

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

VIANT TECHNOLOGY LLC,
Petitioner,

v.

ALMONDNET, INC.,
Patent Owner.

Patent No. 7,861,260
Filing Date: April 17, 2007
Issue Date: December 28, 2010
Title: TARGETED TELEVISION ADVERTISEMENTS BASED ON ONLINE
BEHAVIOR

Inter Partes Review No.: IPR2025-00129

**PETITION FOR *INTER PARTES* REVIEW UNDER 35 U.S.C. §§ 311-319
AND 37 C.F.R. § 42.100 *et seq.***

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EXHIBITS

- Ex. 1001: U.S. Pat. No. 7,861,260 (“the ’260 Patent”)
- Ex. 1002: Expert Declaration of Mr. David B. Lett
- Ex. 1003: Curriculum Vitae of Mr. David B. Lett
- Ex. 1004: Certified File History of U.S. Pat. No. 7,861,260
- Ex. 1005: Excerpts from Case Docket of *Meta Platforms Inc. v. AlmondNet Inc. et al.*, IPR2022-00773 (March 28, 2022)
- Ex. 1006: U.S. Pat. App. Pub. No 2007/0283384 (“Haeuser”)
- Ex. 1007: Annotated Version of U.S. Pat. App. Pub. No. 2008/0113674 (“Baig”)
- Ex. 1008: U.S. Prov. Pat. App. No. 60/858,204 (“Baig Provisional”)
- Ex. 1009: Redline document showing differences between Baig (Ex. 1040) and Baig Provisional (Ex. 1008)
- Ex. 1010: Reserved
- Ex. 1011: U.S. Pat. App. Pub. No. 2006/0128364 (“Costa”)
- Ex. 1012: Excerpts from E. D. Zwicky et al., *Building Internet Firewalls* (2d ed. 2000) (“Zwicky”)
- Ex. 1013: U.S. Pat. App. Pub. No. 2004/0076180 (“Satapati”)
- Ex. 1014: U.S. Pat. App. Pub. No. 2006/0271690 (“Banga690”)
- Ex. 1015: Independent Claim Comparison Chart for U.S. Pat. No.

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- Ex. 1016: U.S. Pat. App. Pub. No. 2008/0201731 (“Howcroft”)
- Ex. 1017: U.S. Pat. App. Pub. No. 2007/0025306 (“Cox”)
- Ex. 1018: Korean Pat. App. Pub. No. 2006-0065969 (“Han”)
- Ex. 1019: Certified Translation of Korean Pat. Pub. App. No. 2006-0065969 (“Han”)
- Ex. 1020: U.S. Pat. App. Pub. No. 2007/0180147 (“Leigh”)
- Ex. 1021: U.S. Pat. App. Pub. No. 2003/0083938 (“Smith”)
- Ex. 1022: U.S. Pat. App. Pub. No. 2006/0274741 (“Wing”)
- Ex. 1023: U.S. Pat. App. Pub. No. 2002/0124050 (“Middeljans”)
- Ex. 1024: U.S. Pat. App. Pub. No. 2005/0096980 (“Koningstein”)
- Ex. 1025: U.S. Pat. App. Pub. No. 2008/0263633 (“Banga633”)
- Ex. 1026: U.S. Pat. No. 6,415,322 (“Jaye”)
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- Ex. 1028: U.S. Pat. App. Pub. No. 2006/0230427 (“Kunkel”)
- Ex. 1029: U.S. Pat. App. Pub. No. 2007/0217436 (“Markley”)
- Ex. 1030: U.S. Pat. App. Pub. No. 2002/0145621 (“Nguyen”)
- Ex. 1031: U.S. Pat. No. 6,543,052 (“Ogasawara”)
- Ex. 1032: U.S. Pat. No. 6,282,548 (“Burner”)
- Ex. 1033: U.S. Pat. No. 6,036,601 (“Heckel”)

- Ex. 1034: U.S. Pat. App. Pub. No. 2005/0096978 (“Black”)
- Ex. 1035: Request for Comments: 1631, “The IP Network Address Translator (NAT)” (1994) (“RFC 1631”)
- Ex. 1036: Hagel *et al.*, *Net Worth: Shaping Markets When Customers Make the Rules* (1999)
- Ex. 1037: Zeff *et al.*, *Advertising on the Internet* (2nd ed. 1999) (“Zeff”)
- Ex. 1038: U.S. Pat. No. 8,280,758 (“the ’758 Patent”)
- Ex. 1039: Request for Comments: 793, “Transmission Control Protocol” (1981) (“RFC 793”)
- Ex. 1040: U.S. Pat. App. Pub. No. 2008/0113674 (“Baig”)
- Ex. 1041: Excerpts from *AlmondNet, Inc. v. Freewheel Media, Inc.*, No. 1:23-cv-00220-MN (D. Del.) (“Corresponding District Court Litigation”)
- Ex. 1042: U.S. Pat. No. 9,036,981 (“Barton”)
- Ex. 1043: U.S. Pat. No. 7,634,789 (“Gerba”)
- Ex. 1044: U.S. Pat. App. Pub. No. 2002/0174444 (“Gatto”)
- Ex. 1045: U.S. Pat. App. Pub. No. 2002/0083445 (“Flickinger”)
- Ex. 1046: U.S. Pat. App. Pub. No. 2008/0040742 (“Howcroft742”)
- Ex. 1047: Jakob Nielsen, *Request Marketing* (Oct. 2000),
<https://www.nngroup.com/articles/request-marketing/>

- Ex. 1048: Bettina Fabos, *The Commercial Search Engine Industry and Alternatives to the Oligopoly* (Mar. 2006) EastBound Journal
- Ex. 1049: Susan Young, *Getting the Message: How the Internet is Changing Advertising* (May 16, 2000), <https://hbswk.hbs.edu/item/getting-the-message-how-the-internet-is-changing-advertising>
- Ex. 1050: U.S. Pat. App. Pub. No. 2002/0099842 (“Jennings”)
- Ex. 1051: U.S. Pat. App. Pub. No. 2002/0123928 (“Eldering928”)
- Ex. 1052: Request for Comments: 2663, “IP Network Address Translator (NAT) Terminology and Considerations” (1999) (“RFC 2663”)
- Ex. 1053: ANSI/IEEE Std 802.11, 1999 Edition, “Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications”
- Ex. 1054: Excerpts from Harley Hahn, *The Internet Complete Reference* (2d ed. 1996) (“Hahn”)
- Ex. 1055: U.S. Patent Application Publication No. 2005/0108418 (“Bedi”)
- Ex. 1056: U.S. Patent Application Publication No. 2004/0177147 (“Joshi”)
- Ex. 1057: Excerpts from Downing *et al.*, *Dictionary of Computer and Internet Terms* (8th ed. 2003)
- Ex. 1058: Excerpts from Newton, *Newton's Telecom Dictionary* (21st ed.

2005)

Ex. 1059: Declaration of Dr. Sylvia Hall-Ellis

Ex. 1060: Institution Decision from *Meta Platforms, Inc. f/k/a Facebook, Inc. v. Intent IQ, LLC et al.*, IPR2023-01281, Paper 7 (February 21, 2024)

Ex. 1061: U.S. Pat. No. 6,427,170 (“Sitaraman”)

I. INTRODUCTION

Viant Technology LLC (“Petitioner”) petitions for *inter partes* review and cancellation of claims 1, 6, 8-10, 21, 23-26, 29-34, 38-40, 42-43, 45-53, 55, 59-61, 63-70, 76, 81-82, 85, 87-89, 100, 102-104, 107-115, 117, 120-124, 126, 129-136, 142, 145-147, and 149-150 of U.S. Patent No. 7,861,260 (“the ’260 Patent”) (Ex. 1001). The ’260 Patent claims techniques for associating IP addresses and/or other device identifiers to facilitate targeted advertising. In allowing these claims, the Examiner noted that no references teach “electronically associating an online access IP address of a user and a set-top box IP address of that user based on a common IP address, wherein the network traffic is routed via the common IP address to both an online user interface device and a set-top box of that user.” Ex. 1004, 376. As the prior art demonstrates, the Examiner was wrong: the claims recite well-known technology, and are unpatentable.

II. OVERVIEW OF THE ’260 PATENT

A. Brief Description

The ’260 Patent describes a method for delivering targeted television advertisements to a user’s set-top box (STB) based on user profile information derived from online activity from an associated user device. Ex. 1001, Abstract, 1:7-11, 7:59-65. The user device and STB are associated based on a common IP address

and a shared modem. Ex. 1001, 1:29-53, 2:61-3:3, 9:28-32, 9:35-50, 10:16-29, 12:54-13:15; Ex. 1002, ¶¶29-40.

B. Prosecution History

The application that led to the '260 Patent was filed on April 17, 2007. The '260 Patent issued after Applicant responded to a first office action, adding an additional 101 claims, amending independent claims to specify associating devices “based on a common IP address” through which network traffic to the devices is routed, and distinguishing Haeuser (Ex. 1006) on that basis. Ex. 1004, pp. 312-13; Ex. 1002, ¶¶41-52.

III. OVERVIEW OF PRIOR ART

The relied-upon prior art relates to targeted advertising and associating device IP addresses/identifiers, and therefore is analogous. Ex. 1059 (librarian declaration addressing authenticity and public availability of Exs. 1012, 1035-1037, 1039, 1052-1054).

Reference	Qualifications	Basis (pre-AIA)	Expert Declaration (Ex. 1002)
Baig	Priority Filing 11/10/2006. All citations to Baig are supported in the Baig Provisional (Ex. 1008). <i>See</i> Ex. 1009 (redline compare between Baig and Baig Provisional). The corresponding support from the Baig Provisional is identified by the annotated in Baig (Ex. 1007). Baig's provisional supports at least one claim in Baig. <i>See Dynamic Drinkware, LLC v. National Graphics, Inc.</i> , 800 F.3d 1375, 1381 (Fed. Cir. 2015); <i>see</i> Ex. 1007; Ex. 1002, ¶¶93-95.	§102(e)	¶¶93-100
Costa	Published 6/15/2006	§§102(a)/(e)	¶¶106-108
Zwicky	Published 6/2000	§102(b)	¶¶109-111
Banga690	Filed 5/11/2006; Published 11/30/2006	§§102(a)/(e)	¶¶101-105
Howcroft	Filed 2/15/2007	§102(e)	¶¶112-115
Leigh	Filed 2/1/2006; Published 8/2/2007	§102(e)	¶¶126-128
Smith	Filed 10/29/2001; Published 5/1/2003	§102(b)	¶¶116-119
Middeljans	Filed 2/7/2002; Published 9/5/2002	§102(b)	¶¶129-131
Koningstein	Filed 12/31/2003; Published 5/5/2005	§102(b)	¶¶132-134
Banga633	Filed 9/28/2006; Published 10/23/2008	§102(e)	¶¶138-140

**IV. IDENTIFICATION OF CHALLENGE PURSUANT TO 37
C.F.R. § 42.104(b)**

Petitioner requests review of the Challenged Claims on the following grounds.

Ground	Basis for Challenge under §103	Claims Challenged
A	Baig, Costa, Zwicky	1, 8-9, 21, 24, 26, 31-32, 34, 38-39, 42, 53, 55, 61, 69, 76, 87-88, 100, 103, 117, 121-122, 135, 142, 145-147
B	Baig, Costa, Banga690	1, 8-9, 21, 24, 26, 31-32, 34, 38-40, 42, 45-48, 52-53, 55, 61, 63-65, 68-69, 76, 87-88, 100, 103, 107-110, 114-115, 117, 121-122, 129-131, 134-135, 142, 145-147
C-K	<i>Reserved</i>	
L	Baig, Costa, Zwicky, Howcroft	6, 8-10, 21, 23, 32, 51, 55, 59-60, 67, 76, 81-82, 85, 87-89, 100, 102, 113, 117, 120, 123-124, 126, 133, 142, 145, 149-150
M	Baig, Costa, Banga690, Howcroft	6, 8-10, 21, 23, 32, 51, 55, 59-60, 67, 76, 81-82, 85, 87-89, 100, 102, 113, 117, 120, 123-124, 126, 133, 142, 145, 149-150
N	Baig, Costa, Banga690, Smith	49-50, 66, 70, 111-112, 132, 136
O	Baig, Costa, Zwicky, Middeljans	33
P	Baig, Costa, Banga690, Middeljans	25, 29, 33, 104
Q	Baig, Costa, Banga690, Middeljans,	30, 43

	Koningstein	
R	Baig, Costa, Banga690, Banga633	50, 70, 112, 136

This petition is supported by the expert testimony of David Lett and Exhibits 1001-1061. Ex. 1002, ¶¶1-743.

V. THE BOARD SHOULD NOT DISCRETIONARILY DENY INSTITUTION

A. 314(a) Discretion Does Not Apply

The *Fintiv* factors favor institution.

Factor one is neutral. Petitioner has not sought a stay, but nor has the court denied a stay or indicated that it would not consider a stay.

Factor two favors institution. Trial is set for March 16, 2026. Petitioner is requesting joinder to IPR2024-00422 that has a final decision deadline of October 2, 2025—almost 6 months *before* the scheduled district court trial.

Factor three does not warrant denial. Claim construction has not begun and fact discovery does not close until December 2024.

Factor six favors institution. Petitioner presents compelling unpatentability challenges, as the same grounds of unpatentability were instituted in IPR2024-0422.

B. 325(d) Discretion Does Not Apply

The grounds raised by this Petition are not the same or substantially the same as the art (*e.g.*, Haeuser) and arguments raised during prosecution. To the extent that they are, Examiner erred by not recognizing that features (electronic association based on common IP address) purportedly missing from Haeuser were well-known (which, *e.g.*, Baig and Banga⁶⁹⁰ show).

VI. LEVEL OF ORDINARY SKILL

A person of ordinary skill in the art (a “POSA”) at the time of the alleged invention would have had a degree in computer or electrical engineering, computer science, or a similar discipline, and two years of experience with the design and/or implementation of network-based content delivery systems and Internet advertising. Ex. 1002, ¶¶144-149. Petitioner’s expert, David Lett, at least meets the level of skill of a POSA. Ex. 1002, ¶¶4-16.

VII. CLAIM CONSTRUCTION

Petitioner applies the plain meaning for all claim terms. No express construction is necessary at this time. *Id.*, ¶150.

VIII. SPECIFIC GROUNDS FOR UNPATENTABILITY

A. Grounds A-B: Obviousness in view of Baig-Costa-Zwicky and/or Baig-Costa-Banga⁶⁹⁰

The ’260 Patent includes four independent claims—claims 1, 26, 38, and 61. As discussed below, these claims only differ in trivial ways (*see* Ex. 1015) and are

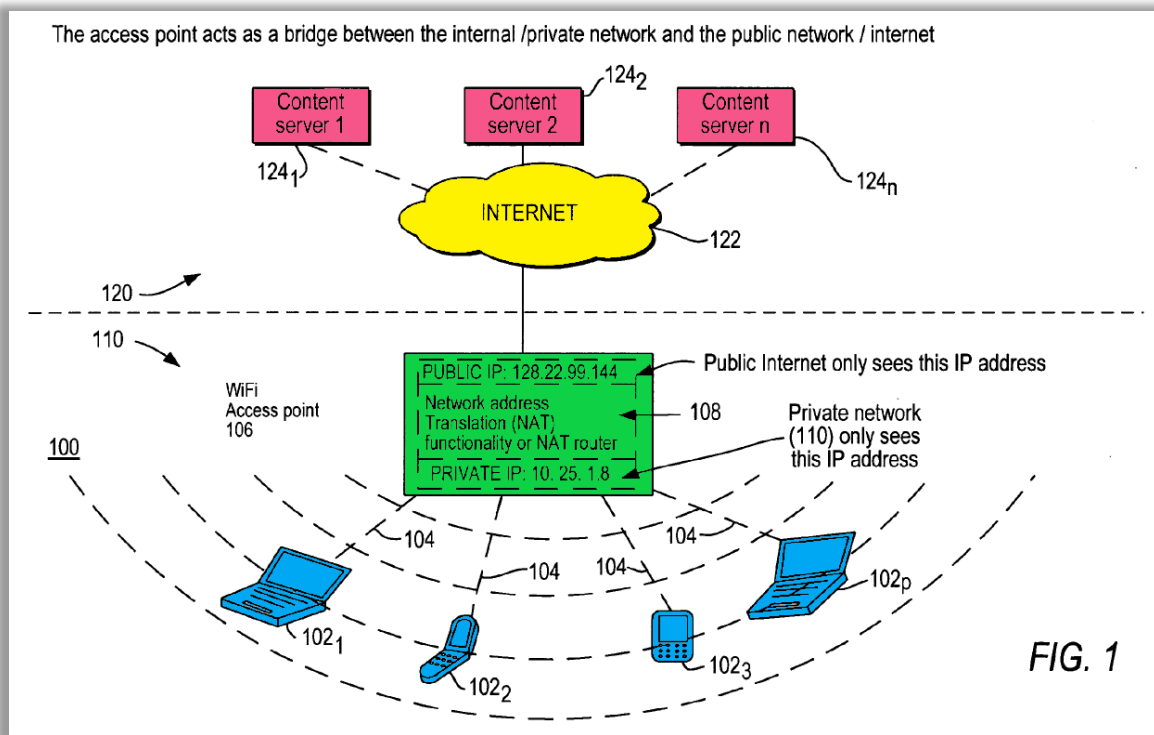
thus unpatentable in view of Baig-Costa-Zwicky and/or Baig-Costa-Banga⁶⁹⁰ for substantially the same reasons.

1. Independent Claim 1

a. [1pre]

If limiting, Baig teaches this. Baig's Figure 1 (annotated below) illustrates a system with computing devices 102_p (**blue**) that connect to content servers 124_n (**pink**) over the Internet 122 (**yellow**) via a shared access point (AP) 106 (**green**). Ex. 1007¹, ¶¶[0042]-[0043], [0052]-[0053], Fig. 1. WiFi hotspot 110 enables devices 102 (**blue**) to communicate with each other and content servers 124 over Internet 122 via AP 106. *Id.*, ¶¶[0042]-[0043], Figs. 1, 2.

¹ Annotated version of Baig identifying, in the margins, equivalent support in the Baig Provisional (Ex. 1008).

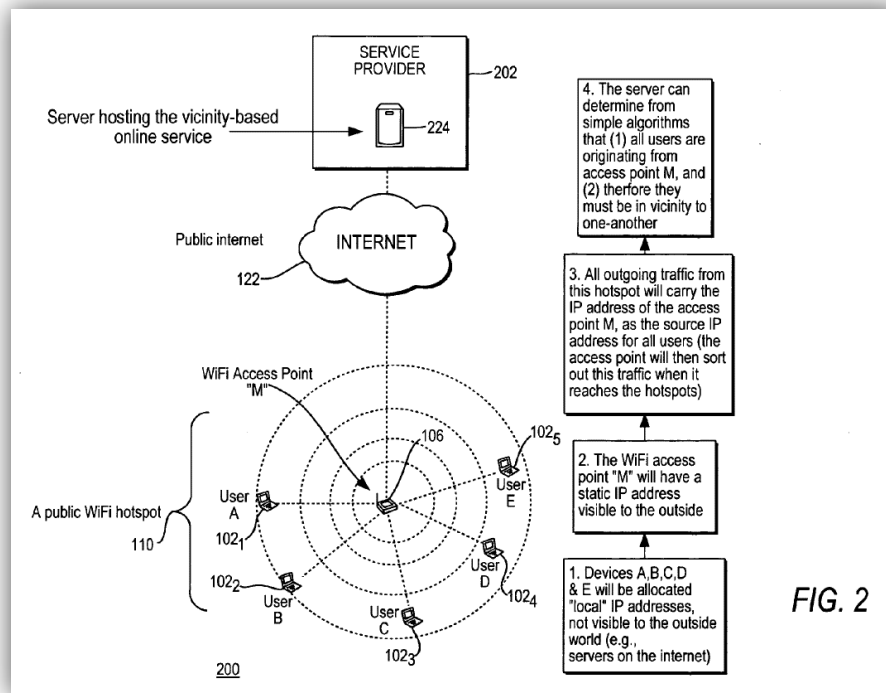


Ex. 1007, Fig. 1 (annotated)

Any or all of these content servers, which “include[] at least one processor, memory and support circuitry for running programs” discloses the recited “programmed hardware computer system” of [1pre]. *Id.*, ¶[0052]; Ex. 1002, ¶¶153-155, 188-190.

b. [1A]

Baig in view of Costa and Zwicky and/or Baig in view of Costa and Banga690 teach [1A]. Baig’s Figure 2 (below) depicts devices used by various individuals connected at a hotspot through a wireless AP:



Ex. 1007, Fig. 2

Baig teaches creating vicinity-based communities of individuals and their devices to offer a combination of various services² at a hotspot. Ex. 1007, ¶¶[0006]-

² A POSA would have recognized that the various VCSP services described in Baig are provided as a combination of choices available to a user through the same website. Ex. 1002, ¶192. To the extent it is argued these figures represent separate and distinct embodiments, a POSA would have found it obvious and been motivated to combine these embodiments to provide a large array of services to users via the VCSP website. *Id.*

[0012], [0038]-[0040], [0052]-[0053], [0067]-[0093], [0112]-[0113] Figs. 1, 2, 6-13. For example, network 200 includes a hotspot 110 with AP “M” 106. *Id.*, ¶[0049]. AP 106 connects mobile devices 102₁-102₅ to content server 124/224 through the Internet 122. *Id.*; Ex. 1002, ¶¶154, 191-192. Any of Baig’s devices 102 teaches an “online user interface device,” while the content server(s) teaches the “computer system.” Ex. 1007, ¶[0049]; Ex. 1002, ¶193.

Each hotspot device in Baig has an IP address, corresponding to the IP address of AP 106 (“online access IP address”), transmitted to content server 224 over Internet 122. Step 3 of Figure 2 explains that “[a]ll outgoing traffic from this hotspot will carry the IP address of the access point M, as the source IP address.” Ex. 1007, Fig. 2, ¶¶[0049]-[0051]. In short, packets sent over the Internet included an IP address of the source and destination devices. Ex. 1002, ¶194.

i. Modifying Baig to include Costa’s STB

Claim 1 requires one of the electronically-associated IP addresses to be that of a set-top box (“STB”). Baig’s devices 102 are of various types. *See* Ex. 1007, ¶[0043]. It would have been obvious to include a STB at Baig’s hotspot. Ex. 1002, ¶¶156-157, 195-197. Costa discloses hotspot-connected STBs. Ex. 1011, ¶¶[0035]-[0036], [0007], Fig. 1. For example, Costa teaches public wireless hotspots (similar to Baig’s coffee shop) having networked STBs and televisions. Ex. 1007, Abstract, ¶¶[0006], [0039], [0101]; Ex. 1011, ¶¶[0006], [0035]-[0037].

Applying Costa to Baig would result in a system with a STB connected through the common hotspot AP. In the proposed combinations, the STB would have the same common IP address as the other devices 102 at that AP (claimed “common IP address”), and thus would be included in the vicinity-based group represented by list 606 of website 600 in Baig’s Figure 6, as discussed below. Ex. 1002, ¶¶158, 198-199; Section V.A.1.b.ii; Ex. 1007, Fig. 6. Network traffic, *e.g.*, from outside of the hotspot, would be routed to both the devices 102 and the STB via the common IP address of AP 106. Ex. 1002, ¶158.

A POSA would have had the skills and motivation to incorporate a STB into Baig’s vicinity-based community service provider (VCSP) system. *Id.*, ¶¶159-165, 198. This represents the mere combination of known elements (Baig’s VCSP and Costa’s STB) according to known methods (connecting the STB to an AP) to yield predictable results (an STB connected to VCSP hotspot AP 106 along with other devices 102 to participate in VCSP services). *Id.*, ¶162. Baig and Costa are both directed to wireless hotspot systems that provide Internet access to various computing devices. *Id.*; Ex. 1007, ¶¶[0006], [0039], [0101]; Ex. 1011, ¶¶[0035]-[0037]. Costa teaches known techniques of connecting a STB to an AP using communication protocols such as 802.11 Wi-Fi, which is also used in Baig. Ex. 1002, ¶¶162-163; Ex. 1007, ¶¶[0043], [0049]; Ex. 1011, ¶¶[0007], [0037]. And, it was well-known to provide web-pages (including advertisements) on a STB. *See*,

e.g., Ex. 1016, ¶¶[0073], [0093], [0032]; Ex. 1002, ¶163. A POSA would be motivated to include Costa's STB because it beneficially allows customers at a public establishment to watch television or other information on an associated display. Ex. 1002, ¶160. Baig shares music, video games, and advertisements at hotspots, and a POSA would have realized a STB would beneficially provide that content for display via a television or other display. Ex. 1007, ¶¶[0054], [0062], [0090], [0094]-[0095], [0103], [0107]-[0108]; Ex. 1002, ¶¶160, 163.

Further, a POSA would have had the skills to implement the combination with a reasonable expectation of success. Ex. 1002, ¶¶164-165. It was straightforward to connect a STB to a hotspot along with various other devices. *Id.*; Ex. 1007, ¶¶[0090], [0103].

ii. Electronically Associating IP Addresses from Baig's Access Point

Baig associates all devices accessing the servers via the common IP address at the hotspot. For example, after receiving a login request from a device connected to the hotspot AP, Baig's server determines if multiple devices are connected to that same AP, as Figure 3 (step 306) illustrates. Ex. 1007, ¶[0056], Fig. 3; Ex. 1002, ¶200.

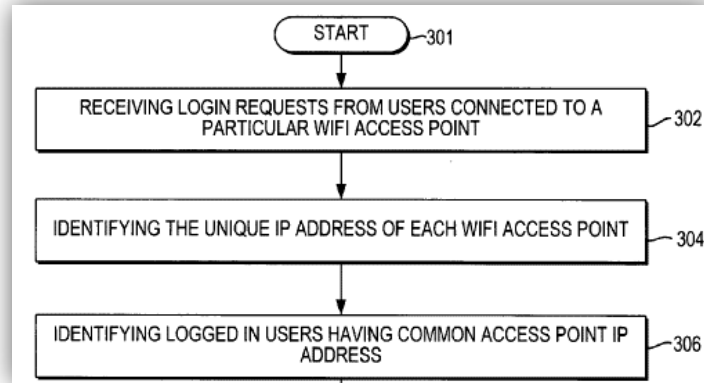
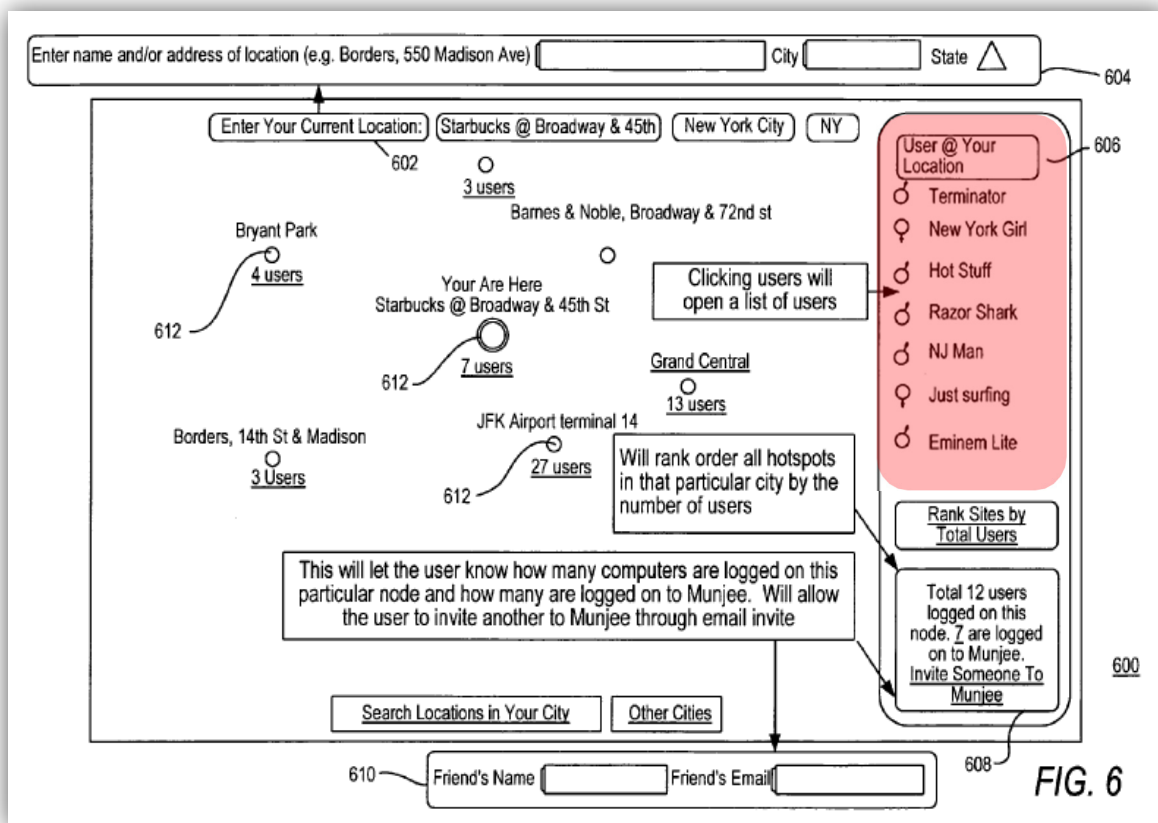


FIG. 3

Ex. 1007, Fig. 3 (partial)

By identifying all devices sharing the AP's IP address, Baig's server electronically associates IP addresses of the devices used at the hotspot. Ex. 1007, ¶[0056], Fig. 3 (Step 306). These devices include Costa's STB, which has the same IP address (claimed "set-top box IP address") as devices 102 and the AP (claimed "online access IP address"). Ex. 1002, ¶201. Accordingly, Baig's content server (claimed "computer system") electronically associates the claimed IP addresses by receiving and tracking the commonality of the IP address of the hotspot AP when each device communicates through the AP to the VCSP service. *See* Ex. 1007, Fig. 2 ("All outgoing traffic [will] carry the IP address of the access point," and illustrating outgoing traffic routed to server 224 over Internet 122); *see also id.*, ¶¶[0055]-[0057]; Ex. 1002, ¶¶166-167, 200-201.

Additionally, Baig maintains a list of devices connected to the hotspot that share a common IP address. Specifically, when the content server determines that one device has connected using the same IP address as another already-connected device, the server places both devices into a “vicinity-based” group. Ex. 1007, ¶¶[0038], [0052]. Baig’s Figure 6 illustrates a webpage 600 which displays, on a user device, a list 606 of individuals connected to the same AP. *Id.*, ¶¶[0038], [0052], [0074]-[0076], Fig. 6; Ex. 1002, ¶¶167, 202-203.



Ex. 1007, Fig. 6 (annotated)

The list generated and stored by Baig's content server identifies and associates those devices (including Costa's STB) connected using a common IP address, and is thus the result of the claimed "electronically associating [the online access and STB IP addresses] based on a common IP address." Ex. 1007, ¶¶[0038], [0043], Fig. 3; Ex. 1002, ¶¶167, 203-204; *see also* Ex. 1001, 12:54-58, 13:41-43.

Element [1A] further requires that the associated IP addresses and corresponding devices be "of [the same] user" and that the electronic association is performed "for each of a multitude of users." The '260 Patent defines "user" as encompassing *multiple* different individuals within an establishment. Ex. 1001, 8:31-53. Accordingly, multiple devices of the same individual or different individuals connected to the same AP 106 in Baig are each devices of the same "user" as defined in the '260 Patent. Ex. 1002, ¶205.

Baig teaches that multiple vicinity-based communities are created corresponding to different hotspots using the same process discussed in further detail below. Ex. 1007, ¶¶[0052]-[0054], [0059], [0061], [0121]-[0122], Fig. 3; Ex. 1002, ¶206. Accordingly, each of the vicinity-based communities in Baig is a separate "user" (which may be one or more people at a particular hotspot) and Baig teaches the same process being performed "for each of a multitude of users." *Id.*

If PO argues that claim 1's "electronic associating" requires uniquely identifying each AP-connected device, Baig discloses that AP 106 includes a

network address translation router (NAT) 108 and that AP 106 is able to perform actions that target individual devices. Ex. 1007, ¶¶[0043]-[0046], [0049]-[0051], [0089], [0095], [0104], [0124]; Ex. 1002, ¶¶168, 207-208. Accordingly, a POSA would appreciate that Baig's hotspot APs are configured to identify individual devices (*e.g.*, using NAT). Ex. 1002, ¶¶168, 207-208. Moreover, as discussed below, each of Zwicky and Banga⁶⁹⁰ teaches how devices external to an AP (*e.g.*, Baig's content servers) identify specific devices connected to the AP.

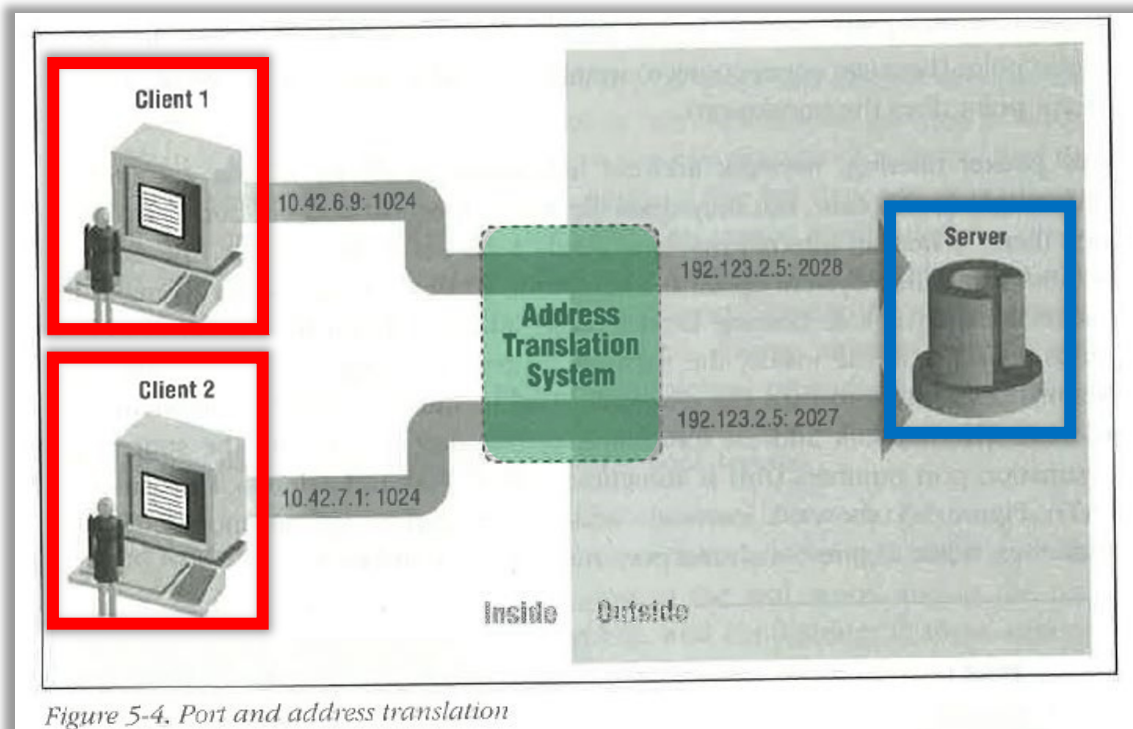
1. Zwicky's Explanation of Address Translation

Zwicky explains how NAT, as taught and used in Baig, works: each device accessing a shared AP may be individually identified using a port number in addition to the public IP address. Ex. 1002, ¶¶169, 209; Ex. 1012, 114-116; Ex. 1007, ¶¶[0043]-[0046], [0049]-[0051]; *see also* Ex. 1013, ¶¶[0004], [0011].

NAT was a widely known, industry-standard technique for allowing devices to share a single connection to the Internet. Ex. 1007, ¶¶[0043]-[0046], [0049]-[0051]; Ex. 1002, ¶¶90-92, 168; *see also* Ex. 1012, 114-115. For example, when a device in Baig wishes to *send* packets through the Internet, AP 106 replaces (translates) the "local IP address" in those outgoing packets with the "public IP address" of AP 106. Ex. 1002, ¶¶168, 210-211; Ex. 1012, 114-115; Ex. 1007, ¶¶[0043]-[0046], [0049]-[0051]. The claimed "online access IP address" and "set-top box IP address" includes at least this shared public IP address.

Zwicky details the standard NAT techniques that Baig mentions. Ex. 1002, ¶¶169-170, 210-214. As was well-known, packets sent over the Internet include an IP address of the source and destination devices, and a source and destination port number to identify a process or endpoint associated with the source and destination IP addresses. *Id.* Port numbers in TCP/IP are 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” indicates the IP address “151.207.240.107” and the port number “443.” TCP/IP port numbers (like IP addresses) have been standard information fields in TCP/IP packets since at least the 1980s. *Id.*

NAT uses “port translation” to allow multiple devices to share the common public IP address. This is graphically depicted in Figure 5-4 of Zwicky:



Ex. 1012, Fig. 5-4 (annotated)

Client 1 and **Client 2** inside the local network have locally-assigned IP addresses (*i.e.*, 10.42.6.9 and 10.42.7.1). The intermediary “**Address Translation System**” (ATS) (like Baig’s AP 106) replaces the local IP addresses for Clients 1 and 2 with the same IP address (*i.e.*, 192.123.2.5), to allow them to communicate with the **remote server**. The ATS also assigns distinct TCP/IP port numbers to these computers to differentiate them when communicating with devices on the Internet, as was well-known. Ex. 1012, 114-115; Ex. 1002, ¶¶170, 213-214; *see also* Ex. 1013, ¶[0011]; Ex. 1052, 11-12. The ATS works in the other direction (*i.e.*, from the server to clients) as well, receiving communications from external sources to the

common IP address and using the distinct TCP/IP ports to route traffic to a destination hotspot device. Ex. 1012, 115; Ex. 1002, ¶214.

Accordingly, in Baig-Costa-Zwicky, each device is identifiable by the combination of (a) the common IP address of the AP to which a mobile device (“online user interface device”) and STB are connected, and (b) TCP/IP port numbers associated with the mobile device and STB respectively, using NAT techniques as Zwicky explains. Baig’s content servers recognize and track the common IP address, thus teaching the recited “associating an online access IP address of the user and a set-top box IP address of that user based on a common IP address.” Ex. 1002, ¶215.

It would have been obvious to apply Zwicky’s port translation to Baig, predictably resulting in at least one of Baig’s content servers (“the computer system”) receiving the IP address of the AP and a port number associated with each connected device. Ex. 1002, ¶¶166-177. The references are analogous in that they teach providing shared online access to information over the Internet and/or local networks for multiple devices. Baig uses NAT (Ex. 1007, ¶¶[0043], [0046],[0049]-[0050]), and Zwicky provides pertinent details about NAT’s beneficial ability to differentiate commonly-connected devices. Ex. 1002, ¶¶171-173. A POSA would have understood Baig’s references to “NAT” as referring to the NAT techniques detailed in Zwicky, providing an express motivation to consult Zwicky. *Id.*

Zwicky's port translation techniques were an obvious way to enable the system of Baig to uniquely identify, differentiate, and properly route traffic between individual devices when communicating over the Internet and to provide Baig's services (*e.g.*, "instant messaging" between hotspot individuals, and targeted advertising). *Id.*, ¶173; Ex. 1007, ¶¶[0089], [0095], [0104], [0124].

Zwicky also provides several express motivations to use NAT port translation, explaining that it conserves IP addresses by allowing multiple devices to share a single public IP address while still being uniquely addressable. Ex. 1012, 116; Ex. 1002, ¶175; *see also* Ex. 1013, ¶[0004]. NAT also provides security benefits by facilitating greater monitoring and control of incoming network traffic from the Internet. Ex. 1002, ¶175; Ex. 1012, 116-117. A POSA would have had a reasonable expectation of success, as NAT techniques were well-known. Ex. 1002, ¶177.

2. Banga690's Device Identifiers

Banga690 also teaches device-specific identifiers. *Id.*, ¶¶216-217. Like Baig, Banga690 describes a system wherein multiple devices connected to an access point communicate with a client relationship ("CR") server that maintains information such as time and date of access, IP address and other device identifiers, and user profile information associated with the access devices. Ex. 1014, ¶¶[0023]-[0028]; Ex. 1007, ¶¶[0002], [0038]-[0052], [0063], [0076], [0089], [0093], [0101]-[0102], [0118], Figs. 1, 2; Ex. 1002, ¶¶180, 217-218. Also like Baig, Banga690's AP

provides access information and device identifiers to the server (*e.g.*, CR server) when the device connects to the AP. Ex. 1014, ¶[0038]; Ex. 1007, ¶¶[0055]-[0056], Fig. 3. The CR server also records the IP address associated with the device identifiers as well as prior IP addresses and other information. Ex. 1014, Figs. 2, 3, ¶¶[0013], [0028], [0038], [0041]-[0048], [0059]. The device identifiers may include media access control (“MAC”) addresses, international mobile station identities (“IMSI”), and international mobile equipment identities (“IMEI”). Banga690’s CR server uses the received information to generate profiles that include, *e.g.*, the device-specific identifiers. *Id.*, ¶¶[0023]-[0024], [0029], [0039]; Ex. 1053, 32.

Accordingly, in Baig-Costa-Banga690, each device connected to the same AP is identifiable by 1) the common IP address of the AP and 2) one or more device-specific identifiers such as a MAC address. Baig’s content server receives the IP address and device identifier for one device and electronically associates it with the device information for another device like a STB that has the same common IP address in order to build the VCSP-community. Ex. 1002, ¶¶178, 219. And because Banga690’s server stores prior IP addresses (*e.g.*, from previous network access), the association of devices in Baig-Costa-Banga690 may further include associating prior IP addresses used by one or more of the devices. Ex. 1007, ¶¶[0046]-[0047], [0056]-[0060]; Ex. 1002, ¶¶219-220.

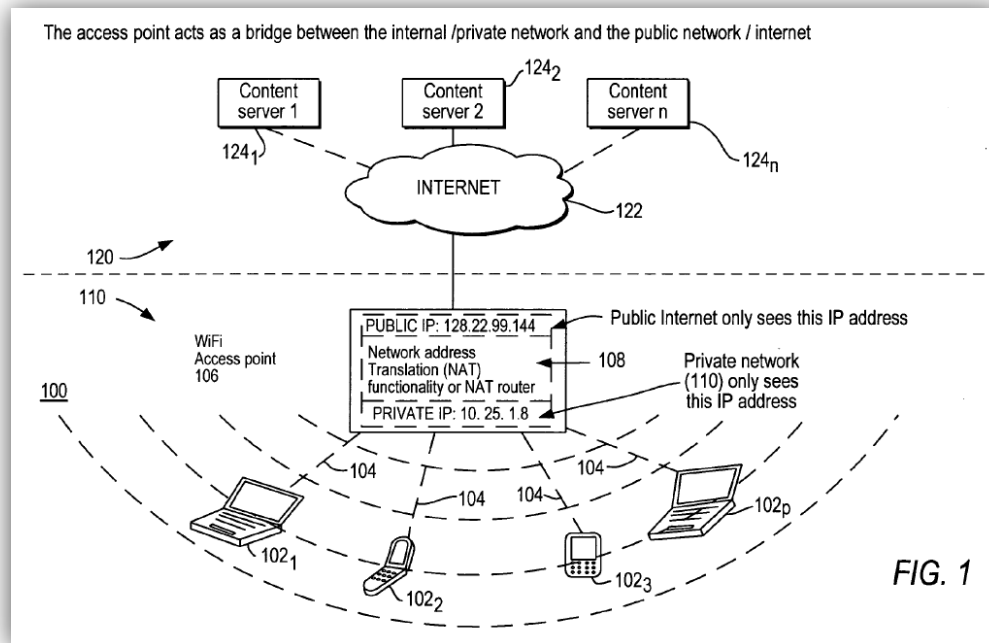
A POSA would have been motivated to modify Baig's system in this manner because doing so would facilitate Baig's services such as "selectively shar[ing] information," "instant messaging" between hotspot members, and targetingspecific individuals for advertising. Ex. 1007, ¶¶[0089], [0095], [0104], [0124]; Ex. 1002, ¶¶178-187, 219. Using a device-specific identifier such as a MAC address (even in addition to IP address and port numbers) would have allowed Baig's VCSP server to recognize devices when the access point IP address or device port changes. Ex. 1002, ¶¶181-183. The combination would allow Baig's profiling system to track device activity across different networks (*e.g.*, having different IP addresses) and use that information to better tailor advertising. *Id.* For example, Banga690 explains that the use of device identifiers improves the ability for "content providers and advertisers . . . [to] identify[], creat[e], and maintain[] relationships with their user base" across different access points. Ex. 1014, ¶[0005].

Further, a POSA would have had a reasonable expectation of success, as the disclosures in Baig and Banga690 describe techniques for tracking device identifiers such as MAC addresses that were well-known. Ex. 1002, ¶¶186-187.

iii. Network Traffic Routed via Common IP Address

Finally, Baig-Costa-Zwicky and/or Baig-Costa-Banga690 discloses "wherein network traffic is routed via the common IP address to both an online user interface device and a set-top box of that user." Figure 1, below, shows a content server ("the

computer system”) communicating through public Internet 122 via NAT router 108 at AP 106 in order to connect to local network 104:



Ex. 1007, Fig. 1

As discussed above, Baig’s content servers provide content to local devices at the hotspot. And, “[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).” Ex. 1007, Fig. 2; Ex. 1002, ¶¶220-221. Thus, in Baig-Costa-Zwicky and Baig-Costa-Banga690 network traffic is routed via the public IP address (“the common IP address”) to and from devices—including a mobile device and a STB—connected to that AP (“an online user

interface device and a set-top box of that user”), and the combinations teach the entirety of [1A]. Ex. 1002, ¶¶220-222.

c. [1B]

Baig-Costa-Zwicky and/or Baig-Costa-Banga⁶⁹⁰ teaches [1B]. As discussed above and further below, in both combinations, a content server provides targeted advertising and other shared services to devices at a public hotspot (*e.g.*, coffee shop). Specifically, the content server uses user profile information derived from online activity of each device to select targeted advertisements, and then delivers those advertisements to one or more hotspot devices, such as a STB, for display.

i. User Profile Information Derived from Online Activity from A First Online User Interface Device Via A First One of The Online Access IP Addresses of The Multitude of Users

Baig discloses creating a vicinity-based group of devices connected via the same AP. Ex. 1007, ¶¶[0038], [0052], [0074], Fig. 6; Sections V.A.1.a-b. “Profile information about ... users, such as age, gender, occupation, interests and the like are requested during the registration process” and individuals may subsequently edit their profiles or update a visibility status. Ex. 1007, ¶¶[0081], [0093]. Baig also tracks geographic location, traffic patterns, and online activities of individuals (*e.g.*, once devices have joined the hotspot). *Id.*, ¶¶[0066], [0093], [0099], [0114]-[0120], Figs. 14-19. Any or all of this information is the claimed “user profile information

derived from online activity.” *See* Ex. 1001, 5:46-67 (discussing breadth of profile information derived from online activity); Ex. 1002, ¶¶224-226.

Banga690 also teaches this. For example, Banga690 teaches determining user profile information such as preferences based on both past and present network access activity (*e.g.*, an access point from which the user is connected to a network). Ex. 1014, ¶¶[0034]-[0046], [0053]-[0060], Figs. 3, 4. It would have been obvious to implement Banga690’s user profile information determination techniques in Baig so that advertisers in Baig may receive user preference information that is inferred from repeated access from the same hotspot (*e.g.*, a particular coffee shop) and/or other access points. *Id.*, ¶[0047]. This would have been the mere use of a known technique to improve substantially similar targeted advertisement systems in the same way. Ex. 1002, ¶¶227-228.

Each of Baig-Costa-Zwicky and Baig-Costa-Banga690’s user profile information is derived from “a first online user interface device via a first one of the online access IP addresses of the multitude of users,” *i.e.* any one of the devices 102 connected to the same AP. And as discussed for [1A], traffic is routed via the public IP address to devices connected to that AP. Section V.A.1.b.

Element [1B] does not require that “a first online user interface device via a first one of the online access IP addresses of the multitude of users” be a different device from the “online user interface device” of [1A]. Nevertheless, if Patent Owner

(“PO”) argues that claim 1 requires two separate devices, Baig discloses that AP 106 connects server 124/224 to different devices 102₁ through 102₅, thereby teaching any interpretation of the “online user interface device” of [1A] and the “first online user interface device” of [1B]. Ex. 1002, ¶¶229-231; Ex. 1007, ¶¶[0044]- [0046].

ii. With the Computer System Automatically Causing a First Television Advertisement to Be Directed To a Set-Top Box For Presentation Via That Set-Top Box, Selectively

Baig discusses vicinity-based advertising in which “advertisers can target the audience of a particular hotspot” based on user profile information derived from online activity. Ex. 1007, ¶¶[0058]-[0059], [0061], [0093]-[0095].

This process of providing advertisements in Baig is performed “automatically” because the user is not required to take specific action to cause it to occur. Ex. 1002, ¶233; *see also* Ex. 1054, 48-49; Ex. 1055, ¶¶10-16, 44-47, Abstract; Ex. 1056, ¶¶5-6, 11-18, 24-25, 50-60, Abstract. Advertisements are selected and subsequently provided through the VCSP website for a particular hotspot based on the collected user profile information at that access point. Ex. 1007, ¶¶[0099]-[0101], claim 13. Baig’s Figure 22 depicts a process for acquiring VCSP user information and automatically selecting and providing advertisements, *e.g.*, stored at the content servers, based on that information (*e.g.*, at a given time and/or based on traffic patterns). *Id.*, ¶¶[0042], [0096]-[0101], Fig. 22; Ex. 1002, ¶¶232-234. Baig

also describes advertisements being provided “in real time” to a particular location. Ex. 1007, ¶¶[0105]-[0106]. Abstract, claim 13. Accordingly, Baig’s content server(s) (“the computer system”) automatically causes a first advertisement to be directed to a device connected to a particular access point. Ex. 1002, ¶¶232- 235.

In the proposed combinations, Costa’s STB is one of the devices receiving ads. Baig’s advertisements would obviously have been displayed on any suitable access device, including Costa’s STB (provided as one of several consumer electronic devices along with a television). *Id.*, ¶236. A POSA thus would have been motivated to provide advertisements to the STB (and its associated television) connected to the access point to broaden the reach of the advertising. *Id.* By providing Baig’s advertisements to a STB for presentation on a television, such advertisements constitute “television advertisements” as defined by the ’260 Patent. *Id.*; Ex. 1001, 6:37-40.

A POSA would have been motivated to direct advertisements to that STB based on the user profile information of other associated devices at that hotspot, as well. Ex. 1002, ¶237. Indeed, when directing advertising to a STB, *e.g.*, in a coffee shop, the system would naturally consider the profile information of individuals in the coffee shop, so the advertisement would likely be of interest to them. As noted above, Baig teaches the aggregation of user profile information at hotspots to better target advertisements by discerning the type of individuals (*e.g.*, similar preferences,

demographics, etc.) at a particular location. Ex. 1007, ¶¶[0096]-[0101], claim 13. An advertiser would wish to direct a hotspot-targeted advertisement to devices which would reach the widest possible audience at the hotspot, such as Costa's STB with an associated television display. Ex. 1011, ¶¶[0007], [0035]-[0036], Fig. 1; Ex. 1007, ¶[0093]. Additionally, Baig's direction of an advertisement is performed "selectively"; user profile information is used to select an advertisement targeted to the particular hotspot. Ex. 1002, ¶238. Thus, Baig-Costa-Zwicky and/or Baig-Costa-Banga690 teaches the computer system automatically causing a first television advertisement to be directed to a STB for presentation via that STB, selectively.

Finally, for the same reasons described for [1A], in Baig-Costa-Zwicky or Baig-Costa-Banga690, traffic is routed via the public IP address to devices connected to that AP, and NAT functionality/MAC address information allows Baig's system to uniquely route traffic to specific hotspot devices (claimed "the set-top box is indicated by the set-top box IP address associated with the first online access IP address."). *Id.*, ¶¶239-240.

Accordingly, Baig-Costa-Zwicky and/or Baig-Costa-Banga690 teaches [1B] and thus, claim 1.

2. Independent Claim 61

Claim 61 is largely identical to claim 1, but recites identifier-based associations for a user interface device and a STB instead of IP address-based associations. Ex. 1015. The analysis of claim 1 addresses both IP addresses as well as device identifiers of the claimed user interface device and STB, *e.g.*, Zwicky's IP address and port combination, and/or Banga690's MAC addresses. Sections V.A.1.b-c (discussing associating device-specific identifiers); Ex. 1002, ¶¶241-243; *see also* Sections V.A.24-26.

Accordingly, Baig-Costa-Zwicky and/or Baig-Costa-Banga690 renders claim 61 obvious.

3. Independent Claim 26

Claim 26 (*i.e.*, [26pre]-[26D]) is largely identical to claim 1. For example, [26pre], [26A], and [26B] substantially correspond to [1A], while [26C]-[26D] are similar to [1B] and the same teachings discussed with respect to [1A] and [1B] apply to the similar elements. Section V.A.1. Claim 26 differs from claim 1 in that it further recites: (1) “computer equipment” to “automatically” deliver electronic user profile information to the computer system that performs the electronic association of IP addresses (element [26A]), and (2) that the delivered user profile information includes identification of the first online access IP address and the time and date of the online activity (element [26C]). Ex. 1015; Ex. 1002, ¶¶244-245.

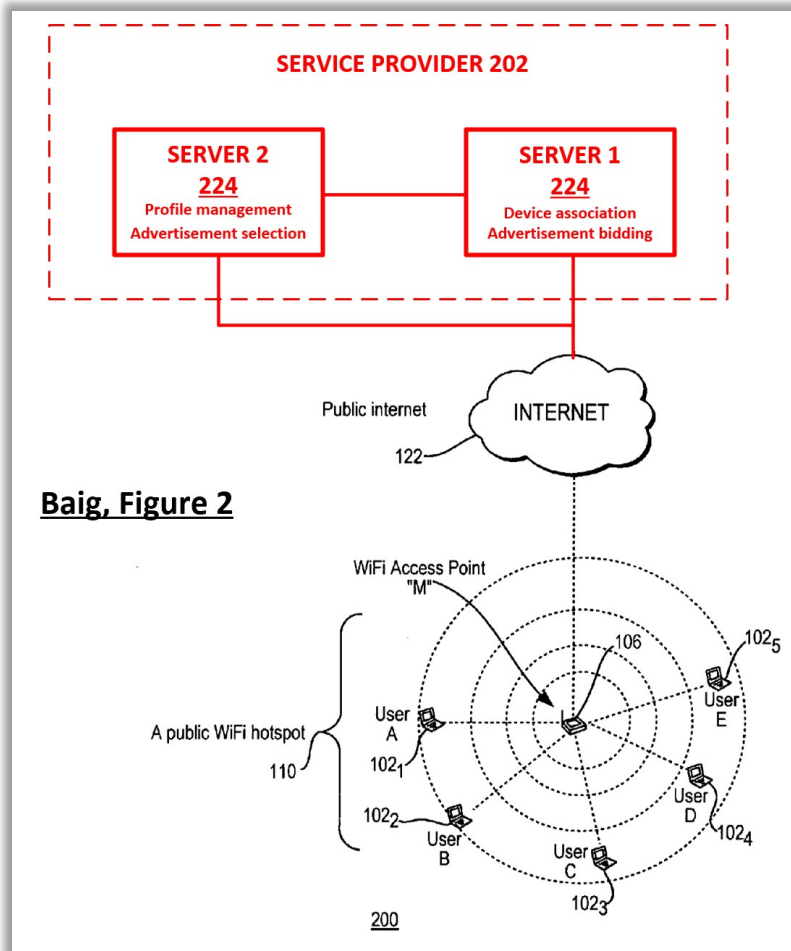
a. [26A]: “With the Computer Equipment, Automatically Electronically Delivering Electronic User Profile Information to a Computer System That Includes a Server”

As explained for [1A], Baig describes a VCSP in which user profile information (including demographic information, traffic patterns, online activities of individuals), e.g., is automatically delivered to the VCSP system (including content server 124/224) upon a user registering on the VCSP website or as a user interacts with the VCSP website. Section V.A.1.b; Ex. 1007, ¶¶[0052], [0093], [0095]-[0100]. The '260 Patent confirms that a profile provider pre-programmed to send profile information when a user interacts with an online site, like in Baig's system, is an example of “automatically” delivering profile information. Ex. 1001, 11:36-64; Ex. 1002, ¶246.

Baig teaches that user profile information is delivered “with [] computer equipment . . . to a computer system that includes a server” as claimed. For example, a POSA would have understood that Baig includes at least one computing component (e.g., at least one of servers 224) in service provider 202 (claimed “computer equipment”) to perform the user registration process (e.g., to collect user responses to its questionnaire) as discussed for Figure 5, and collect other profile information such as traffic patterns. *See* Ex. 1007, ¶¶[0070]-[0074], [0093], [0100], [0104], [0114]-[0120], [0124] Figs. 14-19. This user profile information is

automatically delivered to one or more other components of the VCSP system, including at least one of the other servers 224 in service provider 202 (claimed “computer system that includes a server”) hosting a hotspot community website (e.g., web page of Figure 6) and Baig’s advertising bidding platform. *See id.*, ¶¶[0052]-[0054], [0062], [0074], [0093], [0103]-[0105], Figs. 4-6, 21; Ex. 1002, ¶¶247-248.

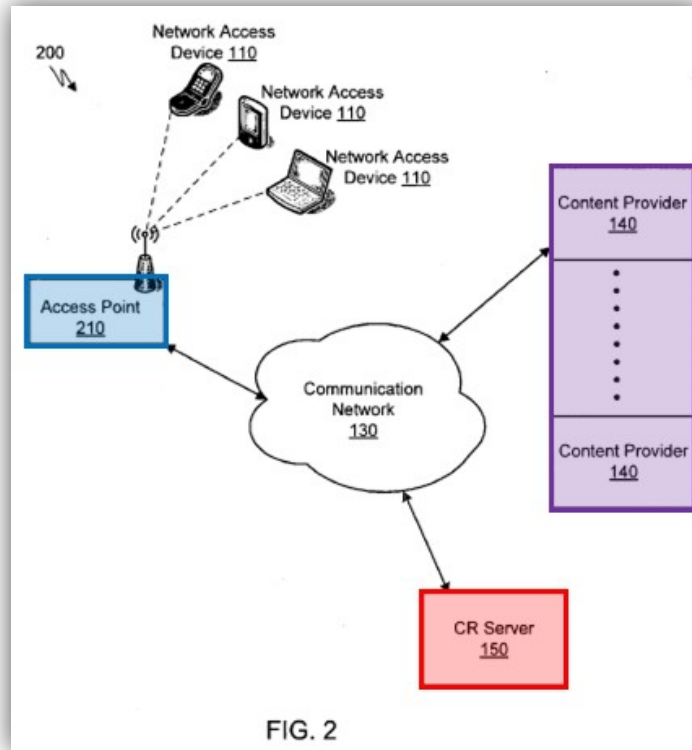
If the computer equipment and the computer system must be different devices, Baig teaches VCSP 202 includes “*at least one* content server 224.” Ex. 1007, ¶[0052] (emphasis added); *see also id.*, ¶[0053]. Accordingly, a POSA would have recognized that Baig explicitly contemplates a system where multiple computing components would be used to support the VCSP’s services, including the above-noted computer equipment (at least one component of servers 224 handling Baig’s registration and profile information management) and computer system (at least another one of Baig’s servers 224 hosting websites for accessing community services and facilitating advertisement bidding). Section V.A.1.b; Ex. 1002, ¶249. This configuration is illustrated below.



Ex. 1007, Fig. 2 (partial, annotated)

If PO argues that the claimed computer equipment must be independent of the computer system, it would have been obvious to modify Baig such that the at least one content server 224 (claimed “computer system”) automatically receives profile information from an independent computer in view of Banga690. In Banga690, CR server 150 (**red**) receives device identifiers and access information from access point 210 (**blue**), and generates and sends user profile information to an advertisement

server or a content provider 140 (purple). Ex. 1014, ¶¶[0030], [0059], Fig. 2; Ex. 1002, ¶¶250-251.

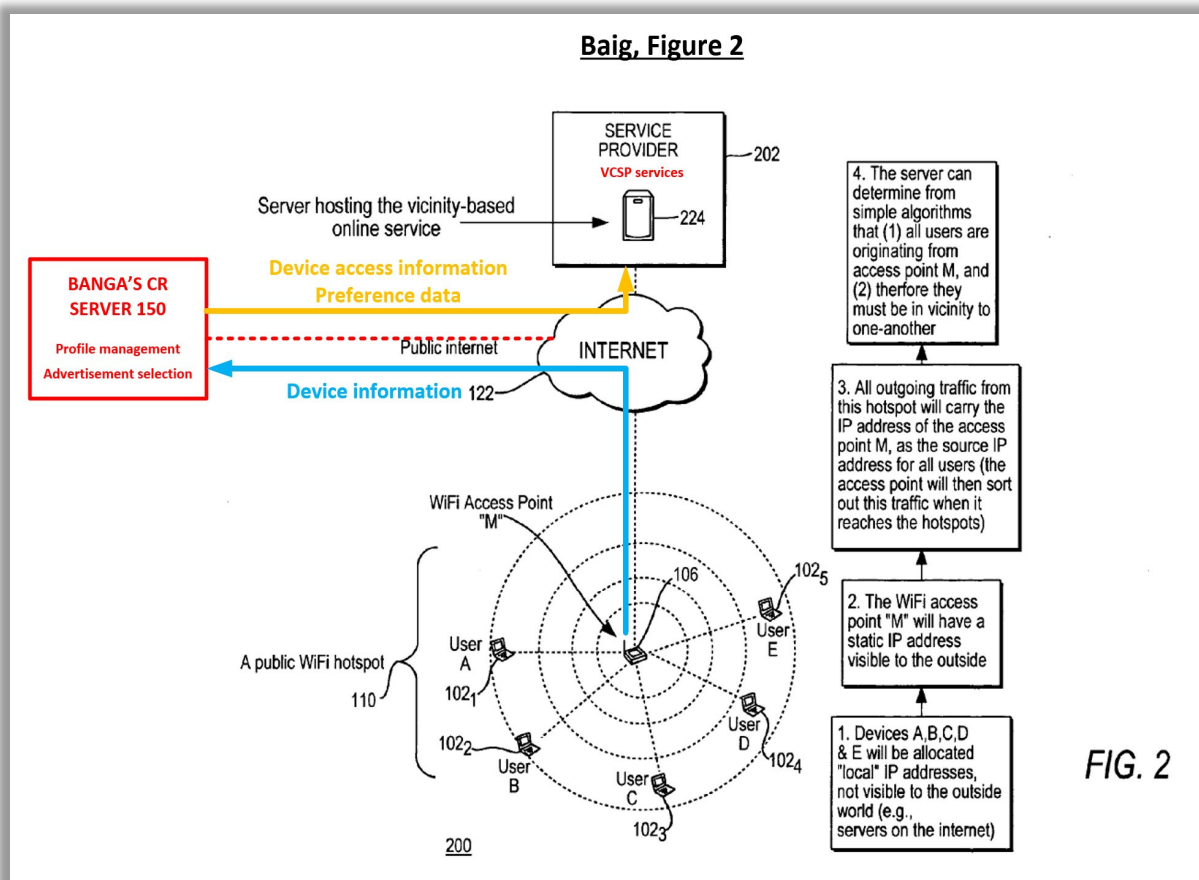


Ex. 1014, Fig. 2 (annotated)

Banga690's CR server 150 is also configured to generate profile information at least partially based on user input, in a similar manner as Baig's Figure 5 process. Ex. 1014, ¶¶[0045], [0063]-[0069], [0073]-[0075]; Ex. 1007, ¶[0093]; Ex. 1002, ¶252. Banga690 also teaches automatic delivery of profile information, *e.g.*, each time a user uses an AP. Ex. 1014, ¶¶[0038], [0040]; Ex. 1002, ¶252.

It would have been obvious to implement a separate server such as Banga690's CR server 150 ("computer equipment") in Baig's system, as shown in

the annotated figure below, to handle the collection of profile information used by Baig's at least one server 224 hosting VCSP services ("computer system") to improve processing capabilities. Ex. 1002, ¶¶253-255. This would have been the mere use of a known technique to improve similar systems in the same way. For example, Banga690 describes the well-known technique of dividing functionality between different servers for processing efficiency and load management. Ex. 1002, ¶255; Ex. 1014, ¶¶ [0059]-[0060]. Baig would have benefited from this same improvement. *Id.*



Ex. 1007, Fig. 2 (annotated with Banga690's CR Server 150)

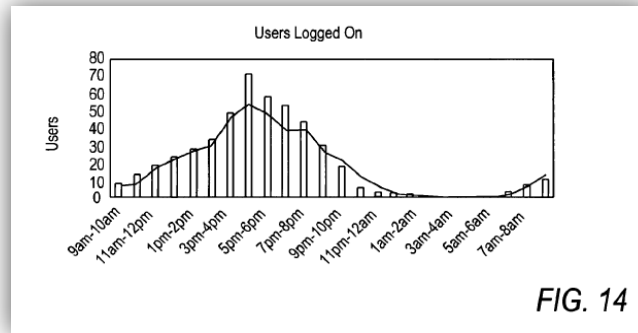
Additionally, using a separate server in Baig to provide profile information would also have been the simple substitution of one known element for another to obtain predictable results. *Id.*, ¶256. In the combination, Baig's VCSP server components handling profiling and advertisement selection and storage would have been substituted with Banga690's CR Server 150 which provides similar functionality in a separate, external server. *Id.* The replacement would have been simple and the results of the combination would have been predictable given that Banga690 explains how such a system would interoperate with content providers, which are analogous to Baig's service provider 202. *Id.*; Ex. 1014, ¶¶[0038], [0040], [0049]-[0051], [0053]-[0060], Figs. 2, 4.

b. [26C]: "Wherein Delivered User Profile Information ... Includes Identification of the First Online Access IP Address and the Time and Date of the Online Activity"

Baig teaches the claimed delivered user profile information. Baig describes that VCSP servers 224 can build a database that associates the IP addresses of each hotspot ("first online access IP address") with physical locations, and that includes monitoring activity at each hotspot, including the number of users logging in on an hourly, daily, weekly, monthly and yearly basis ("time and date of the online activity"). Ex. 1007, ¶¶[0039], [0114], Fig. 14. To generate these aggregate statistics, a POSA would have understood that Baig's above-noted computer component of at least one server 224 hosting the VCSP registration and login process would track and

provide the time and date of each user login or registration event. *Id.*; Ex. 1002,

¶¶257. Accordingly, Baig-Costa-Zwicky teaches [26C].



Ex. 1007, Fig. 14

Banga690 also describes the claimed profile information of claim 26. Banga690 describes generating profile information based on a device record, such as identification of the access point (an IP address or other access point identifier) and the date and time that a device seeks network access. Ex. 1014, ¶¶[0034], [0038]-[0039].

It would have been obvious to include additional profile information that includes Banga690's list of time and date information for IP addresses because Baig describes the desire to track statistical user information "to better assist in providing services to users," such as by improving bandwidth allocation for increased traffic loads or to better target advertisements. Ex. 1007, ¶¶[0114], [0120]; Ex. 1002, ¶¶258-259. This would have been the mere use of a known technique to improve

substantially similar network systems in the same way. Ex. 1002, ¶259. That is, tracking each date and time of user access (*i.e.*, online activity) would provide a temporal aspect to activity trends and preferences. *Id.* Using this information, advertisers may better target advertisements to times and/or dates at which there is higher likelihood of interest for a particular product or service. *Id.*; Ex. 1007, ¶¶[0114], [0120]. Accordingly, Baig-Costa-Banga⁶⁹⁰ also teaches [26C].

Accordingly, Baig-Costa-Zwicky and/or Baig-Costa-Banga⁶⁹⁰ renders claim 26 obvious. Ex. 1002, ¶260.

4. Independent Claim 38

Claim 38 is largely identical to claim 26, except that claim 38 recites device identifier-based associations, whereas claim 26 recites IP address-based associations. Ex. 1015. These are the same differences that distinguish claim 61 from claim 1.

For at least the same reasons as claims 26 and 61, Baig-Costa-Zwicky and/or Baig-Costa-Banga⁶⁹⁰ render obvious claim 38, because the prior art teaches associations based on device identifiers (*e.g.*, IP addresses, MAC addresses). Sections V.A.1.b.ii, V.A.2-3; Ex. 1002, ¶¶261-263.

5. Dependent Claims 8 and 87

Claims 8 and 87 require that the advertisement sent to the STB is selected from a group of advertisements based on user profile information. As explained

above (§V.A.1.c), in the proposed combinations, an advertisement is selected based on user profile information derived in part from user online activity. And the advertisement is selected from a group of advertisements. Ex. 1007, ¶¶[0059], [0099]; Ex. 1014, ¶¶[0034]-[0046], [0053]-[0060], Figs. 3, 4; Ex. 1002, ¶¶291-292.

Accordingly, Baig-Costa-Zwicky and/or Baig-Costa-Banga690 teaches claims 8 and 87. Ex. 1002, ¶¶290-294.

6. Dependent Claim 9

Claim 9 is dependent on claim 8, which Baig-Costa-Zwicky and Baig-Costa-Banga690 teach. Section V.A.5; Ex. 1007, ¶[0099]; Ex. 1002, ¶¶295-296. Baig also uses demographic (e.g., age, gender) or behavioral (time spent on certain webpages) profile information in advertisement selection “to attract more viewers.” Ex. 1007, ¶¶[0096], [0119]-[0120]; Section V.A.1.c. Banga690 teaches similar demographic- and behavior-based advertisement selection. Ex. 1014, ¶¶[0057]-[0060].

Accordingly, Baig-Costa-Zwicky and/or Baig-Costa-Banga690 teaches “wherein the first television advertisement is selected based at least partly on demographic or behavioral attributes included in the user profile information.” Ex. 1002, ¶¶295-298.

7. Dependent Claims 21 and 100

Claims 21 and 100 require causing “the first television advertisement to be directed without a request [] from the user’s set-top box.” Baig causes direction of

television advertisements automatically and without the user or STB having to request it. Ex. 1007, ¶¶[0096]-[0101]; Section V.A.1.c. For example, a POSA would have understood that Baig's webpage advertisements would be automatically delivered in one of two well-known ways: client request or server push. Ex. 1054, 48-49; Ex. 1002, ¶¶335-337. The push process does not require a browser request. Ex. 1054, 48-49. It would have been obvious to use one of these options, and a POSA would have been motivated to select the server push model to allow the content provider more control when and where to place an advertisement. Ex. 1002, ¶¶335-337. Thus, claims 21 and 100 are rendered obvious by Baig-Costa-Zwicky and/or Baig-Costa-Banga690.

8. Dependent Claims 24, 34, 42, and 103

Claims 24 and 103 require the computer system to “receiv[e] a revenue amount as a result of directing the advertisement,” and claims 34 and 42 similarly require the computer system to “automatically” receive this revenue. Baig discloses that “multiple advertisers can bid against each other to have their advertisements displayed.” Ex. 1007, ¶[0102]; *see also id.*, ¶¶[0011]-[0012], [0054], [0062], [0103]-[0106], Fig. 21. Thus, advertisers would pay for the display of an advertisement in Baig-Costa-Zwicky or Baig-Costa-Banga690. Ex. 1002, ¶¶344-346. Further, because Baig's VCSP automatically delivers both user profile information and advertisements based on that user profile information, a POSA would recognize that

Baig's VCSP would also automatically receive revenue from the advertisers upon the direction of the advertisement. *Id.*; Ex. 1007, ¶¶[0052], [0093].

Accordingly, Baig-Costa-Zwicky and/or Baig-Costa-Banga690 renders claims 24, 34, 42, and 103 obvious. Ex. 1002, ¶¶343-348.

9. Dependent Claims 31, 39, and 147

As discussed for [1B] and [26D], Baig's VCSP receives user profile information. Sections V.A.1.c, V.A.3; Ex. 1007, ¶¶[0061], [0093], [0096]. And in the proposed combinations, the computer equipment automatically selects and provides advertisements based on the profile information. Sections V.A.1.c, V.A.3; Ex. 1007, ¶¶[0058]-[0059], [0093]-[0095], [0099]; Ex. 1014, ¶¶[0034]-[0046], [0053]-[0060], Figs. 3-4; Ex. 1002, ¶¶358-359. Accordingly, Baig-Costa-Zwicky and/or Baig-Costa-Banga690 teaches "with the computer equipment, automatically selecting the first television advertisement based on the user profile information," as recited in claims 31, 39, and 147. Ex. 1002, ¶¶358-362.

10. Dependent Claims 32, 88, and 145

Claim 32, 88, and 145, are dependent on claims 31, 87, and 39, respectively, which are taught by Baig-Costa-Zwicky and/or Baig-Costa-Banga690 as discussed above. Sections V.A.9, V.A.5. Claims 32 and 88 are otherwise identical to claim 9, which requires selecting an advertisement based at least partly on demographic or behavioral attributes, and are taught by Baig-Costa-Zwicky and/or Baig-Costa-

Banga690 for the same reasons. Section V.A.6. Claim 145 is nearly identical to claim 9 but specifies that demographic attributes are “collected through an Internet site accessed with the online user interface device of the first user,” and is taught by Baig-Costa-Zwicky and/or Baig-Costa-Banga690 for substantially similar reasons. Section V.A.6; Ex. 1002, ¶364. And, as explained for claim 9, Baig teaches that demographic or behavioral profile information used in advertisement selection is collected through a VCSP website using an individual’s device. Ex. 1007, ¶¶[0093], [0096], [0119]-[0120]; Section V.A.6; Ex. 1002, ¶¶363-364.

11. Dependent Claim 40

As discussed for the independent claims, Baig describes “delivered user profile information of a first user of the multitude of users” and that this user profile information “includes identification of the first online IP address.” Sections V.A.1-4. Claim 40 further requires that the advertisement selection is based on profile information “not delivered to the computer system,” which is taught by Banga690. As explained for claims 26, 31, and 38, in Baig-Costa-Banga690, Banga690’s CR server teaches the claimed “computer equipment” configured to perform a registration process, determine user profile information, and select advertisements based on user profile information. Sections V.A.3, V.A.4, V.A.9. As also explained, Banga690 uses a variety of profile information to select advertisements, including information determined independently by the CR server such as weather

information. Ex. 1014, ¶¶[0044], [0058]; Sections V.A.8-9. Although this type of profile information may be abstracted out to determine the preferences of a user or group of users—which may be provided to an advertisement server or content provider—Banga690 does not teach transmitting that profile information (*i.e.*, the self-determined weather/climate information) outside of the CR server (claimed “computer equipment”). Ex. 1014, ¶¶[0057]-[0060]; Ex. 1002, ¶¶388-389. Accordingly, such profile information in Baig-Costa-Banga690 teaches the claimed “user profile information not delivered to the computer system,” as recited in claim 40. Ex. 1002, ¶¶387-389.

It would have been obvious that at least some of the profile information determined by CR server 150 (e.g., weather) would not be transmitted to the VCSP server 224 (claimed “computer system”), but still used to determine a targeted advertisement because both Baig and Banga690 provide explicit teachings of preserving user anonymity. Ex. 1007, ¶¶[0068], [0098], Fig. 5 (element 512); Ex. 1014, ¶¶[0007]-[0008]; Ex. 1002, ¶390. A POSA would have appreciated that providing less profile information would be beneficial to achieving that goal. Accordingly, in Baig-Costa-Banga690, a POSA would have found it obvious for the CR server 150 to have distributed less or abstracted out profile information (*e.g.*, information not specifically required by VCSP server 224) in order to maximize privacy. Ex. 1014, ¶¶[0057]-[0060]; Ex. 1002, ¶391. In one example, while CR

server 150 may provide network access information within delivered user profile information, as discussed for claim 26, to the VCSP server 224, CR server 150 may abstract out other information (e.g., weather) into user preference information. Section V.A.3; Ex. 1002, ¶391; Ex. 1014, ¶¶[0057]-[0060]. Rather than providing the specific weather information, CR server 150 may instead transmit the user preference information. Ex. 1002, ¶391; Ex. 1014, ¶¶[0057]-[0060]. This would have been the mere use of a known technique (profile information abstraction as taught by Banga690) to improve similar systems in the same way (improve user anonymity). Ex. 1002, ¶¶390-392. Thus, Baig-Costa-Banga690 teaches claim 40. Ex. 1002, ¶¶387-394.

12. Dependent Claims 45, 63, 107, and 129

Claims 45, 63, 107, and 129 require “the first online access IP address and the common IP address differ.” Banga690 teaches this.

As discussed for [1A], Banga690 discloses CR server generating and managing user profiles. Section V.A.1.b. Banga690’s CR server records every time a user interface device seeks network access and uses that information to generate user profile information. Ex. 1014, ¶[0038]; Ex. 1002, ¶402; *see also* Section V.A.3. As discussed for [1B], in Baig-Costa-Banga690, when the online user interface device is commonly connected to the hotspot along with a STB, the VCSP server would receive user profile information derived from online activity (e.g., network

access) of the user interface device in order to target advertisements to that hotspot, including to the STB. Section V.A.1.c; Ex. 1002, ¶403. Banga690 teaches that this online activity includes information about the device's prior network activity through other APs (e.g., other hotspots) having different IP addresses. Ex. 1014, ¶¶[0034]-[0046], [0053]-[0060], Figs. 3, 4; Ex. 1002, ¶¶403-404. Accordingly, Baig-Costa-Banga690 teaches deriving profile information from prior online activity associated with an IP address of a different previous AP ("first online access IP address of the first online user interface device"), which is different from the common IP address of the hotspot to which the device is currently connected.

The use of online activity at other APs to determine user preferences would have been beneficial since advertisers would be interested in having a more complete and accurate collection of profile information. Ex. 1002, ¶406; Ex. 1007, ¶¶[0099]-[0101], claim 13. Accordingly, a POSA would have been motivated to include Banga690's access information, including at least one prior IP address used by that device to access the internet, in Baig so that advertisements could be better targeted to individuals. A POSA would have additionally been motivated to modify Baig's VCSP server to include the information taught by Banga690 as discussed for [1A]. Section V.A.1.b. Thus, Baig-Costa-Banga690 teaches claims 45, 63, 107, and 129. Ex. 1002, ¶¶400-409.

13. Dependent Claims 46, 64, 108, and 130

Claims 46 depends from claim 45 and requires that “the first online access IP address and the set-top box IP address are associated based on online access by the first user’s online user interface device via a second online access IP address.” Baig-Costa-Banga690 teaches this. Ex. 1002, ¶¶410-416.

As discussed for claim 45, in Baig-Costa-Banga690, the VCSP server of a hotspot receives device access information of a connected user interface device, including at least one prior IP address used by that device to access the internet (claimed “first online access IP address”). *Id.*, ¶¶411-412; Section V.A.12. That prior IP address is associated with the STB’s IP address by virtue of the device later being used at the hotspot (claimed “online access”), using a second online access IP address that is the same IP address of the STB, *i.e.*, the hotspot’s common IP address. As explained for claim 45, associating the data in the profile information from the device’s earlier online sessions provides a more complete and accurate collection of profile information for targeting advertisements. Section V.A.12; Ex. 1007, ¶¶[0099]-[0101], claim 13. For similar reasons as explained for [1B], the electronic association would be based on the device’s access from the hotspot (*i.e.*, the claimed “based on online access by the first user’s online user interface device via a second online access IP address”). Accordingly, the common IP address of the hotspot

teaches both the claimed “common IP address” and the claimed “second online access IP address.”³ Ex. 1002, ¶¶412-414.

Except for dependency and the presence of “first” before “user’s online user interface device,” (claim 108) or the change from “first online access IP address/set-top box IP address” to “online user interface device identifier/set-top box identifier,” (claims 64, 130) the claims are identical. Thus, claims 64, 108, and 130 are taught by Baig-Costa-Banga690 for the same reasons as claim 46. *Id.*, ¶¶410-417.

14. Dependent Claims 47, 65, 109, and 131

Claims 47, 65, 109, and 131 require that “the second online access IP address and the common IP address are the same.” As discussed for claims 45 and 46 above, the second online access IP address is the common IP address of Baig’s VCSP server. Ex. 1002, ¶¶418-420; Sections V.A.12-13.

Accordingly, Baig-Costa-Banga690 renders claims 47, 65, 109, and 131 obvious. Ex. 1002, ¶¶418-422.

15. Dependent Claims 48 and 110

Baig-Costa-Banga690 further teaches the first online access IP and STB addresses “are associated based on a correlation between the common IP address

³ Claim 46 does not require the “common IP address” to be different from the “second online access IP address.”

and an online user interface device identifier that indicates the user's online user interface device." Banga690's user profile information tracks a device identifier and current and prior IP addresses, among other information. Ex. 1002, ¶424; Ex. 1014, ¶¶[0038], [0046]. The prior IP address (claimed "first online access IP address") is associated with the user's device because the profile information contains a device identifier (e.g., MAC address) and tracks when the device accesses the network from different IP addresses. Thus, when the device is later used at the hotspot, the device's identifier is also correlated to the common IP address of the hotspot (claimed "common IP address" and "set-top box IP address"). Because of this correlation, the prior IP address is associated with the STB IP address (also the hotspot's common IP address). As explained for claims 45, 63, 107, and 129, associating the data in the user profile from the device's earlier online sessions provides a more complete and accurate collection of profile information for targeting advertisements. Section V.A.12; Ex. 1007, ¶¶[0099]-[0101], claim 13.

Accordingly, Baig-Costa-Banga690 teaches claims 48 and 110. Ex. 1002, ¶¶423-427.

16. Dependent Claims 52, 68, 114, and 134

Claims 52 and 114 require "the set-top box is further indicated by a set-top box identifier that includes a device MAC address or a portion thereof." As discussed for claim 1, Banga690 teaches that devices may be identified using a MAC address.

Sections V.A.1.b-c; Ex. 1014, ¶¶[0024], [0032], [0054]; Ex. 1002, ¶429. Accordingly, in Baig-Costa-Banga690, and as also discussed for claim 1, a STB would also be identified by a MAC address so that messages and other communication from external systems may be specifically delivered to the STB. Sections V.A.1.b-c. Except for dependency and inconsequential wording changes, claims 68 and 134 are identical to claims 52 and 114. Ex. 1002, ¶431. Accordingly, Baig-Costa-Banga690 renders claims 52, 68, 114, 134 obvious. *Id.*, ¶¶428-431.

17. Dependent Claims 53, 69, 115, and 135

Claims 53 and 115 require “wherein the set-top box is further indicated by a set-top box identifier that includes a username, a pseudonym, or a confirmation number.” As explained for claim 1, Baig teaches that each device is represented by a username in the list 606 of associated hotspot devices and individuals. Section V.A.1.b; Ex. 1007, ¶[0076], Fig. 6. Accordingly, in Baig-Costa-Zwicky or Baig-Costa-Banga690, a STB would similarly have been indicated by a username so that the STB could be identified in the list (claimed “wherein the set-top box is further indicated by a set-top box identifier that includes a username”). Ex. 1002, ¶433.

Banga690 additionally teaches CR server maintaining device identifiers and having an authentication module to verify a user based on “username, password, or other user identifier.” Ex. 1014, ¶[0051]. Baig-Costa-Zwicky and/or Baig-Costa-Banga690 thus also teaches the STB is indicated by a “set-top box identifier that

includes a username.” Ex. 1002, ¶434. Except for dependency and inconsequential wording changes, claims 69 and 135 are identical to claims 53 and 115. *Id.*, ¶436. Accordingly, Baig-Costa-Zwicky and/or Baig-Costa-Banga⁶⁹⁰ renders claims 53, 69, 135 obvious. *Id.*, ¶¶432-436. Claim 115 depends from claim 110, and is rendered obvious by Baig-Costa-Banga⁶⁹⁰. *Id.*

18. Dependent Claims 55, 76, 117, and 142

Claims 55 and 117 require “wherein the first online access IP address and the set-top box IP address are associated before the online activity occurs.” As explained for [1B], in the proposed combinations, advertisements are sent to a STB based on the online activity of a device connected to the same hotspot as the STB. Section V.A.1.c; Ex. 1002, ¶¶443-444. The user device becomes associated with other devices at the hotspot via the common IP address (claimed “first online access IP address” and “set-top box IP address”) when the user registers at that hotspot, but before the individual browses online content at the hotspot (claimed “online activity”). Ex. 1002, ¶444; Ex. 1007, ¶¶[0066], [0076], [0081], [0093], [0094], [0096]-[0101], [0124]. Except for dependency and the change from “first online access IP address/set-top box IP address” to “online user interface device identifier/set-top box identifier,” claims 76 and 142 are identical to claims 55 and 117. Accordingly, Baig-Costa-Zwicky and/or Baig-Costa-Banga⁶⁹⁰ teaches claims 55, 76, 117, and 142. Ex. 1002, ¶¶443-447.

19. Dependent Claim 121

As discussed for claims 24, 34, 42, 103, Baig teaches “automatically receiving a revenue amount as a result of direction of the first television advertisement.” *See* Section V.A.8. Claim 121 further requires “the revenue amount is received from an advertiser that has contracted to display a TV ad to persons who have characteristics contained in the user profile information.” Baig discloses that “multiple *advertisers* can bid against each other to have their advertisements displayed at a particular location and time of day, or *based on some other end-user profile*.” Ex. 1007, ¶[0102] (emphasis added); *see also id.*, ¶¶[0011]-[0012], [0054], [0062], [0103]-[0106], Fig. 21. Accordingly, Baig-Costa-Zwicky or Baig-Costa-Zwicky-Banga690 teaches claim 121. Ex. 1002, ¶¶481-483.

20. Dependent Claim 122

Claim 122 is dependent on claim 121, but is otherwise identical to 31. Claim 122 is thus taught by Baig-Costa-Zwicky and/or Baig-Costa-Banga690 for the same reasons. Section V.A.9; Ex. 1002, ¶484.

21. Dependent Claim 146

As discussed for claims 24, 34, 42, and 103, Baig-Costa-Zwicky or Baig-CostaZwicky-Banga690 teaches “automatically receiving a revenue amount as a result of direction of the first television advertisement.” Section V.A.8. Claim 146 further requires “the revenue amount is received from an advertiser that has

contracted to display a TV ad to an audience of an Internet site.” Baig discloses that in order for users to access VCSP server, they must log onto the website of the VCSP. Ex. 1007, ¶¶[007], [0040], [0053]-[0054], [0059]-[0060], [0064], [0067]-[0070], [0076]-[0079]; Ex. 1002, ¶¶487-488. Baig also discloses that the VCSP provides advertisements and “multiple advertisers can bid against each other to have their advertisements displayed at a particular location and time of day, or based on some other end-user profile.” Ex. 1007, ¶[0102] (emphasis added); *see also id.*, ¶¶[0011]-[0012], [0054], [0062], [0099], [0103]-[0106], Fig. 21. In the underlying combination, the advertisement delivered to a VCSP webpage of the STB would be displayed on a television to an audience at the hotspot (claimed “display a TV ad to an audience of an Internet site”). Thus, the combinations teach claim 146. Ex. 1002, ¶¶486-489.

B. Grounds L-M: Obviousness in view of Baig-Costa-Zwicky-Howcroft and/or Baig-Costa-Banga690-Howcroft

1. Dependent Claims 6, 85, 120 and 126

Claims 6, 85, 120, and 126 require that the user profile information includes a search request from the user’s device. Baig’s Figure 13 shows an illustrative search webpage 1300 that allows a character string to be searched on the VCSP’s website. Ex. 1007, ¶[0111]. And Baig tracks online activity by users in each of the VCSP’s services. *Id.*, ¶[0119], Fig. 19; Ex. 1002, ¶607.

Howcroft specifically tracks user profile information, including search requests, and explains that targeted advertising may be performed using behavioral information, including user searches. Ex. 1016, Abstract, ¶¶[0022], [0026], [0030], [0032], [0067]-[0070]. A POSA would have been motivated to include search information in the online user activity from which Baig's user profile information is derived so that advertisements may be better targeted based on interests. *Id.*, [0072]-[0079], [0022], [0030]-[0031]; Ex. 1002, ¶¶590-593.

Deriving user interests from Baig's online activity including user search information, as taught in Howcroft, is the mere use of a known technique to improve similar systems in the same way. Ex. 1002, ¶594. Howcroft uses user searches to update a user's preferences (a known technique) in order to increase advertisement relevance (an improvement) as discussed. Ex. 1016, ¶¶[0030]-[0031]. And because Baig similarly teaches an electronic advertisement targeting based on profile information, applying Howcroft's technique would have improved Baig's goals of tailored advertising in the same way. Ex. 1002, ¶594.

Accordingly, Baig-Costa-Zwicky-Howcroft or Baig-Costa-Banga690-Howcroft teaches claims 6, 85, 120, and 126. *Id.*, ¶¶590-594, 606-620.

2. Dependent Claims 8 and 87

These claims require selecting an advertisement "from among a plurality of possible television advertisements." Howcroft teaches using various criteria to

generate a list of potential advertisements for a subscriber, and then selecting one advertisement from the list to send to a user device. Ex. 1016, ¶¶[0066]-[0068], [0070].

Using criteria to generate a list of potential advertisements and selecting an advertisement for a user from that list, as taught in Howcroft, is the mere use of a known technique to improve similar systems in the same way. Ex. 1002, ¶¶601, 623. Howcroft teaches using an advertisement database to generate a list of potential advertisements for a user (a known technique) in order to increase the relevance of advertisements shown to a user (an improvement) as discussed. Ex. 1016, ¶¶[0030]-[0031], [0066]-[0068]. And because Baig similarly teaches an electronic advertisement system for targeting users based on profile information, a POSA would have been motivated to apply Howcroft's technique to improve Baig's goals of tailored advertising in the same way. Ex. 1002, ¶¶601, 623.

Accordingly, Baig-Costa-Zwicky-Howcroft or Baig-Costa-Banga690-Howcroft teaches claims 8 and 87. *Id.*, ¶¶601, 621-625.

3. Dependent Claims 9, 32, 88, and 145

Baig teaches profile information including “age and gender information” and using such demographic information in advertisement selection “to attract more viewers of the advertisements.” Ex. 1007, ¶¶[0096], [0120]. Baig also selects advertisements based on behavioral attributes in the user profile information, such

as an amount of time spent by individuals in various services provided by the VCSP.
Id., ¶[0119].

Accordingly, Baig-Costa-Zwicky-Howcroft or Baig-Costa-Banga690-Howcroft teaches the first television advertisement being “selected based at least partly on demographic or behavioral attributes included in the [derived] user profile information.” (claims 9, 32, 88) and user profile information “compris[ing] demographic attributes collected through an Internet site accessed with the online user interface device of the first user” (claim 145). Ex. 1002, ¶¶626-629.

4. Dependent Claims 10 and 89

Baig provides advertisements to a particular hotspot “in real time” based on the collected user profile information at that access point. Ex. 1007, ¶¶[0099]-[0101], [0105]-[0106], claim 13. Howcroft describes that advertisers may want to send advertisements while a particular television show is streaming and determine ad placement based on a current usage scenario (such as “watching an IPTV show”) and “time of day.” Ex. 1016, ¶¶[0049]-[0050].

A POSA would have been motivated to include the current usage scenario and timing information of Howcroft within Baig’s user profile so that advertisements may be better targeted to individuals based on current viewing interests. Ex. 1002, ¶¶595-596, 632. Deriving Baig’s user profile information from current viewing, as taught in Howcroft, would have been the mere use of a known technique to improve

similar systems in the same way. Howcroft teaches using user viewing information to update a user's preferences (a known technique) in order to increase the relevance of advertisements (an improvement) as discussed. Ex. 1016, ¶¶[0030]-[0031]. And because Baig also teaches a similar real-time electronic advertisement system for targeting users based on profile information, applying Howcroft's technique would have improved Baig's goals of tailored advertising in the same way. Ex. 1002, ¶¶595-596, 632. Further, a POSA would have had a reasonable expectation of success as this combination would have only required network-based design knowledge and simple programming modifications, which were well within the ordinary level of skill in the art. *Id.*, ¶605. Accordingly, Baig-Costa-Zwicky-Howcroft or Baig-Costa-Banga690-Howcroft teach claims 10 and 89. *Id.*, ¶¶595-596, 605, 630-635.

5. Dependent Claims 21 and 100

To the extent PO argues Baig fails to teach advertisement delivery without a STB request (*see* §V.A.7), Howcroft does. Howcroft teaches advertising through an IP television stream directed to devices such as an IP-connected STB, like the one taught in Baig-Costa-Zwicky or Baig-Costa-Banga690. Ex. 1016, ¶¶[0066], [0070]-[0071]; *see also* Ex. 1011, ¶¶[0032], [0036]-[0038]. After selecting an advertisement, Howcroft teaches rendering that advertisement within the IP stream, at a designated spot and time, at the content delivery end in the IP network. Ex.

1016, ¶¶[0066]-[0067], [0070]-[0071]. A POSITA would have understood that Howcroft's advertising technique directs advertisements without a request from a user STB. Ex. 1002, ¶¶637-638; Ex. 1016, ¶¶[0035], [0066]-[0068], [0088]. A POSA would have been motivated to apply Howcroft's advertisement insertion process in an IP stream and/or automated trigger for sending advertisements to Baig's transmission of advertisements so that advertisements can be targeted to individuals in real time at the advertiser's or content provider's discretion, without awaiting a request from a STB. Ex. 1002, ¶¶639-641.

Directing advertisements, as taught in Baig, based on the advertisement insertion in an IP stream and/or automated trigger in Howcroft, would have been the mere use of a known technique to improve similar systems in the same way. *Id.*, ¶¶597-598, 641. For example, Howcroft teaches automatically selecting and directing advertisements (a known technique) to increase the timeliness and relevance of advertisements without requiring a prompt or request from the user's device (an improvement) as discussed. Ex. 1016, ¶¶[0030]-[0031], [0066]-[0068]. And because Baig-Costa-Zwicky and Baig-Costa-Banga⁶⁹⁰ also teach an advertisement system (a similar system) for targeting users based on profile information through an IP-connected STB, applying Howcroft's technique would have improved Baig's goals of tailored advertising in the same way. Ex. 1002,

¶¶598, 639-640. Accordingly, Baig-Costa-Zwicky-Howcroft or Baig-Costa-Banga690-Howcroft teaches claims 21 and 100. *Id.*, ¶¶597-598, 636-644.

6. Dependent Claims 23 and 102

Claims 23 and 104 require that “only advertisements satisfying criteria selected by each user are directed to the set-top box of that user.” As described for [1B], Baig-Costa-Zwicky and/or Baig-Costa-Banga690 causes an advertisement to be directed to a STB. Section V.A.1.c. Howcroft allows an SSO subscriber (user) to set “SSO subscriber advertising profile settings.” Ex. 1016, ¶¶[0048], [0055], [0083]-[0084]. These settings determine, *e.g.*, the categories of advertising and acceptable advertising formats to be received on selected user devices. *Id.* The settings are stored and used to determine “appropriate advertisements to target an SSO subscriber at a specific time.” *Id.*, ¶[0055].

A POSA would have been motivated to use the advertising profile settings of Howcroft as a criteria for sending advertisements to “increase the relevance of advertisements” in the proposed combinations by allowing users to select their own criteria. Ex. 1016, ¶[0031]; Ex. 1002, ¶¶599-600, 646-647. This represents the use of a known technique to improve similar systems in the same way. Ex. 1002, ¶¶600, 647. Howcroft stores user-defined advertising criteria (a known technique) in order to increase relevance of advertising (an improvement) as discussed. Ex. 1016, ¶¶[0030]-[0031]; Ex. 1002, ¶¶600, 647. And because Baig similarly teaches an

electronic advertisement system for targeting users based on profile information, applying Howcroft's technique would have improved Baig's goals of tailored advertising in the same way. Ex. 1002, ¶¶600, 647.

Accordingly, Baig-Costa-Zwicky-Howcroft or Baig-Costa-Banga690-Howcroft teaches claims 23 and 102. Ex. 1002, ¶¶599-600, 645-649.

7. Dependent Claims 51, 67, 113, and 133

Claims 51, 67, 113, and 133 require an STB identifier that "includes a device serial number or a portion thereof." As discussed for claim 1, Banga690's profile information includes a device identifier (e.g., a MAC address, IMEI identity, or IMSI) to track devices across networks. Ex. 1002, ¶651. Howcroft explains that another type of device identification for managing devices across networks is a product serial number. Ex. 1016, ¶[0061].

A POSA would have been motivated to use a product serial number, as taught in Howcroft, as a device identifier, because doing so was another way to uniquely identify a device that is constant across any network. Ex. 1002, ¶¶604, 652. Using a product serial number as part of the device identifier would have involved the simple substitution of one known element (Baig/Banga690's device identifiers) for another (Howcroft's product serial numbers) to obtain predictable results (using a serial number as a device identifier). *Id.*

Accordingly, Baig-Costa-Zwicky-Howcroft or Baig-Costa-Banga690-Howcroft teaches claims 51, 67, 113, and 133. *Id.*, ¶¶604, 650-654.

8. Dependent Claims 55, 76, 117, and 142

Claims 55, 76, 117, 142 require the first online access and STB IP addresses/identifiers “are associated before the online activity occurs.” To the extent PO argues Baig fails to teach this, Howcroft does. Howcroft “monitors an SSO subscribers’ end user devices event data used to access the platforms and networks and stores the access event devices data in an Internet profiling database 204.” Ex. 1016, ¶[0039]. User devices of an SSO subscriber, including a STB and an online access device (e.g., mobile phone) are first associated based on SSO credentials, and then all event data associated with the SSO subscriber’s communications, including online activity, is monitored and stored in association with the SSO subscriber. *Id.*, ¶¶[0032], [0039], [0061]. In the combinations, after receiving a login request from a device connected to Baig’s hotspot AP that electronically associates devices at the AP, activity data that occurs on that device thereafter is tracked. Ex. 1002, ¶657.

A POSA would have been motivated to use Howcroft’s profiling process as another way to track user activity data in the underlying combinations, thereby improving the breadth of profile information associated with a user. *Id.*, ¶¶603, 658-659. Howcroft teaches a profiling process to track user activity (a known technique) in order to increase relevance of advertising, e.g., by more thoroughly compiling

online activity from devices that are associated before the activity occurs, (an improvement) as discussed. Ex. 1016, ¶¶[0031]-[0032], [0039], [0060]-[0062]. And because Baig also teaches an electronic advertisement system (a similar system) for specifically targeting users based on profile information, applying Howcroft's techniques would have improved Baig's goals of tailored advertising in the same way. Ex. 1002, ¶¶603, 658. A POSA would have had a reasonable expectation of success as this combination would have only required network-based design knowledge and simple programming modifications, which were well within the ordinary level of skill in the art. *Id.*, ¶659.

Accordingly, Baig-Costa-Zwicky-Howcroft or Baig-Costa-Banga690-Howcroft teaches claims 55, 76, 117, and 142. *Id.*, ¶¶603, 655-661.

9. Dependent Claims 59, 81, 123, and 149

Claims 59, 81, 123, and 149 require the computer system be controlled by “an entity that operates independently of” the STB's television service provider, and that the first television advertisement is directed without transmitting user online behavioral profile information to the television service provider. Baig's content servers and VCSP do not include details of a television service provider, and would therefore have been understood to operate independent of one. Further, Howcroft's TAMS obtains product interest information for each subscriber and receives subscriber activity information “from independent network service providers

including ... IPTV.” Ex. 1016, ¶[0060]. Howcroft obtains such information across networks operated by different independent service providers to compile subscriber history (e.g., across devices and networks). Ex. 1016, ¶[0062]. Howcroft’s TAMS associates devices and directs targeted advertisements based on user profile information independent of a television service provider. Ex. 1002, ¶663. After Howcroft feeds profile information to the Targeted Advertising Selection System of the TAMS, which selects and directs an advertisement to the device, without transmitting any profile information externally. Ex. 1016, ¶¶[0068]-[0071], Figs. 2-3. In the combinations, the computer system would thus operate independently of television service providers (as recited in [59A], [81A], [123A], and [149A]). Ex. 1002, ¶663.

As for directing the advertisement without transmitting profile information to a television service provider, Howcroft selects targeted advertisements based on “a product interest correlation score (PICS)” and sending them to a subscriber device based on the subscriber’s current location or activity, and without sending profile information to a television service provider. Ex. 1016, ¶[0035]. In some instances, advertisements are selected and sent based on an automated trigger, set to send advertisements to subscribers having a PICS greater than a threshold level and who are within a threshold distance from a specified location, again without sending profile information externally. Ex. 1002, ¶664; Ex. 1016, ¶¶[0067]-[0071], [0088].

It would have been obvious for Baig's content server (claimed "computer system") to be owned and operated independently of a television service provider as taught by Howcroft such that Baig's targeted advertisement selection is performed without sharing user profile information with a television service provider. Ex. 1002, ¶¶602, 665. A POSA would be motivated to perform Baig's targeted selection and transmission of advertisements independent of a television service provider, as taught by Howcroft, because doing so would enhance privacy and information security, as well as alleviate a television provider from having to maintain and store profile information for each of their subscribers. *Id.*

Accordingly, Baig-Costa-Zwicky-Howcroft or Baig-Costa-Banga690-Howcroft teaches claims 59, 81, 123, and 149. *Id.*, ¶¶602, 662-669.

10. Dependent Claims 60, 82, 124, and 150

Claims 60, 82, 124, and 150 require that associating the online access and STB IP addresses/identifiers and causing advertisement direction to occur "without receiving personally identifiable information from the provider of television service." Baig teaches electronic associations (e.g., based a common IP address) and causing direction of targeted advertisements without requiring information from a television service provider. Ex. 1007, ¶¶[0061], [0066], [0076], [0081], [0093]-[0101], [0124]; Ex. 1001, 6:11-20 (examples of non-personally-identifiable information); Ex. 1002, ¶671. In Baig-Costa-Zwicky-Howcroft and/or Baig-Costa-

Banga690-Howcroft, this non-personally-identifiable profile information is then used in causing television advertisements to be directed to the STB. Section V.A.1.c; Ex. 1016, ¶¶[0066]-[0067], [0070]-[0071]. Thus, Baig-Costa-Zwicky-Howcroft and/or Baig-Costa-Banga690-Howcroft teach claims 60, 82, 124, and 150. Ex. 1002, ¶¶670-675.

C. Ground N: Obviousness in view of Baig-Costa-Banga690-Smith

1. Dependent Claims 49, 66, 111, and 132

Claims 49, 66, 111, 132 further require that the online user interface device identifier includes a cookie. As discussed for [1A], Baig-Costa-Banga690's system uses device profile information that includes a device identifier (e.g., a MAC address, IMEI identity, or IMSI) to track devices across networks. Section V.A.1.b. Smith explains that devices also may be identified using a cookie across different communication sessions. Ex. 1021, ¶¶[0006], [0015]-[0016], [0034]-[0035]. Like Baig and Banga690, Smith teaches generating user profiles, and that "computer identification data, such as cookie data or IP address [may be] used as a key to store the generated profile in the database." *Id.*, ¶¶[0038]-[0039].

It would have been obvious to use a cookie as part of the Baig-Costa-Banga690 device identifier. Ex. 1002, ¶¶676-685. Including a cookie as a device identifier in the underlying combinations would have involved combining known

elements according to known methods to yield predictable results. *Id.* As Smith explains, cookies were well-known techniques for identifying devices across communication sessions without requiring authentication. Ex. 1021, ¶¶[0006], [0035]. Smith teaches that cookies provide an efficient key to retrieve profile information. *Id.*, ¶¶[0011], [0018], [0038]-[0039]. In Baig-Costa-Banga690, device identifiers are similarly used to retrieve device records and profile information. Ex. 1014, ¶¶[0006], [0043]. A POSA would have been motivated to use Smith's cookie identification as a device identifier in Baig-Costa-Banga690 to index profile information. Ex. 1002, ¶¶679-680, 684.

A POSA would also have found the result of the combination—a system where user profile information and device records are identified using a device-specific cookie—to be predictable since using cookies in this fashion was well known. *Id.*

Accordingly, Baig-Costa-Banga690-Smith teaches claims 49, 66, 111, 132. *Id.*, ¶¶685-686.

2. Dependent Claims 50, 70, 112, and 136

Claims 50, 70, 112, 136 further require that the online user interface device identifier includes a tag. As explained for claims 49, 66, 111, and 132, Baig-Costa-Banga690-Smith teaches that an online user interface device identifier includes a cookie. Section V.C.1. While no express definition is provided, the '260 Patent

interchangeably refers to cookies or tags as example identifiers (Ex. 1001, 17:40-18:14) and the '260 inventor has explained elsewhere that a cookie is an example of a tag. Ex. 1038, 3:17-23 (“a cookie is [] one example of a possible tag” and “[a] tag generally is a unique identifier used to mark [a] person electronically”); Ex. 1002, ¶¶687-689. Accordingly, Baig-Costa-Banga690-Smith teaches claims 50, 70, 112, and 136. Ex. 1002, ¶¶689-690.

D. Grounds O-P: Obviousness in view of Baig-Costa-Zwicky-Middeljans and/or Baig-Costa-Banga690-Middeljans

1. Dependent Claims 25 and 104

Claims 25 and 104 require the computer system to “pay[] a revenue amount to a profile provider as a result of using the user profile information in part (b).” Baig discloses advertisers paying its VCSP server (claimed “computer system”) for directing advertisements. Ex. 1007, ¶¶[0011]-[0012], [0054], [0062], [0102]-[0106], Fig. 21; Ex. 1002, ¶¶697-698. As discussed for claim 26, Banga690’s CR server is separate from content provider servers and generates user profile information. Section V.A.3; Ex. 1002, ¶¶698-699. Middeljans teaches a payment to such a profile provider. Ex. 1002, ¶¶691, 699-700.

Middeljans distributes targeted content, profiles users, and provides payment to entities creating and maintaining user profiles. Ex. 1023, Abstract, ¶¶[0001], [0008]-[0010], [0012], [0015], [0046]-[0052], [0054], [0058]. Middeljans’ profiling

center (separate from a content aggregator) collects information from a variety of sources and devices to generate aggregate user profiles. *Id.*, Abstract, ¶¶[0008]-[0010], [0015], [0046]-[0052], [0054], [0058]. Middeljans recognizes that collecting and maintaining user profiles is valuable to “[a]nyone who is in the business of distributing content to a segment of a large user group needs accurate profiles,” and it would make sense to sell them for a fee. *Id.*, ¶¶[0058], [0015].

A POSA would have been motivated to apply Middeljans’ techniques for payment to a profiling center to the underlying combination to monetize the stored user profile information. Ex. 1002, ¶¶692-696, 701-702. Both Banga690’s CR server and Middeljans profiling center (claimed “profile provider”) are similar because they are run by third parties separate from portions of the system that use user profile information. *Id.* Thus, this combination would have been the simple use of known a technique (paying a profile provider for providing user profile information) to improve a similar system (Baig-Costa-Banga690’s system having profile providers provide user profile information for targeted advertisements) in the same way (providing monetary incentives to profile providers). *Id.*

Accordingly, Baig-Costa-Banga690-Middeljans renders claims 25 and 104 obvious. *Id.*, ¶¶697-705.

2. Dependent Claim 29

Claim 29 requires the computer equipment to “receiv[e] a revenue amount from a proprietor of the computer system as a result of the electronic delivering act.” As discussed for claim 25, Middeljans’ computer system pays a profile provider for using profile information, which in the combination includes a profile provider (Banga690’s CR server) receiving revenue from the proprietor of the computer system (Baig’s VCSP server) for delivered user profile information. Section V.D.1; Ex. 1002, ¶¶692-696, 706-708.

Accordingly, for the same reasons as claim 25, Baig-Costa-Banga690-Middeljans renders claim 29 obvious. Ex. 1002, ¶¶706-709.

3. Dependent Claim 33

Claim 33 requires the computer equipment to “receiv[e] a revenue amount from a provider of the television advertisement as a result of electronically delivering the user profile information.” Baig’s advertisers (claimed “provider of the television advertisement”) pay the VCSP system. Ex. 1007, ¶¶[0011]-[0012], [0054], [0062], [0102]-[0106], Fig. 21; Ex. 1002, ¶¶710-712.

Middeljans discloses a profiling center that collects information from various sources to generate user profiles, and recognizes that collecting and maintaining these user profiles “are very valuable to content aggregators, *advertising agencies* and other parties.” Ex. 1023, ¶[0010] (emphasis added); *see also id.*, Abstract, ¶¶[0008]-[0009], [0015], [0046]-[0052], [0058]. Thus, a POSA would have

understood that Middeljans teaches an advertiser (claimed “provider of the television advertisement”) paying the computer equipment (e.g., a profile provider) for the delivery of profile information. Ex. 1002, ¶713.

A POSA would have been motivated to use Middeljans’ payment to a profiling center by advertisers for the delivery of user profile information with Baig-Costa-Zwicky or Baig-Costa-Banga690. *Id.*, ¶¶692-696, 714-715. Further, as taught by Middeljans, an advertiser would have found it beneficial to pay a profile provider to deliver specific user profiles to Baig’s advertisement bidding system that would correspond to specific groups of people to increase the likelihood of viewer engagement for their advertised products or services. *Id.*; Ex. 1023, ¶¶[0008]-[0010], [0015], [0046]-[0052], [0056], [0058]. This combination would have been nothing more than the use of known technique (Middeljans’ advertiser paying a profile provider for delivering user profile information) to improve similar method (Baig-Costa-Zwicky’s or Baig-Costa-Banga690’s delivery of user profile information to an advertising bidding computer system) in the same way (incentivizing collection and provision of user profile information with payment from advertisers). Ex. 1002, ¶¶692-696, 715.

Accordingly, Baig-Costa-Zwicky-Middeljans or Baig-Costa-Banga690-Middeljans renders claim 33 obvious. *Id.*, ¶¶710-716.

E. Ground Q: Obviousness in view of Baig-Costa-Banga690-Middeljans-Koningstein

1. Dependent Claim 30

Claim 30 requires the computer equipment to “receiv[e] a revenue amount as a result of the electronic delivering act, wherein the revenue amount is received in response to each instance in which revenue is generated as a result of presenting the selected television advertisement via the set-top box indicated by the set-top box IP address associated with the first online access IP address.” As discussed for claim 29, Baig-Costa-Banga690-Middeljans teaches the computer equipment receiving a revenue amount as a result of the electronic delivering act. Section V.D.2. Baig-Costa-Banga690-Middeljans also teaches that this payment can come from advertisers rather than proprietors of the computer system. Ex. 1023, ¶¶[0008]-[0010], [0015], [0046]-[0052], [0058].

Koningstein discloses a method of delivering targeted advertisements that includes advertisers only paying when a user takes some revenue-generating action. Ex. 1024, ¶¶[0039]-[0040], [0043]-[0048]. Specifically, Koningstein teaches a method in which advertisers are obligated to pay an advertising provider only when “some [] monetization event occurs,” such as a purchase of an item by a user. *Id.*, ¶¶[0045], [0048]. Thus, Koningstein teaches a system in which advertisers pay to

have their advertisements shown, but only when revenue is generated as a result of presenting the selected advertisement. Ex. 1002, ¶¶725-726.

A POSA would have been motivated to apply Koningstein's payment method in which advertisers only pay if revenue is generated by presentation of a particular advertisement to Baig-Costa-Banga690-Middeljans because it increases the incentive for an advertiser to purchase profile information to more effectively reach targeted users. *Id.*, ¶¶717-721, 727. This combination would have been the use of known technique (advertisers only pay when revenue is generated as a result of the presentation of the advertisement) to improve a similar method (Baig-Costa-Banga690-Middeljans's method of the computer equipment receiving revenue for the delivery act) in the same way (a payment system that better incentivizes advertisers to purchase profile information to have ads that more effectively reach targeted users). *Id.*

Accordingly, Baig-Costa-Banga690-Middeljans-Koningstein renders claim 30 obvious. Ex. 1002, ¶¶722-728.

2. Dependent Claim 43

Like claim 30, claim 43 recites receiving revenue in response to each instance in which revenue is generated as a result of presenting or displaying the selected television advertisement, and Baig-Costa-Banga690-Middeljans-Koningstein

renders claim 43 obvious for the same reasons as claim 30. Ex. 1002, ¶¶722-731; Section V.E.1.

F. Ground R: Obviousness in view of Baig-Costa-Banga690-Banga633

1. Dependent Claim 50, 70, 112, and 136

As explained in Grounds N-O for claims 50, 70, 112, and 136, where a cookie is an example of a tag, Baig-Costa-Banga690-Smith teaches “wherein the online user interface device identifier includes a tag.” Section V.C.2.

If PO argues that a cookie does not teach a tag, Banga633 teaches that an identifier associated with a user profile may include a tag. Banga633, like Baig and Banga690, is directed to tracking user profile information and targeting content to users. Ex. 1025, Abstract, ¶¶[0012]-[0035]. To track a user device and activity, a “profile information tag (UID) will be transmitted to every destination (website) that is accessed with this device thus enabling the customization of end-user content specific to UID (universal identifier).” *Id.*, ¶¶[0119], [0013]-[0022], [0098]. In this way, “all of the content transmitted to the user ... may be formatted and/or indexed to the specific type of access device utilized by the user.” *Id.*, ¶[0119].

A POSA would have been motivated to use Banga633’s user profile tag to identify devices in the Baig-Costa-Banga690 systems to maximize the potential for advertisers to provide targeted advertisements. Ex. 1002, ¶¶732-737, 739-740.

Doing so would have involved the combination of known elements (Baig-Costa-Banga690's device records and user profiles derived therefrom and Banga633's tags serving as device identifiers) according to known methods (tracking profile information and targeting content using device identifiers) to yield predictable results (providing another type of profile key). Additionally, Banga633 teaches a method of generating and storing a device-specific profile tag such as a UID and using that tag (in addition to or as an alternative to MAC IDs) to communicate which device is being used to interact with a content provider or system. Ex. 1025, ¶¶[0084]-[0085], [0090]-[0091], [0095], [0098], [0104], [0119], Fig. 2; Ex. 1002, ¶739.

A POSA would also have found the result of the above combination—a system where user devices corresponding to device records and user profiles are identified using a tag such as a UID—to be predictable since implementing such an identifier was well within the programming skills of a POSA. Ex. 1002, ¶737.

Accordingly, Baig-Costa-Banga690-Banga633 also teaches claims 50, 70, 112, and 136. *Id.*, ¶¶740-741.

IX. CONCLUSION

Inter partes review should be instituted and the challenged claims canceled.

X. GROUNDS FOR STANDING & FEE PAYMENT

Petitioner hereby certifies that the '260 Patent is available for, and Petitioner is not estopped from requesting, *inter partes* review. Petitioner is requesting joinder to IPR2024-00422. The bar does not apply. 35 U.S.C. §315(b).

The undersigned authorizes the charge of any required fees to Deposit Account No. 06-1050.

XI. MANDATORY NOTICES UNDER 37 C.F.R § 42.8(a)(1)

A. Real Party-In-Interest Under 37 C.F.R. § 42.8(b)(1)

Petitioner, Viant Technology LLC is the real party-in-interest. Adelphic LLC and Viant US LLC are additional real parties-in-interest.

B. Related Matters Under 37 C.F.R. § 42.8(b)(2)

The '260 Patent was asserted against Petitioner by AlmondNet, Inc. and Intent IQ, LLC (collectively "AlmondNet") in the United States District Court for the District of Delaware: *AlmondNet, Inc. v. Viant Technology Inc.*, 1-23-cv-00174 (D. Del.).

In addition, the '260 Patent or its related patents have been the subject of the following pending district court cases:

- *AlmondNet, Inc v. Freewheel Media, Inc.*, No. 1:23-cv-00220-MN (D. Del.), which is currently pending.
- *AlmondNet, Inc. v. Samsung Electronics Co., Ltd.*, 4-22-cv-07515

(N.D. Cal.) (“7515 N.D. Cal. case”), which is currently pending but stayed.

- *AlmondNet, Inc. et al. v. Samsung Electronics Co., Ltd. et al.*, 6-21-cv- 00891 (W.D. Tex.), which was transferred to the 7515 N.D. Cal. case.
- *AlmondNet, Inc. v. Meta Platforms, Inc. f/k/a Facebook, Inc.*, 4-22-cv- 08911 (N.D. Cal.) (“8911 N.D. Cal. case”), which was reassigned to the 7515 N.D. Cal. case and is otherwise stayed.
- *AlmondNet, Inc. v. Meta Platforms, Inc. f/k/a Facebook, Inc.*, 6-22-cv- 01205 (W.D. Tex.), which was transferred to the 8911 N.D. Cal. case.
- *Roku, Inc. v. AlmondNet, Inc. et al.*, 1-21-cv-01035 (D. Del.), which is currently pending and awaiting a claim construction order.
- *AlmondNet, Inc. et al v. Freewheel Media, Inc. et al*, 1-23-cv-00220 (DDE), which is currently pending.

Patents related to the '260 Patent have been the subject of the following U.S. Patent Office proceedings. Petitioner and its real parties-in-interest were not involved in any of these cases:

- *Meta Platforms, Inc. f/k/a Facebook, Inc. v. Intent IQ, LLC et al.*, IPR2022- 00773, challenging claims of the '398 Patent on different

grounds from those presented herein, was granted institution, but terminated due to settlement. Ex. 1005.

- *Amazon.com, Inc. et al. v. Intent IQ, LLC, et al.*, IPR2023-00227, challenging claims of the '398 Patent on different grounds from those presented herein, was denied institution.
- *Microsoft Corporation et al. v. Intent IQ, LLC*, IPR2022-01420, challenging claims of the '398 Patent on different grounds from those presented herein, was denied institution.
- *Roku, Inc. v. Intent IQ, LLC et al.*, IPR2022-01236, challenging claims of the '398 Patent on different grounds from those presented herein, was denied institution.
- *Yahoo! Inc. v. Intent IQ, LLC et al.*, IPR2017-01299, challenging claims of the '398 Patent on different grounds from those presented herein, was denied institution.
- *Roku, Inc. v. Intent IQ, LLC*, IPR2022-01315, challenging claims of the '878 Patent on different grounds from those presented herein, was denied institution.
- *Meta Platforms, Inc. f/k/a Facebook, Inc. v. Intent IQ, LLC et al.*, IPR2023-01281, challenging claims of the '878 Patent on different grounds from those presented herein, was granted institution. Ex.

1060.

- *Samsung Electronics Co., Ltd. v. AlmondNet, Inc. et al.*, IPR2022-01505, challenging claims of the '878 Patent on different grounds from those presented herein, was denied institution.
- *Samsung Electronics Co., Ltd. v. Intent IQ, LLC*, IPR2022-01506, challenging claims of the '164 Patent on different grounds from those presented herein, was denied institution.
- *Roku, Inc. v. Intent IQ, LLC*, IPR2022-00953, challenging claims of the '164 Patent on different grounds from those presented herein, was denied institution.
- *Roku, Inc. v. Intent IQ, LLC*, IPR2022-00959, challenging claims of the '069 Patent on different grounds from those presented herein, was denied institution.
- *Roku, Inc. v. Intent IQ, LLC*, IPR2022-00960, challenging claims of the '198 Patent on different grounds from those presented herein, was denied institution.
- *Samsung Electronics Co., Ltd. v. Intent IQ, LLC*, IPR2022-01507, challenging claims of the '198 Patent on different grounds from those presented herein, was denied institution.
- *Freewheel Media, Inc. v. Intent IQ, LLC*, IPR2024-00421 (PTAB)

filed on March 1, 2024.

- *Freewheel Media, Inc. v. Intent IQ, LLC*, IPR2024-00422 (PTAB)

filed on March 1, 2024.

- *Freewheel Media, Inc. v. Intent IQ, LLC*, IPR2024-00423 (PTAB)

filed on March 1, 2024.

- *Freewheel Media, Inc. v. Intent IQ, LLC*, IPR2024-00424 (PTAB)

filed on March 1, 2024.

C. Lead And Back-Up Counsel Under 37 C.F.R. § 42.8(b)(3)

Petitioner provides the following designation of counsel.

Lead Counsel	Backup counsel
Joshua A. Griswold, Reg. No. 46,310 Fish & Richardson P.C. 60 South Sixth Street, Suite 3200 Minneapolis, MN 55402 Tel: 202-783-5070 Fax: 877-769-7945 Email: IPR56090-0004IP2@fr.com	Karan Jhurani, Reg. No. 71,777 Daniel G. Wheaton, Reg. No. 78,933 Susan E. Morrison, Reg. No. 56,332 Fish & Richardson P.C. 60 South Sixth Street, Suite 3200 Minneapolis, MN 55402 Tel: 202-783-5070 Fax: 877-769-7945 PTABInbound@fr.com

D. Service Information

Please address all correspondence and service to the address listed above.

Petitioner consents to electronic service by email at IPR56090-0004IP2@fr.com
(referencing No. 56090-0004IP2).

Respectfully submitted,

Dated: November 1, 2024

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CERTIFICATION UNDER 37 CFR § 42.24

Under the provisions of 37 CFR § 42.24(d), the undersigned hereby certifies that the word count for the foregoing Petition for *Inter partes* Review totals 13,897 words, which is less than the 14,000 allowed under 37 CFR § 42.24.

Dated: November 1, 2024

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CERTIFICATE OF SERVICE

Pursuant to 37 CFR §§ 42.6(e)(4)(i) *et seq.* and 42.105(b), the undersigned certifies that on November 1, 2024, a complete and entire copy of this Petition for *Inter partes* Review, Power of Attorney, and all supporting exhibits were provided via Federal Express, to the Patent Owner by serving the correspondence address of record as follows:

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CLAIMS LISTING APPENDIX

U.S. Pat. No. 7,861,260

Designation	Claim Language
Claim 1	
[1pre]	1. A method implemented using a programmed hardware computer system, the method comprising:
[1A]	(a) for each of a multitude of users, with the computer system, electronically associating an online access IP address of the user and a set-top box IP address of that user based on a common IP address, wherein network traffic is routed via the common IP address to both an online user interface device and a set-top box of that user; and
[1B]	(b) using user profile information derived from online activity from a first online user interface device via a first one of the online access IP addresses of the multitude of users, with the computer system automatically causing a first television advertisement to be directed to a set-top box for presentation via that set-top box, selectively, wherein the set-top box is indicated by the set-top box IP address associated with the first online access IP address.
Claim 2	
2	2. The method of claim 1 wherein neither the user profile information in part (b) nor the association between the first online access IP address and its associated set-top box IP address includes personally identifiable information.
Claim 3	

Designation	Claim Language
[3A]	3. The method of claim 1: (i) further comprising, using user profile information derived from online activity from a second online user interface device via a second one of the online access IP addresses of the multitude of users, with the computer system automatically causing a second television advertisement to be directed to a second set top box for presentation via that set-top box, selectively, wherein the second set-top box is indicated by the set-top box IP address associated with the second online access IP address,
[3B]	(ii) wherein which television advertisement is directed to or presented via which set-top box depends on differences between the online activities from the first and second online user interface devices, respectively.
Claim 4	
4	4. The method of claim 3 wherein neither the user profile information in part (i) nor the association between the second online access IP address and its associated set-top box IP address includes personally identifiable information.
Claim 5	
5	5. The method of claim 1 further comprising storing in the computer system electronic associations between the online access IP addresses and the set-top box IP addresses.
Claim 6	
6	6. The method of claim 1 wherein the online activity comprises requesting a search.
Claim 7	
7	7. The method of claim 1 wherein the first television advertisement is caused to be directed to the set-top box upon first being contacted by the set-top box after the user profile

Designation	Claim Language
	information is derived.
Claim 8	
8	8. The method of claim 1 wherein the first television advertisement is selected from among a plurality of possible television advertisements based at least in part on the user profile information derived from the online activity from the first online access IP address.
Claim 9	
9	9. The method of claim 8 wherein the first television advertisement is selected based at least partly on demographic or behavioral attributes included in the user profile information.
Claim 10	
10	10. The method of claim 1 wherein the first television advertisement is selected from among a plurality of possible television advertisements based at least in part on the television content viewed at the time the first television advertisement is to be presented by the set-top box.
Claim 11	
11	11. The method of claim 1 wherein the common IP address is an IP address dynamically assigned to a modem or router used by the user for online access and connected to the user's set-top box.
Claim 12	
[12A]	12. The method of claim 1 further comprising: (i) receiving at the computer system an identifier corresponding to the set-top box of the user; and
[12B]	(ii) with the computer system causing the television advertisement to be transmitted only if

Designation	Claim Language
	directed to the set-top box corresponding to the identifier.
Claim 13	
13	13. The method of claim 1 wherein part (a) comprises the act of storing the common IP address, and further comprising updating the common IP address of the user.
Claim 14	
14	14. The method of claim 1 wherein part (a) comprises the act of storing the common IP address, and further comprising periodically updating the common IP address of the user.
Claim 15	
[15A]	15. The method of claim 1 wherein: (i) the user profile information in part (b) includes a list of online access IP addresses corresponding to specific online activities and times and dates corresponding to each of the online activities; and
[15B]	(ii) the computer system causes the television advertisement to be directed to the set-top box of one of the users only if any of the listed online access IP addresses corresponding to the specific online activities and the corresponding dates and times of the online activities match the common IP address assigned to that user and the date and time corresponding thereto.
Claim 16	
16	16. The method of claim 15 wherein part (a) comprises the act of storing the common IP address and dates and times corresponding thereto in the computer system, and further comprising, with the computer system, periodically updating (i) the common IP address and times and dates corresponding thereto or (ii) the list of online access IP addresses corresponding to specific online

Designation	Claim Language
	activities and time and dates corresponding to each of the online activities.
Claim 17	
17	17. The method of claim 1 wherein the computer system is a central ad server and the first television advertisement is received at the central ad server and directed to the set-top box.
Claim 18	
18	18. The method of claim 1 wherein part (b) comprises, with the computer system, directing instructions to a profile provider, to an online site, or to an independent ad server to direct the first television advertisement to the set-top box.
Claim 19	
19	19. The method of claim 1 wherein part (b) comprises, with the computer system, directing instructions to the set-top box to retrieve the first television advertisement from a profile provider, from an online site, or from an independent ad server.
Claim 20	
20	20. The method of claim 1 wherein the computer system causes the first television advertisement to be directed only in response to a request for advertisements originating from the user's set-top box.
Claim 21	
21	21. The method of claim 1 wherein the computer system causes the first television advertisement to be directed without a request for advertisements originating from the user's set-top box.
Claim 22	
22	22. The method of claim 1 wherein the online access IP address of each user is an IP address associated with a modem or router used by that user for online access.
Claim 23	

Designation	Claim Language
23	23. The method of claim 1 wherein only advertisements satisfying criteria selected by each user are directed to the set-top box of that user.
Claim 24	
24	24. The method of claim 1 further comprising receiving a revenue amount as a result of directing the advertisement.
Claim 25	
25	25. The method of claim 1 further comprising paying a revenue amount to a profile provider as a result of using the user profile information in part (b).
Claim 26	
[26pre]	26. A method implemented using computer equipment, the method comprising:
[26A]	(a) with the computer equipment, automatically electronically delivering electronic user profile information to a computer system that includes a server that electronically associates, for each of a multitude of users, an online access IP address of the user and a set-top box IP address of that user based on a common IP address,
[26B]	(b) wherein network traffic is routed via the common IP address for both an online user interface device and a set-top box of that user,
[26C]	(c) wherein delivered user profile information of a first user of the multitude of users (i) is derived from online activity of the first user from a first online user interface device via a first online access IP address and (ii) includes identification of the first online access IP address and the time and date of the online activity, and
[26D]	(d) as a result of which delivery, a first television advertisement can be directed to a set-top box for presentation via that set-top box, selectively, wherein the set-top box is indicated by the set-top box IP address that the server associates with the first online access IP address.
Claim 27	

Designation	Claim Language
27	27. The method of claim 26 wherein neither the user profile information delivered in part (a) nor the association between the first online access IP address and its associated set-top box IP address includes personally identifiable information.
Claim 28	
[28A]	28. The method of claim 26: (e) wherein delivered user profile information of a second user of the multitude of users (i) is derived from online activity of the second user from a second online user interface device via a second online access IP address and (ii) includes identification of the second online access IP address and the time and date of the online activity,
[28B]	(f) as a result of which delivery, a second television advertisement, different from the first television advertisement, is directed to a second set-top box for presentation via that set-top box, selectively, wherein the second set-top box is indicated by the set-top box IP address that the server associates with the second online access IP address, for selective presentation via that set-top box, and
[28C]	(g) wherein which television advertisement is directed to or presented via which set-top box depends on differences between the online activities from the first and second online user interface devices, respectively.
Claim 29	
29	29. The method of claim 26 further comprising receiving a revenue amount from a proprietor of the computer system as a result of the electronic delivering act.
Claim 30	
30	30. The method of claim 26 further comprising receiving a revenue amount as a result of the electronic delivering act, wherein the revenue amount is received in response to each instance in which revenue is generated as a result of

Designation	Claim Language
	presenting the selected television advertisement via the set-top box indicated by the set-top box IP address associated with the first online access IP address.
Claim 31	
31	31. The method of claim 26 further comprising, with the computer equipment, automatically selecting the first television advertisement based on the user profile information.
Claim 32	
32	32. The method of claim 31 wherein the first television advertisement is selected based at least partly on demographic or behavioral attributes included in the derived user profile information.
Claim 33	
33	33. The method of claim 26 further comprising receiving a revenue amount from a provider of the television advertisement as a result of electronically delivering the user profile information.
Claim 34	
34	34. The method of claim 26 further comprising automatically receiving a revenue amount as a result of direction of the first television advertisement.
Claim 35	
35	35. The method of claim 26 further comprising, with the computer equipment, electronically delivering the first television advertisement to the computer system for subsequent direction to the set-top box.
Claim 36	
36	36. The method of claim 26 further comprising, with the computer equipment, directing the television advertisement to the set-top box in response to instructions received from the computer system.

Designation		Claim Language
Claim 37		
37	37. The method of claim 26 wherein the step of delivering user profile information comprises delivering the first user online access IP address.	
Claim 38		
[38pre]	38. A method implemented using computer equipment, the method comprising:	
[38A]	(a) with the computer equipment, automatically electronically delivering electronic user profile information to a computer system that includes a server that electronically associates, for each of a multitude of users, an online user interface device identifier, which indicates an online user interface device of the user, and a set top box identifier, which indicates a set-top box of that user, which electronic association is based on a common IP address,	
[38B]	(b) wherein network traffic is routed via the common IP address for both the online user interface device and the set-top box of that user,	
[38C]	(c) wherein delivered user profile information of a first user of the multitude of users (i) is derived from online activity of the first user from the first user's online user interface device via a first online access IP address and (ii) includes identification of the first online IP address and the time and date of the online activity, and	
[38D]	(d) as a result of which delivery, a first television advertisement can be directed to a set-top box for presentation via that set-top box, selectively, wherein the set-top box is indicated by the set-top box identifier that the server associates with the online user interface device identifier of a first user's online user interface device.	
Claim 39		
39	39. The method of claim 38 further comprising, with the	

Designation	Claim Language
	computer equipment, automatically selecting the first television advertisement based on the user profile information.
Claim 40	
40	40. The method of claim 39 wherein (i) the step of delivering electronic user profile information derived from the online activity comprises, with the computer equipment, delivering the first user online access IP address; and (ii) the selection of a television advertisement is based on user profile information that is not delivered to the computer system.
Claim 41	
41	41. The method of claim 38 wherein the step of delivering electronic user profile information derived from the online activity comprises, with the computer equipment, redirecting the first user's online user interface device during the first user's accessing of an online site via the first online access IP address.
Claim 42	
42	42. The method of claim 38 further comprising automatically receiving a revenue amount as a result of direction of the first television advertisement.
Claim 43	
43	43. The method of claim 42 wherein the revenue amount is received in response to each instance in which revenue is generated as a result of displaying the selected television advertisement via the set-top box indicated by the set-top box identifier associated with the online user interface device identifier of the first user's online user interface device.
Claim 44	
44	44. The method of claim 1 wherein the first online access IP address and the common IP address are the same.

Designation	Claim Language
Claim 45	
45	45. The method of claim 1 wherein the first online access IP address and the common IP address differ.
Claim 46	
46	46. The method of claim 45 wherein the first online access IP address and the set-top box IP address are associated based on online access by the first user's online user interface device via a second online access IP address.
Claim 47	
47	47. The method of claim 46 wherein the second online access IP address and the common IP address are the same.
Claim 48	
48	48. The method of claim 45 wherein the first online access IP address and the set-top box IP address are associated based on a correlation between the common IP address and an online user interface device identifier that indicates the user's online user interface device.
Claim 49	
49	49. The method of claim 48 wherein the online user interface device identifier includes a cookie.
Claim 50	
50	50. The method of claim 48 wherein the online user interface device identifier includes a tag.
Claim 51	
51	51. The method of claim 1 wherein the set-top box is further indicated by a set-top box identifier that includes a device serial number or a portion thereof.

Designation	Claim Language
Claim 52	
52	52. The method of claim 1 wherein the set-top box is further indicated by a set-top box identifier that includes a device MAC address or a portion thereof.
Claim 53	
53	53. The method of claim 1 wherein the set-top box is further indicated by a set-top box identifier that includes a username, a pseudonym, or a confirmation number.
Claim 54	
54	54. The method of claim 1 wherein the common IP address is determined by the computer system by matching the first online access IP address with a set-top box IP address used by a uniquely identified set-top box both before and after the online activity occurs.
Claim 55	
55	55. The method of claim 1 wherein the first online access IP address and the set-top box IP address are associated before the online activity occurs.
Claim 56	
56	56. The method of claim 1 wherein the first online access IP address and the set-top box IP address are not associated until after the online activity occurs.
Claim 57	
57	57. The method of claim 1 further comprising, with the computer system, automatically deriving the user profile information from the online activity performed from the first online access IP address.
Claim 58	
58	58. The method of claim 1 further comprising, with the computer system, automatically selecting the first

Designation	Claim Language
	television advertisement based on the user profile information.
Claim 59	
[59A]	59. The method of claim 1 wherein: (i) the computer system is under control of an entity that operates independently of a provider of television service to each of the multitude of users through the corresponding set- top box; and
[59B]	(ii) the computer system causes the first television advertisement to be directed in part (b) without transmitting user online behavioral profile information to the provider of television service.
Claim 60	
60	60. The method of claim 59 wherein the online access and set- top box IP addresses are associated in part (a), and the first television advertisement is caused to be directed in part (b), without receiving personally identifiable information from the provider of television service.
Claim 61	
[61pre]	61. A method implemented using a programmed hardware computer system, the method comprising:
[61A]	(a) for each of a multitude of users, with the computer system, electronically associating an online user interface device identifier, which indicates an online user interface device of the user, and a set-top box identifier, which indicates a set-top box of that user, which electronic association is based on a common IP address, wherein network traffic is routed via the common IP address to both the online user interface device and the set-top box of that user; and
[61B]	(b) using user profile information derived from online activity from the online user interface device of a first user of the multitude of users via a first online access IP address, with the computer system automatically causing a first television advertisement to be directed to a set-top box

Designation	Claim Language
	for presentation via that set-top box, selectively, wherein the set-top box is indicated by the set-top box identifier associated with the online user interface device identifier of the first user's online user interface device.
Claim 62	
62	62. The method of claim 61 wherein the first online access IP address and the common IP address are the same.
Claim 63	
63	63. The method of claim 61 wherein the first online access IP address and the common IP address differ.
Claim 64	
64	64. The method of claim 63 wherein the online user interface device identifier and the set-top box identifier are associated based on online access by the first user's online user interface device via a second online access IP address.
Claim 65	
65	65. The method of claim 64 wherein the second online access IP address and the common IP address are the same.
Claim 66	
66	66. The method of claim 61 wherein the online user interface device identifier includes a cookie.
Claim 67	
67	67. The method of claim 61 wherein the set-top box identifier includes a device serial number or a portion thereof.
Claim 68	

Designation	Claim Language
68	68. The method of claim 61 wherein the set-top box identifier includes a device MAC address or a portion thereof.
Claim 69	
69	69. The method of claim 61 wherein the set-top box identifier includes a username, a pseudonym, or a confirmation number.
Claim 70	
70	70. The method of claim 61 wherein the online user interface device identifier includes a tag.
Claim 71	
71	71. The method of claim 61 wherein the online user interface device identifier includes the first online access IP address.
Claim 72	
72	72. The method of claim 61 wherein the set-top box identifier includes the common IP address.
Claim 73	
73	73. The method of claim 61 wherein the set-top box identifier includes at least a portion of the common IP address.
Claim 74	
74	74. The method of claim 61 wherein the set-top box identifier includes a set-top box IP address.
Claim 75	
75	75. The method of claim 61 wherein the common IP address is determined by matching the first online access IP address with a set-top box IP address used by a uniquely identified set-top box both before and after the online activity occurs.

Designation	Claim Language
Claim 76	
76	76. The method of claim 61 wherein the online user interface device identifier and the set-top box identifier are associated before the online activity occurs.
Claim 77	
77	77. The method of claim 61 wherein the online user interface device identifier and the set-top box identifier are not associated until after the online activity occurs.
Claim 78	
78	78. The method of claim 61 further comprising, with the computer system, automatically deriving the user profile information from the online activity performed from the first online access IP address.
Claim 79	
79	79. The method of claim 61 further comprising automatically selecting the first television advertisement based on the user profile information.
Claim 80	
80	80. The method of claim 61 wherein neither the user profile information in part (b) nor the association between the online user interface device identifier and the set-top box identifier includes personally identifiable information.
Claim 81	
[81A]	81. The method of claim 61 wherein: (i) the computer system is controlled by an entity that operates independently of a provider of television service to each of the multitude of users through the corresponding set-top box; and
[81B]	(ii) the computer system causes the first television advertisement to be directed in part (b) without transmitting user online behavioral profile information to

Designation	Claim Language
	the provider of television service.
Claim 82	
82	82. The method of claim 81 wherein the online user interface device identifier and the set-top box identifier are associated in part (a), and the first television advertisement is caused to be directed in part (b), without receiving personally identifiable information from the provider of television service.
Claim 83	
[83A]	83. The method of claim 61: (i) further comprising, using user profile information derived from online activity from the online user interface device of a second user of the multitude of users via a second online access IP address, with the computer system, automatically causing a second television advertisement to be directed to a second set-top box for presentation via that set-top box, selectively, wherein the second set-top box is indicated by the set-top box identifier associated with the online user interface device identifier of the second user's online user interface device, and
[83B]	(ii) wherein which television advertisement is directed to or presented via which set-top box depends on differences between the online activities from the online user interface devices of the first and second users, respectively.
Claim 84	
84	84. The method of claim 83 wherein neither the user profile information in part (i) nor the association between the second online user interface device identifier and its associated set-top box identifier includes personally identifiable information.
Claim 85	

Designation	Claim Language
85	85. The method of claim 61 wherein the online activity comprises requesting a search.
Claim 86	
86	86. The method of claim 61 wherein the first television advertisement is caused to be directed to the set-top box upon first being contacted by the set-top box after the user profile information is derived.
Claim 87	
87	87. The method of claim 61 wherein the first television advertisement is selected from among a plurality of possible television advertisements based at least in part on the user profile information derived from the online activity from the first online access IP address.
Claim 88	
88	88. The method of claim 87 wherein the first television advertisement is selected based at least partly on demographic or behavioral attributes included in the user profile information.
Claim 89	
89	89. The method of claim 61 wherein the first television advertisement is selected from among a plurality of possible television advertisements based at least in part on the television content viewed at the time the first television advertisement is to be presented by the set-top box.
Claim 90	
90	90. The method of claim 61 wherein the common IP address is an IP address dynamically assigned to a modem or router used by the user for online access and connected to the user's set-top box.

Designation	Claim Language
Claim 91	
[91A]	91. The method of claim 61 further comprising the computer system: (i) receiving an identifier corresponding to the set-top box of the user; and
[91B]	(ii) causing the television advertisement to be transmitted only if directed to the set-top box corresponding to the identifier.
Claim 92	
92	92. The method of claim 61 wherein part (a) comprises the act of storing the common IP address, and further comprising updating the common IP address of the user.
Claim 93	
93	93. The method of claim 92 wherein part (a) comprises the act of storing the common IP address in the computer system, and further comprising periodically updating the common IP address of the user.
Claim 94	
[94A]	94. The method of claim 61 wherein: (i) the user profile information in part (b) includes a list of online access IP addresses corresponding to specific online activities and times and dates corresponding to each of the online activities; and
[94B]	(ii) the computer system causes the television advertisement to be directed to the set-top box of one of the users only if any of the listed online access IP addresses corresponding to the specific online activities and the corresponding dates and times of the online activities match the common IP address assigned to that user and the date and time corresponding thereto.
Claim 95	

Designation	Claim Language
95	95. The method of claim 94 wherein part (a) comprises the act of storing in the computer system the common IP address and dates and times corresponding thereto, and further comprising periodically updating (i) the common IP address and times and dates corresponding thereto or (ii) the list of online access IP addresses corresponding to specific online activities and time and dates corresponding to each of the online activities.
Claim 96	
96	96. The method of claim 61 wherein the computer system is a central ad server and the first television advertisement is received at the central ad server and directed to the set-top box.
Claim 97	
97	97. The method of claim 61 wherein part (b) comprises, with the computer system, directing instructions to a profile provider, to an online site, or to an independent ad server to direct the first television advertisement to the set-top box.
Claim 98	
98	98. The method of claim 61 wherein part (b) comprises, with the computer system, directing instructions to the set-top box to retrieve the first television advertisement from a profile provider, from an online site, or from an independent ad server.
Claim 99	
99	99. The method of claim 61 wherein the computer system causes the first television advertisement to be directed only in response to a request for advertisements originating from the user's set-top box.

Designation	Claim Language
Claim 100	
100	100. The method of claim 61 wherein the computer system causes the first television advertisement to be directed without a request for advertisements originating from the user's set-top box.
Claim 101	
101	101. The method of claim 61 wherein the online access IP address of each user is an IP address associated with a modem or router used by that user for online access.
Claim 102	
102	102. The method of claim 61 wherein only advertisements satisfying criteria selected by each user are directed to the set-top box of that user.
Claim 103	
103	103. The method of claim 61 further comprising receiving a revenue amount as a result of directing the advertisement.
Claim 104	
104	104. The method of claim 61 further comprising paying a revenue amount to a profile provider as a result of using the user profile information in part (b).
Claim 105	
105	105. The method of claim 26 wherein automatically electronically delivering comprises, with the computer equipment, redirecting the user's online user interface device to a server of the computer system.
Claim 106	
106	106. The method of claim 26 wherein the first online access IP address and the common IP address are the same.

Designation	Claim Language
Claim 107	
107	107. The method of claim 26 wherein the first online access IP address and the common IP address differ.
Claim 108	
108	108. The method of claim 107 wherein the first online access IP address and the set-top box IP address are associated based on online access by the user's online user interface device via a second online access IP address.
Claim 109	
109	109. The method of claim 108 wherein the second online access IP address and the common IP address are the same.
Claim 110	
110	110. The method of claim 107 wherein the first online access IP address and the set-top box IP address are associated based on a correlation between the common IP address and an online user interface device identifier that indicates the user's online user interface device.
Claim 111	
111	111. The method of claim 110 wherein the online user interface device identifier includes a cookie.
Claim 112	
112	112. The method of claim 110 wherein the online user interface device identifier includes a tag.
Claim 113	
113	113. The method of claim 110 wherein the set-top box is further indicated by a set-top box identifier that includes a device serial number or a portion thereof.

Designation	Claim Language
Claim 114	
114	114. The method of claim 110 wherein the set-top box is further indicated by a set-top box identifier that includes a device MAC address or a portion thereof.
Claim 115	
115	115. The method of claim 110 wherein the set-top box is further indicated by a set-top box identifier that includes a username, a pseudonym, or a confirmation number.
Claim 116	
116	116. The method of claim 26 wherein the common IP address is determined by matching the first online access IP address with a set-top box IP address used by a uniquely identified set-top box both before and after the online activity occurs.
Claim 117	
117	117. The method of claim 26 wherein the first online access IP address and the set-top box IP address are associated before the online activity occurs.
Claim 118	
118	118. The method of claim 26 wherein the first online access IP address and the set-top box IP address are not associated until after the online activity occurs.
Claim 119	
119	119. The method of claim 26 further comprising, with the computer equipment, automatically deriving the user profile information from the online activity from the first online access IP address.
Claim 120	
120	120. The method of claim 31 wherein the first television advertisement is selected based at least partly on a specific

Designation	Claim Language
	search request, which request has originated from the first online user interface device.
Claim 121	
121	121. The method of claim 34 wherein the revenue amount is received from an advertiser that has contracted to display a TV ad to persons who have characteristics contained in the user profile information.
Claim 122	
122	122. The method of claim 121 further comprising, with the computer equipment, automatically selecting the first television advertisement based on the user profile information.
Claim 123	
[123A]	123. The method of claim 26 wherein: (i) the computer equipment is controlled by an entity that operates independently of a provider of television service to each of the multitude of users through the corresponding set- top box; and
[123B]	(ii) the computer equipment causes the first television advertisement to be directed in part (d) without transmitting or causing to be transmitted user online behavioral profile information to the provider of television service.
Claim 124	
124	124. The method of claim 123 wherein the online access and set-top box IP addresses are associated in part (a), and the first television advertisement is caused to be directed in part (d), without receiving personally identifiable information from the provider of television service.
Claim 125	

Designation	Claim Language
125	125. The method of claim 28 wherein neither the user profile information delivered in part (a) nor the association between the second online access IP address and its associated set-top box IP address includes personally identifiable information.
Claim 126	
126	126. The method of claim 39 wherein the user profile information derived from the online activity comprises an indication of a search request originating from the online user interface device of the first user.
Claim 127	
127	127. The method of claim 38 wherein automatically electronically delivering comprises, with the computer equipment, redirecting the user's online user interface device to the computer system.
Claim 128	
128	128. The method of claim 38 wherein the first online access IP address and the common IP address are the same.
Claim 129	
129	129. The method of claim 38 wherein the first online access IP address and the common IP address differ.
Claim 130	
130	130. The method of claim 129 wherein the online user interface device identifier and the set-top box identifier are associated based on online access by the user's online user interface device via a second online access IP address.
Claim 131	
131	131. The method of claim 130 wherein the second online access IP address and the common IP address are the same.
Claim 132	

Designation	Claim Language
132	132. The method of claim 38 wherein the online user interface device identifier includes a cookie.
Claim 133	
133	133. The method of claim 38 wherein the set-top box identifier includes a device serial number or a portion thereof.
Claim 134	
134	134. The method of claim 38 wherein the set-top box identifier includes a device MAC address or a portion thereof.
Claim 135	
135	135. The method of claim 38 wherein the set-top box identifier includes a username, a pseudonym, or a confirmation number.
Claim 136	
136	136. The method of claim 38 wherein the online user interface device identifier includes a tag.
Claim 137	
137	137. The method of claim 38 wherein the online user interface device identifier includes the first online access IP address.
Claim 138	
138	138. The method of claim 38 wherein the set-top box identifier includes the common IP address.
Claim 139	
139	139. The method of claim 38 wherein the set-top box identifier includes at least a portion of the common IP address.
Claim 140	

Designation	Claim Language
140	140. The method of claim 38 wherein the set-top box identifier includes a set-top box IP address.
Claim 141	
141	141. The method of claim 38 wherein the common IP address is determined by matching the first online access IP address with a set-top box IP address used by a uniquely identified set-top box both before and after the online activity occurs.
Claim 142	
142	142. The method of claim 38 wherein the online user interface device identifier and the set-top box identifier are associated before the online activity occurs.
Claim 143	
143	143. The method of claim 38 wherein the online user interface device identifier and the set-top box identifier are not associated until after the online activity occurs.
Claim 144	
144	144. The method of claim 38 further comprising, with the computer equipment, automatically deriving the user profile information from the online activity performed from the first online access IP address.
Claim 145	
145	145. The method of claim 39 wherein the user profile information derived from the online activity comprises demographic attributes collected through an Internet site accessed with the online user interface device of the first user.
Claim 146	
146	146. The method of claim 42 wherein the revenue amount is received from an advertiser that has contracted to display a TV ad to an audience of an Internet site.

Designation	Claim Language
Claim 147	
147	147. The method of claim 42 further comprising, with the computer equipment, automatically selecting the first television advertisement based on the user profile information.
Claim 148	
148	148. The method of claim 38 wherein neither the user profile information delivered in part (a) nor the association between the online user interface device identifier and the set-top box identifier includes personally identifiable information.
Claim 149	
[149A]	149. The method of claim 38 wherein: (i) the computer equipment is controlled by an entity that operates independently of a provider of television service to each of the multitude of users through the corresponding set-top box; and
[149B]	(ii) the first television advertisement is directed in part (d) without transmitting user online behavioral profile information to the provider of television service.
Claim 150	
150	150. The method of claim 149 wherein the online user interface device identifier and the set-top box identifier are associated in part (a), and the first television advertisement can be directed in part (d), without receiving personally identifiable information from the provider of television service.
Claim 151	
[151A]	151. The method of claim 38: (e) wherein delivered user profile information of a second user of the multitude of users (i) is derived from online

Designation	Claim Language
	activity of the second user from the second user's online user interface device via a second online access IP address and (ii) includes identification of the second online access IP address and the time and date of the online activity,
[151B]	(f) as a result of which delivery, a second television advertisement, different from the first television advertisement, is directed to a second set-top box for presentation via that set-top box, selectively, wherein the second set-top box is indicated by the set-top box identifier that the server associates with the second online user interface device identifier of the second user's online user interface device, for selective presentation via that set-top box, and
[151C]	(g) wherein which television advertisement is directed to or presented via which set-top box depends on differences between the online activities from the first and second online user interface devices, respectively.
Claim 152	
152	152. The method of claim 151 wherein neither the user profile information delivered in part (a) nor the association between the second online user interface device identifier and its associated set-top box identifier includes personally identifiable information.