates open discussion amongst a group and allows multiple chat-style conversations to take place simultaneously.” (EX-1006, 5:27-30; *see also*, 5:35-7:13, 7:18-57, 7:58-9:35.)

Within Forums, a user has the ability to create an individual Forum opened to members of a specified group (Private Forum) or to all (Public Forum). (EX-1006, Appendix 1, 13:60-18:18; EX-1005, 24:13-17.) Randall describes that “a forum allows **several people** to be part of a ‘**channel**’ or room.” (EX-1005, 40:17-19; *see also* EX-1005, 82:5-10, 82:10-83:5.) Forsyth describes several examples of Forums being used to author and share content (e.g., text messages, photos, links, audio files, documents) among members: Group Based Text Messaging Scenario 1 (5:35-7:13), Discussion of Photos Scenario 2 (7:18-57), Social Scheduling Scenario 3 (7:58-9:4), and Digital Memento from a User’s Birthday Scenario 4 (9:5-35).

A Forum created in and available via Forums (computer program) provides a means to share content (information) with identified members of the Forum—i.e., it is a mechanism through which content/information is transferred to Forum members. Each individual Forum (and its supporting network infrastructure) is “computer program-based medium for transferring information”, meeting PO’s MDT-Meta-Litigation construction and Meta’s Meta-MDT-IPR construction. (EX-1003, ¶99.) A Forum is also a “component of a mobile site [Forums running on the

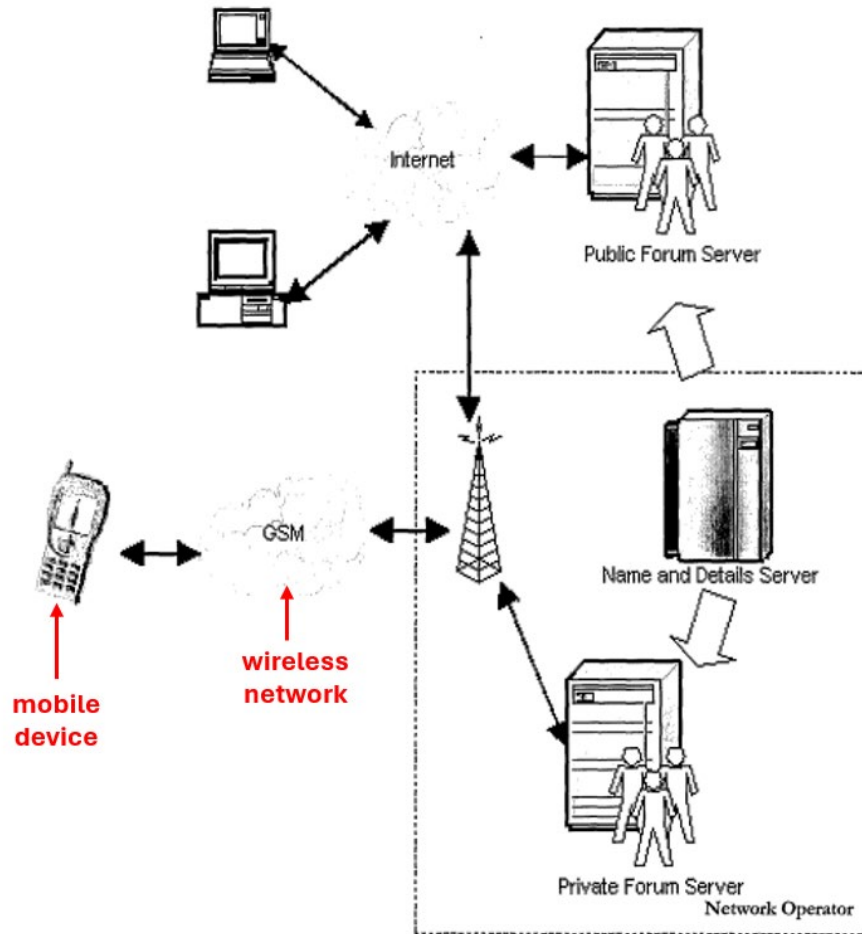
server] configured to permit a wide variety of mobile devices to send and receive content over a wireless network”, meeting PO’s Meta-MDT-IPR construction. (*Id.*)

**b. “Content Item Comprising Media Data ...”**

**(1) Mobile Device**

The Randall-Forsyth combination discloses a “*mobile device*” [1A]/[9B] under the MDT-Meta-Litigation and Meta-MDT-IPR constructions. (EX-1003, ¶¶101-112.)

The Forums infrastructure uses a client-server model with wireless information devices connected to servers via a wireless network. (*See, e.g.*, EX-1005, 40:28-30, 3:10-13 (Randall “relates to the use of an open, universal data infrastructure for **wireless information devices**”); EX-1006, 1:15-16 (Forsyth “relates to a group communication method for a **wireless information device**”).)

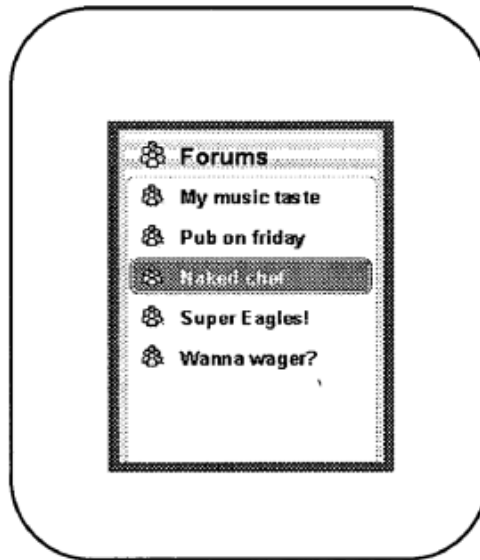


**Forums—Randall, Figure 4**

The wireless information devices disclosed in both Randall and Forsyth encompass “any kind of device with one or two way wireless information capabilities [including] without limitation radio telephones, smart phones, communicators, personal computers, computers and application specific devices.” (EX-1005, 1:7-11; EX-1006, 1:16-22.) Each listed wireless information devices is portable, capable of being held in the hand, and configured for “communicat[ion] in any manner over any kind of network, such as GSM or UMTS, CDMA and

WCDMA mobile radio, Bluetooth”, 802.11, and IrDa (infrared). (EX-1005, 1:11-13; EX-1006, 1:16-25.) That is, these portable/handheld devices process information and are configured to connect to and communicate via a wireless network and therefore meet Meta’s Litigation/IPR and PO’s Litigation “*mobile device*” constructions. (EX-1003, ¶¶102-104.)

Randall and Forsyth also teach wireless information devices (e.g., radio telephone and smartphone) that have limited display space and/or limited navigational capabilities. (See EX-1006, 4:61-62, Figures 2-11; EX-1005, 45:23-25 (“current architecture of the Internet is not well suited for the wireless device form factor ... for mobile devices with small displays.”).) For example, as shown in Forsyth’s Figure 6 (below), the wireless information device has a small display and the interface permits the user to navigate to only the listed forums—i.e., the mobile device has limited navigational capabilities. (EX-1003, ¶105.) Thus, the Randall-Forsyth combination discloses a “*mobile device*” even under PO’s overly narrow Meta-MDT-IPR construction. (*Id.*)



**Symbian Forums—Forsyth, Figure 6**

**(2) “content item comprising media data captured ...”**

The Randall-Forsyth combination discloses “*at least one content item comprising media data captured by the mobile device*” [1A]/[9B]. (EX-1003, ¶¶113-122; EX-1001, 17:35-37 (describing media as encompassing “a document, a video, a photo, a graphic, a music file, etc.”).)

Forsyth discloses that in Forums “**personal content** such as photographs, opinions, music playlists, music tracks etc.” is shared “amongst a pre-defined group.” (Forsyth, 4:9-11, Figure 13.) For example, Randall and Forsyth each disclose capturing a photo at a wireless device either via an integrated camera or via a camera interfacing with the mobile device. (EX-1003, ¶¶115-117.) Randall describes a function called “Take a picture” which “takes a digital picture which [a user can] send to [their friends ... and chat about it.” (Randall, 80.) Such

functionality involves photo capture, upload, and storage, and is supported by “a special type of mobile phone, with a photographic lens.” (EX-1005, 80.) Forsyth similarly discloses an exemplary Forum for “Discussion of Photos” (Scenario 2) where a user “takes a few photographs” and sends them to the group. (EX-1006, 7:30-35.) In the exemplary Forum “Digital Memento from a User’s Birthday,” members post “photos” to a Forum. (See, EX-1006 9:5-35.)

Forsyth and Randall also disclose sharing music/audio files in a Forum. (See, e.g., Forsyth, 4:9-11, 11:41-47; Randall, 80:1-15.) For example, Forsyth describes an exemplary Forum (Scenario 4) where “[p]eople post MP3s of the kind of music played at each club.” (Forsyth, 9:21-22.) While not explicit, a POSITA would have understood the shared track/MP3 (music file) is captured in some manner on the user’s device, either by recording or via data transfer from another device, so that it can be uploaded to the server. (EX-1003, ¶¶118-120.) Randall and Forsyth further disclose capturing a graphic at a mobile device, e.g., via a “write-on function.” (Randall, 79; Forsyth, Figure 13; EX-1003, ¶121.)

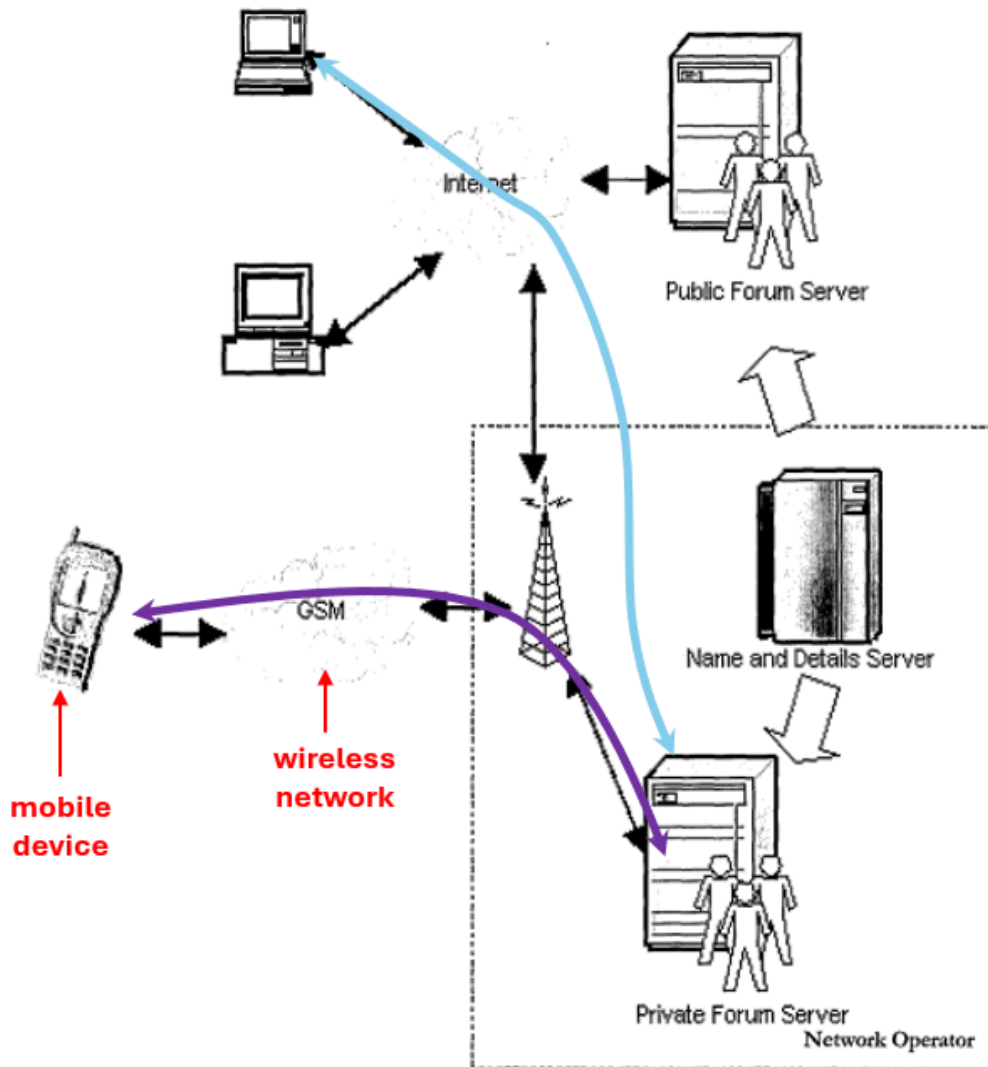
### **(3) “Providing a First Interface”**

The Randall-Forsyth combination discloses “*providing a first interface permitting designation of at least one content item, via the mobile device, for insertion into an application-based information channel*” in multiple ways, including by providing (1) a wireless network interface (e.g., GSM-WAP

interface), (2) a user interface to create a Forum and upload the initial Forum content message, (3) a user interface to manage stored user content, and (4) a user interface to designate and share content within a pre-existing Forum. (EX-1003, ¶¶123-155.)

**(a) Interface to the Wireless Network**

The server's interface is "*a first interface permitting designation of at least one content item, via a mobile device, for insertion into an application-based information channel.*" (EX-1003, ¶¶124-127.) The Forums infrastructure includes "internet servers" hosting individual Private and Public Forums and extensible databases (taught by Randall). (EX-1005, 40:15-41:2, 13:22-24, Figure 4 (below); §IV.A.) These servers use "existing transports" for client-server communication such as "WAP to access the services on the server side" from wireless devices and "standard IP formats such as MIME, SMTP and HTTP" to access the servers over the Internet. (See EX-1005, 58:23-27.) That is, each server includes an interface (e.g., GSM/WAP) for communicating with mobile devices over the wireless network and an interface (e.g., HTTP) for communicating with devices over the Internet. (EX-1003, ¶125, *see also*, ¶¶56-66 (describing WWW, WAP, and GSM-SMS).) Thus, the Forums server "*provid[es] a first interface.*" (EX-1003, ¶125.)



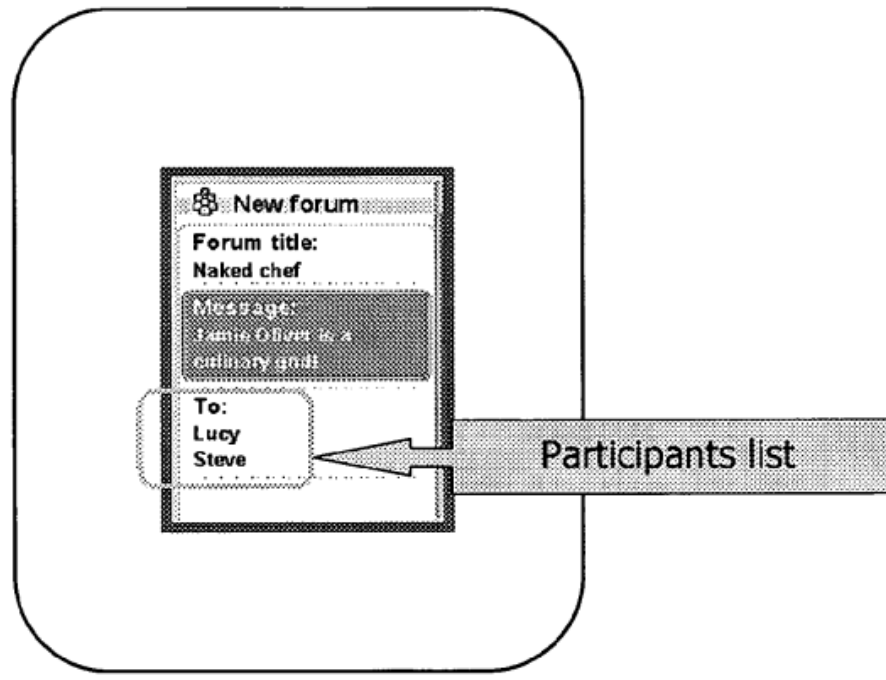
**Forums—Randall, Figure 4**

As described below, through the wireless network interface, the mobile device sends protocol messages to the server containing new Forums content messages to be posted to the Forum (*see, e.g., Forsyth, 6:1-22*) and messages associated with uploading, storing, and managing content in the user's profile (*see, e.g., Randall, 66:1-70:16.*) And, when GSM-WAP is used for the network

interface, the server provides webpages for display to the user via a browser or local Forums application running on the mobile device to, e.g., create a Forum and manage the user's profile. (EX-1003, ¶127.) Thus, the interface to the wireless network “*permit[s] designation of at least one content item, via a mobile device, for insertion into an application-based information channel.*” (EX-1003, ¶¶267-72.)

### **(b) Forums Service User Interface—Creating Forum**

Within Forums, a user has the ability to create an individual Forum opened to members of a specified group (Private Forum) or to all (Public Forum). (EX-1006, Appendix 1, 13:60-18:18; EX-1005, 24:13-17.) To create a Forum, a user interface is provided permitting the user to name the Forum, designate members, and designate initial content for the Forum. This is illustrated by Forsyth's “group-based text messaging” Scenario. In this example, the “New Forum” user interface is displayed to the user. (Forsyth, Figure 4 (below).) Through this user interface, the user designates participants, Forum name, and initial content (e.g., text “Jamie Oliver is a culinary god!!”). (Forsyth, 5:50-67.) After the user creates the Forum, the initial content and participant list are provided by the mobile device “to the message server” over the wireless network. (Forsyth, 6:1-14.) The New Forum user interface is thus a “*first interface.*” (EX-1003, ¶¶129-131.)



**Forums—Forsyth, Figure 4**

Although Scenario 1 describes the initial Forums message content as text only, both Randall and Forsyth describe sharing other types of content in a Forum as discussed below. (EX-1003, ¶132.) Thus, the New Forum user interface “*permit[s] designation of at least one content item, via a mobile device, for insertion into an application-based information channel [newly created Forum].*” (EX-1003, ¶¶128-132.)

Randall and Forsyth both disclose or suggest to a POSITA the user interfaces displayed on the mobile device are provided by the Forums server. (EX-1003, ¶¶133-138.) As described by Randall, Forums “acts in effect like a fully personalized **web portal** ....” (Randall, 13:22-24.) Forums establishes “web portals” (websites) for users of wireless devices through the use of “standard data

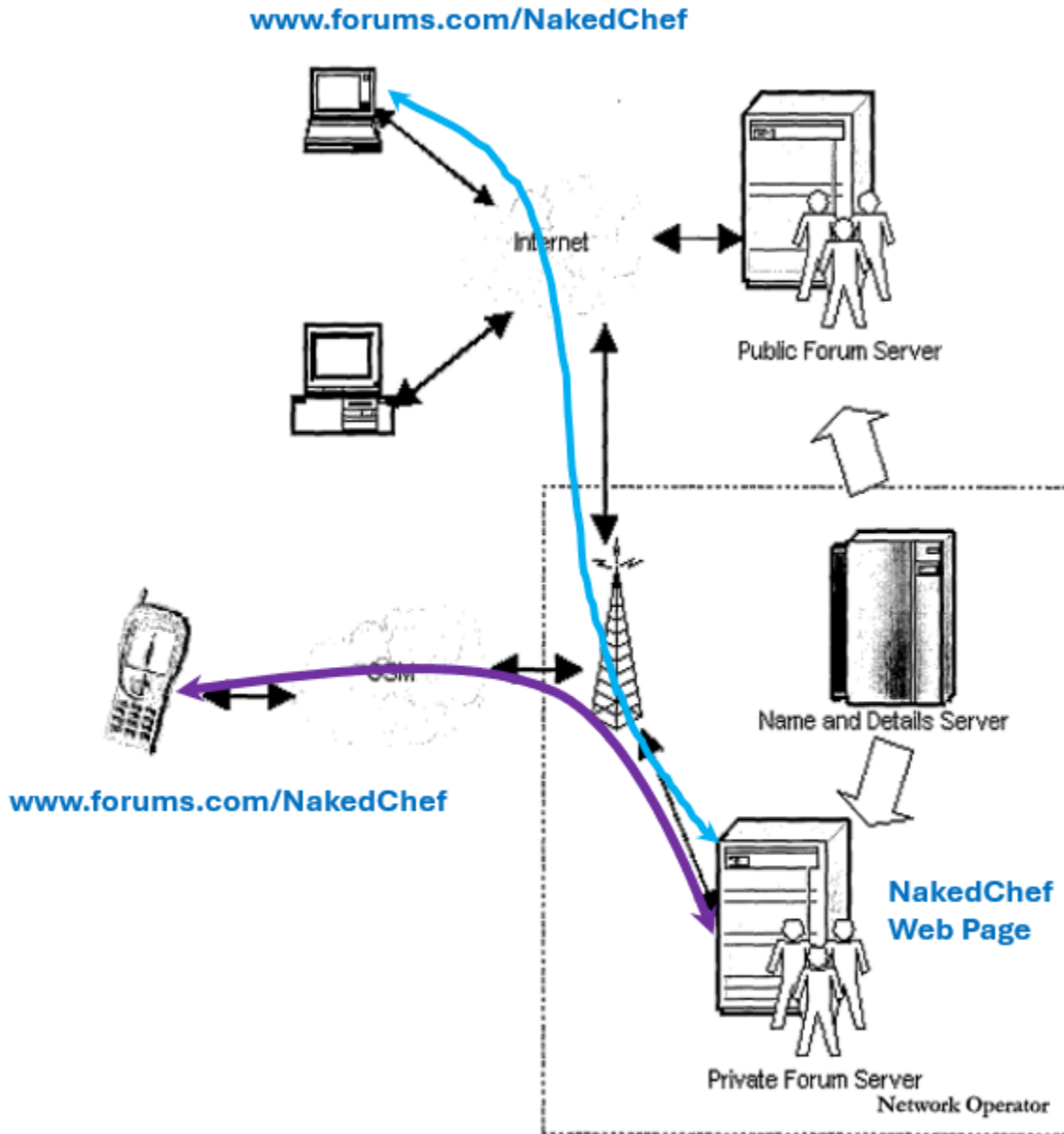
transports such as WAP or http for data access” to the server. (Randall, 45:14-15.)

Use of WAP teaches or suggests Forums user interface pages are provided to a mobile device from the server, e.g., via a website download. For example, WAP “allows content and applications to be hosted on standard WWW servers.” (EX-1003, ¶134, *citing* WAP Architecture, 14, Park, 1:66-2:10.)

Randall’s ADS naming convention further underscores that Forums are designed to be mobile websites. In Randall, a “wireless information device (as well as web browsers) can access an entity’s database by sending to the server an unchanging pointer or key (an ‘ADS Number’) which is unique to that entity.” (Randall, 9:13-15.) Randall’s ADS number is “an **address on a web server**—for example **www.indirect.com/Alice**” which “is in effect a pointer to entity specific data held on the **web server**”. (Randall, 64:25-28.) Indeed, Forsyth confirms an individual Forum “*is accessible via a mobile website*”, explaining “Forums facilitates the situation where, to a degree, the other members of a group are ‘always there’ for a user” including “ensuring other interfaces—e.g., via the Web and PCs, and possibly via normal phones—are available.” (EX-1006, 11:23-31.)

For example, with the web-based Forums architecture, a user connected to the Internet enters the ADS number associated with the Forum, Naked Chef (e.g., [www.forums.com/NakedChef](http://www.forums.com/NakedChef)) and connects to the server hosting that Forum via HTTP; the server processes the request and responds with the webpage (blue line).

(EX-1003, ¶138.) A mobile device user similarly enters (directly or via a local application) the Forum's ADS number (e.g., [www.forums.com/NakedChef](http://www.forums.com/NakedChef)) and connects to the server over GSM-WAP (purple). If the WAP server hosts the Forum (as shown below), it processes the request and responds with a webpage. If not, the WAP server contacts the hosting server via HTTP to retrieve the webpage which is returned to the mobile device via GSM-WAP. (*Id.*)



Forums—Randall, Figure 4

(c) Forums User Interface—Content Management

Forums also “*provid[es] a first interface permitting designation of at least one content item, via the mobile device, for insertion into an application-based*

*information channel*” by providing a user interface allowing a user to designate stored content for insertion into a pre-existing Forum. (EX-1003, ¶¶139-148.)

The combination uses Randall’s extensible database to deliver Forsyth’s enhanced Forums service. In Forums, a manages their user profile and stored content via a webpage associated with the ADS number of the user (e.g., [www.indirect.com/Alice](http://www.indirect.com/Alice)”). (EX-1003, ¶148.) Although Randall illustrates the database as a standalone server, a POSITA would have understood and been motivated to implement database functionality on the Forums server both for ease of maintenance, and to reduce equipment costs. (EX-1003, ¶141.) An exemplary webpage (view) is illustrated in Randall’s Table 1 below. The content management webpage provided to a mobile device by the server is a “*first interface*.” (EX-1003, ¶142-48.)

Table 1

| Alice's iData       |             |                                                       |                     |
|---------------------|-------------|-------------------------------------------------------|---------------------|
| Field/Attribute     | Category    | Details                                               | i-Groups            |
| First name          | personal    | Alice                                                 | all                 |
| Family name         | personal    | Edwards                                               | all                 |
| Title               | work        | European Marketing Manager                            | all                 |
| Company Name        | work        | Wireless Information Device gets R Us                 | all                 |
| Company Address     | work        | 1 Science Park Rd, London, N1                         | all                 |
| Company E-mail      | work        | alice.edwards@Wireless Information Device getsrus.com | business 1          |
| Company switchboard | work        | 0207 200 2000                                         | all                 |
| Company Direct      | work        | 0207 200 2012                                         | business 1          |
| Mobile Phone        | work        | 0840 1234 567                                         | business 1, friends |
| Home Phone 1        | work        | 0208 341 1234                                         | friends, family     |
| Home Address        | work        | 25 The Gables, Hampstead, London, NW3                 | family              |
| My photo            | photos      |                                                       | friends             |
| Childhood photo     | photos      |                                                       | family              |
| Home note           | notice      | Sorry about dinner ☹                                  | partner             |
| Work note           | notice      | In a meeting with Tim till 7pm                        | work 1              |
| My mood now         | mood        | Very tired                                            | all                 |
| Tel Call Subject    |             | "Dinner Tonight"                                      |                     |
| Bluetooth           | location    | Bluetooth pods 1000-1020 ...Sentinel room 2...        |                     |
| GPS                 | location    | London W1, Seymour St.                                | partner             |
| Hobby               | preferences | Photography, travel                                   | friends             |
| Book                | preferences | Maverick                                              | friends             |
| AlbumOfTheWeek      | InstaPoll   |                                                       | friends             |

Randall, Table 1

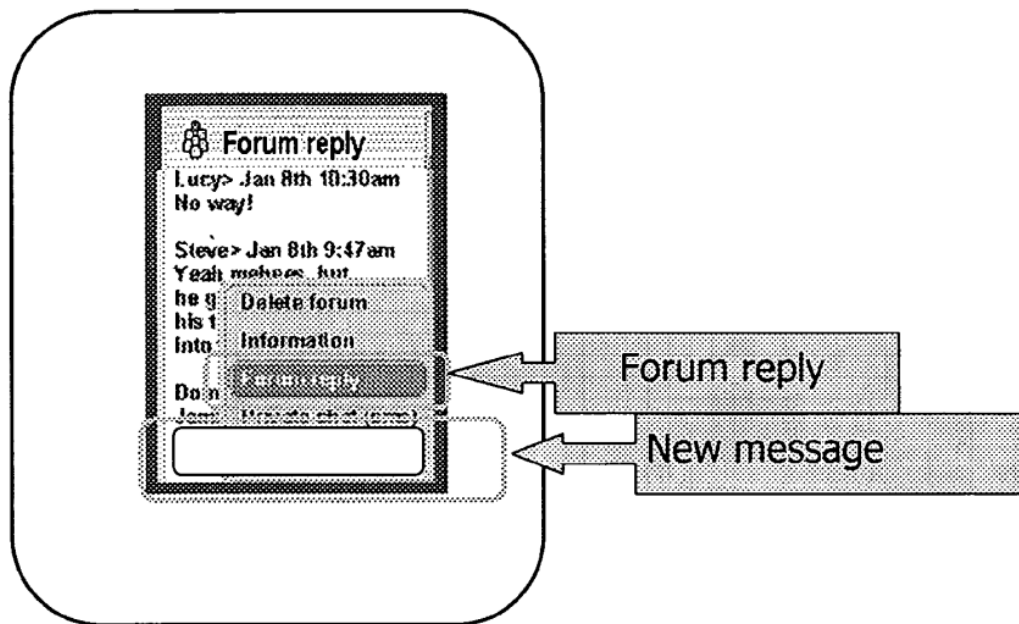
Information stored in the extensible database used for Forums includes content. (EX-1006, 3:31-34 (central server “act[s] as a store for resources which group-members may wish to discuss and share (e.g., personal information, personal photographs, music, web sites etc.)”); EX-1005, 32:26-27, 66:10-14, Table 1 (e.g., “My Photos”/“Childhood Photos”).) A POSITA would have understood that such content includes content captured by the device, e.g., via the integrated camera. (EX-1003, ¶¶142-43.) Each piece of stored data “has an associated tag (or field/attribute) and an associated list of groups (“i-Groups”) allowed to access the data.” (EX-1005, 66:9-10.) By associating stored content with a group (e.g., Forum), the user designates the content item “*for insertion*” into the Forum. As Randall explains, after a group is designated as having access rights, the information is provided when a group member “contacts the server” or the information “will be pushed to” a member’s device “if technology allows.” (EX-1005, 68:28-30; *see also* EX-1006, 7:34-38; EX-1003, ¶147.)

Thus, the server “*provid[es] a first interface [user’s content management webpage] permitting designation of at least one content item, via the mobile device, for insertion into an application-based information channel [a Forum].*”

#### **(d) Forum User Interface—Message Posting**

Within Forums, a user interface displays a list of a user’s Forums. (Forsyth, Figure 6 (below).) When the user selects one of these Forums, the user navigates to

a user interface associated with the selected Forum (e.g., Forsyth Figure 8) where the user can enter and post content. (*See, e.g.*, Forsyth, 6:28-35.) For example, through the Forum Reply user interface displayed in Figure 9 (below), a user can enter content and designate that content “for insertion” into the Forum by clicking on “reply.” (Forsyth, 6:54-55.) A new message is then “posted to the Forum” when the mobile device sends the Forums message to the server. (*See* §V.B.3-4.) As discussed above, the Forum Reply user interface displayed to the user is provided by the server, e.g., via a webpage downloaded by the server. (EX-1003, ¶151.)



**Forums—Forsyth, Figure 9**

Thus, Forums “*provid[es] a first interface [Forum Reply Interface] permitting designation of at least one content item, via the mobile device, for*

*insertion into an application-based information channel [e.g., Naked Chef*

*Forum]*”. (EX-1003, ¶¶149-151.)

### (e) Insertion of Captured Content

Both Randall and Forsyth disclose content captured at the mobile device is to be inserted into a Forum either via a Forums message posted to a Forum or via designation via content management. (EX-1003, ¶¶152-155.) For example, Forsyth describes several examples of Forums where users post “photos” including “Discussion of Photos” (Scenario 2) and “Digital Memento from a User’s Birthday” (Scenario 4). For example, in Scenario 2 after the group is created and an initial photo shared, “[s]ome people post their own **photos** back.” (Forsyth, 7:41-42.) And in Scenario 4, Forum members “post MP3s of the kind of music played at each club, and links to the club’s pages” (Forsyth, 9:21-24), “**photos**” (Forsyth, 9:29), and even “the bar bill” (Forsyth, 9:30).

### 3. “Integrating” Limitations [1B]/[9C]

The Randall-Forsyth combination discloses “*integrat[ing] the at least one content item and information associated with at least one wireless networking functionality of the mobile device to generate at least one integrated content item.*”

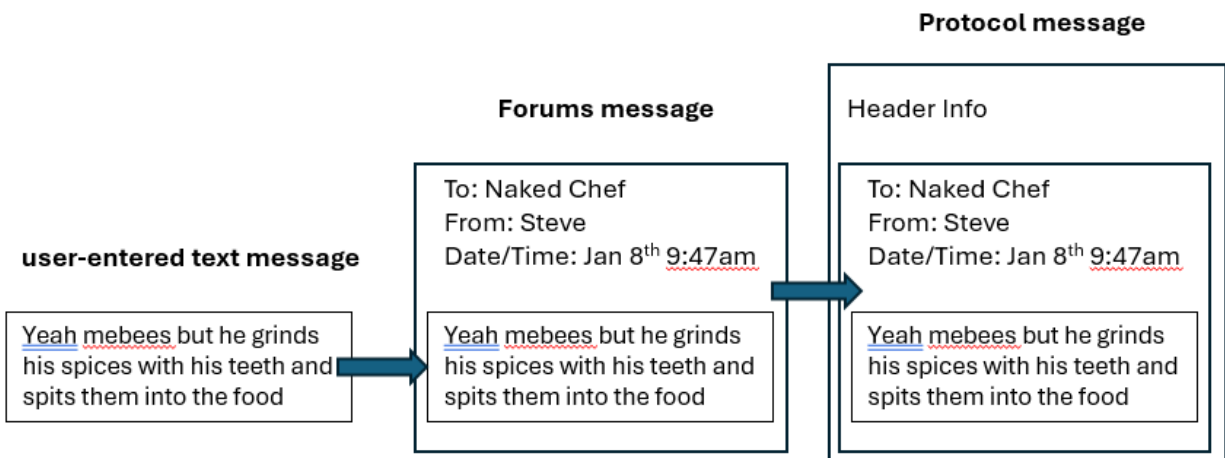
[1B]/[9C] under both PO’s and Meta’s IPR constructions. (EX-1003, ¶¶156-73.)

**a. Information Associated with a Wireless Networking Functionality**

The wireless network (which is separate from the Internet as shown in Randall's Figure 4) and the wireless devices in the Randall-Forsyth combination implement "*at least one wireless networking functionality*"—messaging. (EX-1003, ¶¶157-166; EX-1001, 1:34-39; 1:54-58, 9:48-53.) For example, Forums supports "group based text messaging" and "group based multi-media messaging." (EX-1006, 3:35-58, 5:45-49.) The scenarios and examples provided by Forsyth and Randall demonstrate a "*messaging action*" initiated by the user—e.g., posting/sending a message containing captured content to the Forum. For example, in Forsyth's Scenario 1, when the "Naked Chef" Forum is created, the user sends an initial message to the message server. (See EX-1006, 6:1-9.) Subsequent responses "are of the form that the new **message is sent to the server.**" (EX-1006, 6:18-22.)

These scenarios/examples also demonstrate "*information associated*" with the "*wireless networking functionality*" of messaging. (EX-1003, ¶¶159-166.) Specifically, when the device captures user content, the mobile device must create a Forums message for inclusion in the stored message object for the Forum stored at the server containing the sender name (i.e., identity of the user in the Forum (e.g., Steve)), Forum name (e.g., Naked Chef), and content provided by the user, captured by the device (e.g., "Yeah mebees but he grinds his spices with his teeth

and spits them into the food”). (EX-1006, 4:19-26, 7:6-8; EX-1003, ¶162.) The mobile device must further encapsulate the Forums message into a protocol message (e.g., GSM-SMS or WAP) for transmission over wireless network. (EX-1003, ¶¶163-166.) The protocol message includes information associated with the action of sending a message over the network such as message type and content type identifier. (EX-1003, ¶¶164-165, *citing* EX-1015, 42-43, 60, 63.) These messages are illustrated in Houh’s Figure B below. (EX-1003, ¶163.) Thus, the messaging “*information*” is “*one or more messaging actions*” [6]. (EX-1003, ¶163.)



**Houh, Figure B**

Forsyth further teaches that Forums is designed for group discussion and collaboration. (*See, e.g.*, 11:32-34 (discussing “Collaborative Activity”).) Forsyth’s “Social Scheduling” (Scenario 3) provides a specific example of a “*collaboration*

*action*” where a user in the group poses a question (“Anyone fancy a trip to the cinema next week some time?”) and members of the group collaborate to provide an answer. (EX-1006, 8:44-46.) The collaboration in Scenario 3 is through the exchange of messages which discuss the night, the cinema, and the film to see. (See EX-1006, 8:56-60.) The information associated with the wireless messaging that specifies the collaboration actions (messaging among Forum members to solve, e.g., the scheduling details for a cinema visit) is described above. (EX-1003, ¶¶167-169.) Thus, the “*information*” is “*one or more collaborators actions*” implementable over the wireless network through messaging. (EX-1003, ¶169.)

**b. “Integrating the at least one content item and information  
... to generate at least one integrated content item”**

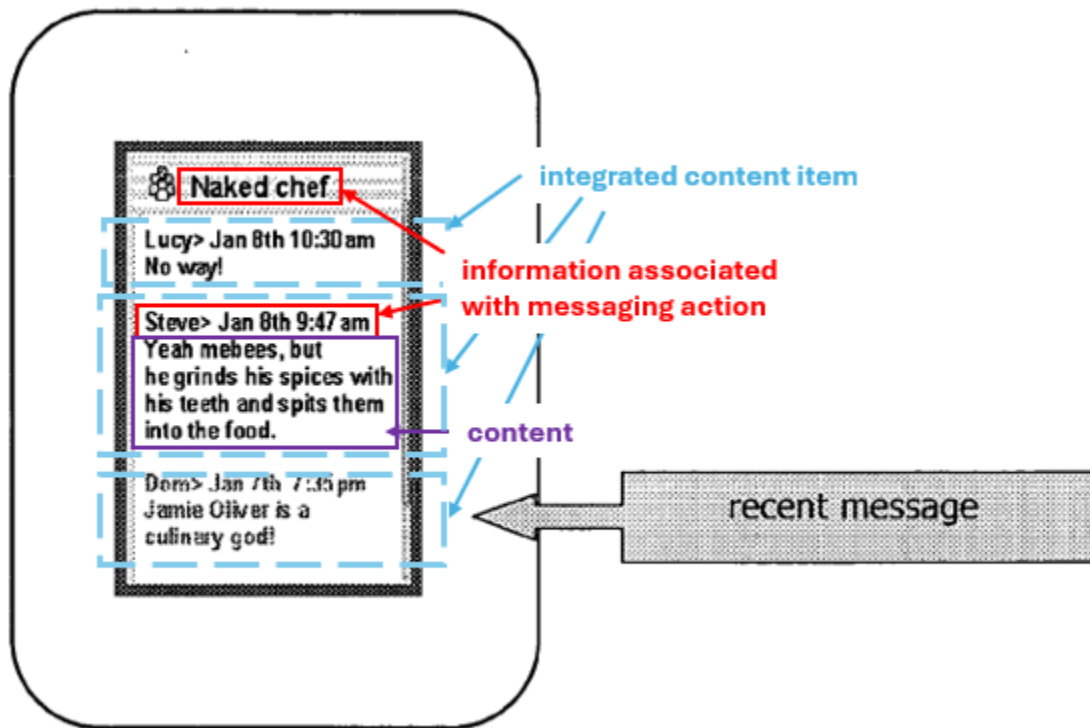
The content and the information associated with a wireless networking functionality are provided to the server and integrated as an entry in a Forum (“*application-based information channel*”). Forums achieves this integration of content and information in part through use of a single communication object associated with a Forum. (Forsyth, 4:19-26, 7:6-8.) For example, in the group based text messaging Scenario 1, a communication object is created for the Forum which holds the initial message and all subsequent messages in the Forum. (Forsyth, 4:19-24.) When new messages are sent to the server, the server “forwards the increment to all the people on the current (server-maintained) address list.” (Forsyth, 6:1-22.) As discussed above, the sender name and Forum name are

included in the Forums message encapsulated in the protocol message. (Forsyth, 6:36-40.) The server integrates this “*information associated with at least one networking functionality*” (e.g., sender/poster identity, Forum name, date/time) with the “*content item*” (e.g., photo/image, music/audio file, graphic, and/or text, etc.) “*to generate*” a “*integrated content item*” (entry) and inserts this “*integrated content item*” into the message/communication object for the Forum. (EX-1003, ¶¶170-72)

The generation of the “*integrated content item*” is illustrated through the user interface displayed to the user containing the messages/discussions posted/published to the Forum. (Forsyth, Figure 7 (below).) Through this user interface, “the user is shown the messages posted to that Forum.” (Forsyth, 6:38-40.) “Messages appear in date order, i.e. newest messages appear at the bottom.” (Forsyth, 6:40-42.) As shown, captured content (message; “No way!”) and at least a portion of the determined information (poster identity (e.g., Lucy) and date/time (Jan 8<sup>th</sup> 10:30 am)) is presented as a single “*integrated content item*” (entry) and as shown, “*integrated content items*” are separated on the screen. (EX-1003, ¶172.)

The teachings of Randall and Forsyth are consistent with PO’s infringement allegations which contend this limitation is met by an application that integrates “information (e.g., username, date, time, Group) associated with at least one

networking functionality of the mobile device (messaging action) into an integrated content item.” (See EX-1029, 17.)



Forums—Forsyth, Figure 7

\* \* \*

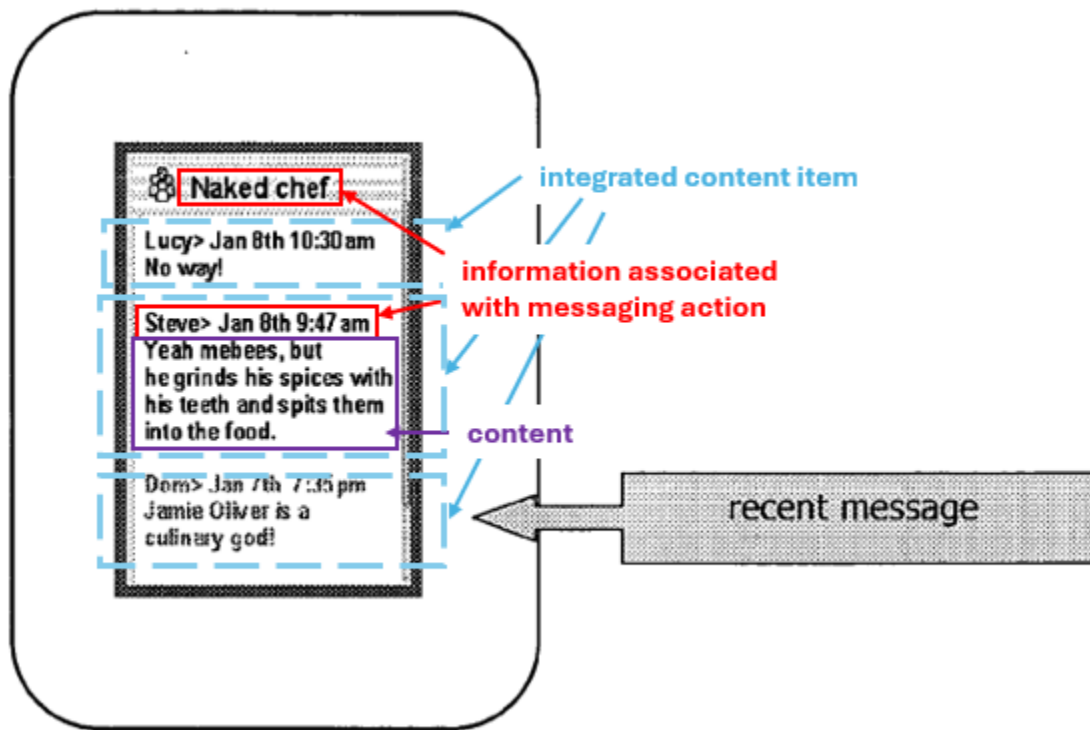
Accordingly, the Randall-Forsyth combination discloses the processing element of the server “*integrat[es] the at least one content item and information associated with at least one wireless networking functionality of the mobile device to generate at least one integrated content item*” [1B]/[9C]. (EX-1003, ¶¶170-173.)

#### 4. “Inserting” Limitations [1C]/[9D]

The Randall-Forsyth combination discloses the processing element of the server “*insert[s] the at least one integrated content item into the application-based information channel*” [1C]/[9D]. (EX-1003, ¶¶174-177.)

In Forums, the server “handle[s] all aspects of storing and forwarding messages to the intended recipients.” (Forsyth, 3:20-22.) For example, in the group based messaging Scenario, the Forums server “forwards a copy of the [initial Forums] message to each of the people on the address list.” (Forsyth, 6:9-14.) And, when new messages are sent to the server, the server “forwards the increment to all the people on the current (server-maintained) address list.” (Forsyth, 6:1-22.) Thus, the server “*insert[s] the at least one integrated content item into the application-based information channel [individual Forum].*”

Forums provides a user interface that displays the messages/discussions posted/published to a Forum and through this interface “*share[s] access to a plurality of content items including the at least one integrated content item.*” (EX-1003, ¶176.) Forsyth’s Figure 7 (below) is an example of this user interface (Naked Chef) associated with the Naked Chef Forum. The user interface presented to the Forum members that displays posted messages is “*a second interface*” provided by the Forum (“*the application-based information channel*”). (EX-1003, ¶176.)

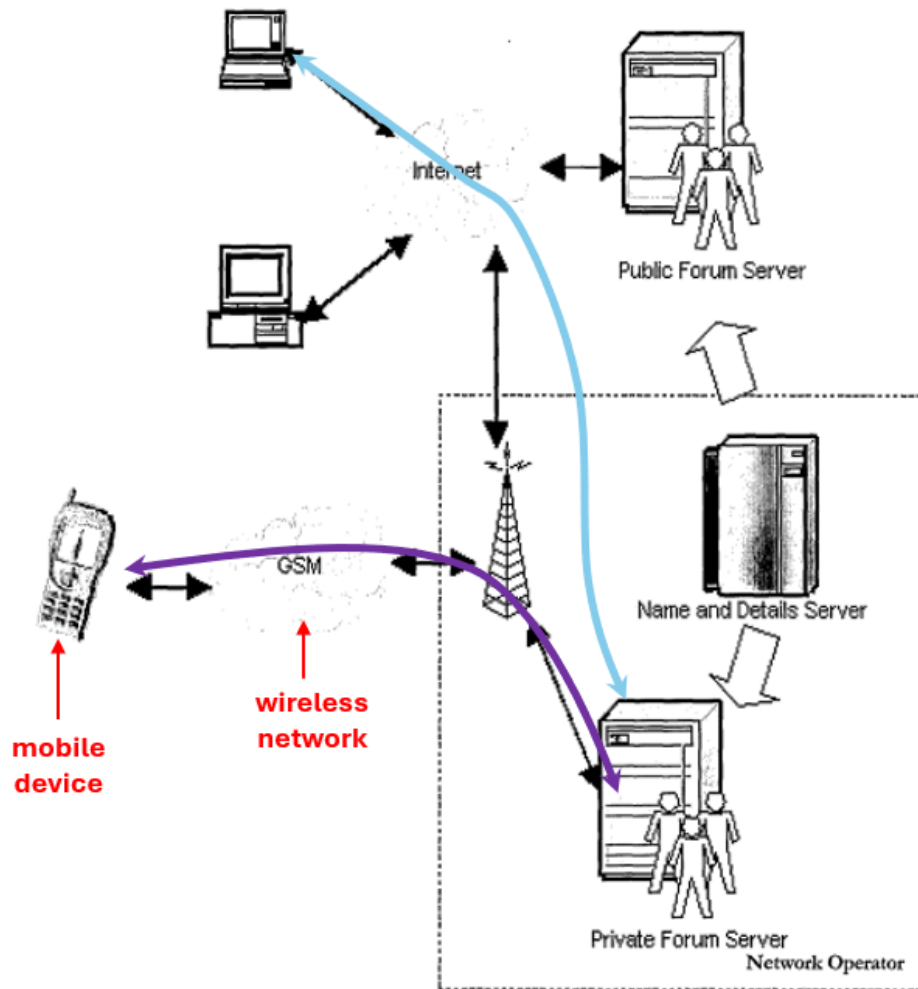


Forums—Forsyth, Figure 7

As discussed in §V.B.2.b.(3) the Randall-Forsyth combination teaches or suggests these user interface pages are provided from the server e.g., via a website downloaded. Because a Forum has multiple members, the user interface (e.g., webpage) is provided to each Forum member. Thus, the Randall-Forsyth combination discloses or suggests *“the application-based information channel providing a second interface wherein two or more users share access to a plurality of content items including the at least one integrated content item.”* (EX-1003, ¶177.)

**C. Claim 11**

The Randall-Forsyth combination discloses a “*network-based communication system*” comprising “*a plurality of servers configured to communicate over a network, a given one of the servers comprising the apparatus of claim 9.*” (EX-1003, ¶185.) The Forums infrastructure, illustrated below, includes “*a plurality of servers*”: “internet servers” hosting individual Private and Public Forums (as enhanced by Forsyth) and “internet servers” hosting extensible databases (as taught by Randall). (Randall, 7:16-19.) As shown, wireless devices access these servers/databases via the wireless network and non-mobile devices access these servers via Internet. (EX-1003, ¶185.) A POSITA would have been motivated to implement the functionality associated with providing Forums and the functionality of hosting a database on a single server to obtain, e.g., the benefits of more efficient maintenance as well as cost savings of reduced amount of network equipment. (EX-1003, ¶185.) Therefore, one of these plurality of servers, e.g., the server hosting the Private Forum and the user extensible database, is the apparatus described above in §V.B.1.b and one or more servers hosts other forums (e.g., Public Forum server).



**Forums—Forsyth, Figure 4**

**D. Independent Claims 12 and 17**

Claims 12 and 17 include substantially overlapping processing limitations ([12A]-[12D]/[17C]-[17F]). (EX-1003, ¶186.) Petitioners address these claims together.

**1. Preamble [12P]: “method”**

The Randall-Forsyth combination discloses a method for performing the actions recited in limitation [12A]-[12D] discussed in §V.D.4.

**2. Preamble [17P]: “mobile device”**

The Randall-Forsyth combination discloses a “*mobile device*” for the reasons discussed above in §V.B.2.

**3. Mobile Device Architecture Limitations [17A]-[17B]**

The Randall-Forsyth combination, as informed by a POSITA’s general knowledge, teaches or suggests a “*mobile device*” comprising “*a processing element comprising a processor coupled to a memory*” [17A] and “*a network interface*” [17B]. (EX-1003, ¶¶189-200); *Philips v. Google*, 948 F.3d 1330, 1337-38 (Fed. Cir. 2020) (finding claims obvious over a reference “in light of the general knowledge of a skilled artisan”).

The wireless devices of Randall and Forsyth use the Symbian operating system (“OS”). (EX-1005, 1:17-19; EX-1006, 1:29-32.) Both Randall and Forsyth further describe applications that run on Symbian OS, including Forums’ client-side application. (EX-1006, 2:47-48; EX-1005, 5:22-24; *see also* EX-1005, claim 53 (wireless device software “run[s] on the device”); EX-1006, claim 19 (wireless device “programmed with computer software”).) A POSITA would have understood a device’s OS and applications are software that execute on “*a processor*” within a “*processing element.*” (EX-1003, ¶189.)

Both Randall and Forsyth also disclose or suggest that the processing element of the wireless device includes “*a memory*.” (See EX-1003, ¶190; EX-1001, 5:13-16 (memory includes RAM, ROM, “disk-based memory, or any other type of storage device”); EX-1006, 4:49-52; EX-1005, 15:5-6, 53:5-6.) For example, Forsyth mentions “memory constraints of the handheld devices.” (EX-1006, 4:49-52.) Randall describes the wireless device “caches” information; i.e., stores information in memory. (EX-1005, 15:5-6, 53:5-6; EX-1003, ¶190.) Additionally, a POSITA would have understood the Symbian OS and applications running on Symbian OS are stored in a memory. (EX-1003, ¶191.) Because software/application executing on a processor are stored in a memory and access information stored locally, a POSITA would have understood the “*processor [is] coupled to a memory*.” (*Id.*; §V.F.)

The Randall-Forsyth combination also discloses or suggests a “*network interface*” within the “*processing element*.” (EX-1003, ¶192.) Both Randall and Forsyth disclose the wireless devices are “able to communicate in any manner over any kind of network, such as GSM ....” (EX-1005, 1:11-13; EX-1006, 1:22-25.) To access these networks, the wireless device requires an interface to the network—a “*network interface*.” (EX-1003, ¶192; *see also*, EX-1001, 5:17-19 (network interface “provide[s] an interface ... to the wireless network”).) Indeed, Randall specifically refers to the “GSM/GPRS interface.” (EX-1005, 40:1-2.)

Moreover, the general architecture of a mobile device (processor coupled to memory and a network interface) was within a POSITA's general knowledge by June 2002. (EX-1003, ¶¶193-99.) For example, U.S. Patent 6,947,396 (Salmi)(14:53-65), U.S. Patent 7,031,718 (Jouppi)(7:52-61), U.S. Patent 7,092,495 (Kraft)(4:4-20), Bansal(6:66-7:5) each discloses this arrangement. (EX-1003, ¶¶193-199.) Allin also describes the memory and processor specifications for numerous Symbian OS devices. (EX-1012, Appendix B, 458-59; EX-1003, ¶199.)

#### **4. Limitations [12A]-[12D]/[17C]-[17F]**

Limitations [12A]-[12D]/[17C]-[17F] add nothing more than what was already set forth in at least limitations [1A]-[1C]/[9B]-[9D]. Accordingly, the Randall-Forsyth combination discloses limitations [12A]-[12D]/[17C]-[17F] for the reasons discussed above in §§V.B.2-4. (EX-1003, ¶¶201-204.)

#### **E. Claims 21 and 22**

Independent claims 21 and 22 substantially overlap with server-side claim 1 and add nothing more than what was already set forth in at least claim 12. Similarly, independent claim 22 recites 3 limitations [22C], [22E], and [22F] substantially identical to limitations [21B]-[21D] and to a portion of limitation [12A] (“*the at least one content item comprising media data captured by the mobile device*”), [12C] and [12D]. Limitation [22D] is substantially the same as [12B]. Additionally, the combination discloses the “*accessing*” [22A] and

*“providing at least one content item to at least one server”* [22B] for the same reasons discussed in §V.D.4 for the *“designating”* limitation of claim 12.

Accordingly, the Randall-Forsyth combination discloses claims 21 and 22 for the reasons discussed above in §§V.B/D. (EX-1003, ¶212.)

#### **F. “Computer Readable Medium” Claims 8/16**

The Randall-Forsyth combination suggests *“executable code of one or more software programs”* which *“when executed by a processing element implements”* the steps of the method of claim 1 (claim 8) and the steps of the method in claim 12 (claim 16). (EX-1003, ¶¶178-84 (claim 8), ¶¶205-211 (claim 16).)

As discussed in §V.D.3, both Randall and Forsyth disclose a client-side program component of Forums that executes on the wireless device. (EX-1006, 2:47-48, claim 19 (referring to wireless device “programmed with computer software”); EX-1005, 5:22-24, claim 53 (referring to “[s]oftware for a wireless information device” which “run[s] on the device”).)

As discussed in §V.B.1.c, both Randall and Forsyth disclose the server performs processing and therefore has a server-side program component of Forums. (See EX-1006, 3:28-31; EX-1005, 57:4 (“server side software”), 38:24 (“server side message handling applications”); EX-1003, ¶178.)

Although not explicit, a POSITA would have understood from these disclosures the client-side Forums program and the server-side Forums program

are each “*executable code of one or more software programs*” which “*when executed*” by a processor cause the mobile device/server to perform the recited actions of claims 1/19 respectively. (EX-1003, ¶¶178, 205.)

Neither Randall nor Forsyth explicitly states that the client-side program or server-side program is stored in a “*non-transitory computer-readable storage medium*.” Memory or another similar computer readable medium storing the software to be executed on the processor would necessarily be included in the server and mobile device. (EX-1003, ¶¶179, 206, *citing* EX-1026, 29-30, 37.) To the extent PO argues this is not inherent in a computing device running software, it would have been obvious to a POSITA and well within the POSITA’s general knowledge as evidenced by the wireless device disclosures of Salmi (15:1-11), Kraft (4:6-7, 17:32-40), Bansal (7:23-34), and Pelkey and Eck (§VI.F) and the server disclosures of Agboatwalla (3:7-9, 42:1-38), Cheng (23:63-24:1), Bansal (7:23-24) and Pelkey and Eck (§VI.F). (EX-1003, ¶¶180-184, 207-211.)

## **G. Dependent Claims**

### **1. Claim 6**

The Randall-Forsyth combination discloses claim 6 for the reasons discussed in §V.B.3.a. (EX-1003, ¶¶213-214.) And the Randall-Forsyth combination likewise discloses a “wireless network” under any proposed construction because it

discloses a network for wireless communication separate from the internet. (EX-1003, ¶214.)

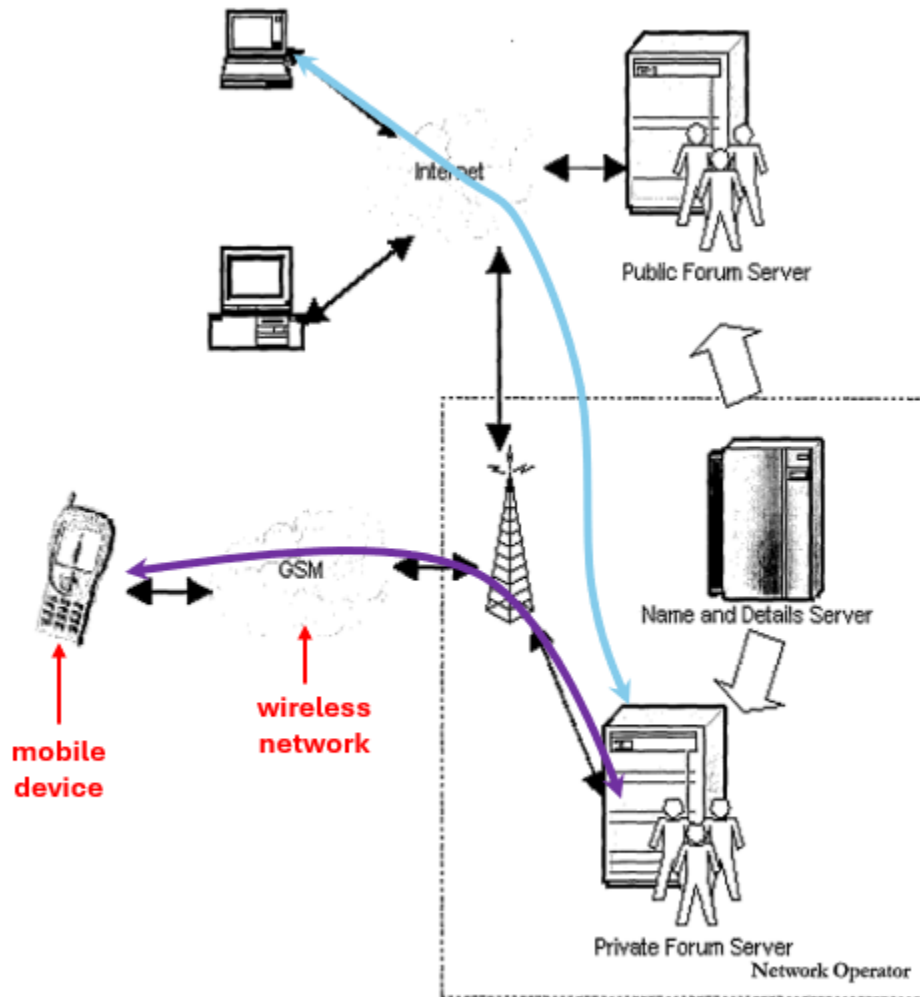
## 2. Claim 7

The Randall-Forsyth combination discloses “*providing, via the first interface, one or more content integration options to the user*” by providing each user multiple options for creating and posting content and by providing a user-activatable control mechanism (drop down menu) allowing for the designation of content for integration into a Forum. (EX-1003, ¶¶215-220.) For example, Forsyth discloses that “**personal content** such as photographs, opinions, music playlists, music tracks etc.” is shared “amongst a pre-defined group.” (EX-1006, 4:9-11.) Randall and Forsyth each discloses posting a text message to a Forum (EX-1006, 3:36-44, 5:27-29), posting photos/images (EX-1005, 74, 80; EX-1006, 7:30-35, 7:41-42, 9:5-35), and posting music files as content (EX-1006, 9:21-22).

The user interface provided to a user (“*first interface*”) includes a user-activatable control mechanism (drop down menu) for designating content for insertion into a Forum. For example, in the “group based text messaging” Scenario 1, a user can “make a context menu appear” within the Forum, allowing the user to “carry out additional tasks related to the Forum.” (EX-1006, 6:44-49, Figure 8 (below-left).) “If a user selects ‘Forum Reply’ then a new message is posted to the Forum” including posting a response. (EX-1006, 6:54-56; Figure 9.)

### 3. Claim 10

The Randall-Forsyth combination discloses “*at least one server accessible over the Internet via a network interface*” [10]. (EX-1003, ¶¶221-226.) The network infrastructure implementing Forums includes “internet servers.” (Randall, 7:16-19.) These servers “use[] standard data transports such as WAP or http for data access.” (Randall, 45:14-15.) That is, as illustrated in Figure 4 below, Randall uses “existing transports” (communication means) for client-server communication such as “WAP to access the services on the server side” and “standard IP formats such as MIME, SMTP and HTTP” to “enable compatibility with Internet Messaging systems.” (Randall, 58:23-27.) As stressed by Randall, “the Internet and its servers can be used by a mobile device to deliver enchanting services that far surpass the present PC-Internet model.” (Randall, 46:8-10.)



**Symbian Forums—Randall, Figure 4**

The Randall-Forsyth combination also discloses or suggests the server includes a “*network interface*” in order to access the Internet via HTTP as taught by Randall. (EX-1003, ¶222.) Moreover, the general architecture of a server (processor coupled to memory and a network interface) was within the general knowledge of a POSITA by June 2002. (EX-1003, ¶¶194-198.) For example,

Agboatwalla (5:40-55), Cheng (23:26-51), Bansal (6:66-7:5), Pelkey (5:7-14) and Eck (3:46-47) each discloses the claimed arrangement. (EX-1003, ¶¶222-226.)

#### 4. Claim 15

As discussed in §V.B.2.b.(2), “*the at least one content item*” (e.g., photo/image, voice comments/music file) comprises “*device-captured image data*” and “*device-captured audio data*” at the wireless device. (EX-1003, ¶¶227-230.)

#### 5. Claims 18-19

Randall-Forsyth combination discloses the “*mobile device*” is a “*mobile telephone*” [18]: wireless information device encompasses “any kind of device with two way wireless information capabilities and includes without limitation radio telephones, smart phones ....” (EX-1005, 1:7-10; EX-1006, 1:16-22.)

Both Forsyth and Randall teach that a mobile device includes “some onboard method” for determining location “such as **GPS**.” (EX-1006, 13:45-58; EX-1005, 74, claim 7 (user location “is obtained using a GPS system”), Table 1 (listing GPS location).) Randall describes use of GPS location in navigation-like features including people tracking, your map, and rendezvous. (EX-1005, 6:1-4, 83.) Because the mobile device includes a GPS component and navigation features, the Randall-Forsyth combination discloses the “*mobile device*” is a “*global positioning system (GPS)-based navigational device*” [19]. (EX-1003, ¶¶233-236.)

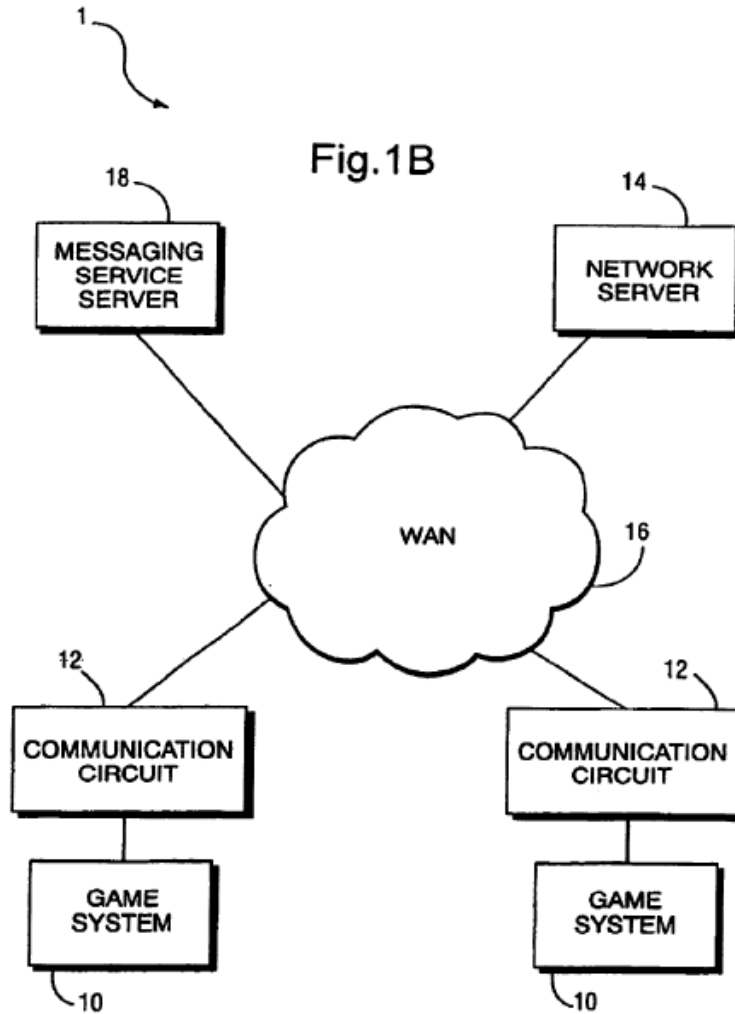
## **VI. GROUND 2: Pelkey-Eck Combination Renders the Challenged Claims Obvious**

### **A. Combination Overview**

Pelkey and Eck each disclose systems permitting users of “portable game machines,” like the Nintendo GameBoy® to share messages, photos taken with an attached digital camera, and, in the case of Eck, sound clips with other users. (EX-1007, Abstract; EX-1008, 2:15-22.)

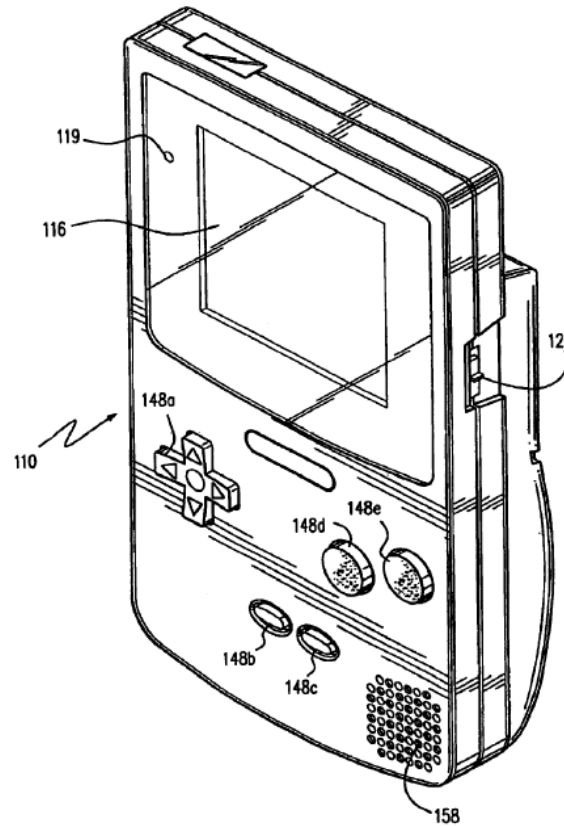
#### **1. Pelkey**

Pelkey’s Figure 1B (below) illustrates a network architecture “in which the messaging service [] may be implemented.” (EX-1007, 2:58-60.) The network “includes game systems 10 connected via communications circuits (e.g., modems, network interfaces, etc.) to a wide area network.” (EX-1007, 2:60-62.) A messaging service server may be included within the network server or as a standalone component. (EX-1007, 3:9-31; EX-1003, ¶238.)



**Pelkey, Figure 1B**

Game system 10 can be a “GameBoy® Color game system”, Figure 3B (below), and additionally, or alternatively, a game console such as the N64 video game system. (EX-1007, 3:32-33, 3:38-48, 4:66-67, Figure 2; EX-1003, ¶239.)



**Pelkey, Figure 3B**

While Pelkey a user “includ[ing] in their profiles digital images of their own faces generated, for example, using [an integrated] digital camera,” (Pelkey, 7:20-30) it does not specifically disclose sharing and viewing images amongst multiple users as in Eck.

## **2. Eck**

Eck’s modified Nintendo Game Boy® “provides enhanced multi-player capabilities through communications with other game machines.” (EX-1008, 1:48-51.) Eck discloses inserting a “pager cartridge” and game cartridge to access

“PagerWorld, a virtual community for the network of all users having pager cartridges.” (EX-1008, 10:20-23.)

“Players are represented in PagerWorld by a ‘persona character’ ... that all other PagerWorld players will see.” (EX-1008, 10:23-25.) “[I]mage data obtained with a digital camera cartridge” can be used to “customize the persona character.” (EX-1008, 12:38-40.)

In “PagerWorld,” “[p]layers can find pen-pals” and “view message boards,” among other activities. (EX-1008, 10:40-42.) “[M]essaging” activities include “broadcasts to all pagers,” “group messages,” “digital camera picture transmission (with/ without sound),” “messages plus sound bites” and “messages to and from Internet.” (*See* EX-1008, 16:42-45, 20:6-36.) Messages are read, composed and sent from the PagerWorld “Message Center.” (EX-1008, 11:27-29.) “Message Center” includes an “Address Book” that “provides a listing of other users by their handles” and “the persona character of the other user.” (EX-1008, 11:32-35; *see* EX-1008, 12:16-19.) Eck thus specifically discloses how users can share photos taken with an attached digital camera with other users. (EX-1003, ¶242.)

### **3. Motivation to Combine**

A POSITA would have been motivated to combine Eck’s teachings regarding PagerWorld with the network and message server architecture taught in Pelkey. (EX-1003, ¶¶244-48.)

Pelkey and Eck both disclose devices in the same field as the '578 patent—“network-based communication systems.” (EX-1001, 1:26-27; EX-1007, 1:37-42; EX-1008, Abstract.) Pelkey and Eck are also reasonably pertinent to problems addressed by the '578 patent, namely “optimizing” the sharing of information content on mobile devices. (EX-1001, 1:51-55; EX-1003, ¶245.)

Eck discloses PagerWorld features, including the ability to share photos and sound clips and exchange messages with other players. In the preferred embodiment, such information is exchanged using a “pager cartridge” where “message charges are generally based on the number of characters in the message.” (EX-1008, 16:57-60.) While Eck discloses its “invention” can be applied to other technologies like WAP (EX-1008, 25:17-20), it does not specifically disclose a client-server structure as taught in Pelkey.

Pelkey discloses use of a network server and message server to facilitate game play and exchanging messages amongst users. A POSITA would be motivated to apply the network and message server architecture in Pelkey to Eck in order to avoid the charge-based system for exchanging messages and photos via pager cartridge in Eck. (EX-1003, ¶247.) In addition, a POSITA would be motivated to modify the “pager cartridge” in Eck as necessary to use PagerWorld in Pelkey given the disclosed benefits of PagerWorld including “exploration and adventure,” “chat and community interaction,” and “character growth.” (*Id.*; EX-

1008, 10:13-19.) Notably, Pelkey does not describe any game play that includes in-game messaging in conjunction with the aforementioned features. In addition, the combination is nothing more than the application of a known technique (Eck's PagerWorld game) to a known method/product (Pelkey's client-server based messaging server) which was ready for further improvement to achieve predictable results. Replacing the pager system infrastructure in Eck with the client-server architecture in Pelkey is the simple substitution of a one known element for another to achieve a predictable result (internet-based functionality). (EX-1003, ¶247.)

A POSITA would have had a reasonable expectation of success in the combination and the results of the combination would have been predictable because both references are directed to the same product and activity (game play). (EX-1003, ¶248.) Both Pelkey and Eck disclose the desirability of combining messaging capabilities with game play in a portable gaming system. (EX-1007, 2:20-23; EX-1008, 10:32-44.) As explained below, the complimentary network architecture disclosed in Pelkey and Eck further demonstrates such a modification could be made with a reasonable expectation of success. (EX-1003, ¶248.)

## **B. Independent Claims 1 and 9**

### **1. [1P]: “method”**

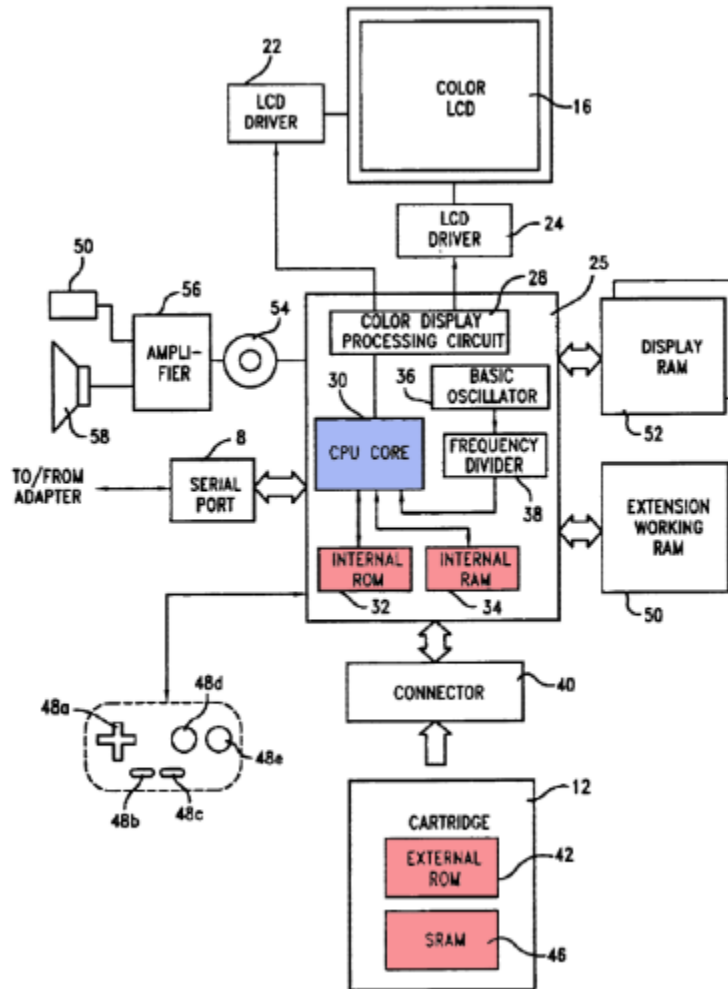
The Pelkey-Eck combination discloses a method for performing the actions recited in limitation [1A]-[1C].

### **2. [9P]: “apparatus”**

The Pelkey-Eck combination discloses an apparatus having the features in limitations [9A]-[9D], namely, a portable game machine.

### **3. Processing Element [9A]**

The Pelkey-Eck combination discloses “*a processing element comprising a processor coupled to a memory.*” Eck explains a pager cartridge “is provided for use with a game machine having a game program executing processing system including a microprocessor to execute a video game program and player controls operable by a player to generate video game control signals.” (Eck, 1:60-65; *see also* Pelkey, 6:44-46 (“program contained in cartridge 112 [] includes program code for a messaging service client”).) This arrangement is illustrated in Eck’s Figure 2 (below) showing the portable game machine with an inserted cartridge. This figure is identical to Pelkey’s Figure 4.



**Eck, Figure 2**

Game machine 10 includes “central processing unit (CPU) 26 [mislabeled as 25 in Fig. 2 above],” which further includes CPU core 30 [shaded blue] “that is connected to an internal read only memory (ROM) 32 and an internal random access memory (RAM) 34.” (Eck, 3:42-46.) Eck explains that “[i]nternal RAM 34 is used as a work memory of CPU core 30.” (Eck, 3:46-47.) For example, when executing a game program, “character data supplied from game cartridge 12 and the controller data from operating keys 48a–48e, CPU 26 executes data processing

and writes display data into a display RAM 52, using an extended RAM 50 when necessary.” (Eck, 4:46-50.) CPU 26 is the “*processor*”; ROM 50 and RAM 52 (shaded red) are “*memory*”; and as shown each of ROM and RAM is coupled to the processor.

Should PO contend the recited “*memory*” in the “*processing element*” must store instructions executed by the “*processor*,” the Pelkey-Eck combination discloses this arrangement, as would any device running software. (EX-1003, ¶253.) The inserted cartridge includes ROM 42 which “contain[s] instructions” pertaining to, e.g., the messaging function. (*See, e.g.*, Eck, 4:5-6, 7:7-12. When inserted, the “game machine circuitry [] access[es] information contained with ROM 42 (and read/write memory 46), which information controls the game machine ... under control of the ROM game program information.” (Eck, 4:9-20.)

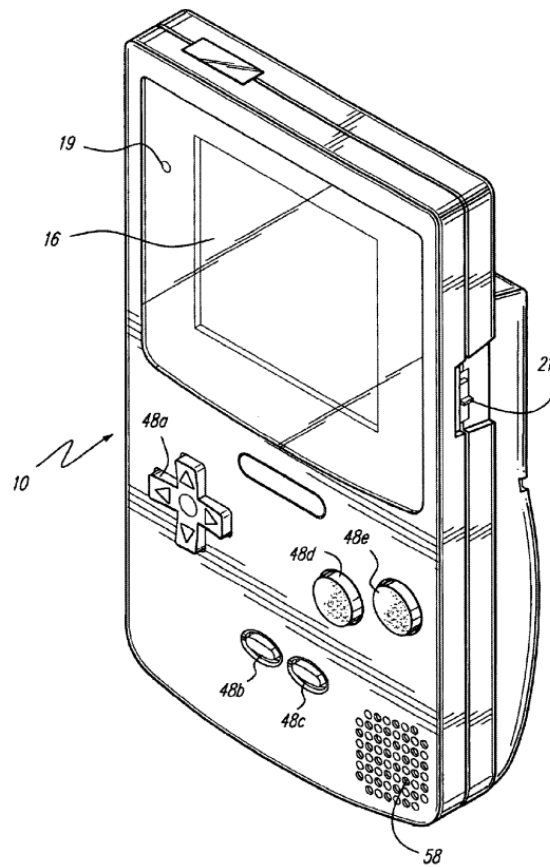
#### **4. “Providing” Limitations [1A]/[9B]**

The Pelkey-Eck combination discloses each element in these limitations.

As an initial matter, the Pelkey-Eck combination discloses a “*mobile device*” under any of the constructions proposed in the MDT-Meta-Litigation and Meta-MDT-IPR. For example, the “portable game machine” in Pelkey and Eck is “a piece of handheld equipment” under PO’s MDT-Meta-Litigation construction. (EX-1003, ¶256.) Indeed, both Pelkey and Eck describe the “portable game machine” as being a “portable (handheld)” game system. (EX-1007, 4:55-57; EX-1008, 2:38-39.)

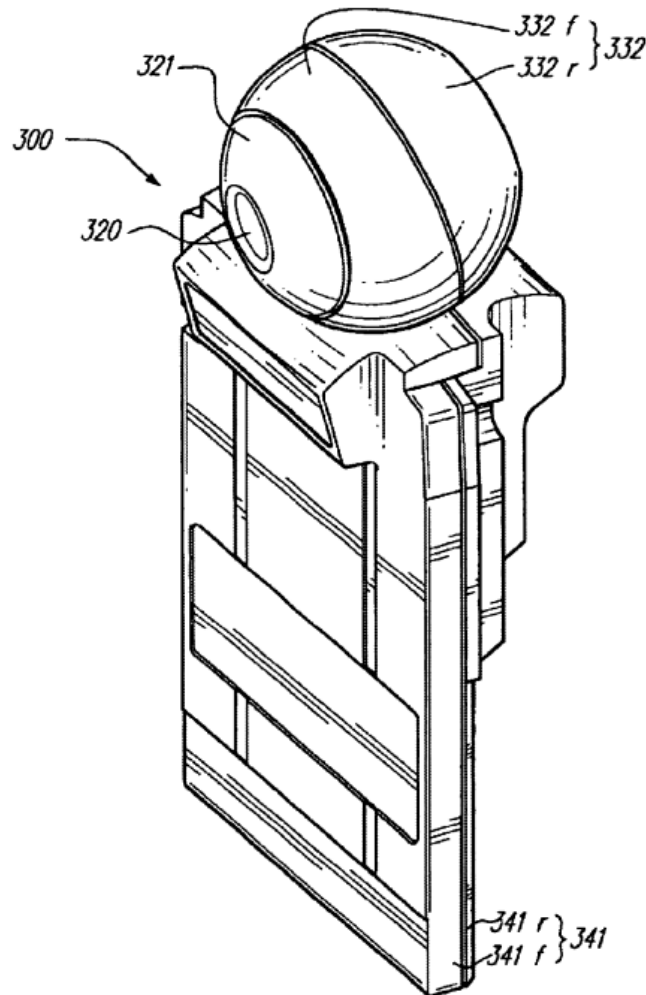
Both Pelkey and Eck disclose a “portable game machine that is selectively configurable for one or more different operations such as wireless communications, global positioning, image capturing and combinations thereof.” (EX-1008, 1:12-16, Figure 1B (below); EX-1007, 4:55-57.) Moreover, Eck discloses a portable device that “connects to a mobile site and/or mobile channel via a wireless network,” specifically, PagerWorld. (EX-1008, 13:51-54.) Accordingly, the “portable game machine” is at least a “portable game player” under Meta’s MDT-Meta-Ligation and a “portable information processing device capable of being configured for communication over a network” under Meta’s Meta-MDT-IPR constructions. (EX-1003, ¶256.)

As shown in, for example, Figure 1B, the “portable game machine” in Pelkey is a “portable device with limited display space.” It has “limited navigational capabilities” in that its functionality is limited by the gaming cartridge and selected navigational capabilities. It is thus “a portable device with limited display space and limited navigational capabilities that connects to a mobile site and/or mobile channel via a wireless network” under PO’s Meta-MDT-IPR construction. (*Id.*)



**Eck, Figure 1B**

The Pelkey-Eck combination also discloses “*captured content*” and a “*content item*.” (See EX-1003, ¶¶257-59.) Eck discloses “a game machine is provided with ... digital camera circuitry configured to capture an image.” (Eck, 2:16-18.) For example, Eck discloses a pager cartridge, “is itself provided with a slot for receiving” another cartridge. (See, e.g., Eck, 5:23-25.) One example of a “piggy-backed” cartridge is a “digital camera cartridge,” illustrated in Figure 14 (below): “thereby enabling game play or digital camera operations while pager cartridge 100 is attached to game machine 10.” (Eck, 22:14-20, 23:36-38.)



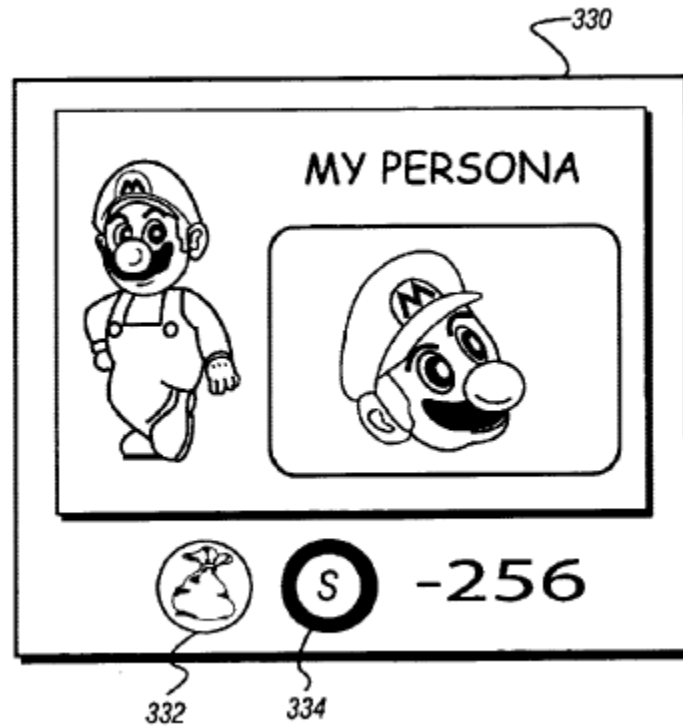
**Eck, Figure 14**

The portable game machine having an inserted messaging cartridge and an inserted camera cartridge discloses the creation of at least one “*content item*.” (EX-1003, ¶258.) Eck’s digital camera cartridge “is usable to capture images, which images may then be transmitted to others via an operation using” the messaging cartridge into which the camera cartridge is inserted. (Eck, 23:38-41; *see also* Eck, 2:15-18 (“a game machine is provided with ... digital camera circuitry configured to capture an image”).) The “digital camera cartridge” may also be “configured to

capture sounds [and] these captured sounds may be used by game machine 10 and/or transmitted as a message using pager cartridge.” (Eck, 9:20-23.) At least photos and sounds are examples of “*media data captured by the mobile device.*” (EX-1003, ¶259.)

Eck discloses the Message Center screen (230) serves as a “*first interface,*” allowing users to designate content items such as messages for insertion into PagerWorld. (EX-1003, ¶261.) The interface enables users to read, compose, and send messages, with unread messages displayed in a window (232). Selecting a message takes users to the Read Message screen (250), where the content is displayed alongside the user’s persona character and the sender’s “handle,” facilitating the designation and management of shared content. (Eck, 11:26-40.) Such messages can include photos and sound clips obtained using the integrated digital camera. (Eck, 9:20-23 (“If the digital camera cartridge is configured to capture sounds, these captured sounds may be used by game machine 10 and/or transmitted as a message using pager cartridge 100.”).)

Alternatively, the “*first interface*” is the “My Persona” screen depicted in Figure 8H (reproduced below). (EX-1003, ¶262.)



Eck, Figure 8H

“Here, a user may customize his/her persona character to his/her liking.”  
(Eck, 12:22-23.) As discussed elsewhere herein, “[t]t is even possible to customize the persona character using image data obtained with a digital camera cartridge.”  
(Eck, 12:38-40.) When a user customizes their persona character using a photo taken with the digital camera, or selects a photo or sound clip to include with a message, they are “*designating*” the photo for insertion into PagerWorld. (EX-1003, ¶263.)

Also, the Pelkey-Eck combination discloses an “*application-based information channel*” under any of the constructions proposed by PO and Meta.  
(See EX-1003, ¶¶264-66.)

Eck discloses that the messaging cartridge includes a memory “storing software used” in the messaging (e.g., pager) operations and “one or more video game programs that are executable by CPU 26 of game machine 10.” (Eck, 7:7-22.) The messaging cartridge “can be used in game playing” (Eck, 9:60-61) such as, “[i]nternet-based on-line” multi-player games like PagerWorld (Eck, 10:2-7.)

While Eck uses the word “PagerWorld” in the title to reflect the communication means is paging, a POSITA would have understood that such a game is equally applicable when the communication means is another messaging type such as SMS or messaging via a WAP protocol. (EX-1003, ¶266.)

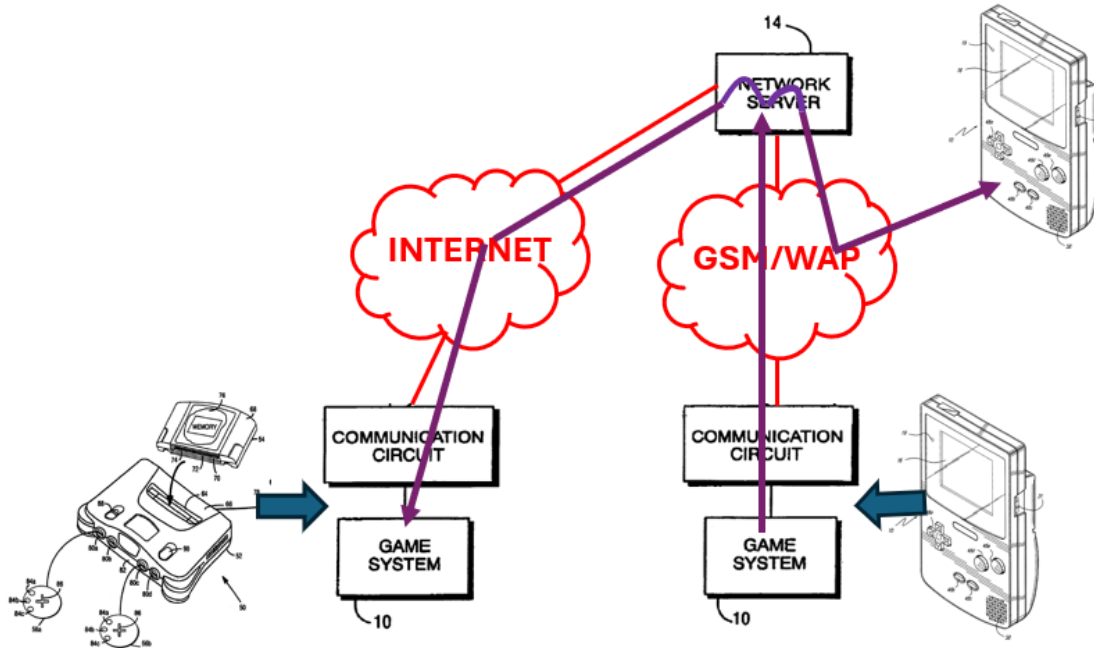
PagerWorld includes client software in the portable game machine (client program) and corresponding software in the server (server program). (See Eck, 4:61-5:7, 9:40-59.) As such, PagerWorld is persistent—it remains in existence after individual users exit the world. PagerWorld is therefore a an “*application-based information channel*” under any proposed construction. (EX-1003, ¶266.) For example, PagerWorld is a “computer program-based medium for transferring information” (Patent Owner’s MTD-Meta-Litigation construction and Meta’s Meta-MDT-IPR construction) among members of the PagerWorld community. (*Id.*) PagerWorld is likewise a “virtual location at the content management site at which user-authored content may be added for transmission to the mobile web site” (Meta’s MDT-Meta-Litigation construction). (*Id.*) For example, the “Message

Center” in PagerWorld is a “virtual location” to which user-authored content (messages) can be added for transmission to PagerWorld. Finally, PagerWorld includes “a component of a mobile site configured to permit a wide variety of mobile devices to send and receive content over a wireless network” (Patent Owner’s Meta-MDT-IPR construction). (*Id.*) The Pelkey-Eck combination discloses a “mobile device” under any construction for the reasons below. The Message Center, for example, is a “component” in PagerWorld that is configured to allow multiple mobile devices to send and receive content over a wireless network. (*Id.*)

The Pelkey-Eck combination also discloses “*providing a first interface permitting designation of at least one content item via a mobile device.*” The network implementing the messaging service of Pelkey and Eck, illustrated in Pelkey’s Figure 1A (reproduced below), includes the game system (e.g., portable game machine) coupled via a network to a server. (Pelkey, 2:58-3:4.) The network server “provides the messaging service.” (Pelkey, 3:9-10.)

The portable game machine transmits messages “with images and sound bytes to other pagers in the network.” (Eck, 16:42-45, 24:30-36, 2:15-23.) This “image and sound data may be compressed/decompressed in accordance with well-known compression/decompression techniques to more effectively utilize the available bandwidth.” (Eck, 16:45-48.) The message may further include the

sending user's persona. (See Eck, 11:53-57, 12:36-38 ("Any time the user sends a message, his/her persona character appears alongside the message on the other user's screen.")) The image or sound byte is "*designated*" for insertion when it is selected by a user to be inserted into PagerWorld. Pelkey discloses that the server "suppl[ies] messages received from one logged-in player to another logged-in player." (Pelkey, 17:1-5.) The message is thus provided via a "*first interface*" and as shown in the Figure below. (See, e.g., Eck. 2:15-18 ("a game machine is provided with radio circuitry configured to transmit messages")) This is consistent with Eck's use of GSM-SMS which requires a server to act as a message service centre for storing and forwarding messages from originators to recipients. (See §VI.A.1; EX-1003, ¶268.) Figure 1 below depicts a message from a portable game system being sent to the server.

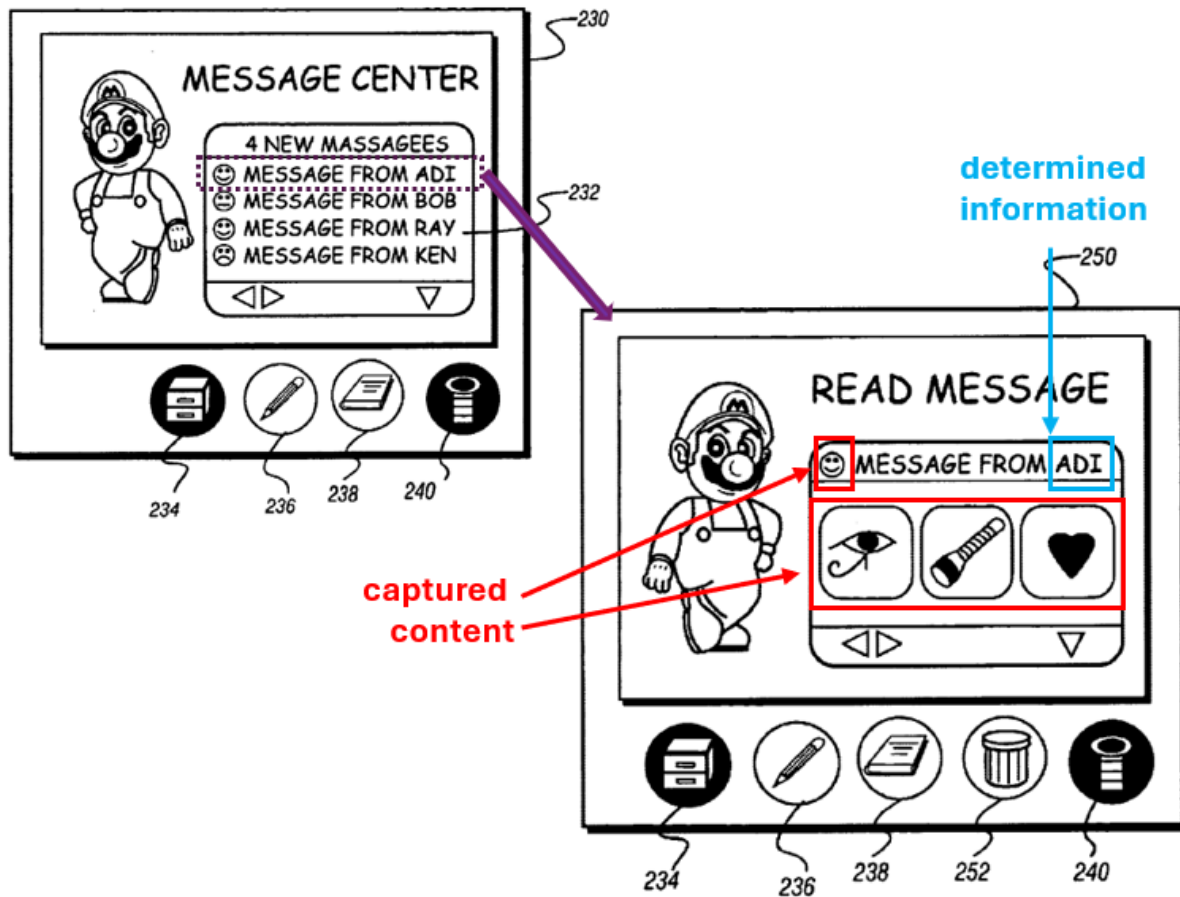


**Pelkey, Figure 1A**

The server forwards the message received from the portable game device to the intended recipients (one or more (or all) messaging system users). (Eck, 9:46-49, 20:8-9.) (EX-1003, ¶269.)

The “*content item*” is provided “*for insertion into an application-based information channel.*” (EX-1003, ¶271.) For example, when a message is forwarded to a recipient, the header information remains in the forwarded GSM-SMS message. This is again reflected in Eck’s Figure 8C (below-left) and Figure 8D (below-right). Figure 8C provides a list of unopened message and “[s]electing a message takes the user to a Read Message screen” shown in Figure 8D. (Eck,

11:26-32.) As shown in this figure, the message received at the user's device includes the captured content and the determined information.



Eck, Figure 8C (left), Figure 8D (right)

Thus, the Pelkey-Eck combination discloses “*providing [at least a portion of] a first interface permitting designation of at least one content item, via a mobile device, for insertion into an application-based information channel, the at least one content item comprising media data captured by the mobile device.*”

[1B]/[9B]. (EX-1003, ¶272.)

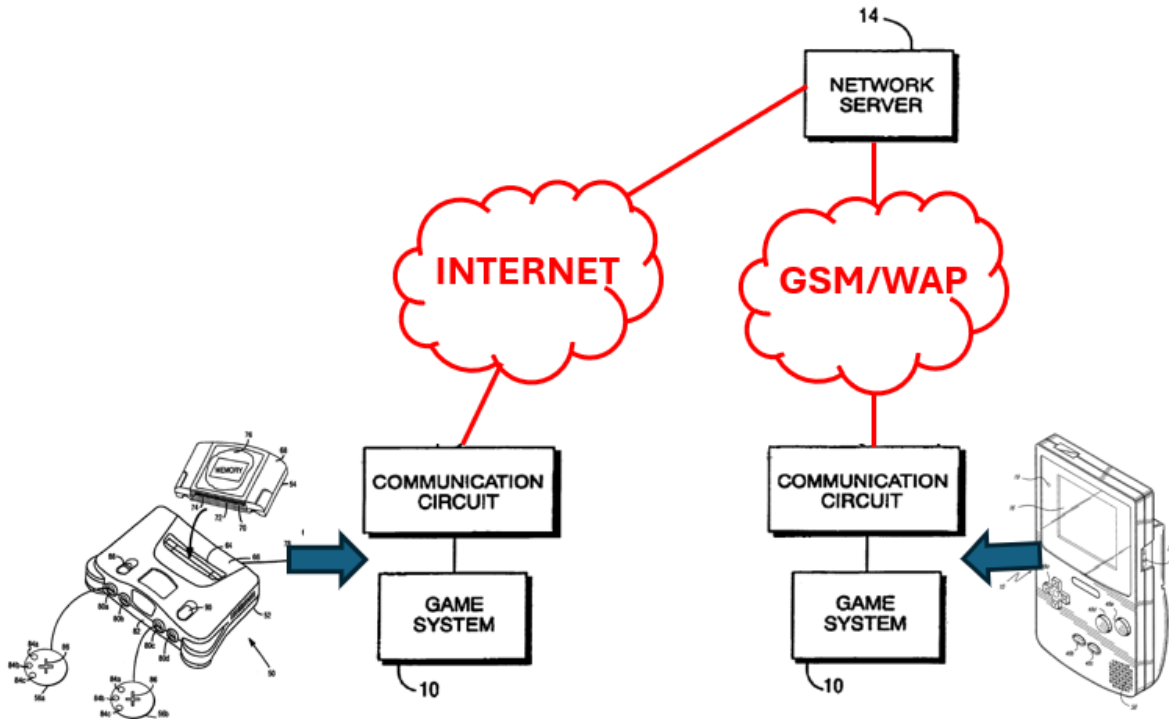
## 5. “Integrating” Limitations [1B]/[9C]

The Pelkey-Eck combination discloses “*integrat[ing] the at least one content item and information associated with at least one wireless networking functionality of the mobile device to generate at least one integrated content item.*” [1B]/[9B]. See EX-1003, ¶¶273-80.)

The Pelkey-Eck combination discloses “*wireless networking functionality of the mobile device*” under either of the Meta-MDT-IPR proposed constructions. EX-1003, ¶274.)

The ’578 patent refers to “messaging, distributed collaboration, and location-based services” as examples of “wireless networking functionality.” (EX-1001, 1:36-41, 1:56-60.) Both Pelkey and Eck are directed to a messaging service provided using a portable game machine. Pelkey discloses a network “in which the messaging service” may be implemented. (Pelkey, 2:58-60.) The network “includes game systems 10 connected via communications circuits 12 (e.g., modems, network interfaces, etc.) to a wide area network 16 such as the Internet.” (Pelkey, 2:60-62.) Pelkey explains that game system 10 may be a video game system, such as the N64 video game system, connected to a television (*see* Pelkey, 3:38-48) or the portable game machine 110 (Pelkey, 4:55-57.). Below is Pelkey’s Figure 1A with the game system 10 on the left using the N64 game system illustrated in Pelkey’s Figure 2 and the game system 110 on the right using the

portable game machine in Eck's Figure 1B. The connection from the N64 game system to the server via the Internet as taught by Pelkey is also shown.



**Pelkey, Figure 1**

Pelkey does not disclose details of the wireless network used to provide wireless messaging from the game system to the server. (EX-1003, ¶276.)

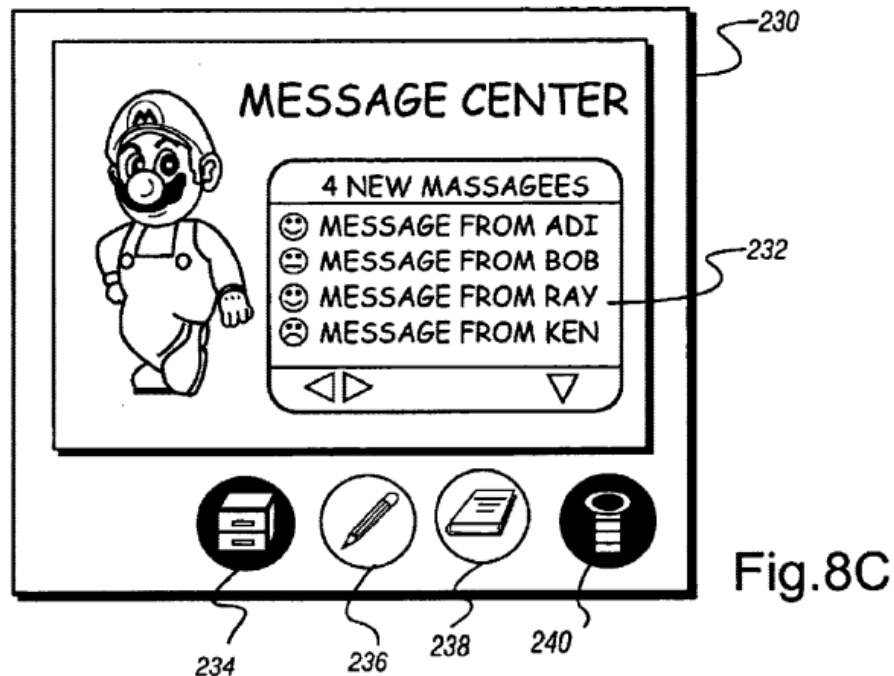
However, while Eck mentions use of a paging network for this functionality, Eck also explicitly discloses that its “present invention” may be “applied to other wireless technologies such a[s] GSM ... and WAP ....” (*Id.*; Eck, 25:17-20.) A POSITA would have been motivated to use either GSM-SMS or WAP for the messaging service, rather than paging, to obtain the enhanced features of those

protocols. (EX-1003, ¶276.) Based on Eck's disclosure, a POSITA would have understood that the portable game machine communicates with the server via messaging available via the GSM network (e.g., SMS) or messaging available via WAP. (*Id.*)

GSM-SMS is "functionality implementable over a wireless network" and, as shown in Pelkey's Figure 1, the GSM network is separate from the Internet connecting the N64 game system to the server. (EX-1003, ¶277.) Thus, the Pelkey-Eck combination discloses "*wireless networking functionality*" under both PO's and Meta's constructions from the Meta-MDT-IPR proceeding. (*Id.*)

The WAP protocol stack transports data over GSM's SMS. (*See* EX-1003, ¶276.) As discussed above, in a mobile originated message in SMS in a GSM network, the SMS message includes a header with data fields indicating control and content details for the message. These fields, associated with the action of sending a message over the wireless network, are "*information associated with at least one wireless networking functionality of the mobile device.*" Thus, to send a message, the portable game machine determines this information to construct the GSM-SMS message. Figure 8C from Eck confirms that this information is determined. Specifically, this figure depicts the Message Center user interface screen presented to the player which shows a list of unread received messages with each message including the sending user's name and associated persona image.

Such information constitutes “*information associated with at least one wireless networking functionality of the mobile device.*”



**Eck, Figure 8C**

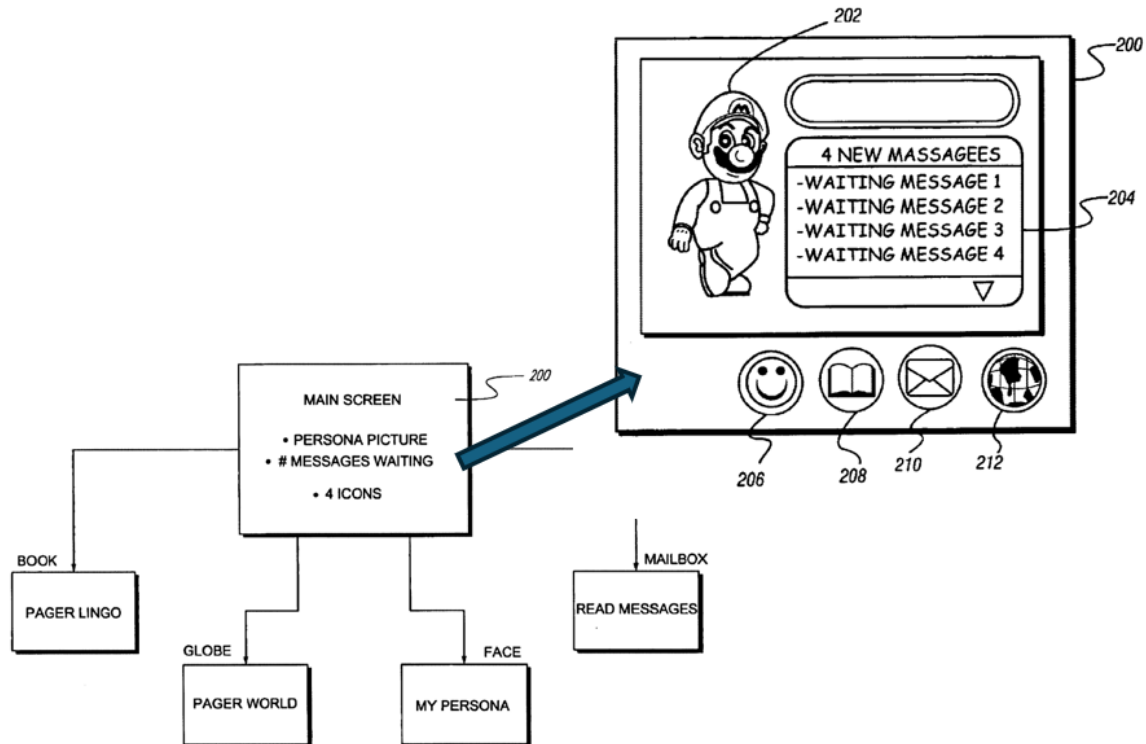
Such “*information associated with at least one wireless networking functionality of the mobile device*” is integrated, along with a “*content item*” to “*generate at least one integrated content item*” because such functionality facilitates transfer of the content item (message, image, sound) into PagerWorld (the application-based information channel). As in the case of Ground 1, sender information (“ADI,” “BOB,” “RAY,” or “KEN” of Fig. 8C or 8E) is integrated with the message-related information. (EX-1003, ¶280.)

## 6. “Inserting” Limitations [1C]/[9D]

The Pelkey-Eck combination discloses “*inserting the at least one integrated content item into the application-based information channel.*”

Eck discloses that the messaging cartridge includes a memory “storing software used” in the messaging (e.g., pager) operations and “one or more video game programs that are executable by CPU 26 of game machine 10.” (Eck, 7:7-22.) In addition to messaging (e.g., paging functions), the messaging cartridge “can be used in game playing.” (Eck, 9:60-61.)

As noted above, PagerWorld is the relevant “*application based information channel.*” *Supra* §VI.B.5. A user connects to PagerWorld through the “main PagerWorld screen 200,” illustrated in Figure 7 (below-left), which is “the starting point for every user session.” (Eck, 10:57-60, 10:65-66.) The main screen presents the user’s persona character, shown in Figure 8A as the character Mario, from the Mario Bros Nintendo game. (*See* Eck, 10:60-61.) The main screen also includes a set of icons including a book (“Pager Lingo”), an unopened envelope (“Message Center”), a globe (“PagerWorld”), and a face (“My Persona”). (Eck, 11:2-7.)



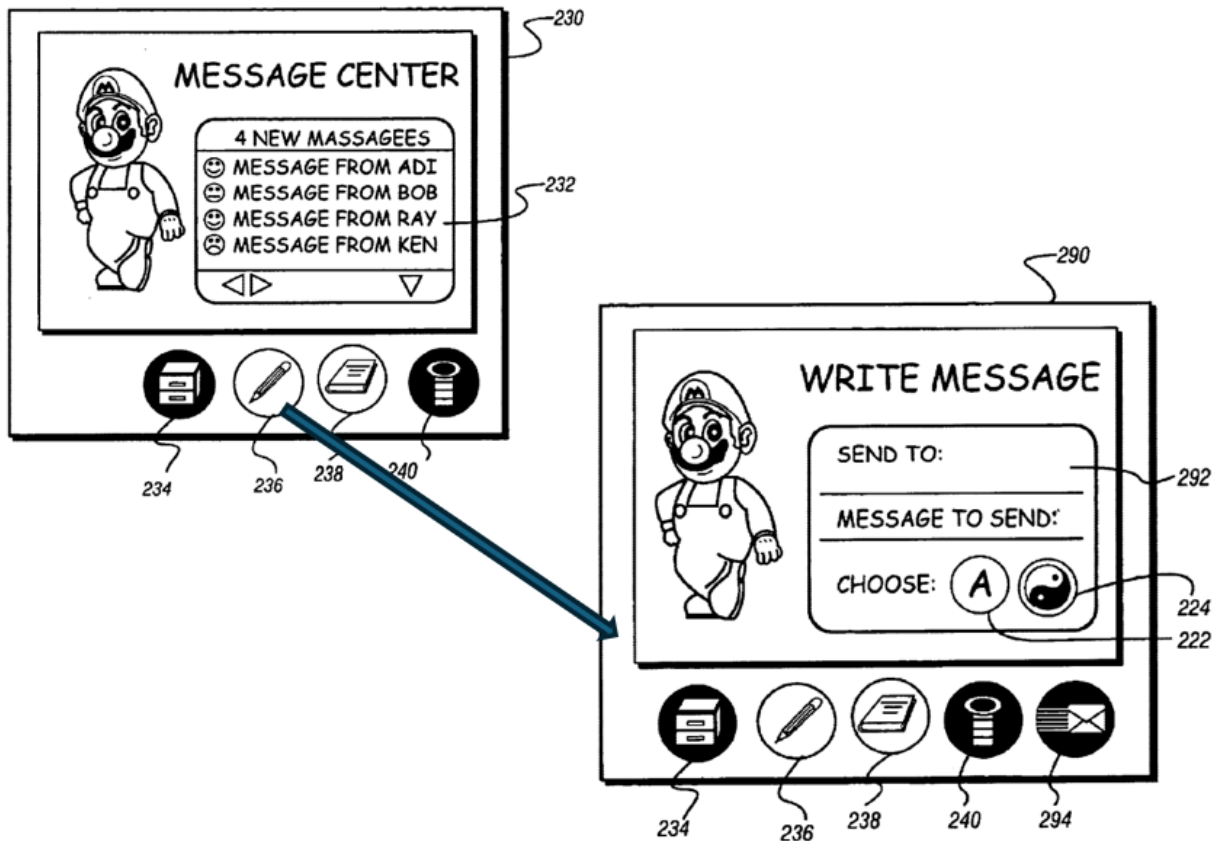
**Eck, Figure 7 (left), Figure 8A (right)**

PagerWorld facilitates interaction between a user of the mobile device and one or more additional users of PagerWorld in a number of ways. First, players “read and send messages from the main PagerWorld screen” which serves as “communication central.” (Eck, 10:32-34.) Second, players can select the PagerWorld icon 212 portal from the main screen and “step into a nation-wide or world-wide community of other PagerWorld players.” (Eck, 10:34-36.) Within the shared world, users interact by exchanging messages.

In the Pelkey-Eck combination, the captured content (photos/images, sounds/audio files/messages) is “inserted” into the “application-based information channel.” PagerWorld supports transmission of messages “with images and sound

bytes to other pagers in the network.” (Eck, 16:42-45, 24:30-36 (“the images stored in the read/write memory of digital camera cartridge 300 may be transmitted to other [sic] using the radio circuitry of pager cartridge 100”) (*see also supra* §VI.B.4)

Such a message can be sent through the Message Center accessed through an icon on the main screen. (Eck, 11:26-28.) While in the Message Center (e.g., screen illustrated in Figure 8C (below-left)), user activates the quill icon 236 to navigate to the “Compose Message screen 290” of Figure 8F. (Eck, 11:37-38.) The “send to” window 292 “allows the user to choose to whom the message will be sent.” (Eck, 12:10-11.) A user can opt to send the message to an individual, to a pre-defined group (e.g., a buddy list), (Eck, 20:9), or as a broadcast to all messaging devices in PagerWorld, (Eck, 20:8, 9:46-49 (“messages from the paging system operator may be sent to all users in the paging system, to certain groups of users in the paging system or to a particular user in the paging system”)). For group messaging, Pelkey teaches that the messaging service client “allows the user to create a list (‘buddy list’) of other users (‘buddies’) with whom he/she wishes to remain in contact.” (Pelkey, 7:33-35.) The buddy list “is stored by the network server.” (Pelkey, 7:35-36.) In the Pelkey-Eck combination, the PagerWorld user can identify a “buddy list” in the “send to” window to send a “carbon copy” of the message.



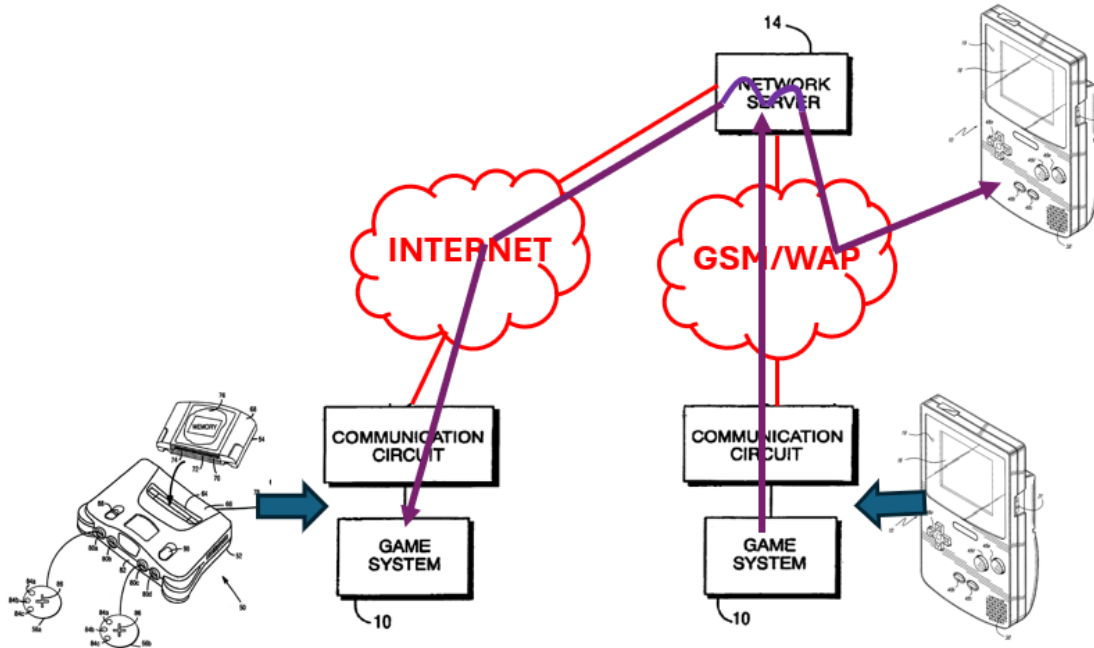
**Eck, Figure 8C (left), Figure 8F (right)**

The Message Center screen features a window 232 that lists unread messages. (Eck, 11:27-31.) “When a message is selected from Message Center screen, the contents of the message appear, along with the user’s persona character and ‘handle’ of the person that sent the message.” (Eck, 11:53-57.)

PagerWorld also supports insertion of captured data into PagerWorld through personalization of a user’s person character. Players in PagerWorld are represented “by a ‘persona character’ and it is this character that all other PagerWorld players will see.” (Eck, 10:23-25.) The users may be “provided with

the capability of including in their profiles customized faces (images) made up of various user-selected features” or “digital images of their own faces.” (Pelkey, 7:20-27.) For example, in Eck, the “persona character” can be “customize[d] .... using image data obtained with a digital camera cartridge.” (Eck, 12:38-40.) The persona character, is stored, in the combination at the network server. In addition to including the persona character in messages, in the PagerWorld game universe, players “walk their persona characters in a world featuring attractions and sideshows.” (Eck, 10:38-40, 13:29-31.) Thus, the image (persona) “*is to be inserted*” into PagerWorld for inclusion in the virtual world and message exchanged between players. (EX-1003, ¶290.)

Pelkey discloses that the server “suppl[ies] messages received from one logged-in player to another logged-in player.” (Pelkey, 17:1-5.) The message is thus provided into the “*application-based information channel*” as shown in the modified Figure 1A (reproduced below). (See, e.g., Eck. 2:15-18 (“a game machine is provided with radio circuitry configured to transmit messages”).) (EX-1003, ¶291.)



**Pelkey, Figure 1A**

The Pelkey-Eck combination also discloses an “*application-based information channel providing a second interface wherein two or more users share access to a plurality of content items including the at least one integrated content item.*” For example, as noted above, each user is capable of customizing their persona using, e.g., photos taken with the integrated digital camera. As noted above, “Message Center” includes an “Address Book” that “provides a listing of other users by their handles” and “the persona character of the other user as it appeared on his/her last communication with the user.” (Eck, 11:32-35; *see* Eck 12:16-19.) The “Address Book” is another example of a “*second interface*” where

*“two or more users share access to a plurality of content items including the at least one integrated content item.”* (EX-1003, ¶292.)

### **C. Claim 8**

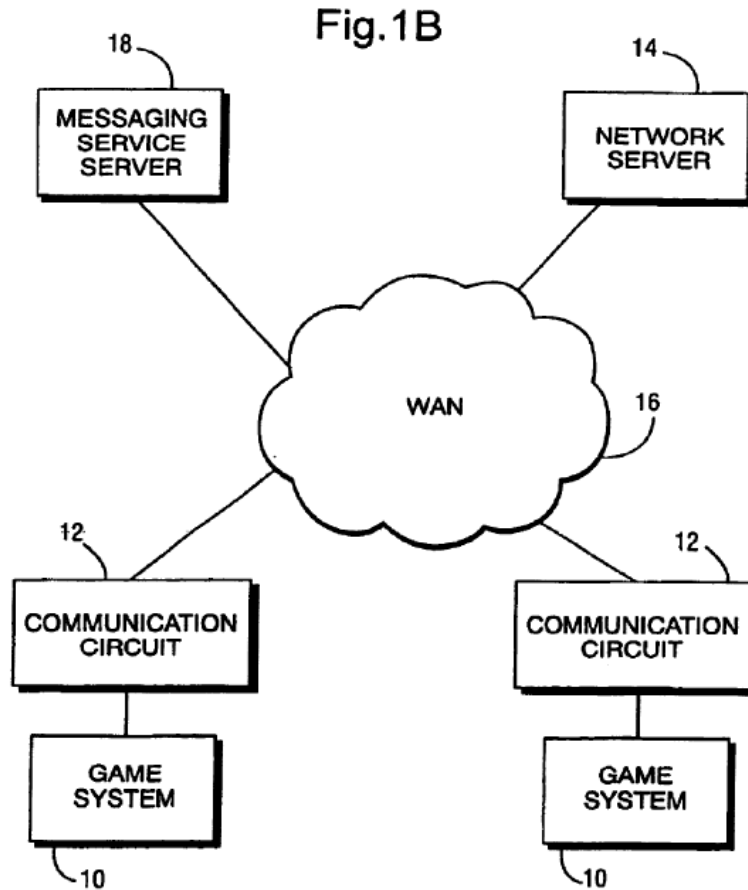
Eck explains a cartridge including messaging functionality (e.g., a pager cartridge) “is provided for use with a game machine having a game program executing processing system including a microprocessor.” (Eck, 1:60-65.) The messaging cartridge “includes a memory 145 for storing software used in the pager operations.” (Eck, 7:7-9.) Pelkey similarly discloses “[a] messaging service client is implemented by program code contained in an application (e.g., a video game, a web browser) executed by the game system.” (Pelkey, 1:42-44.)

As explained in §VI.B.3, the inserted messaging cartridge includes ROM 42 which “contain[s] instructions” pertaining to, e.g., the messaging function. (*See, e.g.,* Eck, 4:5-6, 7:7-12.) When inserted, the “game machine circuitry [] access[es] information contained with ROM 42 (and read/write memory 46), which information controls the game machine ... under control of the ROM game program information.” (Eck, 4:9-20.) The game machine 10 then “automatically activates a display of messages on the display thereof in accordance with the operating software stored in the memory of the pager.” (Eck, 22:10-14.) Eck likewise discloses the use of executable software code to perform the disclosed functions. (Eck, 25:42-51.)

Therefore, the Pelkey-Eck combination discloses “*non-transitory computer-readable storage medium having embodied therein executable code of one or more software programs, wherein said executable program code when executed by a processing element implements the steps of the method of claim 1.*” (EX-1003, ¶296.)

**D. Claim 11**

The Pelkey-Eck combination discloses “[*a*] *network-based communication system comprising a plurality of servers configured to communicate over a network, a given one of the servers comprising the apparatus of claim 9.*” For example, Figure 1B in Pelkey discloses an embodiment that includes a “Messaging Service Server” 18 and a “Network Server” 14 that communicate over the internet (depicted as “WAN” 16). The “Message Service Server” and “Network Server” together comprise a “*plurality of servers.*”



**Pelkey, Figure 1B**

According to Pelkey, the “network server” “stores games that may be played by users of the network. These games may be one player games or multi-player games.” (Pelkey, 3:4-9.) In such an embodiment, the processing steps set forth in claim 9 are each performed by the “messaging service server.” (EX-1003, ¶299.)

## **E. Claims 12 and 17**

### **1. [12P]: “method”**

The Pelkey-Eck combination discloses a method for performing the actions recited in limitations [12A]-[12D].

## 2. [17P]: “mobile device”

The Pelkey-Eck combination discloses a “*mobile device*” having the features in limitations [17A]-[17F], namely, a portable game machine, for the reasons discussed above in §VI.B.4.

## 3. Mobile Device Architecture Limitations [17A]-[17B]

The Pelkey-Eck combination discloses “*a processing element comprising a processor coupled to a memory*” for the same reasons discussed above in §VI.B.3. (EX-1003, ¶304.)

The Pelkey-Eck combination discloses “*a network interface.*” Pelkey discusses that the network for implementing a “messaging service” includes a game system 10 (e.g., the portable game machine) “connected via communications circuits 12 (e.g., modems, **network interfaces**, etc.) to a wide area network 16 such as the Internet.” (Pelkey, 2:60-62.) Pelkey explains that communication circuits 12 “may be provided internally to the game system or embodied as cartridges ... removably attachable to a port or bay of the game systems.” (Pelkey, 2:65-3:2.) Eck discloses the embodiment of a network interface in a cartridge. As shown in Eck’s Figure 5A, the pager cartridge includes “an antenna 130 connected to a conventional radio section 132 for receiving and sending messages.” (Eck, 6:34-36; *see also* Eck, 7:36-53 (describing a pager cartridge includes a codec/DSP

section, bandpass filter, RF mixer and dual PLL section, crystal, transmitter, receiver and antenna.) The radio section and/or antenna is a “*network interface*.”

#### **4. Limitations [12A]-[12D]/[17C]-[17F]**

Limitations [12A]-[12D]/[17C]-[17F] add nothing more than what was already set forth in at least claims 1 and 9. Accordingly, the Pelkey-Eck combination discloses limitations [12A]-[12D]/[17C]-[17F] for the reasons discussed above in §VI.B.

#### **F. Claim 16**

The Pelkey-Eck combination discloses a “*non-transitory computer-readable storage medium having embodied therein executable code of one or more software programs, wherein said executable program code when executed by a processing element implements the steps of the method of claim 12*” for the same reasons discussed above in §VI.C.

#### **G. Claim 21**

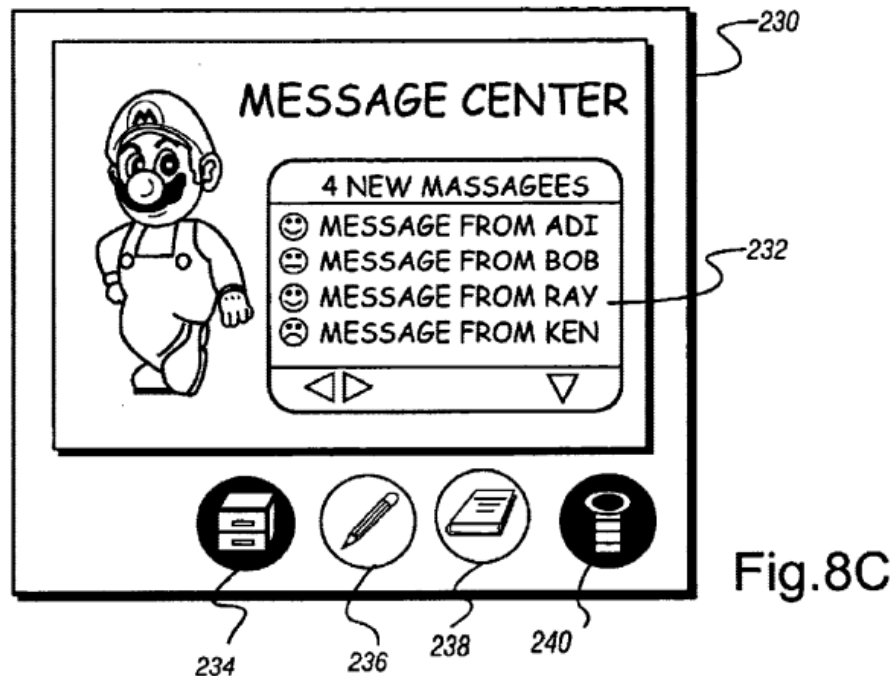
Independent claim 21 adds nothing more than what was already set forth in at least claim 12. Accordingly, the Pelkey-Eck combination discloses each limitation in claim 21 for the reasons discussed above in §VI.E.

## H. Dependent Claims

### 1. Claim 6

The Pelkey-Eck combination discloses at least “wireless networking functionality” that includes “*one or more messaging actions implementable over a wireless network*” and “*one or more collaboration actions implementable over the wireless network.*”

“Message Center” includes an “Address Book” that “provides a listing of other users by their handles” and “the persona character of the other user.” (Eck, 11:32-35; *see* Eck, 12:16-19.) Figure 8C in Eck depicts the Message Center user interface screen presented to the player showing a list of unread received messages with each message including the sending user’s name and associated persona image.



Eck, Figure 8C

As noted above, Eck discloses that its “invention” can be used with wireless technologies such a GSM and WAP. (Eck, 25:17-20.) Like Randall and Forsyth, neither Pelkey nor Eck provides the details of the wireless messaging functionality of GSM-SMS or WAP. For the same reasons as above (*supra* §§V.A.1, VI.B.5), the GSM protocol includes fields associated with the action of sending a message over the wireless network and are therefore also “*information*” associated with “*wireless network functionality*” by inclusion in the protocol message originated by the sending mobile device. Messages transmitted via WAP will include the same additional information.

In addition, PagerWorld integrates information comprising a “*collaboration action*” in game play. For example, Eck discloses that “[a]s players interact with other players in PagerWorld (e.g., by sending messages and playing games), players will share the fun and excitement of discovering new items, skills and appearances as their persona characters gain experience.” (Eck, 10:27-31.) In addition, among the types of games that can be played in PagerWorld are “[t]eamwork-based adventures requiring input from multiple players with complementary skills.” (Eck, 13:40-45.)

## **2. Claim 7**

The Pelkey-Eck combination discloses “*providing, via the first interface, one or more content integration options to the user content integration options.*” As noted above, Pelkey discloses “a messaging service for communicating messages between and among users of video game systems.” (Pelkey, 1:14-16.) And Eck discloses transferring images taken with an integrated digital camera into PagerWorld and sharing such photos with other users through customizing personas with the camera photos and attaching photos and sound clips to messages. (Eck, 12:38-40; *see also* Eck 16:42-45.)

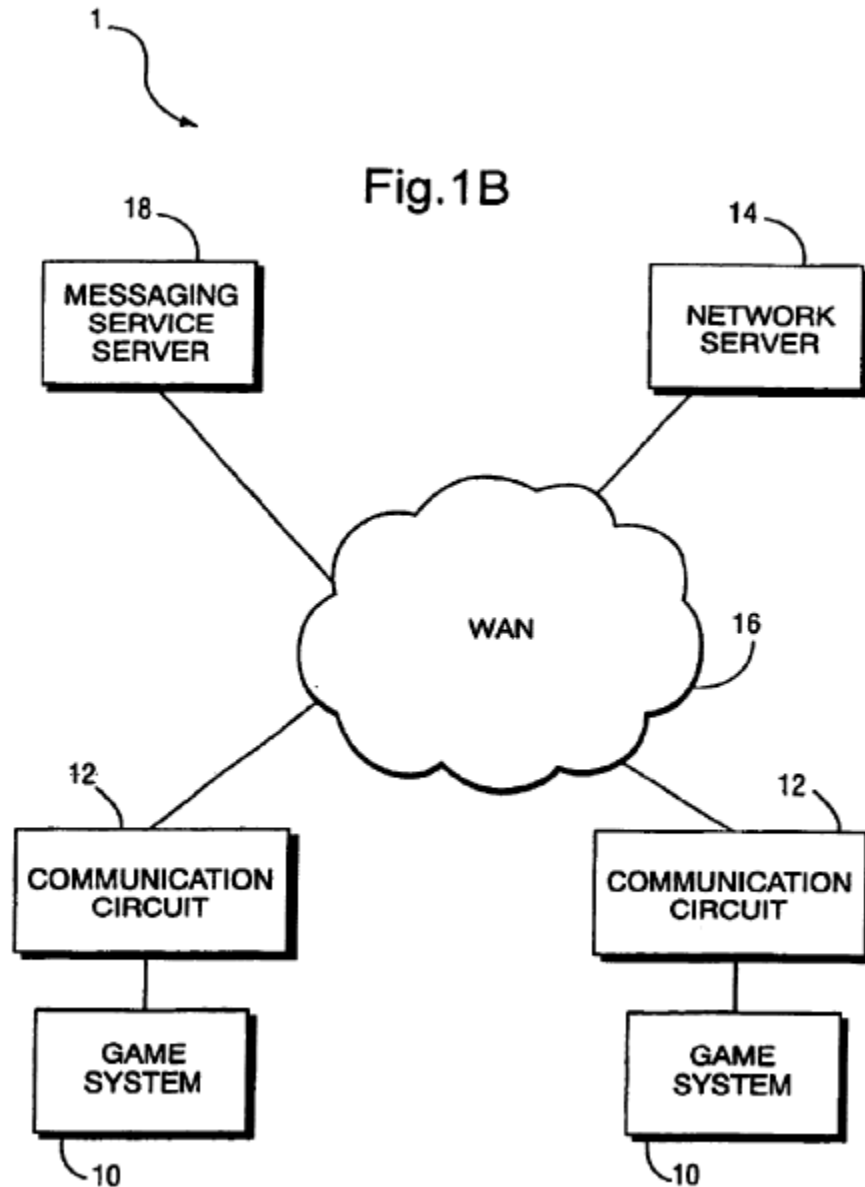
Eck likewise discloses “image and sound data may be compressed/decompressed in accordance with well-known compression/decompression techniques to more effectively utilize the available bandwidth.” (Eck, 16:45-48.) A

POSITA would understand the reference to “utilize the available bandwidth” to mean content integration options are based in part on available wireless networking functionalities. (Ex.1003, ¶324.)

### **3. Claim 10**

The Pelkey-Eck combination discloses “*at least one server accessible over the Internet via a network interface.*”

Pelkey discloses in Figure 1B (below) an exemplary embodiment showing a plurality of servers accessible over the internet (depicted as WAN 16).



**Pelkey, Figure 1B**

Figure 1B of Pelkey illustrates a network “in which the messaging service described herein may be implemented.” (Pelkey, 2:58-60.) The network “includes game systems 10 connected via communications circuits (e.g., modems, network interfaces, etc.) to a wide area network.” (Pelkey, 2:60-62.)

Eck discloses a network interface in a cartridge. As shown in Eck's Figure 5A, the pager cartridge includes "an antenna 130 connected to a conventional radio section 132 for receiving and sending messages." (Eck, 6:34-36; *see also* Eck, 7:36-53 (describing a pager cartridge includes a codec/DSP section, bandpass filter, RF mixer and dual PLL section, crystal, transmitter, receiver and antenna).) The radio section and/or antenna is a "*network interface*." A POSITA would have understood the server is accessible over the "*internet*" through the "*network interface*" based on the cloud-based architecture of Figure 1B.

#### **4. Claim 15**

As discussed above, the Pelkey-Eck combination discloses captured content obtained from the mobile device. Eck discloses that "*at least one content item*" comprises a source of at least "*device-captured image data*" and "*device-captured audio data*." For example, as discussed above in connection with claim 1[A], Eck discloses "digital images may be captured by the camera and used by game machine 10 and/or transmitted as a message" and that "captured sounds may be used by game machine 10 and/or transmitted as a message using pager cartridge 100." (Eck, 9:16-25.)

#### **5. Claims 18-19**

The Pelkey-Eck combination discloses the "*mobile device*" is a "*camera*." Specifically, Eck discloses that "[i]f digital camera cartridge 300 is piggy-backed

into a pager cartridge 100, the images stored in the read/write memory of digital camera cartridge 300 may be transmitted to other using the radio circuitry of pager cartridge 100.” (Eck, 24:30-36.)

The Pelkey-Eck combination also discloses the “*mobile device comprises a global positioning system (GPS)-based navigational device.*” Eck discloses “a global positioning system (GPS) cartridge is also selectively insertable into the slot of game machine 10 or into the slot of pager cartridge 100.” (Eck, 22:28-30, 5:39-43.) Eck explains that “GPS is a satellite-based radio navigation system ... [that] permits users to determine their three-dimensional position velocity, and time.” (Eck, 22:30-34.) Eck discloses that GPS capability, the ability to send and receive messages (pages), and the ability to send and receive photos and audio files can be integrated into the portable gaming system without the need for cartridges. (Eck, 25:35-40.)

## **VII. Discretionary Denial is Not Appropriate**

### **A. 35 U.S.C. §314(a)**

The Board should reach the merits because the Petition presents a compelling unpatentability challenge. (*See* Interim Procedure for Discretionary Denials, 4-5.) The evidence presented in this Petition, “if unrebutted in trial, would plainly lead to a conclusion that one or more claims are unpatentable by a preponderance of the evidence.” (Interim Procedure, 4.)

The median time to trial in the Eastern District of Texas is 21.9 months and the case is scheduled for trial on April 20, 2026. Nonetheless, the district court case is in its early stages and no depositions have taken place. In addition, because a claim construction hearing is not scheduled until October 30, 2025, no claim construction order will issue prior to a decision on institution. And any trial will involve fewer claims than challenged here.

**B. 35 U.S.C. §325(d)**

*Advanced Bionics* Part 1 is not satisfied because none of the asserted references were cited or applied during prosecution and no asserted reference is substantially the same as any art previously presented. Thus, the Board need not reach Part 2.

**C. General Plastics**

The petition should not be denied as an improper serial petition because there is no relationship, such as a joint defense arrangement, much less a “significant relationship” between Petitions here and Meta. Moreover, the functionality of the accused products in the Meta and Samsung district court cases differ. *See Videndum Production Solutions, Inc. v. Rotolight Ltd.*, IPR2023-01218 (Paper 12).

## VIII. Mandatory Notices

### A. Real Party In Interest

The real parties-in-interest are Samsung Electronics Co. Ltd. and Samsung Electronics America, Inc.

### B. Related Matters

To the best of Samsung's knowledge, the following is a list of judicial or administrative matter that would affect, or be affected by, a decision in the proceeding:

- *Mobile Data Technologies LLC v. Samsung Electronics Co. Ltd. et al.*, 2:24-cv-00435-JRG-RSP (E.D. Tex.)
- *Mobile Data Technologies LLC v. Meta Platforms, Inc.*, Case No. 24-cv-00896-WHA (N.D. Cal.)
- *Meta Platforms, Inc. v. Mobile Data Technologies, Inc.*, IPR2024-00247 (PTAB)
- *Samsung Electronics Co., Ltd. v. Mobile Data Technologies*, IPR2025-00535 (PTAB)
- *Samsung Electronics Co., Ltd. v. Mobile Data Technologies*, IPR2025-00536 (PTAB)
- *Samsung Electronics Co., Ltd. v. Mobile Data Technologies*, IPR2025-00537 (PTAB)
- *Samsung Electronics Co., Ltd. v. Mobile Data Technologies*, IPR2025-00538 (PTAB)
- *Samsung Electronics Co., Ltd. v. Mobile Data Technologies*, IPR2025-00543 (PTAB)

### C. Notice of Counsel and Service Information

Pursuant to 37 C.F.R. §§ 42.8(b)(3), 42.8, Petitioners designate the following lead and backup counsel:

| Lead Counsel                                                                                                                                                                    | Back Up Counsel                                                                                                                                                                                           |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Lori Gordon (Reg. No. 50,633)<br>Goodwin Procter LLP<br>1900 N St. N.W.<br>Washington, D.C. 20036<br>Phone: (202) 346-4000<br>Fax: (202) 346-4444<br>Gordon-ptab@goodwinlaw.com | Doug Kline (Reg No. 35,574)<br>GOODWIN PROCTER LLP<br>100 Northern Avenue<br>Boston, MA 02210<br>Tel: (617) 570 1000<br>Fax: (617) 523-1231<br>dkline@goodwinlaw.com                                      |
|                                                                                                                                                                                 | Srikanth Reddy<br>( <i>pro hac vice</i> application to be filed)<br>GOODWIN PROCTER LLP<br>100 Northern Avenue<br>Boston, MA 02210<br>Tel: (617) 570 1000<br>Fax: (617) 523-1231<br>sreddy@goodwinlaw.com |
|                                                                                                                                                                                 | Naomi Birbach (Reg. No. 67,113)<br>Goodwin Procter LLP<br>620 Eighth Avenue<br>New York, NY 10018<br>Phone: (212) 813-8800<br>Fax: (212) 355-3333<br>NBirbach@goodwinlaw.com                              |

Petitioners consent to electronic service at the email addresses listed in the table above.

### IX. Conclusion

IPR is respectfully requested.

Date: February 5, 2025

Respectfully submitted,

/Lori A. Gordon/

Lori A. Gordon (Reg. No. 50,633)  
Goodwin Procter LLP  
1900 N Street, N.W.  
Washington, D.C. 20036  
Phone: (202) 346 4435  
Gordon-ptab@goodwinlaw.com

Lead Counsel for Petitioner

## APPENDIX A – LIST OF CLAIMS

**[1P]** A method comprising:

**[1A]** providing a first interface permitting designation of at least one content item, via a mobile device, for insertion into an application-based information channel, the at least one content item comprising media data captured by the mobile device; and

**[1B]** integrating the at least one content item and information associated with at least one wireless networking functionality of the mobile device to generate at least one integrated content item; and

**[1C]** inserting the at least one integrated content item into the application-based information channel, the application-based information channel providing a second interface wherein two or more users share access to a plurality of content items including the at least one integrated content item.

**[6]** The method of claim 1 wherein the information associated with said at least one wireless networking functionality of the mobile device comprises one of: location-based service information; one or more messaging actions implementable over a wireless network; and one or more collaboration actions implementable over the wireless network.

**[7]** The method of claim 1 further comprising providing, via the first interface, one or more content integration options to the user.

**[8]** A non-transitory computer readable storage medium having embodied therein executable code of one or more software programs, wherein said executable program code when executed by a processing element implements the steps of the method of claim 1.

**[9P]** An apparatus comprising:

**[9A]** a processing element comprising a processor coupled to a memory;

**[9B]** the processing element providing at least a portion of a first interface permitting designation of at least one content item, via a mobile device, for insertion into an application-based information channel, the at least one content item comprising media data captured by the mobile device; and

the processing element being configured:

**[9C]** to integrate the at least one content item and information associated with at least one wireless networking functionality of the mobile device to generate at least one integrated content item; and

**[9D]** to insert the at least one integrated content item into the application-based information channel, the application-based information channel providing a second interface wherein two or more users share access to a plurality of content items including the at least one integrated content item.

**[10]** The apparatus of claim 9 wherein the processing element comprises at least one server accessible over the Internet via a network interface.

**[11]** A network-based communication system comprising a plurality of servers configured to communicate over a network, a given one of the servers comprising the apparatus of claim 9.

**[12P]** A method comprising:

**[12A]** designating at least one content item, via a mobile device, for insertion into an application-based information channel, the at least one content item comprising media data captured by the mobile device; and

**[12B]** providing information associated with at least one wireless networking functionality of the mobile device for integration with the at least one content item;

**[12C]** wherein the at least one content item and the information associated with said at least one wireless networking functionality of the mobile device are integrated to generate at least one integrated content item; and

**[12D]** wherein the at least one integrated content item is inserted into the application-based information channel, the application based information channel providing an interface wherein two or more users share access to a plurality of content items including the at least one integrated content item.

**[15]** The method of claim 12, wherein the at least one content item comprises at least one of device-captured video data, device captured audio data and device-captured image data.

**[16]** A non-transitory computer readable storage medium having embodied therein executable code of one or more software programs, wherein said executable program code when executed by a processing element implements the steps of the method of claim 12.

[17P] A mobile device comprising:

[17A] a processing element comprising a processor coupled to a memory; and

[17B] a network interface;

the processing element being configured to:

[17C] designate at least one content item for insertion into an application-based information channel, the at least one content item comprising media data captured by the mobile device; and

[17D] provide information associated with at least one wireless networking functionality of the mobile device for integration with the at least one content item;

[17E] wherein the at least one content item and the information associated with said at least one wireless networking functionality of the mobile device are integrated to generate at least one integrated content item; and

[17F] wherein the at least one integrated content item is inserted into the application-based information channel, the application-based information channel providing an interface wherein two or more users share access to a plurality of content items including the at least one integrated content item.

[18] The mobile device of claim 17 wherein the mobile device comprises one of a mobile telephone, a tablet computer and a camera.

[19] The mobile device of claim 17 wherein the mobile device comprises a global positioning system (GPS)-based navigational device.

**[21P]** A method comprising:

**[21A]** providing a first interface on a mobile device permitting a user to designate at least one content item for insertion into an application-based information channel, the at least one content item comprising media data captured by the mobile device;

**[21B]** wherein information associated with at least one wireless networking functionality of the mobile device is integrated with the at least one content item to generate at least one integrated content item; and

**[21C]** wherein the at least one integrated content item is inserted into the application-based information channel, the application-based information channel providing a second interface wherein two or more users share access to a plurality of content items including the at least one integrated content item.

**[22P]** A method comprising:

**[22A]** accessing a first interface using a mobile device;

**[22B]** providing at least one content item to at least one server for insertion into an application-based information channel using the first interface, the at least one content item comprising media data captured by the mobile device; and

**[22C]** providing information associated with at least one wireless networking functionality of the mobile device to said at least one server responsive to user input;

**[22D]** wherein the at least one content item and the information associated with said at least one wireless networking functionality of the mobile device are integrated to generate at least one integrated content item; and

**[22E]** wherein the at least one integrated content item is inserted into the application-based information channel, the application-based information channel providing a second interface wherein two or more users share access to a plurality of content items including the at least one integrated content item.

**CERTIFICATE OF WORD COUNT UNDER 37 CFR §42.24(d)**

Pursuant to 37 C.F.R. §42.24(a), Samsung hereby certifies that portions of the above-captioned Petition for *Inter Partes* Review of U.S. Patent No. 9,619,578, in accordance with and reliance on the word count provided by the word-processing system used to prepare this Petition, that the number of words in this paper is 13,973. Pursuant to 37 C.F.R. §42.24(a), this word count is in compliance and excludes the table of contents, table of authorities, mandatory notices under §42.8, certificate of service, certificate of word count, appendix of exhibits, and any claim listing. This word count was prepared using Microsoft Word.

Date: February 5, 2025

Respectfully submitted,

/Lori A. Gordon/

Lori A. Gordon (Reg. No. 50,633)  
Goodwin Procter LLP  
1900 N Street, N.W.  
Washington, D.C. 20036  
Phone: (202) 346 4435  
Gordon-ptab@goodwinlaw.com

Lead Counsel for Petitioner

**CERTIFICATE OF SERVICE**

The undersigned certifies that a true copy of the Petition for *Inter Partes* Review of U.S. Patent No. 9,619,578 together with all exhibits identified in the above Table of Exhibits and Petitioners' Power of Attorney, have been served on the Patent Owner via Federal Express Next Business Day Delivery on the below date, at the correspondence address of record as listed on the Patent Center:

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

*Attorneys for Mobile Data Technologies LLC*

Courtesy copies of the foregoing document were served by e-mail on the following counsel of record for Patent Owner in the concurrent litigation:

Michael C. Smith  
**SCHEEF & STONE LLP**  
113 East Austin Street  
Marshall, Texas 75670  
Telephone: (903) 938-8900  
michael.smith@solidcounsel.com

Erick S. Robinson (Reg. No. 51,354)  
Patrick M. Dunn (Reg. No. 70,474)  
Jayme Partridge (Reg. No. 39,011)  
Jayne C. Piana (Reg. No. 48,424)  
**BROWN RUDNICK LLP**  
811 Main Street, Suite 1825  
Houston, TX 77002  
erobinson@brownrudnick.com  
Tel: (281) 815-0511

Fax: (281) 605-5699

Homayoon Rafatijo (Reg. No. 80,870)  
**BROWN RUDNICK LLP**  
601 Thirteenth Street NW Suite 600  
Washington, D.C. 20005  
hrafatijo@brownrudnick.com  
Tel: (202) 536-1700  
Fax: (202) 536-1701

*Attorneys for Mobile Data Technologies LLC*

Date: February 5, 2025

/Lori A. Gordon/

Lori A. Gordon

Lead Counsel for Petitioner