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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
90/015,284	08/31/2023	8677398	75281.00096	8984

7590 03/14/2024
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EXAMINER

SAGER, MARK ALAN

ART UNIT	PAPER NUMBER
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3992

MAIL DATE	DELIVERY MODE
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03/14/2024

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.



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***EX PARTE* REEXAMINATION COMMUNICATION TRANSMITTAL FORM**

REEXAMINATION CONTROL NO. 90/015,284 .

PATENT UNDER REEXAMINATION 8677398 .

ART UNIT 3992 .

Enclosed is a copy of the latest communication from the United States Patent and Trademark Office in the above identified *ex parte* reexamination proceeding (37 CFR 1.550(f)).

Where this copy is supplied after the reply by requester, 37 CFR 1.535, or the time for filing a reply has passed, no submission on behalf of the *ex parte* reexamination requester will be acknowledged or considered (37 CFR 1.550(g)).

Office Action in Ex Parte Reexamination	Control No. 90/015,284	Patent Under Reexamination 8677398	
	Examiner MARK A SAGER	Art Unit 3992	AIA (FITF) Status No

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

- a. ☒ Responsive to the communication(s) filed on 31 August 2023.
☐ A declaration(s)/affidavit(s) under **37 CFR 1.130(b)** was/were filed on _____.

b. ☐ This action is made FINAL.

- c. ☒ A statement under 37 CFR 1.530 has not been received from the patent owner.

A shortened statutory period for response to this action is set to expire 2 month(s) from the mailing date of this letter. Failure to respond within the period for response will result in termination of the proceeding and issuance of an *ex parte* reexamination certificate in accordance with this action. 37 CFR 1.550(d). **EXTENSIONS OF TIME ARE GOVERNED BY 37 CFR 1.550(c)**. If the period for response specified above is less than thirty (30) days, a response within the statutory minimum of thirty (30) days will be considered timely.

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- | | |
|--|---|
| 1. ☐ Notice of References Cited by Examiner, PTO-892. | 3. ☐ Interview Summary, PTO-474. |
| 2. ☐ Information Disclosure Statement, PTO/SB/08. | 4. ☐ _____. |

Part II SUMMARY OF ACTION

- 1a. ☒ Claims 1-2 are subject to reexamination.
- 1b. ☒ Claims 3-44 are not subject to reexamination.
2. ☐ Claims _____ have been canceled in the present reexamination proceeding.
3. ☐ Claims _____ are patentable and/or confirmed.
4. ☒ Claims 1-2 are rejected.
5. ☐ Claims _____ are objected to.
6. ☐ The drawings, filed on _____ are acceptable.
7. ☐ The proposed drawing correction, filed on _____ has been (7a) ☐ approved (7b) ☐ disapproved.
8. ☐ Acknowledgment is made of the priority claim under 35 U.S.C. 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the certified copies have
 - 1 ☐ been received.
 - 2 ☐ not been received.
 - 3 ☐ been filed in Application No. _____.
 - 4 ☐ been filed in reexamination Control No. _____.
 - 5 ☐ been received by the International Bureau in PCT application No. _____.

* See the attached detailed Office action for a list of the certified copies not received.

9. ☐ Since the proceeding appears to be in condition for issuance of an *ex parte* reexamination certificate except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte* Quayle, 1935 C.D. 11, 453 O.G. 213.
10. ☐ Other: _____

cc: Requester (if third party requester)

Notice of Pre-AIA or AIA Status

1. The present application is being examined under the pre-AIA first to invent provisions.
2. This action regards challenged claims 1 and 2 of U.S. Patent No. 8,677,398 (hereinafter also referred to as ‘398) for which it was determined in Order mailed Nov. 27, 2023 that a substantial new question of patentability affecting claims 1 and 2 of U.S. Patent No. 8,677,398 is raised by the request. The ‘398 patent is not expired.

Extensions of Time

3. Extensions of time under 37 CFR 1.136(a) will not be permitted in these proceedings because the provisions of 37 CFR 1.136 apply only to "an applicant" and not to parties in a reexamination proceeding. Additionally, 35 U.S.C. 305 requires that reexamination proceedings “will be conducted with special dispatch” (37 CFR 1.550(a)). Extension of time in *ex parte* reexamination proceedings are provided for in 37 CFR 1.550(c).

Notification of Concurrent Proceedings

4. The patent owner is reminded of the continuing responsibility under 37 CFR 1.565(a) to apprise the Office of any litigation activity, or other prior or concurrent proceeding, involving Patent No. 8,677,398 throughout the course of this reexamination proceeding. See MPEP §§ 2207, 2282 and 2286.

Amendment in Reexamination Proceedings

5. Patent owner is notified that any proposed amendment to the specification and/or claims in this reexamination proceeding must comply with 37 CFR 1.530(d)-(j), must be formally presented pursuant to 37 CFR 1.52(a) and (b), and must contain any fees required by 37 CFR 1.20(c). This reexamination regards an expired patent, so no amendment is permissible.

Submissions

6. In order to ensure full consideration of any amendments, affidavits or declarations or other documents as evidence of patentability, such documents must be submitted in response to the first Office action on the merits (which does not result in a close of prosecution). Submissions after the second Office

action on the merits, which is intended to be a final action, will be governed by the requirements of 37 CFR 1.116, after final rejection and by 37 CFR 41.33 after appeal, which will be strictly enforced.

Claim Construction

7. The '398 Patent has not yet expired. Under MPEP § 2240, patent claims are to be given their broadest reasonable interpretation consistent with the specifications during Ex Parte Reexaminations. See *In re Yamamoto*, 740 F.2d 1569, 1571 (Fed. Cir. 1984). Claims should only be construed to the extent necessary to resolve a controversy. See *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (only claim terms “that are in controversy” must be construed and “only to the extent necessary to resolve the controversy”).

In summary, since '398 has not yet expired, the claims must be given their “broadest reasonable interpretation consistent with the specification.” See MPEP § 2258; *In re Yamamoto*, 740 F.2d 1569, 222 USPQ 934 (Fed. Cir. 1984). Thus, in this case, the claim terms are given their broadest reasonable interpretation consistent with '398 Patent without reading limitations from '398 disclosure into the claims.

Declaration of Christopher M. Schmandt (“Schmandt”) Under 37 C.E.R. § 1.132

8. The Declaration (PA-DEC) (signed 03/25/2022, as originally filed in IPR2022-00773 for claims 36 and 37 of 8677398), filed 08/31/2023, was reviewed and considered for this decision. Mr. Stephen B. Wicker declares “I have been retained by counsel for Petitioner to provide my expert opinion in connection with the above-captioned proceeding as set forth herein” and the “analysis that I provide in this Declaration is based on my education, research, and experience, as well as the documents I have considered. In forming my opinions, I have read and considered U.S. Patent No. 8,677,398 B2 (“'398 patent”) [Ex. 1001] and its prosecution history” (PA-DEC @ 8, 9). Also, based on declared background/experience (*Id* @ 1-7 and Curriculum Vitae in Exhibit A), Mr. Stephen B. Wicker is deemed an expert and this opinion testimony is relied on herein to extent stated herein.

Declaration of Sylvia D. Hall-Ellis, Ph.D. ("Hall-Ellis") Under 37 C.E.R. § 1.132

9. The Declaration (PA-DEC-2) (signed 03/25/2022, as originally filed in IPR2022-00773 for claims 36 and 37 of 8677398), filed 08/31/2023, was reviewed and considered for this decision. Dr. Sylvia D. Hall-Ellis, Ph.D. ("Hall-Ellis") declares "have been retained as an expert by Meta Platforms, Inc., who I am informed is the Petitioner in this proceeding (the Petitioner)", "I have written this Declaration at the request of the Petitioner to provide my expert opinion regarding the public availability of publications, identified below. My Declaration sets forth my opinions in detail and provides the basis for my opinions regarding the public availability of these publications" and the "I am being compensated for my time spent working on this matter at my normal consulting rate of \$325 per hour, plus reimbursement for any additional reasonable expenses. My compensation is not in any way tied to the content of this Declaration, the substance of my opinions, or the outcome of this litigation. I have no other interests in this proceeding or with any of the parties." (PA-DEC @ 1, 2, 4). Also, based on declared background/experience (*Id* @ 6-9 and Curriculum Vitae in Exhibit A), Dr. Sylvia D. Hall-Ellis is deemed an expert and this opinion testimony is relied on herein to extent stated herein.

Claim Rejections - 35 USC § 103

10. In the event the determination of the status of the application as subject to AIA 35 U.S.C. 102 and 103 (or as subject to pre-AIA 35 U.S.C. 102 and 103) is incorrect, any correction of the statutory basis for the rejection will not be considered a new ground of rejection if the prior art relied upon, and the rationale supporting the rejection, would be the same under either status.

11. The following is a quotation of pre-AIA 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. The factual inquiries for establishing a background for determining obviousness under pre-AIA

35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

13. **Claim 1-2 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over U.S.**

Patent Appl. Pub. No. 2008/0113674A1 (hereinafter “Baig” or PA-3) in view of The Internet

Complete Reference (2d ed. 1996) (hereinafter “Hahn” or PA-8) or, in the alternative, Claim 1-2

are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Appl. Pub. No.

2008/0113674A1 (hereinafter “Baig” or PA-3) in view of The Internet Complete Reference (2d ed.

1996) (hereinafter “Hahn” or PA-8) and U.S. Pat. No. 7356045 (hereinafter “Satapati” or PA-7) or

“Building Internet Firewalls” (hereinafter “Zwicky” or PA-6). At the outset, as noted in Order grant

decision, the examiner determines the provisional application 60/858,204 (hereafter ‘204 or PA-4)

supports every limitation of at least published claim 1 and would have enabled an ordinarily skilled

artisan to make and use its subject matter. See *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800

F.3d 1375, 1381 (Fed. Cir. 2015) (“A reference patent is only entitled to claim the benefit of the filing

date of its provisional application if the disclosure of the provisional application provides support for the

claims in the reference patent in compliance with § 112, 1st paragraph”); M.P.E.P. § 2136.03 III (“The

critical reference date under pre-AIA 35 U.S.C. 102(e) of a US. patent . . . may be the filing date of a

relied upon provisional application only if at least one of the claims in the reference patent ... is supported

by the written description of the provisional application in compliance with pre-AIA 35 U.S.C. 112, first

paragraph, or 35 U.S.C. 112(a).”) Thus, Baig qualifies as §102(e) prior art as of November 10, 2006.

**Claim 1: A method implemented using a programmed hardware computer system, the
method comprising:**

Regarding claim 1, lacking evidence to the contrary, with broadest reasonable interpretation of the claims without reading limitations from ‘398 patent into the claims herein, although Baig uses different

terminology, facts herein show Baig describes a method enabled by software to program a computer system that overlaps recited method herein as follows. Baig describes techniques and technologies that attempt to take advantage of WiFi networking and WiFi “hotspots” that were common fixtures in the mid-2000s in airports, coffee shops, and other public places. Baig discloses a technique for creating “vicinity-based” communities of users who are connected to the same WiFi hotspot. As Baig explains:

In particular, the present invention is directed to a method and apparatus for creating vicinity-based communities over the Internet by a vicinity-based community service provider (VCSP) for wireless mobile devices of end-users that have accessed the VCSP via a wireless access point at a wireless hotspot. A vicinity-based community service is a service provided by the VCSP which discovers (i.e., identifies) and connects wireless users within physical vicinity of each other at a WiFi hotspot. Once a "vicinity-based community" at a physical location (i.e., a hotspot) is created, the users can potentially interact physically or non-physically with each other. The VSCP identifies a group of users at a wireless hotspot based upon their common public IP address and interconnects them, thereby creating a vicinity-based user group. The VSCP may also request the street address or the venue name of the hotspot from the end user in order to correlate the vicinity-based group to a specific geographical location.

Baig (PA-3), [0038].

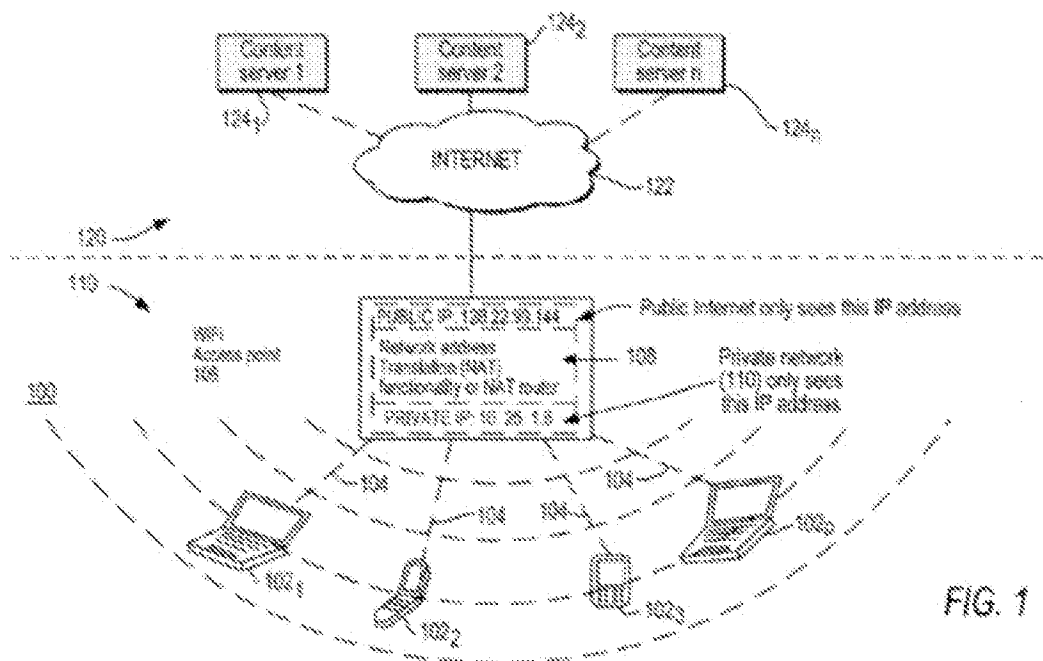
Baig describes “**a method implemented using a programmed hardware computer system**” where

Baig discloses enabled instructions cause one or more computers to perform a method (ABS, FIG. 1).

A **method** and apparatus for providing vicinity-based community services at a wireless access location by a public network service provider. The method includes the steps of **receiving over a public network, at least one request for vicinity-based community services** *from at least one end-user accessing the wireless access point, grouping end-users accessing common wireless access points, and providing the vicinity-based community services in real time to end-users accessing the public network service provider from the wireless access point.* The apparatus includes devices for carrying out the method described above.

Baig (Ex. PA-3), Baig Provisional (Ex. PA-4), ABS, emphasis added.

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Baig (Ex. PA-3), Baig Provisional (Ex. PA-4), FIG. 1, highlight added for emphasis. Figure 1 above depicts three content servers 124 coupled to the Internet 122, to which a WiFi wireless access point 106 is also coupled. (*See also* Baig (Ex. PA-3), Fig. 2 (showing content server 224), Baig Provisional (Ex. PA-4), FIG. 2).) However, any one of the content servers 124, or a collection of them, discloses “**a programmed hardware computer system.**” The software in Baig would also have been encoded on a memory in such “hardware computer system” for storing computer programs and thus such computer system is a “**programmed hardware computer system.**” Baig explains that each content server “includes at least one processor, memory and support circuitry for running programs....” (Baig (Ex. PA-3), [0052]; Baig Provisional (Ex. PA-4), 0012- 0013.) (emphasis added.) As would be understood by an artisan (i.e., one of ordinary skill in the art) the content server in Baig could not run programs unless they were stored in some form of memory and executed by components that make up part of the programmed hardware computer system described by Baig.

The network 200 of FIG. 2 further includes a vicinity-based community service provider (VCSP) 202 having at least one content server 224 coupled to the Internet 122 in a conventional manner. The server 224 includes at least one processor, memory and support circuitry for running programs that, for example, identify users that are originating from a particular access point 106 and then groups those users having a common IP address to the same hotspot 110.

Accordingly, since **each hotspot 110 has a unique static IP address**, and the range of wireless communications for any given hotspot is limited, any users accessing the hotspot are deemed to be in vicinity of each other. For example, any users of mobile devices accessing a hotspot 110 illustratively provided by a public library are deemed to be, and are in fact, in vicinity to each other.

Baig (Ex. PA-3), [0052]; Baig Provisional (Ex. PA-4), 0012-0013, emphasis added.

a. **receiving, at the computer system, an electronic identifier of a first device;**

This limitation is disclosed by Baig with further evidence of knowledge of an artisan in support thereof by Satapati or Zwicky or, in the alternative, as obvious over Baig combined with Satapati or Zwicky, as follows. The claim does not recite “*unique*” identifier or similar. The abstract (copied above) and Figure 2 of Baig (below) depicts the connection of mobile devices through a wireless access point and hotspot:

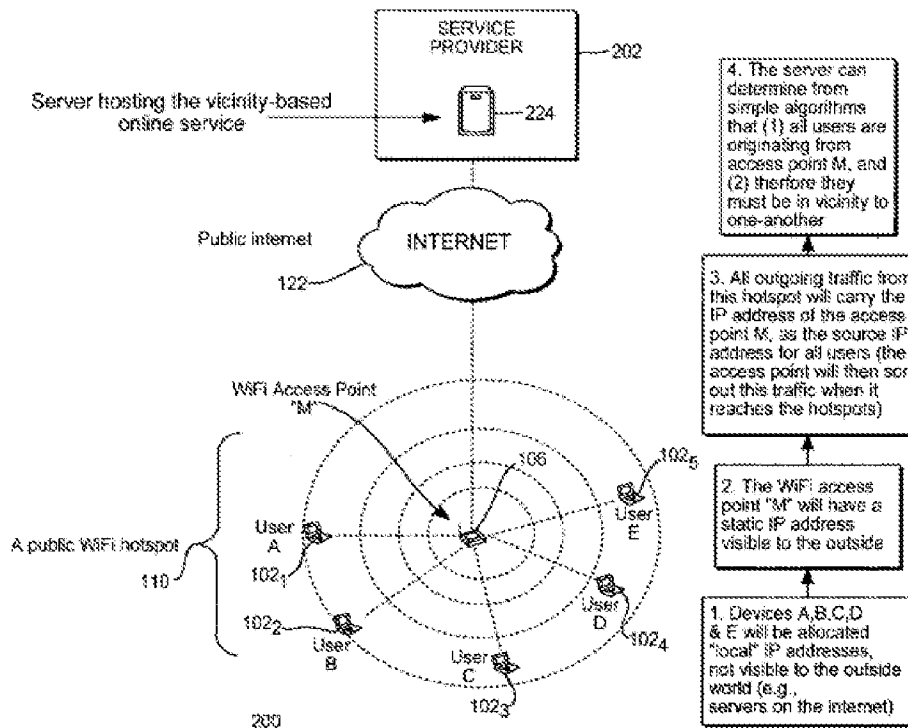


FIG. 2

Baig (Ex. PA-3), Baig Provisional (Ex. PA-4), FIG. 2.

Figure 2 shows communications network 200 having a WiFi hotspot 110 with WiFi wireless access point “M” 106. (Baig (Ex. PA-3), [0049]; Provisional (Ex. PA-4), 0012.) Wireless access point 106 connects to mobile devices 102; through 102₅ and also connects to content server 224 through “the public Internet 122 in a conventional manner.” (*Id.*) For purposes of claim 1(a), any one of the mobile

devices 102 as shown in Figure 2 corresponds to a **“first device.”** And as noted, a content server in Baig is one example of a **“programmed hardware computer system.”**

Referring now to FIG. 2, a communications network 200 includes a public WiFi hotspot 110 coupled to the public Internet 122 in a conventional manner. Illustratively, **mobile devices 102₁ through 102₅ are connected via wireless communications to Internet via the access point 106**, as discussed above with respect to FIG. 1. The **access point (which includes the NAT router 108) allocates “local” IP addresses to the mobile devices** (e.g., laptops, PDA, and the like). The **local IP addresses of the mobile devices 102** are not visible to network environments external to the hotspot 110.

Baig (Ex. PA-3), [0049]; Baig Provisional (Ex. PA-4), 0012, emphasis added.

A mobile device in Baig (**“first device”**) has an **“electronic identifier,”** which includes an IP address transmitted by the access point 106 to the content server 224 over the Internet 122. As stated in the Step 3 box of Figure 2 above, “[a]ll outgoing traffic from this hotspot will carry the IP address of the access point M, as the source IP address for all users (the access point will then sort out this traffic when it reaches the hotspots).” (Baig (Ex. PA-3), Fig. 2; Provisional (Ex. PA- 4), Fig. 2.) As was understood by an artisan at the time, data packets sent over the Internet included an **IP address** of the source and destination devices. (Ex. PA-DEC, para. 76). Baig shows an electronic identifier for IP address.

Also, as explained further below, the claim does not require a “unique” electronic identifier; but when the **“electronic identifier of a first device”** for claim limitation 1(a) the “identifier” takes the form of the combination of: (a) the IP address of the access point, and (b) a TCP/IP port number associated with the mobile device (the **“first device”**) that is connected to the access point, based on Baig with support of Zwicky or Satapati only as knowledge of an artisan regarding NAT, the electronic identifier is unique. This **electronic identifier of a first device is received** by the content server, as explained below.

Turning first to the IP address, Baig discusses “network address translation” (NAT), which was widely known. (Baig (Ex. PA-3, [0043] and Provisional (Ex. PA-4), 0011 (“The access point 106... provides network address translations (NAT)....”).) emphasis added. As understood by an artisan, NAT refers to industry-standard techniques known at the time for allowing multiple devices to share a single connection to the Internet. (Ex. PA-DEC, para. 77; *see also* Zwicky (PA-6), pp. 114-117; Satapati (PA-7), Abstract, 1:11-36, FIGS. 3-5) NAT was known to enable an intermediary device (such as an access

point) to receive network communications between a local device and a remote device connected to the Internet, and then modify (or translate”) their IP addresses. (Ex. PA-DEC, para. 48, 77.) Baig explains:

The access point 106 utilizes a unique "public" IP address (e.g., 126.22.99.144 illustratively shown in FIG. 1) which relays data between the wireless mobile devices 102 connected to the wireless network 104 and the external or public network, such as the Internet 122. An IP address is necessary because all data communications takes place in form of data packets. Each packet must contain the IP address of the source device and the IP address of the destination device. Whenever a mobile device 102 that is connected to a hotspot 110 requests information from the public network (e.g., the Internet) 120, the mobile device 120 sends data packets containing a "local" IP address to the access point 106. All devices on the internal network 104 use local IP addresses (these local IP addresses are not visible to the public networks). On the other hand, the access point 106 interacts with the public network 120 with a public IP address, which is visible to all devices on the public internet 122.

The access point 106 (which includes the NAT router 108) replaces the "local" IP address with its own "public" IP address, and forwards the packets to the destination device (e.g., content server) on the Internet or external network 120. When the public network 120 sends packetized information back to the requesting mobile device 102, the NAT router 108 replaces the "public" IP address with the mobile device's "local" IP address, and routes the packetized information to the requesting mobile device 102.

Baig (Ex. PA-3), [0044]-[0046]; Baig Provisional (Ex. PA-4), 0011, emphasis added.

The techniques described above were not invented by Baig - they describe well-known NAT techniques at the time for allowing multiple mobile devices to communicate over the Internet using a single external (or “public”) IP address. (Ex. PA-DEC, para. 78.) For example, when a mobile device in Baig wishes to send packets through the Internet, access point 106 replaces the “local IP address” in those outgoing packets with the “public IP address” of access point 106. (*Id.*; Baig (Ex. PA-3), [0046], [0050]; Provisional (Ex. PA-4), 0011-0012.) These disclosures confirm existence of “**an electronic identifier of a first device,**” which includes the IP address of the access point 106 to which the mobile device (“**a first device**”) is connected.

To avoid any confusion, the claimed “**electronic identifier**” is the “public” IP address of the access point in Baig - not the “local” IP address of the mobile device. This is because, as noted below, claim limitation 1(a) further requires that the “**electronic identifier**” be received at the “**computer system**” (recited in limitation preamble of claim 1 and 2) but as noted by Baig above, the “local” IP address is not visible outside the private/local network. Thus, the public IP address of access point 106 in Baig regards an “**electronic identifier of a first device,**” as opposed to just an electronic identifier of

access point 106. This is provided by the known industry-standard network addressing translation (NAT) techniques mentioned above, which are expressly mentioned by Baig but although not described in detail would be understood by an artisan to be implicit in Baig. (Baig (Ex. PA-3), [0043] (“The access point 106... provides network address translations (NAT)...”) and NAT Router 108; Baig (Ex. PA-3), 0011; see also Baig (Ex. PA-3), [0046], [0049]-[0051]; Provisional (Ex. PA-4), 0011-0012 (referring to “NAT router”).) (emphasis added). Zwicky (Ex. PA-6) and Satapati (Ex. PA-7), is each cited only as evidence of knowledge of an artisan which provide details about standard NAT techniques that Baig mentions where Baig relies on knowledge of an artisan regarding NAT that involves port number from “port translation” as discussed further below (which is unsurprising given its widely known use and understanding at the time). (Ex. PA-DEC, 46-50, 79-80.)

As was well-known at the time, packets sent over the Internet not only included an **IP address** of the source and destination devices, but also a source and destination **port number** to identify a process or endpoint associated with the source and destination IP addresses. (Ex. PA-DEC, para. 81.) Port numbers in TCP/IP were commonly represented as a number added to the end of an IP address after a colon; for example, the string “151.207.240.107:443” would represent an IP address of “151.207.240.107” and a port number of “443.” TCP/IP port numbers (like IP addresses) have been standard information fields in TCP/IP packets since at least the early 1980s. (*Id.*)

NAT involves a technique known as “port translation” that uses port numbers to allow multiple devices to share a common public IP address. (Satapati (Ex. PA-7), 1:34-36; Ex. PA- DEC, para. 82.) This is also graphically depicted in Figure 5-4 of Zwicky (Zwicky (Ex PA-6), pp. 114-117):

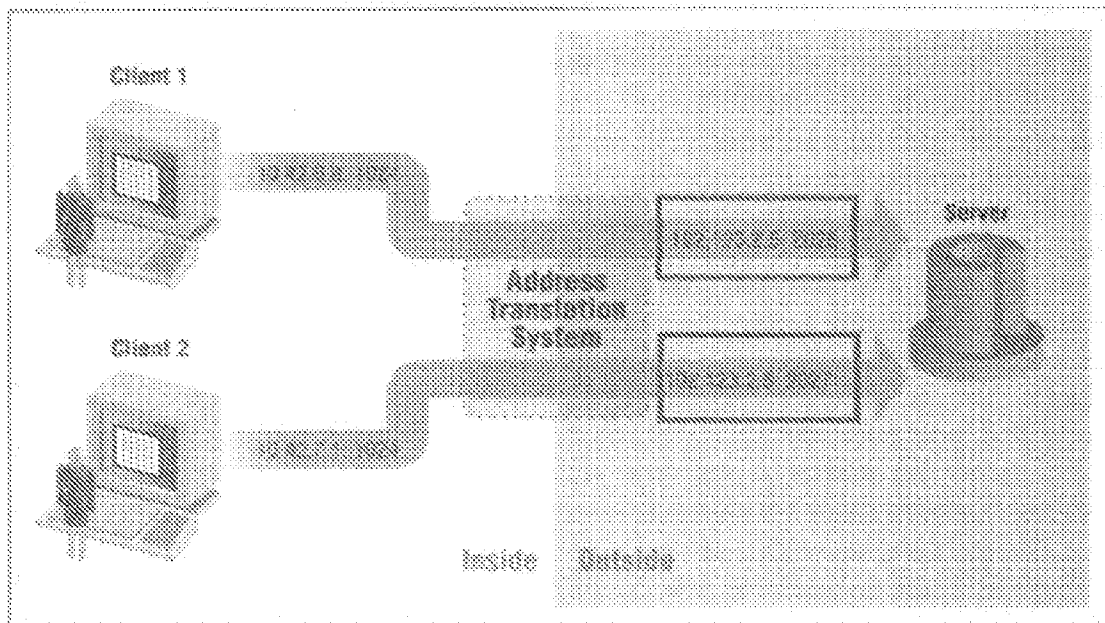


Figure 5-4. Port and address translation

Zwicky, PA-7, Fig. 5-4, pg. 115, black box annotations added for emphasis.

Figure 5-4 of Zwicky shows Client 1 and Client 2 inside a local network with locally-assigned IP addresses (i.e., 10.42.6.9 and 10.42.7.1). Figure 5-4 shows an intermediary “Address Translation System” sitting between the clients and a remote server outside the local network. Like the access point 106 in Baig, this Address Translation System replaces the local IP addresses for Client 1 and Client 2 with the same IP address (i.e., 192.123.2.5), to allow them to communicate with the remote server. The Address Translation System also assigns distinct TCP/IP **port numbers** to these computers (2028 for Client 1 and 2027 for Client 2), thus differentiating them. The port number thus allows multiple distinct devices to use a single IP address yet be uniquely identified by port number when communicating over the Internet. (Satapati (Ex. PA-7), 2:66-67; Ex. PA-DEC, 50.)

For purposes of claim limitation 1(a), therefore, “**an electronic identifier of a first device**” under Baig, or alternatively, Baig combined with Zwicky or Satapati (addressed below) corresponds to the combination of (a) the IP address of the access point or hotspot to which a mobile device (“**first device**”) was connected, and (b) the TCP/IP port number associated with the first device, by convention using NAT via “Address Translation System.” The IP address and port number thus provide “**an electronic**

identifier of a first device” because, together, they uniquely identify a particular mobile device that seeks to connect with the content server in Baig. (Ex. PA-DEC, para. 83.)

To the extent Baig is interpreted to not implicitly involve port translation (the examiner disagrees, but to be complete the following is noted), a person of ordinary skill in the art had the rationale and motivation to combine Baig with Zwicky and Satapati for the reasons discussed below. The understanding regarding the modified Baig system/process use of the IP address and port number as an example of the claimed **“electronic identifier”** is consistent with the discussions found in the ’398 patent specification, which explains that the identifier may include any “identifying code or data element” and may be permanently or temporarily assigned to a device. (PAT-A, 15:3-8.) The ’398 specifically identifies an “IP address” as one example. (See e.g., PAT-A, 15:13-17.)

Baig also discloses **“receiving at the computer system”** the claimed electronic identifier as recited. This is because the content server in Baig (**“the computer system”**) receives the IP address of the access point or hotspot when the mobile device attempts to connect. This is directly shown in Figure 2 above. (Baig (Ex. PA-3), Fig. 2 (“3. All outgoing traffic from this hotspot will carry the IP address of the access point M...”), *id.* (showing outgoing traffic routed to server 224 over Internet 122); *see also* Baig (Ex. PA-3), [0055]-[0057]; Provisional (Ex. PA-4), 0013; PA-DEC, para. 85.)

The content server in Baig therefore receives, in response to a login request from a user at a mobile device (**“first device”**), the source IP address of the access point used to route packets to the mobile device. (Baig (Ex. PA-3), e.g., [0044] (“Each packet must contain the IP address of the source device and the IP address of the destination device.”), [0045]; Provisional (Ex. PA-4), 0011.) Thus, teachings of Zwicky and Satapati provide evidence of knowledge of an artisan that Baig involves **receiving, at the computer system, an electronic identifier of a first device** where the discussion in Baig regards **an electronic identifier of a first device** due to discussion that NAT involving a technique known as “port translation” that use port numbers to allow multiple devices to share a common public IP address. (Baig (Ex. PA-3), [0043] (“The access point 106... provides network address translations (NAT)....”) and NAT Router 108; Baig (Ex. PA-3), 0011; *see also* Baig (Ex. PA-3), [0046], [0049]-

[0051]; Provisional (Ex. PA-4), 0011-0012 (referring to “NAT router”).) (emphasis added). Zwicky (Ex. PA-6) and Satapati (Ex. PA-7), is each cited only as evidence of knowledge of an artisan which provide details about standard NAT techniques that Baig mentions where Baig relies on knowledge of an artisan. For reasons noted above, a person of ordinary skill in the art (an artisan) would have understood the content server in Baig would also have received, along with the IP address of the access point, the port number assigned to the mobile device seeking to connect, in light the teachings of Zwicky and Satapati in context of such a person’s knowledge in the art at the time. Thus, Baig overlaps ‘398.

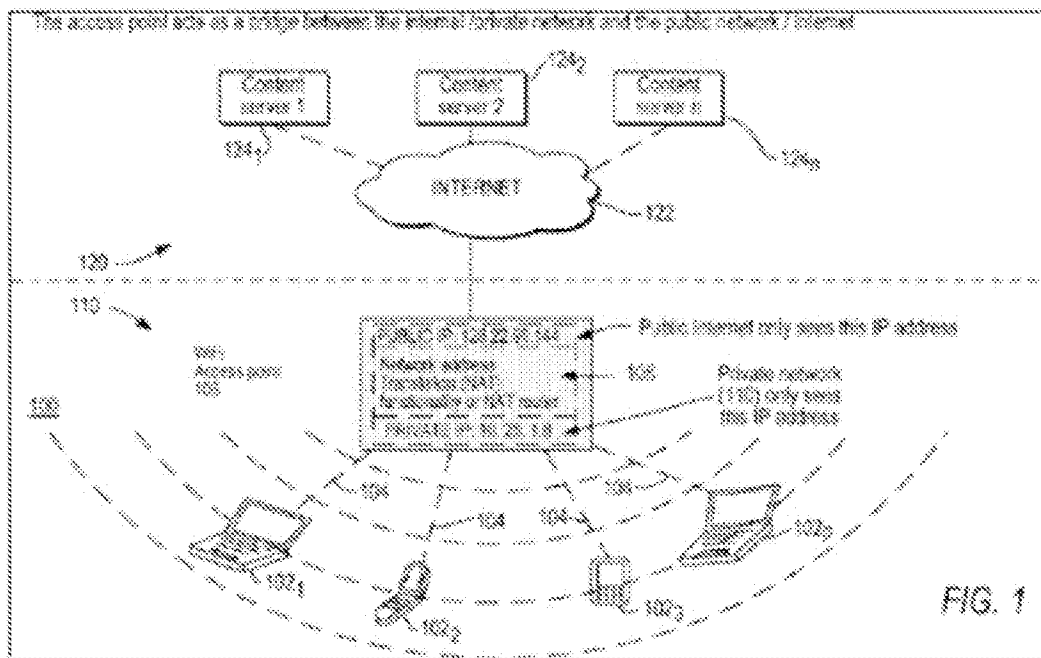
To the extent Baig is interpreted to not implicitly involve port translation (the examiner disagrees, but to be complete the following is noted), a person of ordinary skill in the art had the rationale and motivation to combine Baig with Zwicky and Satapati for the reasons discussed below. The understanding regarding the modified Baig system/process use of the IP address and port number as an example of the claimed “**electronic identifier**” is consistent with the discussions found in the ’398 patent specification, which explains that the identifier may include any “identifying code or data element” and may be permanently or temporarily assigned to a device. (PAT-A, 15:3-8.) The ’398 specifically identifies an “IP address” as one example. (See e.g., PAT-A, 15:13-17.)

In the alternative, to the extent an artisan would interpret Baig does not implicitly include “**an electronic identifier**” as an IP address and a port number resultant from “port translation” in NAT (the examiner disagrees but provides this alternative to be complete), related references Satapati (Ex. PA-7, 1:34-36) and Zwicky (Ex PA-6, pp. 114-117, FIG. 5-4) each disclose NAT process involving an electronic identifier of an IP address and a port number resultant from a “port translation” for each user device connected in a local network to a NAT router to provide an “**electronic identifier of a first device.**” The examiner determines Satapati and Zwicky is each relevant prior art due to either being in the same field of endeavor or being reasonably pertinent to the particular problem with which the Applicant was faced. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). For instance, a person of ordinary skill in the art would have had reasons to consider the teachings of Zwicky and Satapati in context of Baig’s system/processes given all three are analogous references in the field of

providing online access to information over the Internet and/or local networks. Baig, Zwicky and Satapati would also have been reasonably pertinent to a number of problems facing the inventors of the '398 patent (and a person of ordinary skill in the art at the time), including how to differentiate devices connected to a common local network using IP addresses and enable those devices to communicate with servers over the Internet. (*Id.*) The level of ordinary skill in the art is shown by the applied art herein. Since Baig, Satapati and Zwicky each regard a method for providing online access to information over the Internet and/or local networks, in consideration consistent with US Supreme Court decision in KSR that 'known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations are predictable to one of ordinary skill in the art', in this case, it would have been obvious to an artisan to apply the known NAT process of a port number resultant from a "port translation" as described by Satapati or Zwicky to provide an **"electronic identifier of a first device"** to improve the method of Baig to produce the expected result to enable **"an electronic identifier of a first device"** as shown in Baig (FIG. 3 and 6) that produces **receiving, at the computer system, an electronic identifier of a first device to economize on address space, but it can also provide some security advantages."** (Zwicky (Ex. PA-6), pp. 115-116.) and allow multiple devices to communicate over the Internet while sharing a single public IP address. (*Id.*; see also Satapati (Ex. PA-7), 1:63-2:3 (noting that port translation allows tens of thousands of users to share a common IP address).) Further, Zwicky identifies potential disadvantages of NAT, but those would not have outweighed the benefits of using NAT or otherwise discouraged the combination. And finally, an ordinarily skilled artisan would have had more than a reasonable expectation of success, as the disclosures in Baig, Zwicky and Satapati describe techniques that were known well and were fully enabling. (Ex. PA-DEC, paras. 92, 185-189.) In the alternative regarding motivation, it would have been obvious to an artisan to substitute one known method of determining an electronic identifier for another as taught by Satapati or Zwicky to improve the method of Baig to produce the expected result to provide some security advantages." (Zwicky (Ex. PA-6), pp. 115-116.) and allow multiple devices to communicate over the

Internet while sharing a single public IP address. (*Id.*; see also Satapati (Ex. PA-7), 1:63-2:3 (noting that port translation allows tens of thousands of users to share a common IP address).)

Upon considering such teachings and suggestions, a person of ordinary skill in the art would have found it obvious to configure the Baig content server such that it receives an electronic identifier of a first device (e.g., the IP address and port number of the mobile device seeking to connect). An ordinarily skilled artisan would have found the combination/modification straightforward and would have been amply motivated to make it, and done so with a reasonable expectation of success. (Ex. PA-DEC, para. 88.) As noted, Baig repeatedly refers to NAT techniques performed by “NAT router 108” within access point 106. (Baig (Ex. PA-3), [0043], [0046], [0049]-[0050]; Provisional (Ex. PA-4), 0011-0012.) Figure 1 specifically requires that access point 106 have NAT functionality 108:



(Baig (Ex. PA-3) and Provisional (Ex. PA-4), Fig. 1 (shadowing 108 (“Network address Translation (NAT) functionality or NAT router”) added).) An ordinarily skilled artisan would have understood Baig’s references to “NAT” as referring to the NAT techniques further described in Zwicky and Satapati. (Baig (Ex. PA-3), [0050] (“The NAT router 108 at the access point 106 replaces the IP address of the source mobile device with the IP address of the access point in a well-known manner.”); Provisional (Ex.

PA-4), 0012.) (emphasis added). Baig's repeated references to NAT provided an express motivation to consult Zwicky and Satapati. (Ex. PA-DEC, para. 88.)

An ordinarily skilled artisan would also have appreciated that the port translation techniques discussed in Zwicky and Satapati would likely have been required to enable the system of Baig to function properly. As noted, the access point in Baig uses the same IP address for all mobile devices when communicating over the Internet. An additional level of translation would have been beneficial - and likely mandatory - to uniquely identify, differentiate and properly route traffic between individual mobile devices when communicating over the Internet. (Ex. PA-DEC, para. 89.) This is echoed by Satapati, which explains that "NAT may use port address translation, where port numbers are used to further identify different devices with the same address." (Satapati (Ex. PA- 7), 1:34-36.)

In IPR2022-00773, Patent Owner argued that combination of Baig, Zwicky, and Satapati associates users, not the claimed device identifiers. See IPR2022-00773, Paper 13 at 5-14. Patent owner's argument fails to distinguish the specific device identifiers relied upon here (i.e., an IP address and port number), which identify devices regardless of the user of those devices. Indeed, the Board's institution decision specifically recognized that the '398 patent describes an identifier as including identifiers, such as an equipment serial number, a device MAC address, a username, a pseudonym, a tag, or other identifying code or data element, and may include the IP address." IPR2022-00773, Paper 13 at 3-4 (citing '398 patent (Ex. PAT-A), 15:1-14). The Board specifically found that the combined teachings of Baig, Zwicky, and Satapati teaches or suggests a similar limitation in claim 36. *Id.* at 14-16. Such reasoning applies equally to the similar limitations and mappings applied here for claim 1.

b. **with the computer system, automatically generating and storing electronic indicia of an association between the first device identifier and an electronic identifier of a second device based on automatically recognizing that each of the first and second devices was connected, independently of the other, to a common local area network, wherein the computer system is connected to the local area network through the Internet but is not in the local area network**

This limitation is disclosed by Baig with consideration of Satapati or Zwicky as detailed above relied on herein for “**an electronic identifier**” for each connected/grouped device, as follows. After receiving a login request from a mobile device connected to an access point, as discussed above under “**receiving**” step, the server (“**with the computer system**”) determines if multiple mobile devices are connected to that same access point. This is shown in Step 306 of Figure 3 in Baig:

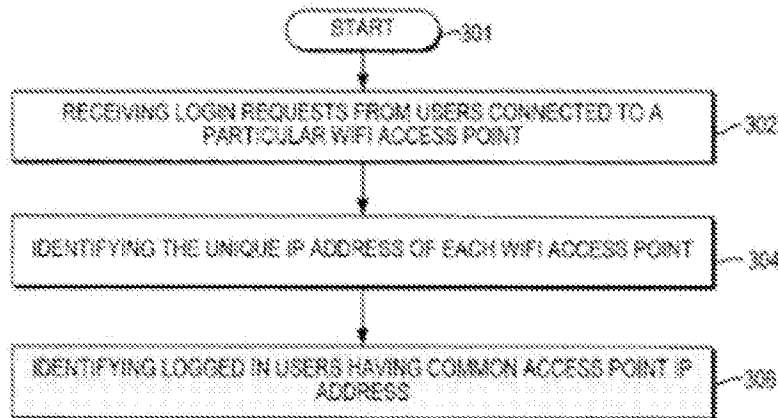


FIG. 3

Baig (PA-3) and Provisional (PA-4), Fig. 3 (excerpt; shadow added to step 306).) “At step 306, the server identifies all the users who have logged in from a common hotspot as having the same access point IP address.” (Baig (PA-3), [0056]; Provisional (PA-4), [0013] (“At step 306, the server 224 identifies the logged-in users having the same access point IP address.”); PA-DEC, para. 93.). Therefore, the server (“**computer system**”) in Baig system performs the step of “**automatically generating and storing electronic indicia of an association between the first device identifier and an electronic identifier of a second device,**” when it identifies at least two mobile devices sharing the same access point IP address. (Baig, Fig. 3 (Step 306); Baig (PA-3), [0056]; Baig Provisional (PA-4), [0013].) The two mobile device IP addresses, in fact, are more than simply “**associate[ed]**” with each other – they match, reflecting that they refer to the same access point.

It would also have been understood by an artisan (i.e., person of ordinary skill in the art) at the time of the invention that the content server in Baig generates and stores “**electronic indicia**” of this association. The “**electronic indicia**” in Baig is evidenced by the fact that Baig maintains a list of users

FIG. 6 is a screenshot of a web application interface. At the top, there is a header bar with a search bar for "Enter name and/or address of location (e.g. Barclays, 100 Madison Ave)" and a dropdown menu for "City". Below the header, the main content area is divided into two sections. The left section is a map showing several locations marked with red dots and labels: "Spring Park", "Starbucks @ Broadway & 40th St", "Grand Central", and "Barclays, 14th St & Madison". The right section is a sidebar with a list of locations and a "Total 12 users" summary. At the bottom of the main content area, there are two buttons: "Search Locations in Your City" and "View Other". Below these buttons, there is a footer bar with two input fields: "Friend's Name" and "Friend's Email".

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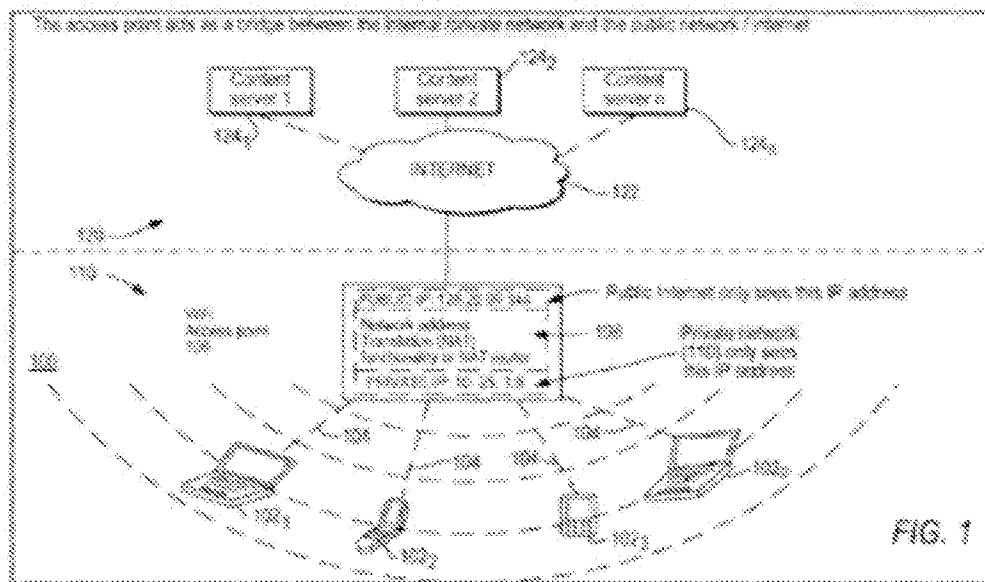
the present hotspot 110.”); Baig Provisional (PA-4), [0018].) As noted in Baig for “receiving” step, an artisan understands this means that those mobile devices associated with those users were connected to the same access point or hot spot using the common IP address of their access point. (PA-DEC, para. 95.)

The list of users generated and stored by the content server in Baig confirms the existence of the recited “**electronic indicia**,” because the list 606 indicates the users whose devices are connected using the common IP address - which in this example would have included at least the first device and the second device. (PA-DEC, para. 95-96.) The list thus confirms “**an association between the first device identifier and an electronic identifier of a second device**,” as recited, because it associates (in a group) users connected using the same IP address for reasons discussed above in the “receiving” step. It would also have been apparent and obvious that the content server (“**the computer system**”) will “**generat[e]** and “**stor[e]**” such electronic indicia in order to keep track of the users that belong to a vicinity-based user group and produce list 606 in Figure 6 due to such association of each user of a mobile device of an identified group. (PA-DEC, para. 96-97.)

This process in Baig is also performed “**automatically**” because the user did not take specific action to cause it to occur. (PA-DEC, para. 98.) Step 306 in Figure 3, in which server 224 identifies all users connected using the same access point IP address, occurs after step 302 in which server 224 receives a login request and occurs after step 304 in which server 224 identifies the IP addresses of each WiFi access point. (Baig (PA-3), Fig. 3, [0055]-[0056]; Baig Provisional (PA-4), [0013].) Nothing in Baig suggests that step 306 was triggered by any user action (such as a request). In fact, Step 306 (highlighted above) from Figure 3 occurs without user action following completion of steps 302 and 304. (Baig (PA-3), Fig. 3, [0055]-[0056]; Baig Provisional (PA-4), [0013].) In fact, Baig states that “when a user at a hotspot logs into the website of the VCSP 202, the user **automatically** becomes part of the vicinity-based user group.” (Baig (PA-3), [0059]; Provisional (PA-4), [0014].) The only step here potentially involving user action is step 302 of Figure 3 in which server 224 receives the initial login request from a user. (Baig (PA-3), [0055]; Provisional (PA-4), [0013].) But this does not represent a request to perform the actual claimed step of “**automatically generating and storing [the] electronic indicia of an association**

between the first device identifier and an electronic identifier of a second device.” (PA- DEC, para. 98.) This is further confirmed by the ’398 specification, which describes an embodiment in which the association between two device identifiers (IP addresses) is determined following user access to an online site. (PA-DEC, para. 99 (citing ’398 patent (Ex. PAT-A), 13:42-47, 5:10-14).) This confirms that the claim does not exclude prior user action occurring earlier in the causal chain that ultimately led to performance of the claimed step.

The automatic generation of this electronic indicia is also **“based on automatically recognizing that each of the first and second devices was connected... to a common local area network.”** This is because the content server in Baig, as discussed, can detect when two or more mobile devices are connected via the same access point IP address - and this in turn means that those devices were connected to a common local area network. This is shown in Figure 1, which repeatedly refers to the network of devices connected to a particular hotspot or access point as forming a common private network:

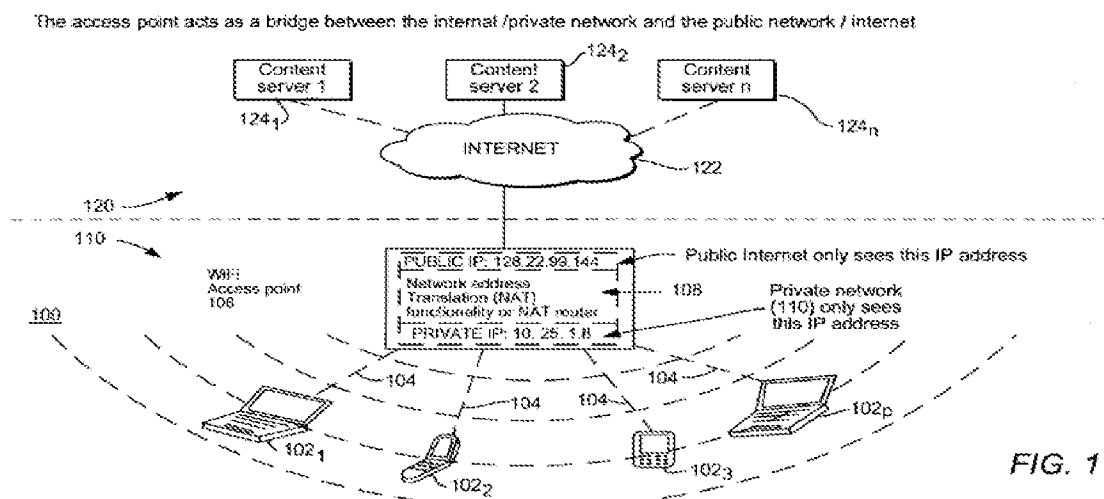


(Baig (PA-3), Fig. 1 (shadowing added); Baig Provisional (PA-4), Fig. 1) Each of the mobile devices 102 in Figure 1 is connected through a common local network 104. (Baig (PA-3), [0043] (“The mobile devices [in Fig. 1] 102 form a ‘local network’ 104 with the access point 106....”); Provisional (PA-4), [0011]; PA-DEC, para. 100.) Accordingly, when the content server automatically recognized that two

mobile devices are connected using the same access point IP address (*see* Figure 3 (Step 306)), it also automatically recognized that they are connected to a common local area network. (PA-DEC, para. 101.)

It would also have been understood by an artisan that the first and second mobile devices in Baig were each connected “**independently of the other**” to the common local area network. (*Id.*, para. 102.) For example, each mobile device connected to the local network has its own local or private IP address, and their connections to the network are independent. (PA-DEC, para. 102; Baig (PA-3), [0049], Fig. 2 (Step 1); Baig Provisional (PA-4), [0012], Fig. 2.) Figure 1 above, for example, does not show any links, connections, or other dependencies *between* mobile devices 102 connected to local network 104. This is further confirmed by the fact that, as Baig expressly confirms, mobile devices need not be connected to the local network at the same time. Figure 3 of Baig, as discussed, contemplates that a mobile device can wirelessly connect to a particular access point and make a login request (Steps 301-302), after other users had already previously connected to that access point (Step 306). (Baig (PA-3), Fig. 3, [0055]-[0056]; Baig Provisional (PA-4), [0013].) That mobile devices can connect at different times further confirms the independence of their respective connections. (PA-DEC, para. 103.)

Finally, Baig discloses that “**wherein the computer system is connected to the local area network through the Internet but is not in the local area network.**” Again referring to Figure 1, below, which shows a content server (“**the computer system**”) communicating through public Internet 122 in order to connect to local network 104 through access point 106:



Baig (PA-3) and Baig Provisional (PA-4), FIG. 1.

Figure 1 above shows each content server (124₁ through 124_n) connected to local network 104 through Internet 122. As depicted in Baig, the Internet sits outside of local network 104. (Baig (PA-3), [0043]; Provisional (PA-4), [0011]; PA-DEC, 104.) An artisan understands the content server 124 in Baig is thus **“connected to the local area network”** but **“not in the local area network.”** For the above facts, Baig overlaps ‘398.

In IPR2022-00773, Patent Owner argued that combination of Baig, Zwicky, and Satapati does not associate device identifiers. IPR2022-00773, Paper 13 at 5-14 (arguing that in this combination of IP address/port number would be associated with “an electronic identifier of a second device” formed by another IP address/port number combination). But again, as the Board’s institution decision specifically recognized, the ’398 patent describes an identifier as including identifiers, such as an equipment serial number, a device MAC address, a username, a pseudonym, a tag, or other identifying code or data element, and may include the IP address.” IPR2022-00773, Paper 13 at 3-4 (citing ’398 patent (Ex. PAT-A, 15:1-14) (emphasis added). And in finding that limitation 36(b) was sufficiently satisfied, the Board acknowledged that “it would have been apparent and obvious that Baig’s content server generates and stores electronic indicia of this association as evidenced by the fact that Baig maintains a list of users whose devices are connected using the same access point IP address.” IPR2022-00773, Paper 13 at 16-17. Such understanding is equally applicable to features recited in claim 1 and the above discussed prior art combination and mappings. Such understanding is also consistent with the ’398 patent, which describes association by recognizing devices having the same IP address. (See, e.g., PAT-A, 12:60-13:21.) Limitation 36(b) is similar to limitation 1(b) in ’398.

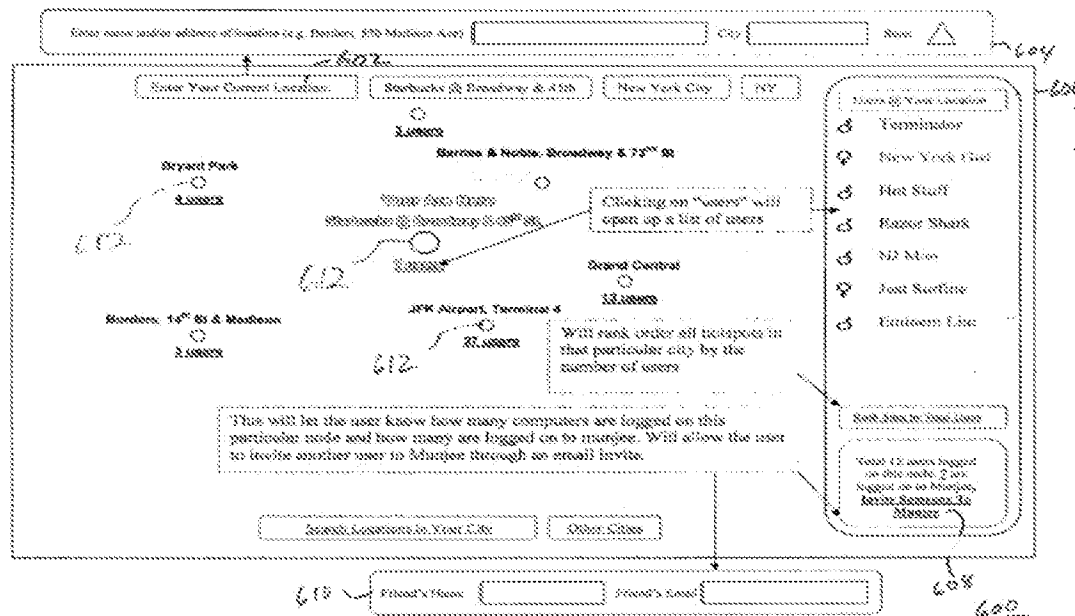
Thus, lacking evidence to the contrary, the server (**“with the computer system”**) in the Baig system with consideration of Satapati or Zwicky as above, performs *“automatically generating and storing electronic indicia of an association between the first device identifier and an electronic identifier of a second device based on automatically recognizing that each of the first and second devices was connected, independently of the other, to a common local area network, wherein the computer system is*

c. with the computer system, based on the electronic indicia of the association between the first and second device identifiers, automatically sending an electronic transmission that causes another programmed hardware computer system to take an action, based on first electronic profile data associated with the first device identifier, with respect to the second device, which is indicated at the time of the action by the second device identifier

[illegible]

List 606, as explained, lists seven other users who are logged-on (e.g., “Terminator,” “New York Girl”),

and either a male or female gender symbol next to each user. The gender symbols are visible in Figure 6 above but are clearer in the Provisional (shown next).



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FIG. 6

(Provisional (PA-4), Fig. 6.) The list of users also appears in Figure 7 of Baig, which shows a webpage that allows users to engage in chat conversations with other users. (Baig (PA-3), Fig. 7, [0080]; Provisional (PA-4), [0019].)

The transmission and display of list 606 discloses and renders obvious limitation of claim 1(c). More specifically, Baig discloses “**based on the electronic indicia of the association between the first and second device identifiers,**” *i.e.* based on the list that includes the first and second users connected using the same access point IP address as explained above for “receiving” and “automatically generating and storing” steps, “**sending an electronic transmission that causes another programmed hardware computer system to take an action... with respect to the second device,**” *i.e.* sending list 606 to the mobile device of the second user (“**another programmed hardware computer system**”). This in turn causes the second mobile device to “**take an action,**” *e.g.*, display list 606 that identifies the user logged in using the first mobile device.

Since claim 1 does not require that “**another programmed hardware computer system**” be a different device from the claimed “**second device**”, presently the “**another programmed hardware**

computer system” is part of **“second device.”** Alternatively, in order for analysis to be complete to consider scope where the second device is **“another programmed hardware computer system”**, the discussion for Appleman below addresses this scope.

Turning back to claim 1(c) here, consider an example. Suppose the user “Terminator” shown in Figure 6 connected using his mobile device (**the first device**), and at that time, another user, such as “New York Girl”, had previously connected via the same access point and was currently viewing the webpage of Figure 6 or Figure 7 on its mobile device (**the second device**). In this scenario, after “Terminator” logged in, the server would send the webpage to the second device (**“an electronic transmission”**) including list 606. This would have caused **“another programmed hardware computer system to take an action... with respect to the second device,”** because the second device would have displayed “Terminator” on list 606 when displaying the webpage. (Baig (PA-3), [0076] (“The web page 600 also displays a list 606 of other users at the present hotspot 110.”); Provisional (PA-4), [0018].)

Claim limitation 1(c) further requires **“automatically sending an electronic transmission.”** While Baig is unclear as to the timing and triggering with respect to how list 606 gets updated (Ex. PA-DEC, para. 110, 114), it would have been obvious to configure the above Baig system/process to perform such “automatic[]” features in light of the teachings of Hahn, discussed in further detail below.

Turning back to Baig, the webpage transmission and resulting display on the second device is also **“based on first electronic profile data associated with the first device identifier.”** This is because, as explained, list 606 that was transmitted to and displayed on the second device identifies the gender of the other logged-in users. For “Terminator” using our example above, list 606 includes a gender symbol (“♂”) indicating that user is male. (Baig (PA-3) and Provisional (PA-4), Fig. 6.) The transmission and display of list 606 to the second device is thus **“based on first electronic profile data associated with the first device identifier,”** because it includes gender information (**“first electronic profile data”**) of “Terminator,” who has connected using the first device having the access point IP address as discussed

above (“**associated with the first device identifier**”). The mapping of gender to “**profile data**” is consistent with the ‘398 patent, which broadly describes profile data as including “demographic or behavioral information,” such as information “concerning the user’s characteristics or activities.” (‘398 patent (Ex. PAT-A), 5:65-6:2.)

Baig discloses a second way in which transmission and display of list 606 on the second device was based on first electronic profile data. Baig discloses another type of user profile data — a user’s decision whether or not it wishes to be visible to other users. (Baig (PA-3), e.g., [0080] (“A link 720 can also be provided to remove [the user’s] concealment (i.e. invisibility) to other users.”), [0124] (“All users who are logged on can see the other users in the chat-room, unless a user options out from being visible to other users.”); Provisional (PA-4), [0019], [0027].) The transmission and display of list 606 is thus “**based on first electronic profile associated with the first device identifier**,” because list 606 transmitted to the second device will only include “Terminator” (who is connected using access point IP address associated with the first device), if “Terminator” allowed himself to be visible to other users. (PA-DEC, para. 112.) Terminator’s visibility setting qualifies as “**profile data**” because it reflects his decisions with respect to visibility to other users.

Baig also discloses taking an action with respect to the second device, “**which is indicated at the time of the action by the second device identifier**.” This is because, when the webpage including list 606 is transmitted to and displayed on the device of the viewing user (**the second device**), at that point in time, the second device is identified and connected (“indicated”) using the second device identifier which comprises (as discussed) the IP address of the access point. (PA-DEC, para. 113.) As explained, under the combination of Baig, the “second device identifier” would also have included the TCP/IP port number associated with the second device.

Although facts show Baig describes “**sending an electronic transmission**” (see, e.g., PA-3, FIGs. 6-7, [0037]-[0039], [0057], [0074]), to the extent that it is unclear (the examiner disagrees but provides this analysis to be complete) whether Baig alone discloses “**automatically sending an electronic transmission**, as recited, the following is noted, since such process was well known. For

example, consider again the scenario in which (a) the second device is already connected to the access point and viewing list 606 as shown in Figure 6 or Figure 7, and (b) at some point later, another user “Terminator” at the first device connects at the same access point and logs in. It would have been understood that list 606 shown on the second device would have to be updated and sent to the second device at some point to display “Terminator” (assuming he/she chose to make himself/herself visible), in order to present an accurate list of members of the vicinity based group. (PA-DEC, para. 114.) But it is unclear from Baig when or how updates to list 606 are triggered. (*Id.*, para. 115.)

Nonetheless, a person of ordinary skill in the art would have found obvious to implement the Baig system/process (see discussions above for limitation 1(b)) such that list 606 gets automatically updated, for example by the server automatically sending an updated or refreshed version of the webpage in Figure 6 or Figure 7, when users are added to the access point vicinity group. This is supported and confirmed by Hahn (PA-8), which describes well-known features of conventional web technologies. As Hahn explains:

Updating Information Automatically

Once you tell your web browser to load a web page, you must wait for the information be sent from the web server to your computer. As the information arrives, your browser (the web client) displays it for you. However, once the page is displayed, it does not change. Nevertheless, there are times in which it is desirable to display information which can be updated automatically. There are two ways which this can be done. (Hahn (PA-8), pp.192-193 (bold in original).) Hahn goes on to describe these “two ways.” The first technique, “CLIENT PULL,” involves the web browser automatically requesting that the page be reloaded at periodic intervals, for example every 30 seconds. (*Id.*) With the second technique, “SERVER PUSH,” the server automatically sends new data without the browser making a request. (*Id.*)

Both techniques independently qualify as “**automatic**,” as they occur without requiring user action. (PA-DEC, para. 117-118.) With respect to CLIENT PULL, Hahn explains that “the client program (your browser) is told to ‘pull’ information from the server without your intervention.” (Hahn (PA-8), p.0048.) Although the client periodically requests a page update, the update is still “automatic” because both the client request and the server response occur without user action. (PA-DEC, para. 118.)

The SERVER PUSH technique is similarly automatic and, as noted, does not require a client request.

(Hahn (PA-8), p.0048; PA-DEC, para. 118.)

It would have been obvious to adapt Baig's system/process to incorporate the automatic update techniques like those discussed by Hahn, predictably resulting in the system of Baig in which the server ("**computer system**") **automatically** sends an updated or refreshed version of the webpage shown in Figure 6 and Figure 7 - which would have included a current and up-to-date list 606 of users currently connected to a hotspot that opted to be visible - to the second device. (PA-DEC, para. 119.)

Building on the scenario described above, therefore, when "Terminator" connects to the access point and logs into the website using his first device, the content server would have **automatically** sent an updated version of Figure 6 or Figure 7 - with an updated list 606 - to the second device for display of those opted to be visible. This "automatic" transmission could have been implemented using either well known CLIENT PULL or SERVER PUSH techniques in Hahn. (*Id.*, 120.)

An ordinarily skilled artisan would have been amply motivated to combine. For example, Hahn provides an express motivation to combine by explaining that "there are times when it is desirable to display information which can be updated automatically," and further explains the CLIENT PULL and SERVER PUSH techniques "are useful in situations where you are looking at data that changes." (Hahn, p.0048.) This would have provided a clear benefit to Baig given that membership in a vicinity group (and thus the contents of list 606) could have frequently changed. (PA-DEC, para. 122.) The system in Baig, for example, is designed to work with locations where users commonly gather for short periods such as coffee shops or airport terminals. (Baig (PA- 3), e.g., [0039], [0078]; Provisional (PA-4), [0010], [0018].) An ordinarily skilled artisan would thus have been motivated to adapt Baig to incorporate the automatic update techniques of Hahn so users have up-to-date information about users in the vicinity group. (PA-DEC, para. 122-123.)

Hahn provides a further motivation by explaining that automatic update is suitable for "web-based talk facilities," in which users send messages back and forth with other users, similar to the chat feature of Baig. (Baig (PA-3), [0048]-[0049], [0069]; PA-DEC, para. 123.) An ordinarily skilled artisan

would have had more than a reasonable expectation of success and the combination would have been fully enabled. (PA-DEC, para. 124, 185, 187, 189.)

In summary, it would have been obvious to an artisan at the time of the invention to combine the well-known process of “**automatically**” sending an electronic transmission” as shown by CLIENT PULL or SERVER PUSH as described by Hahn to improve the method of Baig to produce the expected result of “based on the electronic indicia of the association between the first and second device identifiers, **automatically** sending an electronic transmission” as recited in claims 1 and 2 of ‘398.

Although facts show Baig describes “**sending an electronic transmission**” (see, e.g., PA-3, FIGs. 6-7, [0037]-[0039], [0057], [0074]), to the extent that it is unclear (the examiner disagrees but provides this analysis to be complete) if Baig alone discloses “**automatically**” **sending an electronic transmission**, as recited, the following is noted, since such process was well known as shown by related reference Hahn where the combined method of Baig with Hahn involves “**automatically sending**” an update of the list 606 as shown in FIG. 6 and 7 of Baig for each change to associated connected user devices. As Hahn explains “there are times in which it is desirable to display information which can be updated automatically. There are two ways which this can be done.” (Hahn (Ex. PA-8), p.192-193 (bold in original).) Hahn goes on to describe these “two ways”, as discussed above.

The examiner determines Hahn is relevant prior art due to either being in the same field of endeavor or being reasonably pertinent to the particular problem with which the Applicant was faced. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). A person of ordinary skill in the art would have had reasons to consider the teachings and guidance of Hahn, especially given Hahn is an analogous reference in the same field of the ’398 patent and would have been reasonably pertinent to a number of problems facing the inventors (and of such skilled persons at the time), including how to automatically transmit information after determining that two devices are connected to the same network. (PA-DEC, para. 121.) For instance, a person of ordinary skill in the art would have had reasons to consider the teachings of Hahn with Baig’s system/processes given all each are analogous references in the field of providing online access to information over the Internet and/or local networks. Baig and

Hahn would also have been reasonably pertinent to a number of problems facing the inventors of the '398 patent (and a person of ordinary skill in the art at the time), including how to automatically update information in a network of connected devices. The level of ordinary skill in the art is shown by the applied art herein. Since Baig and Hahn each regard a method for providing online access to information over the Internet and/or local networks, in consideration consistent with US Supreme Court decision in KSR that 'known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations are predictable to one of ordinary skill in the art', in this case, it would have been obvious to an artisan to apply updating information **“automatically”** as described by Hahn to improve the method of Baig with consideration of Satapati or Zwicky, as applicable, to produce the expected result of sending an electronic transmission automatically by use of known process of CLIENT PULL or SERVER PUSH since “there are times in which it is desirable to display information which can be updated automatically” (Hahn (PA-8), pp. 192-193.)

Accordingly, in light of Hahn, a person of ordinary skill in the art would have had the motivation to configure, with a reasonable expectation of success in achieving the above discussed modification to the Baig system/process, predictably resulting in the server (“computer system”) performing the process of **“with the computer system, based on the electronic indicia of the association between the first and second device identifiers, automatically sending an electronic transmission that causes another programmed hardware computer system to take an action, based on first electronic profile data associated with the first device identifier, with respect to the second device, which is indicated at the time of the action by the second device identifier,”** as recited in limitation 1(c).

Claim 2:

d. The method of claim 1 **wherein the electronic association is recognized based on a common IP address, or portion thereof, wherein network traffic is routed via the common IP address for each of the first and second devices when each is connected to the local area network.**

The combination of Baig and Hahn (and consideration of Satapati or Zwicky as applicable) describes this limitation for the same facts/reasons noted above. For clarity, “as applicable” in this fashion refers to obviousness over Baig in view of Hahn but also with alternative consideration over Baig in view of Hahn and Satapati or Zwicky. Claim 2 does not add anything that was not already addressed in the discussion of claim 1 above relied on herein. As explained above, the content server in Baig recognizes the claimed electronic association by determining that two mobile devices are connected through the common IP address of the access point. (Baig (Ex. PA-3), e.g., [0038], [0052], [0056]; Provisional (Ex. PA- 4), 0010, 0012-0013.) Baig therefore discloses that the **“electronic association is recognized based on a common IP address, or portion thereof.”**

Baig further discloses that **“network traffic is routed via the common IP address for each of the first and second devices when each is connected to the local area network.”** As explained for claim 1, access point 106 includes NAT router 108 that routes network traffic using the access point’s public IP address, when each mobile device is connected to the local area network 104. (Baig (Ex. PA-3), [0046]-[0047]; Provisional (Ex. PA-4), 0011-0012.) The access point 106 thus uses the common IP address to route network traffic between the mobile devices and the Internet, when the mobile devices are connected to the local network. (Baig (Ex. PA-3), [0047]; Provisional (Ex. PA-4), 0012; Ex. PA-DEC, para. 125-126.) For instance, see the discussion above regarding the “receiving an electronic identifier” and “automatically sending” an update of list information in relation to another subsequent device connecting to NAT so as to be associated and identified as discussed in relation to “Terminator.”

14. **Claim 1-2 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Appl. Pub. No. 2008/0113674A1 (hereinafter “Baig” or PA-3) in view of The Internet Complete Reference (2d ed. 1996) (hereinafter “Hahn” or PA-8) and U.S. Patent No. 7,899,862 (hereinafter “Appelman” or PA-9) or, in the alternative, Claim 1-2 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Appl. Pub. No. 2008/0113674A1 (hereinafter “Baig” or PA-3) in view of The Internet Complete Reference (2d ed. 1996) (hereinafter “Hahn” or**

PA-8), U.S. Patent No. 7,899,862 (hereinafter “Appelman” or PA-9) and U.S. Pat. No. 7356045 (hereinafter “Satapati” or PA-7) or “Building Internet Firewalls” (hereinafter “Zwicky” or PA-6).

At the outset, as stated in Order grant decision, the examiner determines the provisional application 60/858,204 (hereafter ‘204 or PA-4) supports every limitation of at least published claim 1 and would have enabled an ordinarily skilled artisan to make and use its subject matter. Thus, Baig qualifies as §102(e) prior art as of November 10, 2006.

Lacking evidence to the contrary, with broadest reasonable interpretation of the claims without reading limitations from ‘398 patent into the claims herein, discussion above for Baig in combination with Hahn (and consideration of Satapati or Zwicky, as applicable) is relied on herein where this combination considers an alternative interpretation of the “automatically sending” limitation as follows. Claim 1 recites “**with the computer system, based on the electronic indicia of the association between the first and second device identifiers, automatically sending an electronic transmission that causes another programmed hardware computer system to take an action... with respect to the second device.**” As noted above, nothing in claim 1 requires that the “**another programmed hardware computer system**” be different from “**the second device**.” (PA- DEC, para. 108, 127). So as to be complete, to the extent it is interpreted that the combination of Baig with Hahn lacks “**another ... computer system**” is different from “**the second device**”, the use of physically separate computing devices is well known as amply disclosed by related reference Appelman. The system in Appelman also sends the claimed transmission “**automatically,**” and thus further renders “different” devices obvious.

Second, claim 1(c) recites that the claimed electronic transmission be “**based on first electronic profile data**”. This limitation is mapped to the first user’s gender in Baig (PA-3, FIG. 6) that can be displayed on list 606, and/or the first user’s visibility preferences. (PA-DEC, para. 111-112.) But in the event that these features in Baig would be interpreted to not sufficiently disclose the use of the claimed “first electronic profile data”, related reference Appelman provides a richer set of features for transmitting user information based on profile data. For all other limitations of claims 1-2, the above analysis in

“automatically sending” applies and thus alternative interpretation incorporates such analysis, arguments, citations, and discussions entirely by reference here.

Appelman, entitled “Dynamic Identification of Other Users to an Online User,” discloses the ability to identify and display users with whom a user can interact. Appelman determines an “online context” for a user and then identifies other users present within the same “online context.” (Appelman (PA-9), 2:27-42.) For example, Figure 6 shows a “Who’s Here?” window showing other users currently viewing the same NFL sports channel:

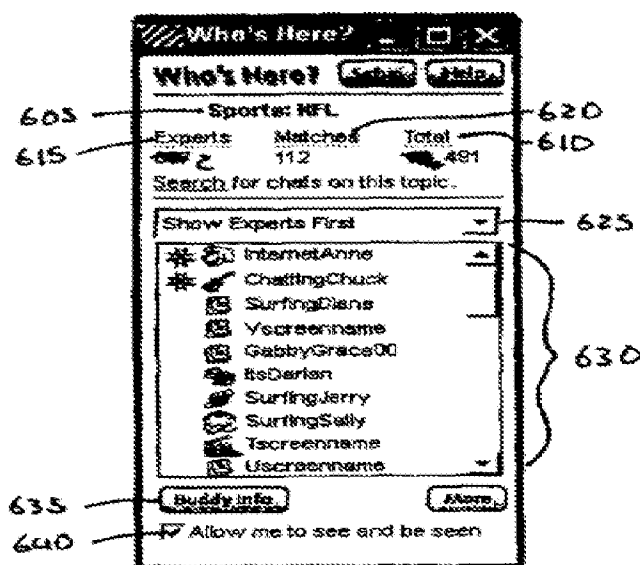


FIG. 6

(Appelman (PA-9), Fig. 6, 1:48-50, 2:6-9.) Figure 6 shows users within the online context of an NFL sports channel, but Appelman can identify users based on a wide variety of other “online contexts,” such as viewing the same web page. (Appelman (PA-9), 2:30-39; see *also id.*, 1:61-2:5.) The “Who’s Here” feature is similar to list 606 of users in Baig connected to the same hotspot and logged into the system with similar association. (PA-DEC, para. 130; Baig (Ex. PA-3), [0040], Provisional (Ex. PA-4), [0010].) Figure 3 depicts the overall system:

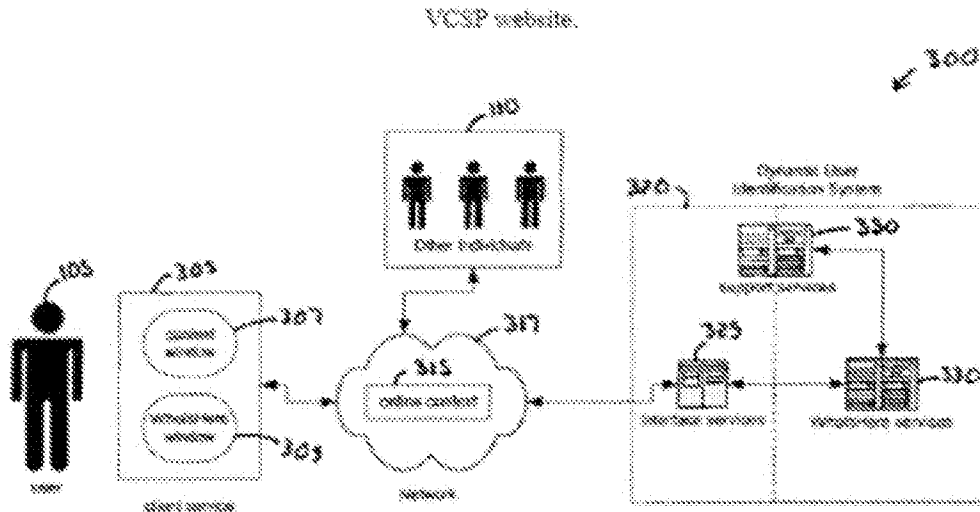


FIG. 3

(Appelman (PA-9), Fig. 3 (shadowing added).) Dynamic user identification system 320 (at right) is responsible for identifying other users in the same online context and providing this information to the user. Dynamic user identification system 320 includes WhoIsHere services 330 and interface services 325.

The WhoIsHere services 330 form part of the “back-end 323” (Appelman (PA-9), 7:17-18, 7:59-62), and are responsible for “determin[ing] the other individuals 110 presently within the online context 315 and... inform[ing] the user of at least one of the other individuals 110.” (Appelman (Ex. PA-9), 7:59-62.) But WhoIsHere services 330 do not directly send this information to the user - they instead send it to interface services 325. Interface services 325 form part of the “front-end 321” (Appelman (PA-9), 7:17-18, 29-30), and are responsible for “communicat[ing] information to the client 305 informing of one or more of the other individuals 110,” among other things. (Appelman, 7:34-37.) As Appelman explains, “[t]he WhoIsHere services 330 communicate trait, identification and/or contact information of other individuals 110 to the interfaces services 325 for suggestion to the user 105 through the client service 305.” (Appelman (PA-9), 8:1-4.) In other words, (1) the WhoIsHere services 330 identify other users within the same online context as the user, and then (2) send the list of other users to support services 325, which in turn provides those users to each of the user’s device for display in the WhoIsHere window. (PA-DEC, para. 131.)

Appelman thus makes clear that WhoIsHere services 330 and interface services 325 can be implemented using two separate computer systems. Appelman explains that “[t]he front end 321 [which includes interface services 325] and the back-end 323 [which includes WhoIsHere services 330] may or may not be incorporated within the same hardware or software device, depending, for example, on an anticipated workload of the dynamic user identification system 320.” (Appelman (PA-9), 7:18-22.) Appelman expressly encourages use of separate devices in order to improve system scalability. (Appelman (PA-9), 7:22-29.)

Appelman also discloses that the communication of the list to interface services 325 is done **automatically** when, for example, membership to the list changes or at a particular interval. (Appelman (Ex. PA-9), e.g., 8:12-22.) This is similar in many respects to the “CLIENT PULL” and “SERVER PUSH” techniques from Hahn discussed in “automatically sending” above. (PA- DEC, para. 132.)

Another key feature disclosed in Appelman is the ability to identify not only users within the same online context as the user, but to filter those users based on the traits or characteristics of the other users. As Appelman explains:

An online service provider may display dynamically and in real time information of other users presently viewing the same web page as the user. For example, the user may perceive when buddy list members view a web page concurrently with the user, or may perceive when other users having a shared trait with the user (e.g., male over 35) view a web page concurrently with the user, or combination of connectivity criteria and trait matching information may be used to identify others who concurrently perceive common web pages or other contact such as television programming. The user may perceive other users based on a trait of the other users and/or based on a trait of the user. (Appelman (PA-9), 1:61-2:5.) Appelman describes a broad range of trait information that can be used to identify other users in the same online context, such as “age, gender, nationality, race, disability... and/or information indicative of an expertise, interest, preference, education... and/or other quality of the other individual 110.” (Appelman (PA-9), 2:62-3:2; *see also id.*, 3:32-26.)

It would have been obvious to combine Baig-Hahn modified system/process with the teachings from Appelman, predictably resulting in the modified system of Baig-Hahn, as discussed above, with the following additional features gleaned from Appelman: (1) the ability to divide the functions of the content server of Baig into separate “front-end” and “back-end” computing systems (as discussed below), and (2)

the ability to filter the display of users on list 606 of Baig based on profile data of other users. An ordinarily skilled artisan would have been motivated to make this combination.

With respect to feature (1), the combination discloses and renders obvious **“with the computer system, based on the electronic indicia of the association between the first and second device identifiers, based on the electronic indicia of the association between the first and second device identifiers, automatically sending an electronic transmission that causes another programmed hardware computer system to take an action... with respect to the second device.”** The combination would have involved a straightforward modification to Baig - divide functions of the content server in Baig between “front-end” and “back-end” systems. The “back-end” would have performed the functions of identifying users within the same vicinity-based user group (i.e. users connected to the same hotspot using the same access point IP address), and then automatically sending the identification of the users to a “front-end” system (**“another programmed hardware computer system”**), as taught by Appelman. (Appelman (PA-9), 8:10-19.) This would have caused the front-end, in turn, to transmit list 606 to the mobile device of the user viewing the webpage (**“take an action... with respect to the second device”**) for display on the web browser of that device. Under this combination, therefore, the **“another programmed hardware computer system”** and **“the second device”** are physically separate devices. (PA-DEC, para. 136.)

With respect to feature (2), the combination discloses and renders obvious causing another programmed hardware computer system to take an action, **“based on first electronic profile data associated with the first device identifier,”** as claimed. This combination would have involved another straightforward enhancement to Baig of allowing identification of users within the vicinity-based group to be further filtered based on profile data. Using the example from discussion of Baig with Hahn and consideration of Satapati or Zwicky as applicable above, the user viewing list 606 of Figure 6 or Figure 7 on its mobile device (**“the second device”**) could have specified desired characteristics or traits that other users in the vicinity-based group must match before appearing on the list. For example, using the example from Appelman, the user viewing list 606 in Baig could choose to limit the list to males over 35

or another data category in profile. (Appelman (PA-9), 1:63-2:5.) In combination with the above-discussed modified Baig system/process (see discussion above for Baig-Hahn with Satapati or Zwicky, as applicable), therefore, list 606 under the combination would show “Terminator” (the first user) only if user was a male over 35. The action taken with respect to the second device, i.e., the display of list 606 on the web browser, would have been “**based on first electronic profile data associated with the first device identifier,**” because the profile data of the first user (e.g. “Terminator”) was used to determine whether or not to include him (i.e., “only if user was a male over 35”) on the list. (PA-DEC, para. 137).

Appelman is determined herein to be relevant prior art due to either being in the same field of endeavor or being reasonably pertinent to the particular problem with which the Applicant was faced. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). For instance, a person of ordinary skill in the art would have had reasons to consider the teachings of Appelman in context of Baig-Hahn (and Satapati or Zwicky as applicable) modified system/process given all are analogous references in the field of providing online access to information over the Internet and/or local networks. A person of ordinary skill in the art would have had reasons to consider the teachings of Appelman in context of the above-discussed modified Baig-Hahn system/process given Appelman is an analogous reference in the same field of providing techniques for facilitating online access between devices through a network. (Ex. PA-DEC, para. 138.) Appelman would also have been reasonably pertinent to a number of problems facing the inventors of the '398 patent (and a person of ordinary skill in the art at the time), including how to differentiate devices connected to a common local network using IP addresses and enable those devices to communicate with servers over the Internet. (*Id.*) Further, Appelman would also have been reasonably pertinent to a number of problems facing the inventors (and of a person of ordinary skill in the art), including determining an online context for a user (such as being logged-in) and taking action in response to that determination and based on user profile information. (*Id.*) The level of ordinary skill in the art is shown by the applied art herein. Since Baig, Hahn (Satapati or Zwicky) and Appelman each regard a method for providing online access to information over the Internet and/or local networks, in consideration consistent with US Supreme Court decision in KSR that 'known work in one field of

endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations are predictable to one of ordinary skill in the art', in this case, it would have been obvious to an artisan to apply “**another ... computer system**” is different from “**the second device**” for the use of physically separate computing devices is well known as amply disclosed by Appelman where the system in Appelman also sends the claimed transmission “**automatically**” and it would have been obvious to an artisan to apply “**based on first electronic profile data**” as described by Appelman to improve the method of Baig in view of Hahn and Satapati or Zwicky, as applicable, to produce the expected result that “may improve the ability of the dynamic user identification system 320 to serve the many users of a large scale network such as the Internet; in other words, the front-end/back-end structure may improve the scalability of the dynamic user identification system 320” (Appelman (Ex. PA-9), 7:22-28), and that identifying users who have “a common age grouping or common demographic identifier” can provide a “more focused and relevant disclosure” to the user. (Appelman, 3:25-32.) An ordinarily skilled artisan would have been motivated to enhance Baig-Hahn with this feature to allow users to focus attention on other users in the vicinity-based group who have certain desired or common characteristics. (PA-DEC, para. 141.) And finally, an ordinarily skilled artisan would have had more than a reasonable expectation of success, as the disclosures in Baig, Hahn, Appelman, with consideration of Zwicky or Satapati describe techniques that were known well and were fully enabling. (Ex. PA-DEC, paras. 92, 185-189.)

An ordinarily skilled artisan would have been amply motivated to make this combination. With respect to feature (1), Appelman itself provides an express motivation to adopt a separated “front-end” and “back-end” approach by explaining that it “may improve the ability of the dynamic user identification system 320 to serve the many users of a large scale network such as the Internet. In other words, the front-end/back-end structure may improve the scalability of the dynamic user identification system 320.” (Appelman (Ex. PA-9), 7:22-28.) Dividing the content server into separate front-end and back-end systems would have improved performance, especially during times of increased network traffic. (PA-DEC, para. 139-140.) A skilled artisan would also have been motivated to adapt the back-end to send the

user list to the front-end “automatically,” as disclosed in Appelman, to provide an up-to-date identification of connected users as fully explained above in Baig-Hahn.

With respect to feature (2), Appelman itself provides an express motivation to use profile data by explaining that identifying users who have “a common age grouping or common demographic identifier” can provide a “more focused and relevant disclosure” to the user. (Appelman (Ex. PA-DEC, 3:25-32.) An ordinarily skilled artisan would have been motivated to enhance Baig-Hahn with this feature to allow users to focus attention on other users in the vicinity-based group who have certain desired or common characteristics. (PA-DEC, para. 141.) An ordinarily skilled artisan would have had more than a reasonable expectation of success, as the combination could have been implemented using conventional techniques and would have been fully enabled. (*Id.*, para. 142, 188-189.) See *KSR Intern. Co. v. Teleflex Inc.*, 550 U.S. 398, 416-17 (2007).

Claim 2:

Regarding claim 2, the discussion above regarding “**wherein the electronic association is recognized based on a common IP address, or portion thereof, wherein network traffic is routed via the common IP address for each of the first and second devices when each is connected to the local area network**” for the combination of Baig and Hahn (and Satapati or Zwicky as applicable) describes this limitation for the same facts/reasons noted is relied on herein with respect to Baig in view of Hahn and Appelman (and Satapati or Zwicky as applicable).

15. **Claim 1-2 are rejected under pre-AIA 35 U.S.C. 103(a) as being unpatentable over U.S. Pub. No. 2007/067459 (hereafter “Baal-Haness” or PA-10) in view of U.S. Patent No. 7,899,862 (hereinafter “Appelman” or PA-9).** At the outset, as noted in Order grant decision, the examiner determines the provisional application 60/858,204 (hereafter ‘204 or PA-4) supports every limitation of at least published claim 1 and would have enabled an ordinarily skilled artisan to make and use its subject matter. See *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1381 (Fed. Cir. 2015) (“A reference patent is only entitled to claim the benefit of the filing date of its provisional application if the

disclosure of the provisional application provides support for the claims in the reference patent in compliance with § 112, 1st paragraph”); M.P.E.P. § 2136.03 III (“The critical reference date under pre-AIA 35 U.S.C. 102(e) of a US. patent . . . may be the filing date of a relied upon provisional application only if at least one of the claims in the reference patent . . . is supported by the written description of the provisional application in compliance with pre-AIA 35 U.S.C. 112, first paragraph, or 35 U.S.C. 112(a).”) (emphasis added).

Claim 1: A method implemented using a programmed hardware computer system, the method comprising:

Regarding claim 1, lacking evidence to the contrary, with broadest reasonable interpretation of the claims without reading limitations from ‘398 patent into the claims herein, although Baal-Haness (PA-10) uses different terminology, facts herein show Baal-Haness describes “**a method implemented using a programmed hardware computer system**” where Baal-Haness describes computer memory hardware that stores software for carrying out the features by a programmed hardware computer system.

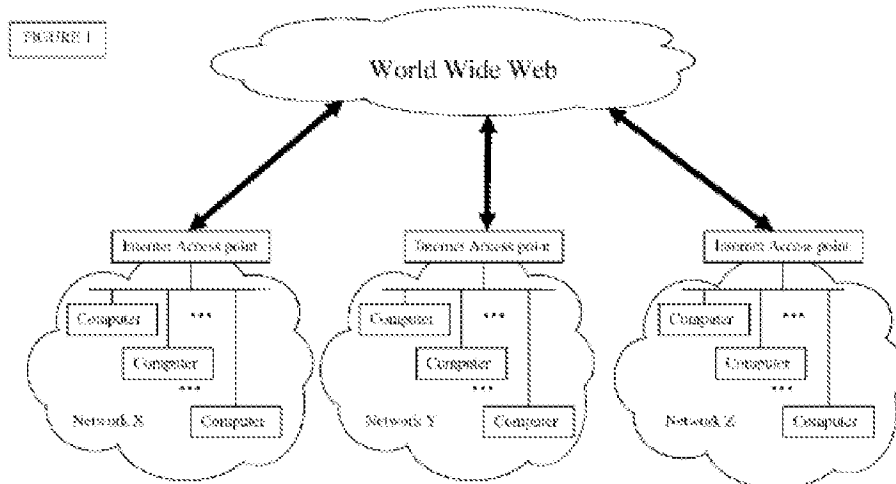
For example, Baal-Haness discloses software for operating a website that separates users into different area networks (ANs) and provides services to users within those networks. (Baal- Haness (Ex. PA-10), 70016 (“The main objective of the present invention is to provide software, a business method, and an internet website....”).) An artisan would have understood that the website software in Baal-Haness would have been executed in “**a programmed hardware computer system.**” For example, Baal-Haness discloses software for operating a website that separates users into different area networks (ANs) and provides services to users within those networks. (Baal-Haness (Ex. PA-10), Abstract (“A method, software, and website to identify the source and entry channel of users as they log in, and then assign them to an Area Network (AN) or segment thereof, providing services that are customized and limited to each such network and the network’s users.”), ([0016] (“The main objective of the present invention is to provide software, a business method, and an internet website....”); Baal-Haness Provisional (Ex. PA-11), 005.) (Ex. PA-DEC, para. 145.) It would have also been apparent and obvious that Baal-Haness would have included “**a programmed hardware computer system,**” e.g., a programmed computer system with

memory for storing those instruction executed by the computer system. (*Id.*) Indeed, as known in context of Baal-Haness, any software program will invariably comprise instructions that are read from memory and provided to a processor to be carried out or executed. (Ex. PA- DEC, para. 145.) It would have also been understood to an ordinarily skilled artisan that Baal-Haness would have included a memory for storing the software for execution by such a computer system, else the processes disclosed by Baal-Haness (as discussed below for limitations 1(a)-(c)) would not have been able to be performed and executed. Such a memory, as described, would have made the software's instructions available to a processor for execution.

The “**a programmed hardware computer system**” corresponds to at least one server (computer system) that provides the features of the website. Baal-Haness specifically refers to an “application” server that carries out the features of the website software. (Baal-Haness (Ex. PA- 10), [0039]-[0040], [0046].) Nevertheless, it would have been obvious that the website in Baal-Haness would have required at least one server or similar programmed computer system. (Ex. PA- DEC, para. 146.) The software running on that server, as explained in more detail below, will instruct the computer to perform a method that satisfies the claimed steps below as discussed next.

a. **receiving, at the computer system, an electronic identifier of a first device;**

Facts herein show Baal-Haness describes limitation, as follows. As explained below, the server in Baal-Haness (“**the computer system**”) receives the claimed electronic identifier from a computer connected to an Internet access point. The claim does not recite “unique” electronic identifier or similar. Figure 1 of Baal-Haness below depicts the connection of each computer (“a first device”) to the World Wide Web:



(Baal-Haness (Ex. PA-10), Fig. 1.) Figure 1 shows three networks, i.e. “**Network X**,” “**Network Y**,” and “**Network Z**,” each containing an “**Internet Access point**” connected to computers within its respective network. Baal-Haness refers to each network as an “**area network**” (AN). (Baal- Haness (Ex. PA-10), [0049]-[0050].) Each Internet access point, in turn, is connected to the World Wide Web as shown.

Any computer in Figure 1 discloses “**a first device**” for purposes of claim limitation 1(a). A computer within a particular area network (“**first device**”) also has an “**electronic identifier**,” which for purposes of claim limitation 1(a), takes the form of the combination of (a) a username associated with a user and (b) the network IP address of the area network (AN) to which the user is connected, as noted above. More specifically, Baal-Haness describes a login process that “creates a database for each different LAN from which the website is used.” (Baal-Haness (Ex. PA-10), [0037].) Baal-Haness confirms that, during this process, the server receives the username and the network IP address:

The login process creates a database for each different LAN from which the website is used. This process ensures that the services provided under the specific network will be available only to that network’s users. Users on each LAN will be able to view and contact only those users that are on the same LAN.

The login process and the application use the network IP address as the basis for network segmentation.

In the login process:

1. The user inserts username or nickname
2. The user clicks on the login button

3. **The user's network IP address is automatically sent to the application (chat room, instant messaging, etc.) server**
4. If there is a database for that IP address, the username is added to that database
5. If there is no database for that IP address, a database is created for that IP address and the username is added to that database

Baal-Haness (Ex. PA-3), [0037]-[0039], emphasis added.

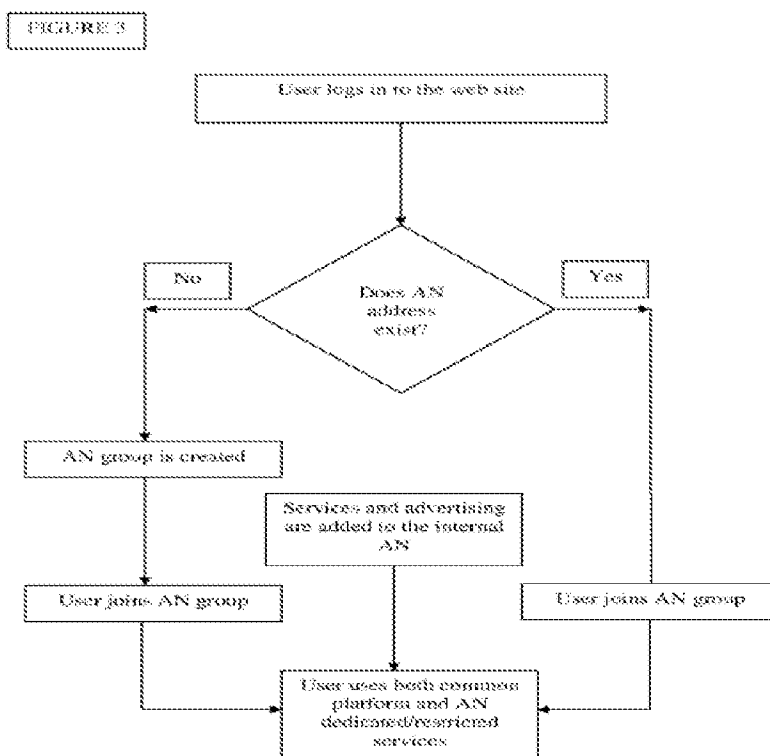
Baal-Haness therefore discloses “**receiving at the computer system,**” i.e., the server, “**an electronic identifier of a first device,**” an identifier that includes a username and the user’s network IP address. These two pieces of information provide an “electronic identifier of a first device” because they identify the IP address of the local area network (LAN) to which the first device is connected, as well as the username associated with the user operating the device. (Ex. PA-DEC, para. 149.) This is consistent with the ’398 patent, which specifically identifies a “username” and an “IP address” as examples of device identifiers. (PAT-A, 15:4-8 (“Examples of such identifiers could include... a username... or any other identifying code or data element.”), 15:13- 17 (“The identifier can include the IP address the STB is using when in contact with the CAS. ...”).)

Accordingly, the above described “computer system” in Baal-Haness performs a process including, “**receiving ... an electronic identifier of a first device**” as claimed. (See Ex. PA-DEC, para. 147-149.) Basically, **receiving an electronic identifier of a first device** in Baal-Haness overlaps ’398.

In IPR2022-00773, Patent Owner argued that Baal-Haness’ username / IP address combination is not a “device identifier.” IPR2022-00773, Paper 13 at 20-33. Such a position fails to distinguish the specific device identifiers relied upon here (i.e., a username and IP address), which are specifically contemplated by the ’398 patent as just discussed. Indeed, the Board specifically found that the combined a user’s username and network IP address teaches or suggests a similar limitation in claim 36(a). IPR2022-00773, Paper 6 at 25-26. Such an understanding is equally applicable to the similar features recited in limitation 1(a).

- b. **with the computer system, automatically generating and storing electronic indicia of an association between the first device identifier and an electronic identifier of a second device based on automatically recognizing that each of the first and second devices was connected, independently of the other, to a common local area network, wherein the computer system is connected to the local area network through the Internet but is not in the local area network**

Facts herein show Baal-Haness describes this limitation, as follows. After receiving the login request (Baal-Haness (PA-10), FIG. 3), the server determines whether the IP address of the users' area network (AN) (part of the **"first device identifier"**) already exists in the database, and if so, adds the logging-on user to that database. This is shown in Figure 3:



(Baal-Haness (PA-10), Fig. 3.) Figure 3 depicts a step ("Does AN address exists?") in which the server checks if the IP address of the area network (AN) exists, and based on that check, can go down one of two paths. The "Yes" path described with respect to Figure 3 performs a step ("User joins AN group) of adding that user to the area network (AN) group. Referring again to the discussion of the login process, Baal-Haness explains:

The login process creates a database for each different LAN from which the website is used. This process ensures that the services provided under the specific network will be available only to that

network's users. Users on each LAN will be able to view and contact only those users that are on the same LAN.

The login process and the application use the network IP address as the basis for network segmentation. In the login process:

1. The user inserts username or nickname
2. The user clicks on the login button
3. The user's network IP address is automatically sent to the application (chat room, instant messaging, etc.) server

4. If there is a database for that IP address, the username is added to that database

5. If there is no database for that IP address, a database is created for that IP address and the username is added to that database
(Baal-Haness (PA-10), [0037]-[0039].)

These disclosures in Baal-Haness show the server performs “**with the computer system, automatically generating and storing electronic indicia of an association between the first device identifier and an electronic identifier of a second device**,” which occurs when the server (a) determines that a database for the user's network IP address already exists, and then (b) adds the username to that database. Baal-Haness repeatedly confirms that it uses the network IP address in order to identify the particular local area network to which the user belongs. (Baal-Haness (PA-10), e.g., [0036], [0038].) An ordinarily skilled artisan would have understood that, in the scenario outlined above in which a database for that IP address *already exists*, another user may have already logged in using the network IP address (“**an electronic identifier of a second device**”), in which case the username of the new user is simply added to the existing database rather than creating a new database. (PA-DEC, para. 151; *see also* Baal-Haness (PA-10), [0051] (“[E]ach user can communicate with other users on the same network....”), [0037], [0047].) Baal-Haness therefore generates and stores “**electronic indicia of an association**” between the first and second device identifiers by recording, when the first user logs in, the username of the first user in the database for the IP address to which both users are connected. This clearly creates an “**association**” between the electronic identifiers of the first and second devices because both usernames are recorded in the same database, *i.e.*, the database for their common network IP address.

This process in Baal-Haness is also performed “**automatically**” because the user did not take specific action to cause it to occur. (PA-DEC, para. 152.) Adding the username to the database occurs automatically during the login process - as Baal- Haness states: “The separation between different LANs is done **automatically** and saved on the application server.” (Baal-Haness (PA-10), [0040].) Baal-Haness therefore discloses “**automatically generating and storing [the] electronic indicia.**” The only step in the login process that potentially involves user action is the user entering a username and pressing the login button. (Baal-Haness (PA-10), [0039].) But these login steps do not represent a request to perform the actual step of “**generating and storing [the] electronic indicia.**” As explained above, the ’398 patent does not exclude prior user action preceding the claimed step. (PA-DEC, para. 153, 99.)

The generation of this electronic indicia was also “**based on automatically recognizing that each of the first and second devices was connected... to a common local area network.**” As explained, Baal-Haness uses the network IP address to determine that two users are on the same local area network. (Baal-Haness (PA-10), *e.g.*, [0030], [0035].) As Baal-Haness further explains:

The following describes the preferred embodiment, which utilizes the network IP address to achieve segmentation of users into LANs.

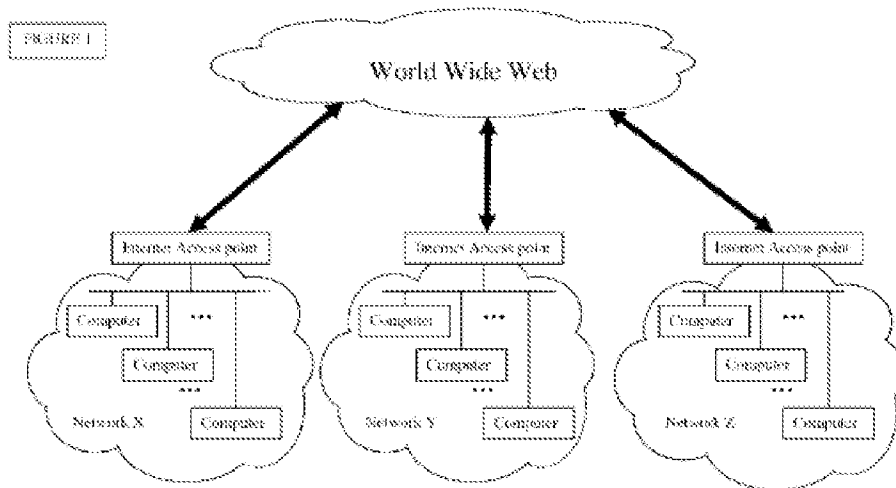
The Login Process

The login process creates a database for each different LAN from which the website is used. This process ensures that the services provided under the specific network will be available only to that network’s users. Users on each LAN will be able to view and contact only those users that are on the same LAN. The login process and the application use the network IP address as the basis for network segmentation.

(Baal-Haness (Ex. PA-10), [0036]-[0038].) As the above makes clear, the segmentation process uses the network IP address to identify users who are all connected to the “same LAN,” *i.e.*, “**a common local area network.**” Accordingly, when the content server automatically recognized that two mobile devices are connected using the same network IP address, it also automatically recognized that they are connected to a common local area network. (PA-DEC, para. 154.)

A person of ordinary skill in the art would have understood from Baal-Haness’ disclosures that each of the first and second devices in Baal-Haness was connected “**independently of the other**” to the

common local area network. And even if not evident, it would also have been obvious to configure the system/process such that each of the first and second devices in Baal-Haness was connected “**independently of the other**” to the common local area network based on the disclosures and suggestions in Baal-Haness. (PA-DEC, para. 155.) Such features are demonstrated in Figure 1, which shows three area networks (ANs) and computers connected within those networks:



(Baal-Haness (PA-10), Fig. 1.) Figure 1 does not show any links, connections, or other dependencies between the computers connected within a particular local area network (e.g., network X, Y, or Z). Thus, a person of ordinary skill in the art would have understood that, or at least been motivated and found it obvious to configure the arrangement, such that, each computer is connected “**independently of**” other computers (“**first and second devices was connected, independently of the other, to a common local area network**”) (Ex. PA-DEC, para. 155.) This is further confirmed by the fact that, as explained above, computers in Baal-Haness need not be logged-into the website at the same time. (*Id.*, para. 156.) The independence of these connections would also have been obvious to any ordinarily skilled artisan with a basic understanding of IP- based local area networks. (*Id.*) Nonetheless, even if not evident, a person of ordinary skill in the art would have been motivated by such teachings and suggestions to configure the “computer system” to operate with first and second devices that were connected, independently of each other, to a common local area network (e.g., Network X, Y, or Z). Such a configuration would have facilitated the network features disclosed by Baal-Haness while freeing the individual computers from

being linked or otherwise electronically or virtually tied to each other, thus beneficially allowing each computer in such a local area network to have independent access to the outside Internet network without any encumbrances from other computers in the common network. (PA-DEC, para. 155-156.) Such a skilled person would have had the skills, motivation, and reasonable expectation of success of configuring and implementing such features, especially given it would have involved the use of known technologies and techniques, such as those described or suggested by Baal-Haness.

Finally, Baal-Haness discloses that **“wherein the computer system is connected to the local area network through the Internet but is not in the local area network.”** This is also demonstrated in Figure 1 above, showing that computers on each network can connect (through the network’s Internet access point) to the “World Wide Web,” which sits outside the local area networks. It would have been apparent and understood by a person of ordinary skill in the art that the server in Baal-Haness (**“the computer system”**), which creates the website, is connected to the local area network via the World Wide Web as depicted in Figure 1. (PA-DEC, para. 157.) In fact, Baal-Haness repeatedly refers to the website as an “internet website.” (Baal-Haness (PA-10), e.g., [0028], [0016]-[0017].) This means that the server **“is not on the local area network,”** because the Internet resides outside local area networks. (PA-DEC, para. 157.) Even if not evident, based on such disclosures and suggestions, a person of ordinary skill in the art would have been motivated and found it obvious to configure the server (**“computer system”**) to operate outside a local area network (e.g., Network X, Y, or Z) since its functionalities are to an “internet website” which is accessible by any of the computers in the local area networks in Baal-Haness. (See discussions and citations above.) As such, such a configuration would have predictably led to the arrangement where **“the computer system is connected to the local area network through the Internet but is not in the local area network”** like that claimed. Such a skilled person would have had the skills, motivation, and reasonable expectation of success of configuring and implementing such an arrangement and features, especially given it would have involved the use of known technologies and techniques, such as those described or suggested by Baal-Haness.

Accordingly, for the reasons explained, Baal-Haness discloses or suggests **“with the computer system, automatically generating and storing electronic indicia of an association between the first device identifier and an electronic identifier of a second device based on automatically recognizing that each of the first and second devices was connected, independently of the other, to a common local area network, wherein the computer system is connected to the local area network through the Internet but is not in the local area network”** as claimed. (See PA-DEC, para. 150-157.)

In disputing the “association” of claim 36 in IPR2022-00773, Patent Owner argued that Baal-Haness’ system “groups user IDs and not device IDs.” IPR2022-00773, Paper 13 at 33-36. But the Board, in its institution decision, acknowledged Baal-Haness’s disclosure of a server that, after receiving a login request, determines whether the IP address of the user’s area network already exists in the database, and if, so, adding the logging-on user to that database. IPR2022-00773, Paper 6 at 25-26. Patent Owner’s own expert argues that this creates an association of devices, which are identified by username and IP address. IPR2022-00773, Paper 13 at 35-36. Although PO characterizes this as an association of user and not devices, there is nothing in Baal- Haness to suggest a distinction with the ’398 patent. Again, the 398 patent, specifically identifies a “username” and an “IP address” as examples of device identifiers. (PAT-A, 15:4-8 (“Examples of such identifiers could include... a username... or any other identifying code or data element.”), 15:13-17 (“The identifier can include the IP address the STB is using when in contact with the CAS....”).) Such understandings are applicable to the teachings and mappings above in context of claim 1, which recites similar features as those discussed in IPR2022-00773 concerning claim 36 that involves similar limitations to claim 1 at issue herein.

- c. **with the computer system, based on the electronic indicia of the association between the first and second device identifiers, automatically sending an electronic transmission that causes another programmed hardware computer system to take an action, based on first electronic profile data associated with the first device identifier, with respect to the second device, which is indicated at the time of the action by the second device identifier**

Discussion above for Baal-Haness is relied on herein. Lacking evidence to the contrary, this limitation is disclosed by the combination of Baal-Haness (PA-10) with Appleman (PA-9) for facts as stated next.

For example, Baal-Haness explains that after the user is logged in using the process in Baal-Haness discussed above in “automatically generating and storing”, the user can access particular services (such as chat and instant messaging) and interact with other users who are also connected to the same local area network. (Baal-Haness (Ex. PA-10), [0040]-[0043].) But Baal-Haness does not describe **“based on the electronic indicia of the association between the first and second device identifiers, automatically sending an electronic transmission that causes another programmed hardware computer system to take an action, based on first electronic profile data associated with the first device identifier, with respect to the second device, which is indicated at the time of the action by the second device identifier”** in sufficient detail. However, a person of ordinary skill in the art would have found such details and features obvious in light of the teachings of Appelman. As explained further below, the resulting modified Baas-Haness system/process in view Appelman discloses and/or suggests, and renders obvious, the features of claim limitation 1(c) for **“automatically sending”** as recited.

For same facts in Appelman as explained above in discussing Appelman with Baig, Appelman describes techniques/mechanisms that determines an “online context” for a user and then identifies other users present with the same “online context.” (Appelman (Ex. PA-11), 2:27-42) Figure 6 shows a screenshot of a “Who’s Here?” feature listing other users currently viewing the same NFL sports channel:

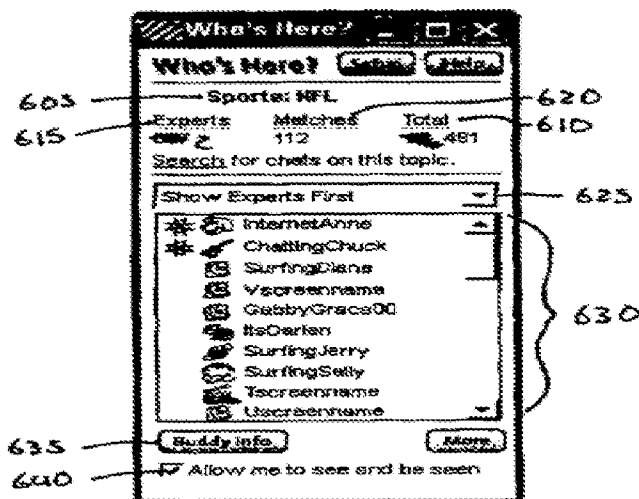
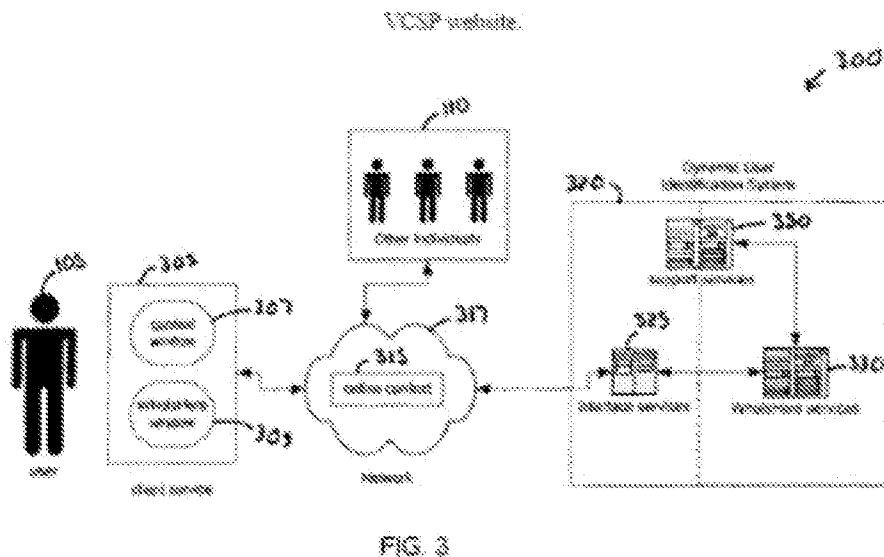


FIG. 6

(Appelman (PA-9), Fig. 6, 1:48-50, 2:6-9.) As explained above previously discussing Appelman, beyond the example in Figure 6, Appelman can identify users based on a wide variety of other “online contexts” such as viewing the same web page or being present in a particular chat room. (Appelman (PA-9), 2:30-33; *see also id.*, 1:61-63.) Referring again to Figure 3:



(Appelman (PA-9), Fig. 3 (shadowing added).) Dynamic user identification system 320 (at right in FIG. 3) is responsible for identifying other users in the same online context and providing this information to the user. Dynamic user identification system 320 includes WhoIsHere services 330 and interface services 325. As discussed above, the WhoIsHere services 330 form part of the “back-end 323” (Appelman (PA-9), 7:17-18, 7:59-62), and is responsible for “determin[ing] the other individuals 110 presently within the online context 315 and... inform[ing] the user of at least one of the other individuals 110.” (Appelman (Ex. PA-9), 7:59-62.)

But as noted previously, WhoIsHere services 330 do not directly send this information to the user - they instead send it to interface services 325. Interface services 325 form part of the “front-end 321” (Appelman (PA-9), 7:17-18, 29-30), and are responsible for “communicat[ing] information to the client 305 informing of one or more of the other individuals 110,” among other things. (Appelman, 7:34-37, 8:1-4.) The user at the client device, in turn, can be informed of the other users via a list, pop-up window or other means. (Appelman (PA-9), 4:15-23.)

As Appelman explains, “[t]he WhoIsHere services 330 communicate trait, identification and/or contact information of other individuals 110 to the interfaces services 325 for suggestion to the user 105 through the client service 305.” (Appelman (PA-9), 8:1-4.) In other words, (1) the WhoIsHere services 330 identify other users within the same online context as the user, and then (2) send the list of other users to support services 325, which in turn provides those users to the user’s device for display in the WhoIsHere window. (PA-DEC, para. 131.)

Appelman thus makes clear that WhoIsHere services 330 and interface services 325 can be implemented using two separate computer systems. Appelman explains that “[t]he front end 321 [which includes interface services 325] and the back-end 323 [which includes WhoIsHere services 330] may or may not be incorporated within the same hardware or software device, depending, for example, on an anticipated workload of the dynamic user identification system 320.” (Appelman (PA-9), 7:18-22.) Appelman expressly encourages use of separate devices in order to improve system scalability. (Appelman (PA-9), 7:22-29.)

Appelman also discloses that the communication of the list to interface services 325 is done **automatically** when, for example, membership to the list changes or at a particular interval. (Appelman (Ex. PA-9), e.g., 8:12-22.) (“The WhoIsHere services 330 may communicate the WhoIsHere list to the interface services 325 **automatically** after a change in the online context of the user 105 and also at any time that the WhoIsHere list changes. The WhoIsHere services 330 also may communicate the WhoIsHere list to the interface services 325 at short periodic intervals, such as, for example, every 30 or 60 seconds.”).) This is similar in many respects to the “CLIENT PULL” and “SERVER PUSH” techniques from Hahn as discussed above. (PA- DEC, para. 132.)

As explained in detail above in previously discussing Appelman, another key feature disclosed in Appelman is the ability to identify not only users within the same online context as the user, but to filter those users based on the traits or characteristics of the other users. As Appelman explains:

For example, the user may perceive when buddy list members view a web page concurrently with the user, or may perceive when other users having a shared trait with the user (e.g., male over 35) view a web page concurrently with the user, or combination of connectivity criteria and trait

matching information may be used to identify others who concurrently perceive common web pages or other contact such as television programming. The user may perceive other users based on a trait of the other users and/or based on a trait of the user.
(Appelman (PA-9), 1:63-2:5.) Appelman describes a broad range of trait information that can be used to identify other users in the same online context, such as “age, gender, nationality, race, disability... and/or information indicative of an expertise, interest, preference, education... and/or other quality of the other individual 110.” (Appelman (PA-9), 2:62-3:2; *see also id.*, 3:32-26.)

It would have been obvious to modify the above-discussed “computer system” in Baal-Haness (*see supra* “automatically generating and storing”) to predictably provide enhanced and beneficial features like those described in Appelman as discussed above. (PA-DEC, para. 166.) A person of ordinary skill in the art would have been motivated based on the collective teachings of Baal-Haness and Appelman to configure the above system and arrangement such that, under the combination, after the “**first user**” in Baal-Haness logs in and is assigned to the appropriate area network (AN), the “**second user**” connected to the same area network (AN) would have been informed of the presence of the “first user,” for example by showing the first user in a list or pop-up window as disclosed in Appelman. (Appelman (PA-9), 4:15-23; PA-DEC, para. 166.)

The combination would thus have rendered obvious configuring the Baal-Haness system/process so that “**with the computer system, based on the electronic indicia of the association between the first and second device identifiers,**” *i.e.*, the addition of the first user to the network IP address database for a particular area network (AN) as described in Baal-Haness, “**automatically sending an electronic transmission that causes another programmed hardware computer system to take an action... with respect to the second device,**” *i.e.*, a back-end system (such as a server provides services similar to the WhoIsHere services 330 of Appelman) automatically communicating a list of other users from the same network to a front-end system (such as interfaces services 325) (“**another programmed hardware computer system**”), which in turn sends the list to the second device for display. (PA-DEC, para. 167.)

The combination would also have rendered obvious causing another programmed hardware computer system to take an action “**based on first electronic profile data associated with the first**

device identifier.” This is because, as explained, Appelman describes features that allows the user list to be filtered based on profile data, such as gender or age. (Appelman (PA-9), 1:63-2:5.) Under the combination, therefore, the first user in Baal-Hannes would only have been displayed to the second user if the first user met the criteria specified by the second user (e.g. a male over the age of 35). In other words, the action taken with respect to the second device, i.e., the display of at least the first user, would have been **“based on first electronic profile data associated with the first device identifier,”** because profile or demographic data of the first user was used to make this determination. (PA-DEC, para. 168.)

For reasons as explained previously relied on herein, Appelman is an analogous reference in the same field as the ‘398 patent. Baal-Haness is also analogous because it describes techniques for facilitating online access between devices through a local network and the Internet. (*Id.*, para. 169.) As such, for similar reasons explained above, a person of ordinary skill in the art would have had reasons to consult and leverage teachings from Appelman in context of Baal-Haness, when contemplating the design, configuration, and implementation of features consistent with those contemplated and disclosed by Baal-Haness.

An ordinarily skilled artisan would have been amply motivated to enhance Baal-Haness to allow for automatic notification of other users logged into an area network (AN) website. As noted, Baal-Haness discloses the ability of users in an area network (AN) to participate in chat room or instant messaging exchanges. (Baal-Haness (PA-10), [0041]-[0043]; Baal-Hanes Provisional (Ex. PA-11), [0010]-[0011].) These features would have benefited from the features taught by Appelman by notifying users of the area network (AN) who are available for interaction. (PA- DEC, para. 170; Appelman (Ex. PA-9), 4:15-23.) Appelman, as noted, confirms that it is specifically adaptable to chat room systems. (Appelman (Ex. PA-9), 2:30-33 (“The online context 115 may be... [a] chat-room....”).)

An ordinarily skilled artisan would have also been motivated to use demographic information of the first user (**“first electronic profile data associated with the first device identifier”**) to decide whether to inform the second user of the first user’s presence. As explained for SNQP 3, Appelman provides an express motivation by explaining that identifying users who have “a common age grouping or

common demographic identifier” can provide a “more focused and relevant disclosure” to the user.

(Appelman (PA-9), 3:25-32; PA-DEC, para. 171, 141.)

This is further enhanced by the fact that an area network (AN) in Baal-Haness would have, in certain configurations, included a large number of users. (PA-DEC, para. 171 (citing Baal-Haness (Ex. PA-10), [0044]-[0045]).) Appelman’s targeting features would have allowed a user of Baal-Haness to locate and focus its attention on other users in the area network who have common or desired characteristics. (PA-DEC, para. 171.)

For similar reasons discussed above, an ordinarily skilled artisan would have been motivated to implement the server in Baal-Haness into one or more “front-end” and “back-end” computer systems, to improve efficiency and reduce performance bottlenecks. (PA-DEC, para. 139.) As noted, Appelman itself provides an express motivation to adopt such an architecture. (Appelman (Ex. PA-9), 7:22-28.) And as explained above, a skilled artisan would also have been motivated to adapt the back-end to send the user list to the front-end “automatically,” similar to that as disclosed in Appelman, to provide a current identification of connected users. An ordinarily skilled artisan would have had more than a reasonable expectation of success in achieving such configurations/implementations, especially since the above-modifications would have involved the use of known technologies and techniques, like those taught by Baal-Haness and Appelman. (PA-DEC, para. 173, 142.)

Appelman is determined herein to be relevant prior art due to either being in the same field of endeavor or being reasonably pertinent to the particular problem with which the Applicant was faced. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). For instance, a person of ordinary skill in the art would have had reasons to consider the teachings of Appelman in context of Baal-Haness modified system/process given all are analogous references in the field of providing online access to information over the Internet and/or local networks. A person of ordinary skill in the art would have had reasons to consider the teachings of Appelman in context of the above-discussed Baal-Haness system/process given Appelman is an analogous reference in the same field of providing techniques for facilitating online access between devices through a network. (Ex. PA-DEC, para. 138.) Appelman

would also have been reasonably pertinent to a number of problems facing the inventors of the '398 patent (and a person of ordinary skill in the art at the time), including how to differentiate devices connected to a common local network using IP addresses and enable those devices to communicate with servers over the Internet. (*Id.*) Further, Appelman would also have been reasonably pertinent to a number of problems facing the inventors (and of a person of ordinary skill in the art), including determining an online context for a user (such as being logged-in) and taking action in response to that determination and based on user profile information. (*Id.*) The level of ordinary skill in the art is shown by the applied art herein. Since Baal-Hannes and Appelman each regard a method for providing online access to information over the Internet and/or local networks, in consideration consistent with US Supreme Court decision in KSR that 'known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations are predictable to one of ordinary skill in the art', in this case, it would have been obvious to an artisan to apply **“with the computer system, based on the electronic indicia of the association between the first and second device identifiers, automatically sending an electronic transmission that causes another programmed hardware computer system to take an action, based on first electronic profile data associated with the first device identifier, with respect to the second device, which is indicated at the time of the action by the second device identifier”** as amply disclosed by Appelman to improve the method of Baal-Hannes to produce the expected result that “may improve the ability of the dynamic user identification system 320 to serve the many users of a large scale network such as the Internet; in other words, the front-end/back-end structure may improve the scalability of the dynamic user identification system 320” (Appelman (Ex. PA-9), 7:22-28), and that identifying users who have “a common age grouping or common demographic identifier” can provide a “more focused and relevant disclosure” to the user. (Appelman, 3:25-32.) An ordinarily skilled artisan would have been motivated to enhance Baal-Hannes with this feature as described in Appelman to allow users to focus attention on other users in the vicinity-based group who have certain desired or common characteristics. (PA-DEC, para. 141.) And finally, an ordinarily skilled artisan would have had more than a reasonable expectation of success, as the

disclosures in Baal-Hannes and Appelman describe techniques that were known well and were fully enabling. (Ex. PA-DEC, paras. 166-173, 139-142.)

Accordingly, for the reasons explained, the Baal-Haness-Appelman combination discloses or suggests, and renders obvious, **“with the computer system, based on the electronic indicia of the association between the first and second device identifiers, automatically sending an electronic transmission that causes another programmed hardware computer system to take an action, based on first electronic profile data associated with the first device identifier, with respect to the second device, which is indicated at the time of the action by the second device identifier,”** as recited in limitation 1(c).

In IPR2022-00773, Patent Owner argued that because the user “enter[s] a username and click[s] on the login button,” Baal-Haness allegedly does not teach or suggest automatically “recogniz[e] that each of the first and second devices was connected, independently of the other, to a common local area network,” and “generat[e] and stor[e] electronic indicia of an association between the first device identifier and an electronic identifier of a second device.” IPR2022-00773, Paper No. 13 at 36-43. But, for reasons similar to those explained by the Board in its institution decision, such a position would be contradicted by the teachings and suggestions of Baal-Haness and Appelman, and in context of the above modification and combination that predictably would have led to the features that meet limitation 1(c). See IPR2022-00773, Paper No. 6 at 26-27 (recognizing that in an asserted combination concerning the same features recited in limitation 1(c), the “recognizing,” “generating,” and “storing” steps occur “after receiving a login request”).

Claim 2: The method of claim 1 **wherein the electronic association is recognized based on a common IP address, or portion thereof, wherein network traffic is routed via the common IP address for each of the first and second devices when each is connected to the local area network.**

Lacking evidence to the contrary, this limitation is disclosed by the combination of Baal-Haness (PA-10) with Appleman (PA-9) for facts previously discussed above as stated next. As explained above, the content server in Baal-Haness recognizes the claimed electronic association based on two or more computers having the IP address associated a particular area network (AN). (Baal-Haness (Ex. PA-10), Fig. 3 (“Does AN address exist?... Yes... User joins AN group...”), [0039] (“3. The user’s network IP address is automatically sent to the application... server [;] 4. If there is a database for that IP address, the username is added to that database.”).) The server in Baal-Haness, in other words, creates the claimed electronic association by storing the usernames associated with the first and second devices in the common database assigned to the network IP address used by both devices. It thus would have been understood and apparent to an artisan that, in order to store the usernames in the same database based on a particular network IP address, the two devices would have been using the same network IP address. The electronic association would thus have been “recognized based on a common IP address, or portion thereof.” (Ex. PA-DEC, 175.)

The remaining features of claim 2 (“**wherein network traffic is routed via the common IP address for each of the first and second devices when each is connected to the local area network,**”) adds nothing of patentable significance in context to the above Baal-Haness combined with Appelman (see similar discussion above regarding claim 2). Indeed, in any IP-based network (such as the Internet used in Baal- Haness), devices communicate with remote servers over the internet using their IP addresses. (Ex. PA-DEC, para. 175.) Baal-Haness states, for example, that when a computer connects to the website, “[t]he user’s network IP address is automatically sent to the application... server.” (Baal-Haness (Ex. PA-10), para. 0039 (step 3).) It thus would have been understood to an ordinarily skilled artisan, if not evident in the combined system, to configure the Baal-Haness as combined with Appelman such that network traffic is routed to computers within an area network “**via the common IP address for each of the first and second devices.**” This routing would have necessarily occurred, “**when each device is connected to the local area network,**” since the computers in the modified Baal-Haness system would

be understood to be connected to the local area network (see Baal-Haness (Ex. PA-10), Fig. 1) in order to initiate and receive network traffic with the website over the Internet. (Ex. PA-DEC, 175.)

Accordingly, for reasons explained the above Baal-Haness-Appelman combination discloses or suggests “**the electronic association is recognized based on a common IP address, or portion thereof, wherein network traffic is routed via the common IP address for each of the first and second devices when each is connected to the local area network,**” as recited in claim 2.

Conclusion

16. All correspondence relating to this ex parte reexamination proceeding should be directed:

By Mail to:

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Central Reexamination Unit
Commissioner for Patents
United States Patent & Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

By FAX to:

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Any inquiry by the patent owner concerning this communication or earlier communications from the Legal Advisor or Examiner, or as to the status of this proceeding, should be directed to the Central Reexamination Unit at telephone number (571) 272-7705.

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