

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

FREEWHEEL MEDIA, INC.,
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.: IPR2024-00424

**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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Ex. 1102:	Expert Declaration of Mr. David B. Lett
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Ex. 1104:	Excerpts of File History of U.S. Pat. No. 7,861,260
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Ex. 1106:	U.S. Pat. App. Pub. No 2007/0283384 (“Haeuser”)
Ex. 1107:	<i>Reserved</i>
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Ex. 1112:	Excerpts from E. D. Zwicky et al., <i>Building Internet Firewalls</i> (2d ed. 2000) (“Zwicky”)
Ex. 1113:	U.S. Pat. App. Pub. No. 2004/0076180 (“Satapati”)
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Ex. 1135:	Request for Comments: 1631, “The IP Network Address Translator (NAT)” (1994) (“RFC 1631”)
Ex. 1136:	Hagel <i>et al.</i> , <i>Net Worth: Shaping Markets When Customers Make the Rules</i> (1999)
Ex. 1137:	Zeff <i>et al.</i> , <i>Advertising on the Internet</i> (1999) (“Zeff”)
Ex. 1138:	U.S. Pat. No. 8,280,758 (“the ’758 Patent”)
Ex. 1139:	<i>Reserved</i>
Ex. 1140:	<i>Reserved</i>
Ex. 1141:	Excerpts from <i>AlmondNet, Inc. v. Freewheel Media, Inc.</i> , No. 1:23-cv-00220-MN (D. Del.) (“Corresponding District Court Litigation”)

- Ex. 1142: U.S. Pat. No. 9,036,981 (“Barton”)
- Ex. 1143: U.S. Pat. No. 7,634,789 (“Gerba”)
- Ex. 1144: U.S. Pat. App. Pub. No. 2002/0174444 (“Gatto”)
- Ex. 1145: U.S. Pat. App. Pub. No. 2002/0083445 (“Flickinger”)
- Ex. 1146: U.S. Pat. App. Pub. No. 2008/0040742 (“Howcroft742”)
- Ex. 1147: Jakob Nielsen, *Request Marketing* (Oct. 2000),
<https://www.nngroup.com/articles/request-marketing/>
- Ex. 1148: Bettina Fabos, *The Commercial Search Engine Industry and Alternatives to the Oligopoly* (Mar. 2006) EastBound Journal
- Ex. 1149: 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. 1150: U.S. Pat. App. Pub. No. 2002/0099842 (“Jennings”)
- Ex. 1151: *Reserved*
- Ex. 1152: *Reserved*
- Ex. 1153: ANSI/IEEE Std 802.11, 1999 Edition, Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) Specifications
- Ex. 1154: *Reserved*
- Ex. 1155: *Reserved*
- Ex. 1156: *Reserved*
- Ex. 1157: *Reserved*
- Ex. 1158: *Reserved*
- Ex. 1159: Declaration of Dr. Sylvia Hall-Ellis

- Ex. 1160: 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. 1161: U.S. Pat. No. 6,427,170 (“Sitaraman”)
- Ex. 1162: U.S. Pat. No. 8,180,674 (“Madhavan”)
- Ex. 1163: U.S. Pat. App. Pub. No. 2006/0039386 (“Park”)
- Ex. 1164: U.S. Pat. App. Pub. No. 2004/0003292 (“Kato”)
- Ex. 1165: U.S. Pat. App. Pub. No. 2008/0120178 (“Martinez”)
- Ex. 1166: U.S. Pat. No. 7,653,923 (“Flickinger923”)
- Ex. 1167: U.S. Pat. No. 7,376,714 (“Gerken”)
- Ex. 1168: *Reserved*
- Ex. 1169: U.S. Pat. No. 5,740,252 (“Minor”)
- Ex. 1170: U.S. Pat. App. Pub. No. 2007/0206773 (“Branam”)

MANDATORY NOTICES

Real Parties in Interest (37 C.F.R. § 42.8(b)(1))

The real parties-in-interest for this petition are (i) FreeWheel Media, Inc., (ii) Beeswax.io Corp., (iii) Comcast Corporation, (iv) Comcast Cable Communications, LLC, and (v) Comcast Cable Communications Management, LLC.

No unnamed entity is funding, controlling, or directing this Petition for *inter partes* review (IPR) of U.S. Patent No. 7,861,260 (“the ’260 Patent”), or otherwise has an opportunity to control or direct this Petition or Petitioner’s participation in any resulting IPR.

The ’260 Patent is the subject of three other requests for *inter partes* review filed by Petitioner. No arguments presented in this Petition were raised during prosecution of the ’260 Patent.

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

The ’260 Patent was asserted against FreeWheel Media, Inc. and Beeswax.io Corp. by AlmondNet, Inc. and Intent IQ, LLC (collectively “AlmondNet”) in the United States District Court for the District of Delaware: *AlmondNet, Inc v. Freewheel Media, Inc.*, No. 1:23-cv-00220-MN (D. Del.) (“Corresponding District Court Litigation”). Ex. 1141. The earliest date of service of the complaint for the Corresponding District Court Litigation on any of the real parties-in-interest was March 2, 2023.

This is the fourth of four petitions for *inter partes* review filed by Petitioner against the '260 Patent—the other three petitions are assigned IPR2024-00421, IPR 2024-00422 and IPR2024-00423. Petitioner is also filing two petitions for *inter partes* review against related U.S. Pat. No. 11,564,015—those two petitions are assigned IPR2024-00419 and IPR2024-00420.

According to the Office's records, the '260 Patent is related to application Ser. No. 17/714,965, filed Apr. 6, 2022, now U.S. Pat. No. 11,564,105 ("the '015 Patent"), which is a continuation of application Ser. No. 16/925,655, filed Jul. 10, 2020, now U.S. Pat. No. 11,303,973 ("the '973 Patent"), which is a continuation of application Ser. No. 16/228,479, filed December 20, 2018, now U.S. Pat. No. 10,715,878 ("the '878 Patent"), which is a continuation of application Ser. No. 15/803,631, filed Nov. 3, 2017, now U.S. Pat. No. 10,178,442 ("the '442 Patent"), which is a continuation of application Ser. No. 15/179,356, filed June 10, 2016, now U.S. Pat. No. 9,813,778 ("the '778 Patent"), which is a continuation of application Ser. No. 14/246,525, filed Apr. 7, 2014, now U.S. Pat. No. 9,369,779 ("the '779 Patent"), which is a divisional of application Ser. No. 13/097,885, filed Apr. 29, 2011, now U.S. Pat. No. 8,695,032 ("the '032 Patent"), which is a divisional of application Ser. No. 12/860,666, filed Aug. 20, 2010, now U.S. Pat. No. 8,281,336 ("the '336 Patent"), which is a continuation of the '260 Patent.

According to the Office's records, the '260 Patent is also related to: application Ser. No. 13/167,605, filed June 23, 2011, now U.S. Pat. No. 8,677,398 ("the '398 Patent"), which is a continuation of the '336 Patent; and application Ser. No. 14/089,645, filed Nov. 25, 2013, now U.S. Pat. No. 10,321,198 ("the '198 Patent"), which is a continuation of application Ser. No. 12/981,925, filed Dec. 30, 2010, now U.S. Pat. No. 8,595,069 ("the '069 Patent"), which is a continuation of application Ser. No. 11/968,117, filed Dec. 31, 2007, now U.S. Pat. No. 8,566,164 ("the '164 Patent"), which is a continuation-in-part of the '260 Patent.

In addition to the Corresponding District Court Litigation, the '260 Patent or its related patents have been the subject of the following district court cases:

- *AlmondNet, Inc. v. Viant Technology Inc.*, 1-23-cv-00174 (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.
- *AlmondNet, Inc. v. Amazon.com, Inc.*, 6-22-cv-01204 (W.D. Tex.), which was terminated.
- *AlmondNet, Inc. v. Microsoft Corp.*, 6-22-cv-01206 (W.D. Tex.), which was consolidated into the 897 W.D. TEx. Case.
- *AlmondNet, Inc. et al v. Oath Holdings Inc.*, 1-19-cv-00247 (D. Del.) (“247 D. Del. case”), which was terminated on March 4, 2019, without a claim construction order.
- *AlmondNet, Inc. et al v. Yahoo! Inc.*, 1-16-cv-01557 (E. D. N.Y.), which was transferred to the 247 D. Del. case.
- *Roku, Inc. v. AlmondNet, Inc. et al.*, 1-21-cv-01035 (D. Del.), which is currently pending and awaiting a claim construction order.

The '260 Patent has not been subject to any prior U.S. Patent Office proceedings. 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. 1105.

- *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. 1160.

- *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.

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

Petitioner designates counsel listed below. A power of attorney for counsel is being concurrently filed.

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Petitioner consents to electronic service by email at the following address and the above emails: ComcastIPRService@bannerwitcoff.com.

I. INTRODUCTION

FreeWheel Media, Inc. (“Petitioner”) petitions for *inter partes* review and cancellation of claims 1, 10-11, 13-14, 23-24, 26, 29-31, 33-53, 61-74, 89-90, 92-93, 102-103, 105-115, 121-122, 127-140, and 146-147 of U.S. Patent No. 7,861,260 (“the ’260 Patent”) (Ex. 1101). 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. 1104, p. 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. 1101, 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. 1101, 1:29-53, 2:61-3:3, 9:28-32, 9:35-50, 10:16-29, 12:54-13:15; Ex. 1102, ¶¶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. 1106) on that basis. Ex. 1104, pp. 312-13; Ex. 1102, ¶¶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. 1159 (librarian declaration addressing authenticity and public availability of Exs. 1112, 1135-1137, 1153).

Reference	Qualifications	Basis (pre-AIA)	Expert Declaration (Ex. 1102)
Madhavan	Filed 10/3/2006; Issued 5/15/2012	§102(e)	¶¶92-98
Park	Filed 07/29/2005; Published 2/23/2006	§§102(b),(e)	¶¶99-103
Kato	Filed 7/1/2003; Published 1/4/2004	§§102(b),(e)	¶¶104-109
Martinez	Filed 11/22/2006; Published 5/22/2008	§102(e)	¶¶110-115
Black	Filed 11/5/2003; Published 5/5/2005	§§102(a),(e)	¶¶119-124
Gerken	Filed 4/1/2004; Issued 5/20/2008	§102(a)	¶¶125-129

Koningstein	Filed 12/31/2003; Published 5/5/2005	§102(b)	¶¶130-132
Minor	Filed 10/13/1995; Issued 4/14/1998	§§102(b),(e)	¶¶133-137
Howcroft	Filed 2/15/2007; Published 8/21/2008	§102(e)	¶¶138-140
Branam	Filed 10/2/2006; Published 9/6/2007	§§102(a),(e)	¶¶141-144

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

A. Claims for Which Review is Requested and Grounds on Which Challenge Is Based

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

Ground	Basis for Challenge under §103	Claims Challenged
A	Madhavan-Park	1, 13-14, 44, 61-62, 71-74, 92-93
B	Madhavan-Park-Kato	1, 13-14, 44-48, 52, 61-65, 68, 71-74, 92-93
C	Madhavan-Park-Martinez	24, 26, 29, 31, 33-40, 42, 103, 106, 121-122, 128, 137-140, 146-147
D	Madhavan-Park-Kato-Martinez	24, 26, 29, 31, 33-40, 42, 103, 106-110, 114, 121-122, 128-131, 134, 137-140, 146-147
E-F	<i>Reserved</i>	<i>Reserved</i>
G	Madhavan-Park-Black	10, 89

H	Madhavan-Park-Kato-Black	10, 89
I	Madhavan-Park-Kato-Gerken	11, 90
J	Madhavan-Park-Martinez-Koningstein	30, 43
K	Madhavan-Park-Kato-Martinez-Koningstein	30, 43
L	Madhavan-Park-Martinez-Minor	41, 105, 127
M	Madhavan-Park-Kato-Martinez-Minor	41, 105, 127
N	Madhavan-Park-Howcroft	23, 66, 70, 102
O	Madhavan-Park-Kato-Howcroft	23, 49-50, 66, 70, 102
P	Madhavan-Park-Martinez-Howcroft	132, 136
Q	Madhavan-Park-Kato-Martinez-Howcroft	111-112, 132, 136
R	Madhavan-Park-Branam	51, 53, 67, 69
S	Madhavan-Park-Kato-Branam	51, 53, 67, 69
T	Madhavan-Park-Martinez-Branam	133, 135
U	Madhavan-Park-Kato-Martinez-Branam	113, 115, 133, 135

This petition is supported by the expert testimony of David Lett and Exhibits 1101-1170. Ex. 1102, ¶¶1-635.

B. 314(a) Discretion Does Not Apply

The *Fintiv* factors as set forth in the Director’s June 21, 2022 Guidance Memorandum favor institution.

Factor one appears neutral. Petitioner has filed IPR petitions challenging all four patents asserted in the District Court. If trial is instituted, Petitioner expects to request a stay, as a decision in Petitioner’s favor would resolve the dispute in its entirety.

Factor two favors institution. Trial is set for March 23, 2026—about 6 months after a final decision is expected.

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

Factor four strongly favors institution. The petition challenges all claims of the ’260 Patent while the Patent Owner charted only claim 1 in its complaint. Ex. 1141.

Factor five does not warrant denial as Petitioner is a defendant in the District Court case.

Factor six favors institution. Petitioner presents compelling unpatentability challenges that merit institution.

C. 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.*, Madhavan-Park and Madhavan-Park-Kato show).

D. 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. 1102, ¶¶145-150. Petitioner’s expert, David Lett, at least meets the level of skill of a POSA. Ex. 1102, ¶¶4-16.

E. Claim Construction

Petitioner applies the plain meaning for all claim terms. No express construction is necessary at this time. *Id.*, ¶151.

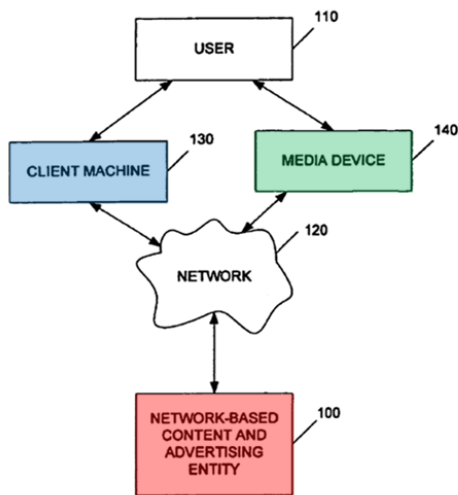
V. SPECIFIC GROUNDS FOR UNPATENTABILITY

As discussed below, independent claims 1 and 61 of the ’260 Patent only differ in trivial ways (*see* Ex. 1115) and are thus unpatentable in view of Madhavan-Park and Madhavan-Park-Kato for substantially the same reasons.

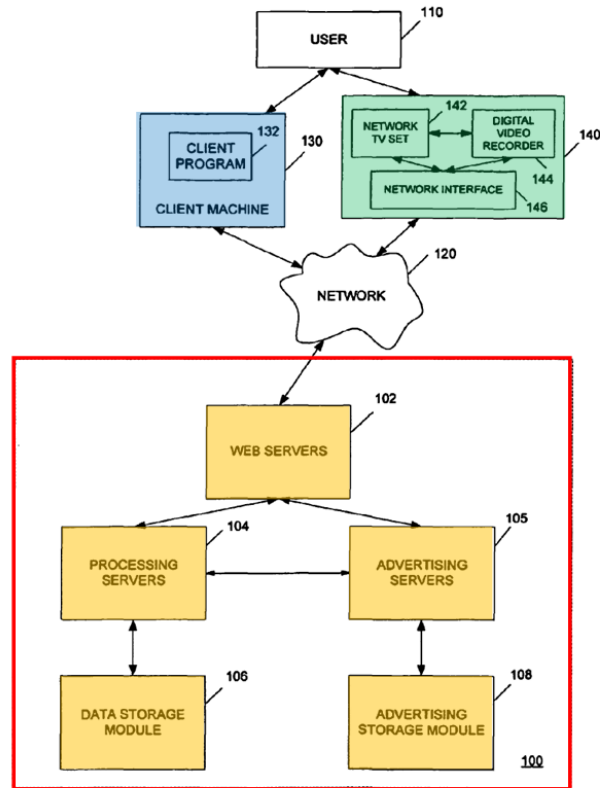
A. Grounds A-B: Obviousness in view of Madhavan-Park or Madhavan-Park-Kato

As shown below, Madhavan-Park and Madhavan-Park-Kato render obvious (1) associating device identifiers, such as IP addresses, of user devices that access the Internet from a shared router and (2) automatically sending targeted advertisements to those devices based on information gleaned from tracking the activity on either or both devices, such as sending an advertisement to one device based on profile information from the other. *See* §§V.A.1.a-c, *infra.*; Ex. 1102, ¶¶154-225.

Madhavan “facilitate[s] targeting of advertisements based on mutual information sharing between devices over a network,” wherein the online activities of a user’s **client machine** 130 and **media device** 140 are tracked, stored, and associated with each other by a network-based content and **advertising entity 100**, comprising **multiple servers**. The advertising entity selects and delivers advertisements to the user’s devices that are related to the previously-stored online activity. Ex. 1162, 1:36-2:3, 4:26-65, 5:18-6:12, 7:2-9:67, Figs. 1-3, 5-6. However, the user’s devices do not necessarily connect to the Internet from the same access point. Ex. 1102, ¶179.

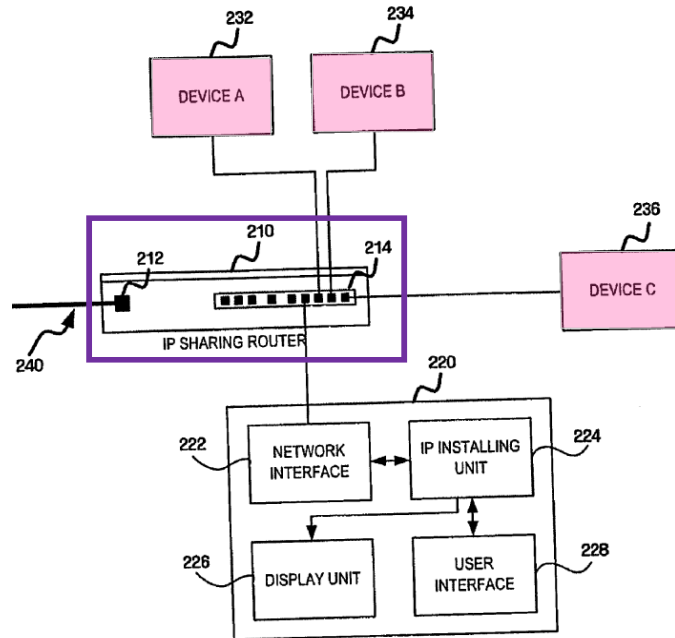


Ex. 1162, Fig. 1 (annotated)



Ex. 1162, Fig. 2 (annotated)

Park recognizes that devices may connect to the Internet via a common access point, and its system comprises a local network having an **IP sharing router** 210, which assigns a private IP address to **user devices** for use within the local network and connects them to the Internet using a common, public IP address. Ex. 1163, [0003], [0007]-[0012], [0029]-[0030], [0035]-[0038], Figs. 1-2; Ex. 1102, ¶¶179-195.



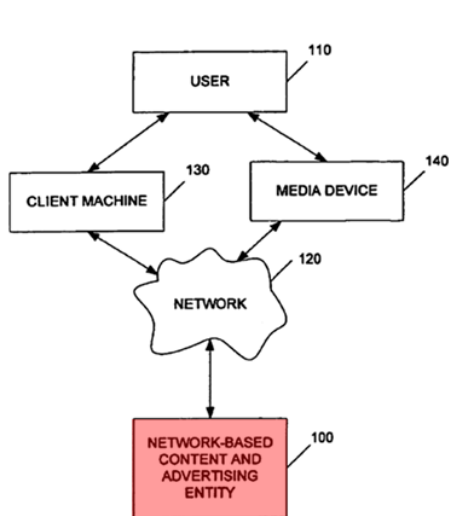
Ex. 1163, Fig. 2 (annotated)

Kato associates multiple devices sharing a common public IP address and distinguishes them by additional device identifiers, including port information and MAC addresses. Ex. 1164, Abstract, [0006]-[0013], [0018]-[0019], [0030]-[0046], [0049]-[0057].

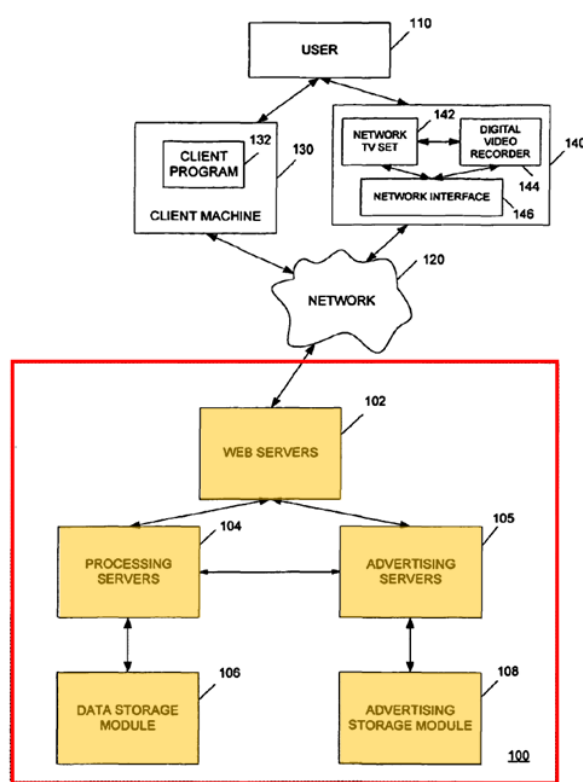
1. Independent Claim 1

- a. [1pre]: “A method implemented using a programmed hardware computer system, the method comprising:”

If limiting, Madhavan teaches the preamble. Madhavan’s system includes a **network-based content and advertising entity 100** (“computer system”) (“content server 100”) comprising multiple different **servers**. Ex. 1162, 4:26-65, 5:18-27, 8:5-8, 8:53-56.



Ex. 1162, Fig. 1 (annotated)



Ex. 1162, Fig. 2 (annotated)

These servers are computer-based and Madhavan's system implements its method through software programs executed on the computers ("**programmed hardware computer system**"). Ex. 1162, 4:26-65, 12:21-62, Figs. 1-3, 12¹; Ex. 1102, ¶164.

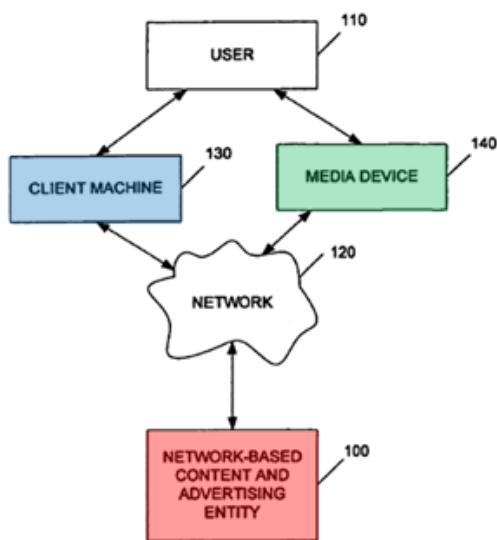
Accordingly, Madhavan discloses Element [1pre]. Ex. 1102, ¶¶162-166.

¹ A POSA would have understood that Figures 1-3 and 12 and their related disclosures in Madhavan are the same system. Ex. 1102, ¶165.

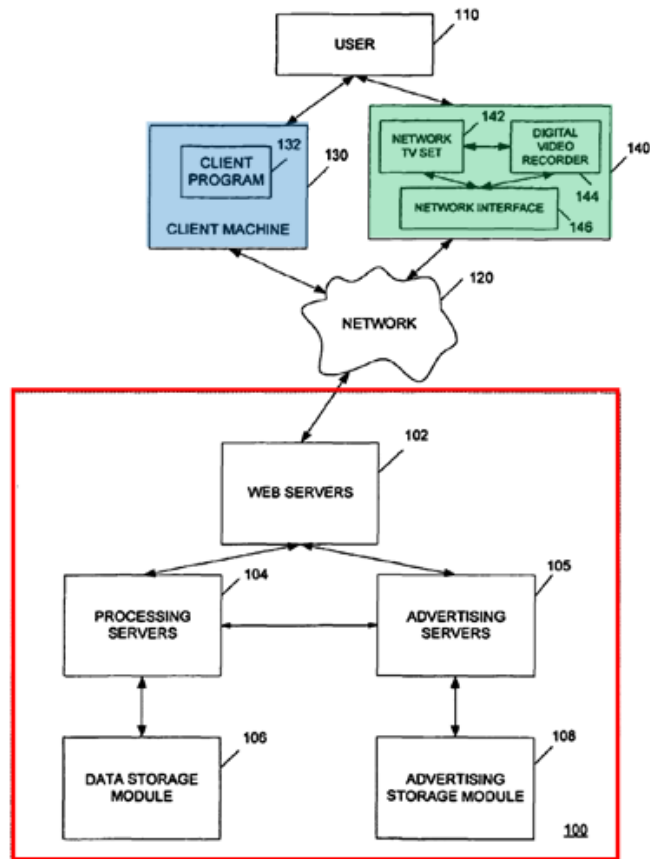
- b. [1A]: “(a) for each of a multitude of users, with the computer system, electronically associating an online access IP address of the user and a set-top box IP address of that user based on a common IP address, wherein network traffic is routed via the common IP address to both an online user interface device and a set-top box of that user; and”

Madhavan discloses a content server 100 comprising multiple servers and storage modules. §V.A.1.a, *supra*. Content server 100 is accessed by multiple users, and the steps discussed below are performed for each user (“**for each of a multitude of users**”) by one or more processing elements of content server 100 (“**with the computer system**”). Ex. 1162, Abstract, 1:36-54, 2:62-67, 4:26-5:2; Ex. 1102, ¶¶167-168.

As seen in Figures 1 and 2, Madhavan’s web servers 102 of **content server** 100 connect to a **client machine** 130 and one or more **media devices** 140, both belonging to user 110, via network 120. Ex. 1162, 4:26-5:32, 8:5-8, 8:53-56, 12:21-53; Ex. 1102, ¶¶169-172. Client machine 130 (“**an online user interface device**”) is assigned an IP address (“**online access IP address of the user**”). Ex. 1162, Abstract, 4:37-45, 5:3-17, 7:33-36, 7:60-67, 8:42-48, 10:35-40, 10:67-11:6; Ex. 1101, 2:31-35; Ex. 1102, ¶172. Media device 140 includes a network-enabled TV set (*i.e.*, “**a set-top box**”) and is assigned an IP address (“**set-top box IP address of that user**”). Ex. 1162, 1:55-60, 4:37-56, 5:18-36, 7:7-14, 9:9-18; Ex. 1101, 1:29-53.



Ex. 1162, Fig. 1 (annotated)



Ex. 1162, Fig. 2 (annotated)

Each user device provides user identification information (*e.g.*, device identifier information such as an IP address) and event/action data to web servers 102, which send such data to processing servers 104. Ex. 1162, 2:62-3:52, 5:53-6:12, 7:14-55, 8:9-25, 8:43-9:3, 10:3-25, 10:65-11:11, 12:49-62, Figs. 2, 5-7².

² A POSA would have understood that the features discussed for Madhavan's Figures 5-11 are attributed and related to operations of Madhavan's system shown in Figures 1-2, and 12, all of which is the same system. Ex. 1102, ¶165. To the

Processing servers 104 stores, in database 200 of data storage module 106, user profiles that associates the aforementioned data (including IP addresses) obtained from each of a user's various devices (**“electronically associat[es] an online access IP address of the user and a set-top box IP address of that user”**). Ex. 1102, ¶¶173-178. Data from a particular device is associated with a particular user's profile using identification information, such as a device identifier (*e.g.*, IP address). When multiple devices are associated as belonging to the same user, the IP addresses of each of those devices are also associated. Ex. 1162, 5:43-66, 7:33-53, 8:57-67, 9:36-40, 10:3-25; Ex. 1102, ¶¶173-178.

Specifically, database 200 includes “user tables 210 contain[ing] a record for each user 110..., such as...a user profile containing user data...such as, for example, user identification information[.]” Ex. 1162, 5:48-59. The identification information provided by a user's device includes “a unique IP address” assigned to the user's device during the online session. *Id.*, 7:15-19, 9:18-25. When a user connects to content server 100, the identification information and the user's

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 method of targeted advertising across multiple user devices based on user profile information. *Id.*

action/event data is sent from the user's device to processing servers 104 via web server 102, and then stored in database 200. *Id.*, 5:48-59, 7:43-55, 8:42-48, 10:1-18, Fig. 7.

The user's action/event data and corresponding classification categories are associated with the respective identification information and "linked to the user profile" by processing servers 104. *Id.*, 7:33-53, 8:63-67, 10:15-25. A user's profile thus contains, from each of the devices that were associated with the user based on the identification information: (1) the respective identification information (such as IP address) and (2) online activity data. *Id.*, 3:1-8, 5:53-6:12, 7:33-36, 8:9-25, 10:3-25, Figs. 6, 8-10; Ex. 1102, ¶¶173-178. Processing servers 104 uses the identification information to associate multiple user devices (*e.g.*, client machine 130, media device 140) with a particular user and will, for example, retrieve a user profile and its previously-stored data obtained from a first user device (*e.g.*, client machine 130) based on the identification information of a second (associated) user device (*e.g.*, media device 140), so that the data from the second device can be added to the database and the data from the first device can be used to direct ads to the second device. Ex. 1162, 3:1-8, 5:53-6:12, 7:33-9:67, 10:3-25, Figs. 6, 8-10; Ex. 1102, ¶¶173-178.

In one example, user 110 first accesses content server 100 through network 120 using a client machine 130 ("**an online user interface device**") having an IP

address (“**online access IP address**”). Ex. 1162, Abstract, 4:37-45, 5:3-11, 7:33-36, 7:60-67, 8:42-48, 10:35-11:6; Ex. 1102, ¶177. Web servers 102 receive the identification information (such as a device identifier (the IP address)) and the action/event data for client device 130, and send it to processing servers 104, which generates activity information (classification categories) for each action/event. Ex. 1162, 8:38-67, 3:1-55, 5:36-6:19, 10:65-11: 37, Figs. 2-3, 6, 9-10. Processing servers 104 store the identification information, the action/event data, and activity information in the user profile. Ex. 1162, 3:1-8, 5:53-6:12, 7:33-36, 8:9-25, 10:3-25, Figs. 5-6, 9-10.

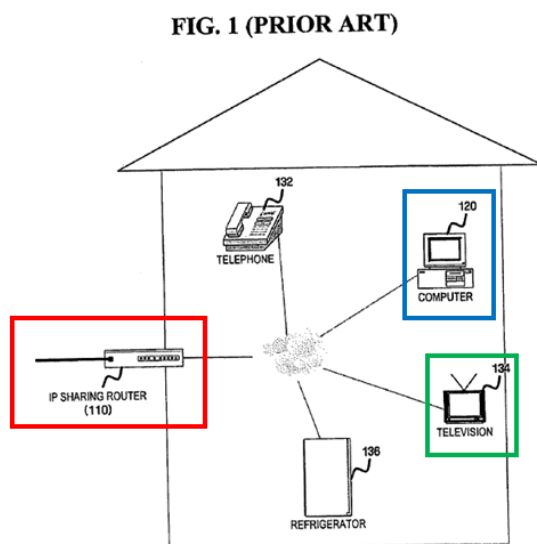
In this same example, user 110 then connects to content server 100 using a media device 140 (which includes “**a set-top box**”) having an IP address (“**set-top box IP address of that user**”). Ex. 1162, Abstract, 1:46-54, 3:55-63, 4:37-56, 5:28-36, 7:15-26, 9:4-29, 11:27-61, Figs. 6, 10. This identification information of media device 140 is sent, via web servers 102, to processing servers 104, which uses it to access the user profile of user 110 discussed above. *Id.*, 9:5-40, 10:41-46, 11:37-44, Figs. 2, 6, 9-10.

Thus, Madhavan’s content server 100 is a computer system with processing servers 104 that associates the IP address of client machine 130 (“**an online access IP address**”) and the IP address of media device 140 (“**a set-top box IP address**”)

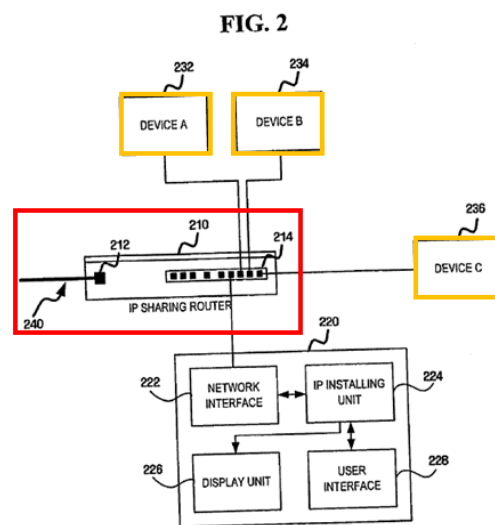
to a user 110 and, indeed, each other, by storing both IP addresses in the user's profile. Ex. 1102, ¶¶173-178.

Combining Madhavan's system with Park's IP sharing router: While Madhavan does not disclose using “a common IP address” to send network traffic to client machine 130 and media device 140, or to associate the IP addresses of those devices, Madhavan-Park renders obvious these features. *Id.*, ¶¶179-180. Park teaches using an IP sharing router to connect multiple devices (such as Madhavan's user devices) to the internet using a common IP address. Ex. 1163, Abstract, [0003]; Ex. 1102, ¶¶179-180.

Figures 1-2 of Park (below) illustrate a home network with an **IP sharing router** 110 and user devices—*e.g.*, **computer** 120, **television** 134, and **devices** 232-236. Ex. 1163, [0007]-[0008], [0029]-[0030]. Each device is assigned a private IP address by the router 110/210 for internal use, but accesses the Internet with a public IP address assigned to the IP sharing router (“**common IP address**”), which beneficially conserves the limited number of public IP addresses. *Id.*, [0009]-[0016], [0029]-[0030]; Ex. 1102, ¶¶180-181.



Ex. 1163, Fig. 1 (annotated)

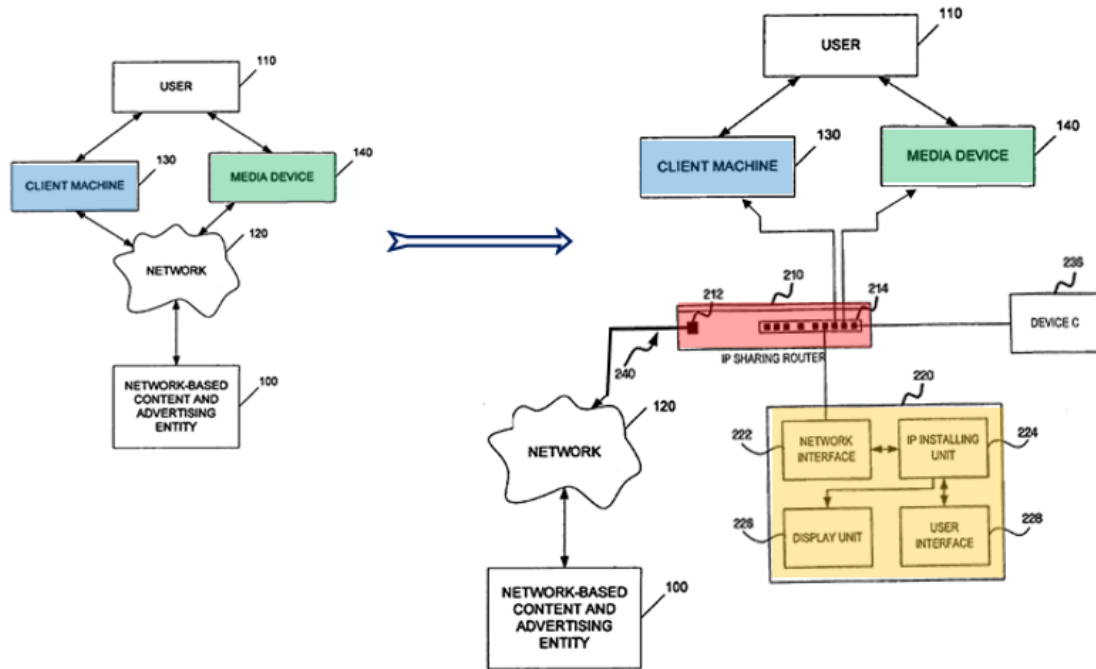


Ex. 1163, Fig. 2 (annotated)

Park's IP sharing router includes well-known network address translation (NAT) functions wherein the router is assigned a public IP address by an ISP, and the router assigns private IP addresses to local devices. Ex. 1163, [0030], [0035]-[0038]; Ex. 1102, ¶182; *see* Ex. 1112, pp. 36-38; Ex. 1113, [0004]-[0019]. Park's router translates the private IP address of the local device to the router's public IP address and adds the device's internal port address—thus enabling an external device to distinguish between and send data to the various local devices sharing the public IP address of Park's router. Ex. 1163, [0030], [0035]-[0038]; Ex. 1102, ¶183.

A POSA would have found it obvious to apply Park's teachings to Madhavan, for example, by adding an IP sharing router with NAT functionality, as taught by Park, to Madhavan's system as illustrated below, because this was a well-known

technique to reduce the number of public IP addresses used by a system such as Madhavan's, resulting in cost reduction, increased security, and simplified network management. Ex. 1102, ¶¶184-195.



Ex. 1162, Fig. 1

Ex. 1162, Fig. 1 (edited to include Park's router 210 and installer 220)

As explained below, the identification information of a user device in Madhavan-Park would be a device identifier that is the combination of: **(i)** an IP address of a router used to connect to the Internet (*e.g.*, the public IP address of Madhavan-Park's router), and **(ii)** a port number associated with the user device. Together, the IP address and port number uniquely identify a particular user device that connects to Madhavan's content server 100 via network 120. Ex. 1102, ¶¶183-184. Thus, in the combined system, Madhavan's processing servers 104

would associate the identification information of client machine 130 and media device 140 based on their use of the IP address of Park's router. *Id.*

Specifically, Park's router would assign private IP addresses to Madhavan's client machine 130 and media device 140. Ex. 1163, [0010]-[0011], [0035]-[0038]; Ex. 1102, ¶¶181-183. When client machine 130 accesses content server 100, Park's IP router replaces the private IP address of client machine 130 with the common IP address ("**online access IP address of the user**") and adds the port number of client machine 130. *Id.* It does the same for media device 140, which has the same common IP address ("**set-top box IP address of that user**") and a different port number. *Id.* In Madhavan-Park, network traffic between content server 100 and client machine 130 and/or media device 140 uses the common public IP address of Park's IP sharing router ("**wherein network traffic is routed via the common IP address**"). Ex. 1163, [0009]-[0016], [0029]-[0030]; Ex. 1102, ¶¶186-190.

The '260 Patent states that "where the user's STB 36 can also obtain online access via the same IP address as the user's online access [device] (*i.e.*, via modem 32), that common IP address comprises the electronic association...." Ex. 1101, 12:54-58, 13:41-43; Ex. 1102, ¶¶190-195. In Madhavan-Park, Madhavan's processing servers 104 (part of its "**computer system**") would "**electronically associat[e]**" the identification information (which includes its IP address) of client machine 130 ("**online access IP address of the user**") with the identification

information (which includes its IP address) of its media device 140 (**“set-top box IP address of that user”**) based on their use of the **“common IP address”** of Park’s IP sharing router. Ex. 1101, 13:19-22, 14:4-9. Further, Madhavan’s user profile would store this common IP address along with their respective port numbers (*e.g.*, the device identifier) as the identification data for each of client machine 130 and media device 140 (**“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”**). Ex. 1102, ¶¶190-195; Ex. 1162, 7:33-36, 7:60-67, 8:42-48, 9:18-29, 10:3-9, 10:67-11:6, 11:32-37. Accordingly, Madhavan-Park teaches Element [1A]. Ex. 1102, ¶195.

A POSA would have been motivated to add Park’s IP sharing router to Madhavan’s system because this was a well-known technique to reduce the number of public IP addresses used by a system such as Madhavan’s, resulting in cost reduction, increased security, and simplified network management. Ex. 1163, [0010]-[0011], [0035]-[0038]; Ex. 1102, ¶191. This represents the simple combination of prior art elements (Madhavan’s system and an IP sharing router as taught by Park) according to known methods (connecting Park’s router to the Internet and to devices in a local network) to yield predictable results (having multiple devices connected to a single router that communicate with the network

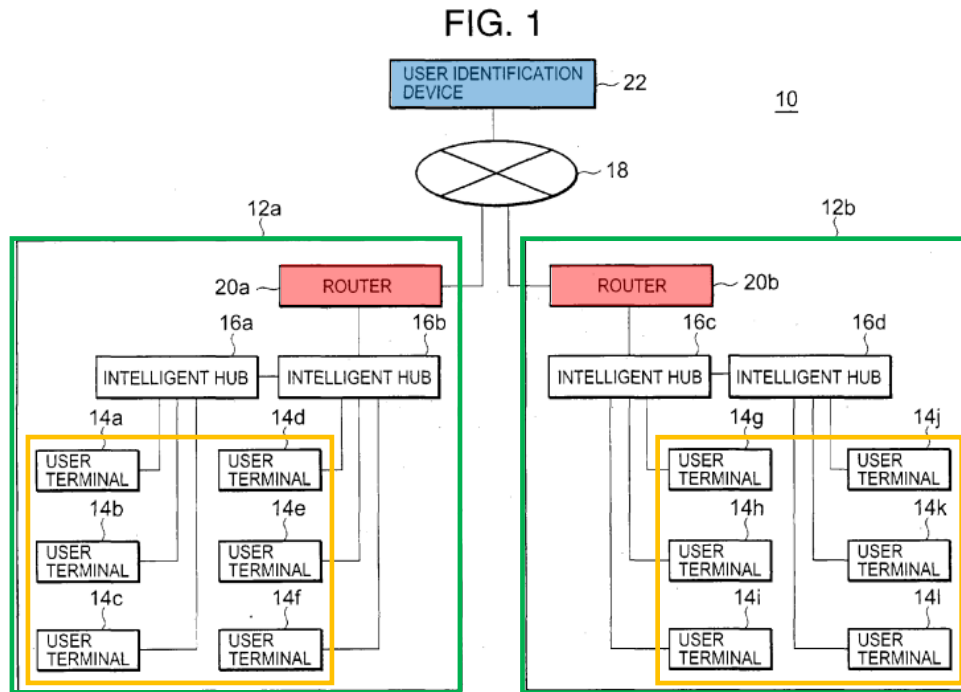
through a common IP address). Ex. 1162, 4:37-42, 5:3-32, 7:15-19, 8:42-48, Figs. 1-2; Ex. 1163, [0010]-[0011], [0030]-[0038], Figs. 1-2; Ex. 1102, ¶¶191-192.

A POSA would have had the skills to implement the combination, including the proposed implementation of Park's router within Madhavan's system, with a reasonable expectation of success. Ex. 1102, ¶193. Connecting multiple devices to an IP sharing router is straightforward. *Id.*; Ex. 1162, 2:55-61, 12:64-13:2; Ex. 1163, [0027]. Such routers are equipped to handle communication between Madhavan's devices and, *e.g.*, the Internet using a common, public IP address. Ex. 1102, ¶¶193-194; Ex. 1162, 1:46-54, 3:55-63, 4:37-42, 5:3-11, 7:15-19, 9:18-22; Ex. 1163, [0008]-[0012]. And, the use of NAT was well-known at the time. Ex. 1102, ¶¶193-194. A POSA would have also understood that the use of Park's router and a common IP address would not interfere with the operations of Madhavan's system. Ex. 1102, ¶194.

Modifying Madhavan-Park with Kato's MAC addresses: To the extent it is argued that Madhavan-Park does not teach "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," Madhavan-Park-Kato does. *Id.*, ¶¶196-214.

Kato recognized that content providers, such as Madhavan's content server 100, use IP addresses to identify which device sent information over a network. Ex. 1164, [0004]. As shown below, Kato's system 10 includes a **plurality of user**

terminals 14a-14l connected to routers 20a and 20b, which connect the LANs 12a and 12b to the Internet 18. *Id.*, [0030]-[0031], Fig. 1; Ex. 1102, ¶199.



Ex. 1164, Fig. 1 (annotated)

Noting that multiple devices use a common IP address (Ex. 1164, [0005]), Kato's system collects: (i) information indicating a correspondence between the physical ports of intelligent hub 16 and terminal identification information (*e.g.*, the MAC address) identifying a user terminal (*e.g.*, user terminals 14a-14l) connected to the port; (ii) information "indicating a correspondence between a MAC address and the private IP address assigned thereto;" and (iii) information indicating a correspondence between the private IP address and the global IP address along with the port number. Ex. 1164, [0006], [0009]-[0011], [0031]-[0057]; Ex. 1102, ¶¶200-

201. Kato's user identification device 22 uses this information to associate the different devices having a common global IP address. Ex. 1164, [0031]-[0041].

A POSA would have understood that Madhavan's devices, and thus the devices in Madhavan-Park-Kato, likewise would have had device identifiers (*e.g.*, MAC addresses) as taught by Kato. Ex. 1102, ¶¶202-205. Further, a POSA would have found it obvious to utilize the relationship between the public IP address, port number, and MAC address of a user's devices, as taught by Kato, to identify user devices (and corresponding user profile information) in Madhavan-Park. *Id.* Thus, the Madhavan-Park-Kato system identifies the user's profile information based on the relationship between the device's MAC address and the common IP address used by that device to access the Internet, as well as their port numbers. *Id.* The combined system, in addition to the common IP address and port number, would also store a device's MAC address in the user profile, and additionally use the MAC address as a device identifier, which is the known purpose of MAC addresses. *Id.* The identification information in Madhavan-Park-Kato would be a device identifier including the common IP address, port number, and MAC address. *Id.*

In Madhavan-Park and Madhavan-Park-Kato, each time a user device accesses content server 100, a corresponding user profile is supplemented with updated identification information (IP address, port number, and/or MAC address) and online activity data. Ex. 1162, 3:1-8, 5:53-6:12, 7:33-36, 8:9-25, 10:3-25,

Figs. 6, 8-10; Ex. 1102, ¶¶206-207. Madhavan's user devices access content server 100 from different locations using different IP addresses. Ex. 1162, 5:59-66; Ex. 1102, ¶¶206-207. Identification and online activity data is collected from the user device at each location and added to the user's profile, even when he is accessing the network from a different device using a different IP address, using Kato's MAC addresses. Ex. 1102, ¶¶206-207.

A POSA would have been motivated to incorporate Kato's teaching of associating multiple devices and their respective MAC addresses based on a common IP address in Madhavan-Park to more accurately identify a user's device (and corresponding user profile information). *Id.*, ¶¶208-209; Ex. 1164, [0005]-[0006], [0030]-[0039]. By identifying user devices via a MAC address as taught by Kato, the Madhavan-Park system would quickly correlate user action data provided by a user device with a particular user profile across different online sessions—even if the user accesses the content server 100 from those devices via different IP addresses. Ex. 1102, ¶¶208-209; Ex. 1162, 7:14-19; Ex. 1164, [0005]-[0006], [0017]-[0020], [0030]-[0053].

Madhavan-Park-Kato merely applies a known technique to a known system ready for improvement. Ex. 1102, ¶210. Kato teaches the known technique of associating user devices based on a determined relationship between the public IP addresses, port numbers, and MAC addresses. *Id.*; Ex. 1164, [0005]-[0006], [0031]-

[0038]. The system to be improved is Madhavan-Park's system, which associates devices in user profiles, but not expressly using the MAC addresses and the public IP address used by the devices to access the Internet. Ex. 1102, ¶210; Ex. 1162, 5:53-66, 7:15-19. The improvement is identifying the user's profile information based on the relationship between the device's common IP address, MAC address, and port numbers. Ex. 1102, ¶210.

Madhavan-Park-Kato also uses a known technique (Kato's association using public IP addresses, port numbers, and MAC addresses) to improve similar methods (Madhavan-Park using identification information for a device to associate online activity with a particular user profile) in the same way to yield predictable results (inclusion of the MAC address in the user profile and associating multiple user devices that accesses the system with a particular user profile based on common IP addresses, port numbers, and MAC addresses). Ex. 1162, 5:53-66, 7:15-8:33, 8:42-9:57, Figs. 5-6; Ex. 1164, [0005]-[0006], [0031]-[0038]; Ex. 1102, ¶211.

A POSA would have reasonably expected success. Ex. 1102, ¶212. Madhavan-Park's devices already have MAC addresses and its system already stores device identification information such as the common IP address and port numbers within a user profile, so including a device's MAC address in its device identification information would require relatively simple software modifications to the server to

include the MAC addresses in the user profiles, which were well within the skill set of a POSA. *Id.*

Thus, Madhavan-Park and Madhavan-Park-Kato teach [1A]. Ex. 1102, ¶¶195, 214.

- c. [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.”**

Madhavan-Park and Madhavan-Park-Kato teach user 110 (“**a first user**”) using client machine 130 (“**a first user interface device**”) to access the internet via a common IP address (“**a first one of the online access IP addresses of the multitude of users**”). Ex. 1102, ¶¶215-225; §V.A.1.b.

In Madhavan-Park and Madhavan-Park-Kato, processing servers 104 receives, via the common IP address and web servers 102, user data containing events and actions (*e.g.*, search queries) performed by user 110 on client device 130. Ex. 1162, 3:1-51, 8:38-56, 10:65-11:37, Figs. 2, 6, 9-10. Processing servers 104 determines classification categories for each event and action (for example, “sports” and “basketball”) and stores this data into category tables and activity tables that are linked to a user profile. *Id.*, 1:38-46, 2:62-3:55, 5:36-6:50, 8:63-67, 11:18-37,

Figs. 3, 6 (annotated below), 9 (annotated below), 10. This is “**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.**”

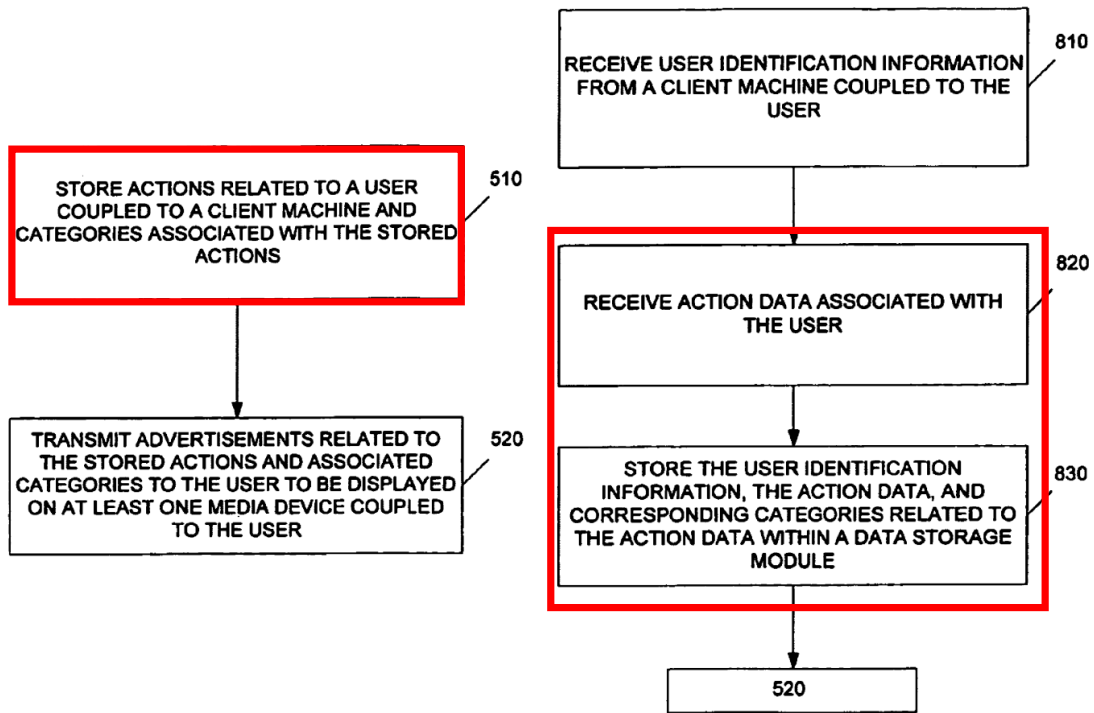


FIG. 6

FIG. 9

Ex. 1162, Figs. 6, 9 (annotated)

When media device 140 subsequently accesses content server 100 via the common IP address and web servers 102, processing server 104 sends its identification information and the previously stored user profile information to advertising servers 105, which uses it to select and direct an advertisement (“**a first television advertisement**”) to media device 140, as shown below in annotated

Figures 6 and 10. Ex. 1162, 1:46-54, 8:34-9:8, 9:36-67, 11:38-61, Figs. 2, 6, 10;
Ex. 1101, 1:29-53.

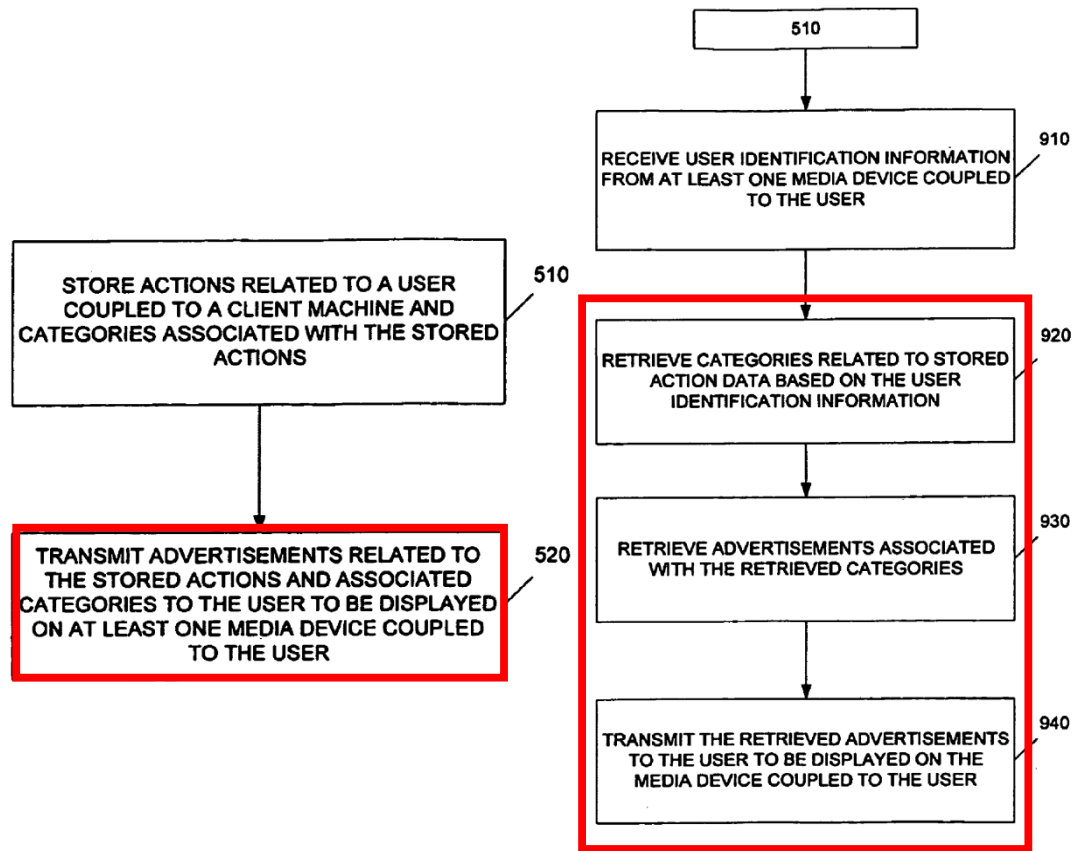


FIG. 6

FIG. 10

Ex. 1162, Figs. 6 and 10 (annotated)

The advertisement is “automatically directed” based on the programming of the servers because the user need not request receipt or initiate the selection, delivery, or display of the targeted advertisements. *See e.g.*, Ex. 1162, 7:56-59, 8:26-33, 9:4-8, Fig. 5 (step 420), Fig. 6 (step 520), Fig. 10 (step 940), Abstract; Ex. 1102, ¶¶216-220. Network traffic between content server 100 and both client

machine 130 and media device 140 uses the common public IP address of Park's IP sharing router (**"wherein the set-top box is indicated by the set-top box IP address associated with the first online access IP address"**). Ex. 1163, [0009]-[0016], [0029]-[0030]; Ex. 1102, ¶¶221-224; §V.A.1.b.

Thus, Madhavan-Park and Madhavan-Park-Kato teach Element [1B]. Ex. 1102, ¶225. Accordingly, Madhavan-Park and Madhavan-Park-Kato render claim 1 obvious. *Id.*

2. Independent Claim 61

Claim 61 parallels claim 1 but for requiring device identifier-based associations rather than claim 1's IP address-based associations. Ex. 1115; Ex. 1102, ¶¶226-229. As explained above, Madhavan-Park teaches associations based on IP address and port number (collectively, **"device identifiers"**) and Madhavan-Park-Kato's teaches associations based on IP address, port number, and MAC address (collectively **"device identifiers"**). Ex. 1101, 14:65-15:2 (device identifiers may be "identifying code or data element," including an IP address); Ex. 1102, ¶¶226-229; §V.A.1; Ex. 1163, [0031], [0035]-[0038]; Ex. 1164, Abstract, [0009]-[0011], [0031]-[0034], [0040]-[0051]. For at least the same reasons as explained for claim 1, Madhavan-Park and Madhavan-Park-Kato also render obvious claim 61. §V.A.1; Ex. 1102, ¶¶226-229.

3. Dependent Claims 13 and 92

As discussed for Element [1A], Madhavan-Park and Madhavan-Park-Kato store/update user profile information (*e.g.*, the common IP address) every time a user's device accesses the system. §V.A.1.b. Claims 13 and 92 further require that the electronically associating includes **“the act of storing the common IP address, and further comprising updating the common IP address of the user.”** Because Madhavan-Park and Madhavan-Park-Kato update/store the IP addresses for every online session of a user device, the common IP address would obviously also be updated and stored to ensure accurate and complete user profiles. §V.A.1.b; Ex. 1162, 7:33-67, 8:42-48; Ex. 1102, ¶¶281-285.

Accordingly, Madhavan-Park and Madhavan-Park-Kato render claims 13 and 92 obvious. *Id.*

4. Dependent Claims 14 and 93

Claims 14 and 93 are identical to claims 13 and 92 but require **“periodically”** updating the common IP address. As discussed for claim 13, Madhavan-Park and Madhavan-Park-Kato teach updating/storing the common IP address every time the user connects through the common IP address (*e.g.*, periodically). §V.A.3; Ex. 1102, ¶287.

Accordingly, Madhavan-Park and Madhavan-Park-Kato render claims 14 and 93 obvious. Ex. 1102, ¶¶286-289.

5. Dependent Claims 44 and 62

As discussed for Element [1A], the online access IP address for the user's devices is the common IP address because the devices use the IP sharing router, which transmits data externally using the router's public IP address. §V.A.1.b.; Ex. 1163, [0009]-[0011], [0038]; Ex. 1102, ¶314.

Accordingly, Madhavan-Park and Madhavan-Park-Kato render claims 44 and 62 obvious. Ex. 1102, ¶¶313-317.

6. Dependent Claims 45 and 63

Madhavan-Park-Kato teaches that the online activity of the user's device may have occurred using a different IP address than that of the user's STB. Ex. 1102, ¶¶318-319. As discussed for Element [1A], Madhavan-Park-Kato teaches recording multiple device identifiers (*e.g.*, IP addresses, port numbers, MAC addresses) for each online session. §V.A.1.b; Ex. 1164, [0031]-[0038], [0040]-[0041]; Ex. 1102, ¶319. Madhavan's user profile information also includes "geographic data detailing user access locations." Ex. 1162, 5:59-66; Ex. 1102, ¶319. A POSA would recognize that different geographic locations have different IP addresses. Ex. 1102, ¶¶319-320. Madhavan-Park-Kato's system would still correlate a user device with a user profile by at least its MAC address while noting the IP address ("**first online access IP address**"), even if different than "**the common IP address.**" *Id.*; Ex. 1164, [0031], [0034], [0040]-[0041], [0049]-[0051].

Accordingly, Madhavan-Park-Kato renders claims 45 and 63 obvious. Ex. 1102, ¶¶320-322.

7. Dependent Claims 46 and 64

As discussed for claim 45, Madhavan-Park-Kato's system recognizes a user device (*e.g.*, client machine 140 (**"user interface device"**)) accessing the system from a **"first online access IP address,"** which is different from **"the common IP address,"** by recognizing the device's MAC address. §V.A.6; Ex. 1102, ¶¶323-324. If the device later accesses the system from the common IP address (**"second online access IP address"**) used by the STB (**"[STB] IP address"**), Madhavan-Park-Kato's system recognizes the device by its MAC address, associates it with the STB (based on use of the common IP address), and includes the data from the device's online session from the first IP address in the user profile, where it can be used to direct advertisements to the STB. Ex. 1102, ¶¶324-328; Ex. 1164, [0031], [0034], [0040]-[0041], [0049]-[0051]; §V.A.1.b. Thus, Madhavan-Park-Kato renders claim 46 obvious. Ex. 1102, ¶¶329-330; *see also* §§V.A.1.b, V.A.5-6.

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 46 and 64 are identical. Accordingly, Madhavan-Park-Kato also renders claim 64 obvious. Ex. 1102, ¶331.

8. Dependent Claims 47 and 65

As discussed for claim 46, the second online access IP address is the common IP address. §V.A.7; Ex. 1102, ¶¶332-335. Claim 65 depends from claim 64 and is identical to claim 47. *Id.*, ¶336.

Accordingly, Madhavan-Park-Kato renders claims 47 and 65 obvious. *Id.*, ¶¶332-336.

9. Dependent Claim 48

As discussed for claim 46, Madhavan-Park-Kato's system would have associated **“the first online access IP address”** with the **“second online access IP address”** (**“the common IP address”** used by the STB) based on the user device's MAC address (**“an online user interface device identifier that indicates the user's online user interface device”**) having accessed the system using both the first IP address and the second (common) IP address. §V.A.7; Ex. 1102, ¶¶337-339. Thus, the first IP address and the STB's IP address are associated **“based on a correlation between the common IP address”** and the MAC address of the user device. §V.A.7; Ex. 1102, ¶¶340-341.

Accordingly, Madhavan-Park-Kato renders claim 48 obvious. Ex. 1102, ¶¶340-341.

10. Dependent Claims 52 and 68

As discussed for Element [1A], Madhavan-Park-Kato identifies devices using MAC addresses. §V.A.1.b; Ex. 1164, Abstract, [0006]-[0013], [0018]-[0019],

[0030]-[0046], [0049]-[0057]; Ex. 1102, ¶¶342-345. Accordingly, Madhavan-Park-Kato renders claims 52 and 68 obvious.

11. Dependent Claim 71

As explained for claims 1 and 61, Madhavan-Park and Madhavan-Park-Kato teach that a device identifier for client machine 130 includes its IP address (“**the first online access IP address**”) and port number. §§V.A.1-2; Ex. 1102, ¶¶386-387; Ex. 1163, [0038]; Ex. 1162, 1:38-46, 2:62-3:55, 8:37-41, 10:65-11:17. Accordingly, Madhavan-Park and Madhavan-Park-Kato render claim 71 obvious. Ex. 1102, ¶388.

12. Dependent Claim 72

As explained for claims 1 and 61, Madhavan-Park’s and Madhavan-Park-Kato’s STB uses the IP sharing router’s public IP address (“**common IP address**”), and thus, the STB’s identification information (“**set-top box identifier**”) includes the common IP address and port number. §§V.A.1-2 ; Ex. 1102, ¶¶389-390; Ex. 1163, [0038]; Ex. 1162, 1:38-46, 2:62-3:55, 8:37-41, 10:65-11:17. Accordingly, Madhavan-Park and Madhavan-Park-Kato render claim 72 obvious. Ex. 1102, ¶391.

13. Dependent Claim 73

Because Madhavan-Park and Madhavan-Park-Kato teach claim 72 (§V.A.12) they also teach the STB identifier including “**at least a portion of the common IP address,**” rendering claim 73 obvious. Ex. 1102, ¶¶392-394.

14. Dependent Claim 74

Because Madhavan-Park and Madhavan-Park-Kato teach claim 72 (§V.A.12) they also teach the STB identifier including “**a set-top box IP address**,” rendering claim 74 obvious. §§V.A.1-2, V.A.12; Ex. 1163, [0038]; Ex. 1102, ¶¶395-397.

B. Grounds C-D: Obviousness in view of Madhavan-Park-Martinez or Madhavan-Park-Kato-Martinez

As discussed below, independent claims 26 and 38 of the '260 Patent only differ in trivial ways (Ex. 1115) and are thus unpatentable in view of Madhavan-Park-Martinez and Madhavan-Park-Kato-Martinez for substantially the same reasons.

1. Independent Claim 26

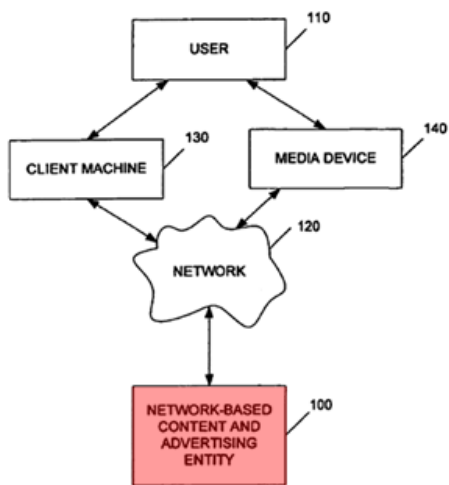
Claim 26 parallels claim 1 but for a few differences. First, a subset of the “computer system” of claim 1 is renamed as “computer equipment” in claim 26. Second, the electronic user profile information is “automatically” delivered and “includes identification of the first online access IP address and the time and date of the online activity” in claim 26.

But for these differences, [26pre], [26A], and [26B] substantially correspond to [1A], while [26C]-[26D] are similar to [1B]. The same teachings discussed with respect to [1A] and [1B] apply to these elements in claim 26. §§V.A.1.b-c, V.B.1; Ex. 1102, ¶¶398-432.

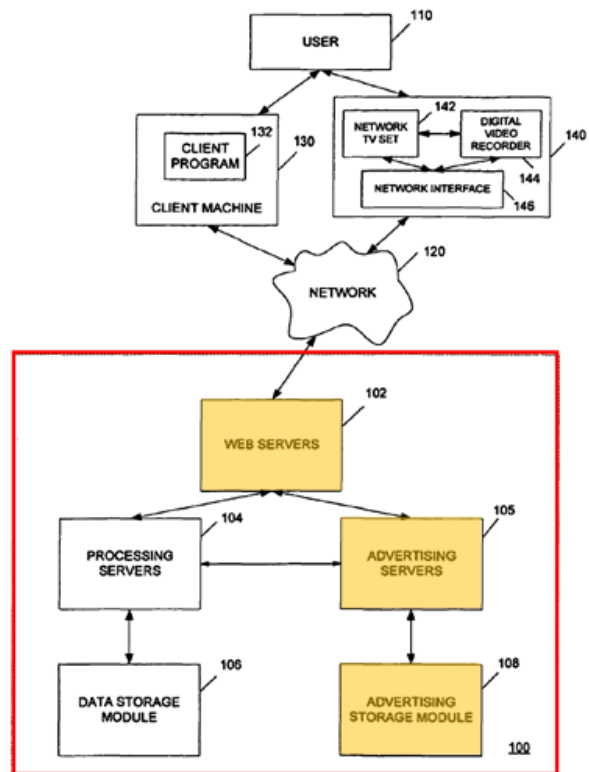
Madhavan's web servers 102 (part of the "computer system" in claim 1 and part of the renamed "computer equipment" in claim 26) receive user profile information from its user devices and automatically deliver this information to processing servers 104 (part of the "computer system" in both claims 1 and 26). §§V.A.1, V.B.1; Ex. 1162, 8:38-56, 10:3-14, 10:65-11:11; Ex. 1102, ¶¶409-410. The processing servers 104 then associate the identification information (a device identifier such as IP address and port numbers or IP address, port number, and MAC address) of the user devices by virtue of a common IP address of a shared IP router in both claims 1 and 26. §§V.A.1.b, V.B.1.b; Ex. 1162, 7:14-18, 7:34-41, 7:60-67; Ex. 1102, ¶411. Martinez further teaches the use of temporal data in a user profile.

a. [26pre]: "A method implemented using computer equipment, the method comprising:"

If limiting, Madhavan teaches the preamble. Madhavan's system and method is implemented through software implemented on hardware processors. Ex. 1162, 12:49-53. As shown in Figures 1 and 2 below, Madhavan's **content server 100** includes **web servers 102**, **advertising servers 105**, and **advertising storage module 108**, which are computer-based and for the purposes of this claim, disclose the claimed **"computer equipment."** Ex. 1162, 4:26-36, 4:57-65, 5:18-27, 8:5-8, 8:53-56, 12:21-53, Figs. 1-3, 12; Ex. 1102, ¶¶403-404.



Ex. 1162, Fig. 1 (annotated)

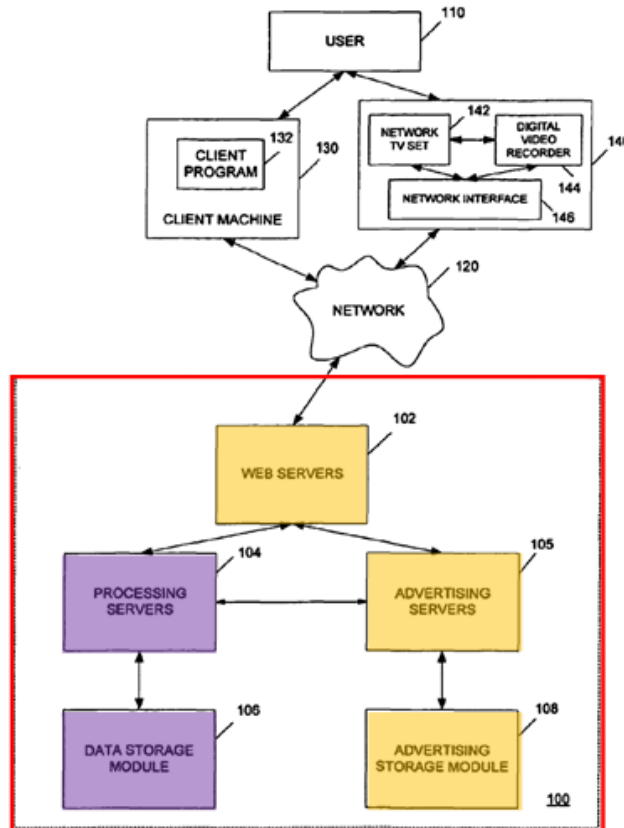


Ex. 1162, Fig. 2 (annotated)

Accordingly, Madhavan teaches Element [26pre]. Ex. 1102, ¶405.

- b. [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,”

Content server 100 further includes **processing servers** 104 and **data storage module** 106, which are also computer-based and collectively disclose the claimed “**computer system that includes a server.**” Ex. 1162, 2:62-3:52, 4:26-36, 7:14-55, 8:43-9:3, 10:65-11:11, 12:21-53, Figs. 1-3, 12; Ex. 1102, ¶¶407-408. Content server 100 is accessed by multiple users, and the steps discussed below are performed for each user (“**for each of a multitude of users**”) by processing servers 104 (part of “**computer system**”), web servers 102 (part of “**computer equipment**”), and/or advertising servers 105 (part of “**computer equipment**”). Ex. 1162, Abstract, 1:36-54, 2:62-67, 3:52-4:2, 4:27-5:2.



Ex. 1162, Fig. 2 (annotated).

As explained for Element [1A], web servers 102 receive identification information and event/action data from user devices (*e.g.*, client machine 130 and/or client machine 140). §V.A.1.b; Ex. 1162, Abstract, 2:62-3:52, 4:37-45, 5:3-11, 7:14-36, 7:60-67, 8:42-56, 10:35-40, 10:65-11:11, Fig.2; Ex. 1102, ¶¶409-410. As further explained for Element [1A], the identification information includes a common IP address of an IP sharing router, a port number of the user device, and/or the MAC address of the user device. Ex. 1162, 7:14-67; Ex. 1163, [0030], [0035]-[0038]; Ex. 1164, [0005]-[0006], [0030]-[0039]; §V.A.1.b.

Web servers 102 (part of **“computer equipment”**) automatically send the identification information and event/action data (individually or collectively, **“electronic user profile information”**) to processing servers 104 (part of **“computer system”**) based on its programming. Ex. 1162, 2:62-3:52, 7:14-55, 8:42-9:3, 10:65-11:11, 12:49-62, Fig. 2; Ex. 1102, ¶410. The ’260 Patent confirms that the pre-programmed sending of profile information is an example of “automatically” delivering profile information. Ex. 1101, 11:36-64; Ex. 1102, ¶410.

As further explained above for Element [1A], processing servers 104 (part of **“computer system”**) then associate the IP addresses of the user devices based on their identification information including a public IP address of an IP sharing router (**“electronically associate[], 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”**). §V.A.1.b.

Thus, Madhavan-Park and Madhavan-Park-Kato teach Element [26A]. Ex. 1102, ¶¶411, 423.

Modifying Madhavan with Martinez’s profile management module:

If Patent Owner argues that the computer equipment must be independent of the computer system, Martinez teaches this feature. Ex. 1102, ¶¶412-423.

Martinez discloses a targeted advertisement system in which a management module 20 receives extensive user profile information from various data providers

(including users and third parties like vendors and government entities). Ex. 1165, Abstract, [0001], [0004], [0009], [0035], [0045]-[0049], [0058]-[0059], [0074], [0091], [0098], [0119]-[0128], Figs. 1-4, Figs. 10e-10i. The management module then creates, updates, and monetizes user profiles based on the received data. *Id.*, Abstract, [0001], [0004], [0006], [0008]-[0011], [0043], [0046], [0048]-[0049], [0059], [0067], [0074], [0085], [0100], [0120]-[0128]. Importantly, the management module is operated by an entity independent from the providers of user profile information. *Id.*, [0048], [0068], [0074], [0085].

Implementing an independent management module for user profiles enables a more extensive collection and incorporation of user profile information from a larger number of providers, which beneficially results in “more accurate user profiles.” *Id.*, [0120]; *see also, id.*, [0005], [0007], [0064]-[0068], [0119]-[0128], Figs. 10e-10i. This also provides a useful mechanism for greater monetization of profile data—both for third-party providers for sending user profile information to the management module, and for the management module for sharing its “more accurate user profiles.” Ex. 1165, [0120].

Madhavan’s user profiles are generated using information sourced by its computer equipment from its users. Ex. 1162, 2:62-3:52, 7:14-55, 8:43-9:3, 10:65-11:11, 12:49-62, Fig. 2. A POSA would have understood the benefits of richer, more accurate user profiles generated using additional data, such as the third-

party user profile information taught in Martinez. Ex. 1102, ¶418. A POSA would have had the motivation to modify Madhavan-Park and Madhavan-Park-Kato to implement an independent user profile manager (as taught in Martinez) because this would generate “more accurate user profiles,” thereby enabling both the monetization of the user profiles and better deduction of a user’s activities and behavioral patterns when targeting the user with advertisements. Ex. 1165, [0120], [0128]. In order to do so, a POSA would have modified Madhavan-Park and Madhavan-Park-Kato such that its user profile manager (*e.g.*, the “**computer system**” that includes processing servers 104) are independent from its user profile information providers (*e.g.*, the “**computer equipment**” that includes web servers 102), as taught in Martinez. Ex. 1102, ¶418.

The proposed combination simply combines prior art elements (Madhavan-Park’s and Madhavan-Park-Kato’s systems where web servers 102 send processing servers 104 user profile information from user devices, and Martinez’s teaching of independence between user profile information providers and the user profile manager, which enables receiving user profile information from additional third parties) according to known methods (having the processing servers 104 and data storage modules 106 operate independently from the “computer equipment” and collect user data from third-parties) to yield predictable results (additional data is collected, allowing for more accurate user profiles that may be, *e.g.*, accessed by

third-parties for targeted advertisements in exchange for compensation). Ex. 1102, ¶419.

Madhavan-Park-Martinez and Madhavan-Park-Kato-Martinez also simply uses known techniques (independence between user profile information providers and a user profile manager) to improve a similar system (Madhavan-Park's and Madhavan-Park-Kato's systems, which collect and incorporate user-sourced user profile data) in the same way (a system that collects broader, more extensive data from a wider variety of third-parties and generates more accurate user profiles). *Id.*, ¶420. The systems are similar because both are directed to targeting advertisements based on user profiles. Ex. 1162, Abstract 1:7-11, 1:36-2:3, 6:3-12; Ex. 1165, [0001]-[0006], [0046]-[0048]; Ex. 1102, ¶420.

A POSA would have had the skills to implement the combination with a reasonable expectation of success. Ex. 1102, ¶422. For example, it would have been straightforward to operate Madhavan-Park and Madhavan-Park-Kato's already-existing computer system and computer equipment independently, and to program processing servers 104 to receive and incorporate third-party data into its user-profiles for accuracy and monetization purposes. *Id.*

Accordingly, Madhavan-Park-Martinez and Madhavan-Park-Kato-Martinez teach Element [26A]. *Id.*, ¶¶421-423.

c. [26B]

Madhavan-Park-Martinez and Madhavan-Park-Kato-Martinez teach Element [26B] because, as explained for Element [1A], Madhavan-Park and Madhavan-Park-Kato teach that network traffic is sent to both client machine 130 and media device 140 using the common IP address of the IP sharing router. §V.A.1.b, *supra*. The inclusion of Martinez’s teachings does not affect this analysis. Ex. 1102, ¶424.

d. [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”

As discussed regarding Elements [1A] and [26A], Madhavan-Park-Martinez and Madhavan-Park-Kato-Martinez teach that when user 110 (“**a first user**”) uses a client machine 130 (“**a first user interface device**”) to access the content server 100 via Park’s common IP address (“**a first online access IP address**”), web servers 102 deliver identification information including the common IP address (“**identification of the first online access IP address**”) and event/action data indicating the user’s activity (“**online activity of the first user from a first online user interface device via a first online access IP address**”) to processing servers 104 (“**delivered user profile information of a first user**”). §§V.A.1.b-c, V.B.1.b.

Madhavan's user profiles include and associate "short term behavior" and/or "long term behavior" data. Ex. 1162, 5:66-6:2. Martinez further teaches specifically tracking and storing "**the time and date of the online activity**" in the user profile information. Ex. 1102, ¶¶425-428.

Martinez's user profile stores various data associated with an electronic device, including interaction data 16, deduced information 17, and temporal data 15, *i.e.*, "time based data (*e.g.*, time stamps) that relate to specific times and/or events associated with a user and/or the electronic device." Ex. 1165, [0051]; *see also id.*, [0036]-[0040], [0049]-[0050], [0058], [0070], [0102]-[0103], Table 3. The temporal data is correlated with data regarding the user's online activities (interaction data 16) to discern patterns in the user's behavior (deduced information 17). *Id.*, [0004], [0046], [0049]-[0059], [0063]. Martinez provides an express motivation for using the temporal data in this way: to "deliver useful services and information to end users, and provide commercial opportunities to advertisers and retailers," *e.g.*, targeted advertising. *Id.*, [0002], [0076]; *see also* [0038], [0049], [0053], [0057]-[0058], [0063], [0084].

A POSA would have found it obvious to adapt Madhavan's modified systems to obtain and store, in the user profile, timestamp information for user devices as taught by Martinez, because it allows content server 100 to better deduce a user's activities and behavioral patterns when targeting the user with advertisements. *Id.*,

[0002]-[0006], [0046]-[0047], [0049], [0071]-[0073]; Ex. 1162, 5:66-6:2; Ex. 1102, ¶429. For instance, it would provide a straightforward way to achieve Madhavan's association of long-term and short-term behaviors. Ex. 1102, ¶429.

The proposed combinations combine prior art elements (the previously-discussed modified Madhavan systems that associate user activity data from various devices with the same user profile, and Martinez's user profiles that contain data indicating when a user's activity on each device occurred) according to known methods (programming the system to collect and store the temporal data) to yield predictable results (the user profile includes temporal data, which can be used to deduce behavioral patterns in user data for the purpose of targeting users with advertisements). Ex. 1102, ¶¶419, 430.

The combinations also use known techniques (Martinez's collection and storage of temporal data for a device's online activity as part of a user profile) to improve a similar system (the modified Madhavan systems that store user activity data from various devices within a common user profile) in the same way (the user profiles include temporal data, which can be used to deduce behavioral patterns to improve the targeting of advertisements). *Id.* The systems are similar because both target advertisements based on user profiles. Ex. 1162, Abstract, 1:7-11, 1:36-2:3, 6:3-12; Ex. 1165, [0001]-[0006], [0046]-[0048]; Ex. 1102, ¶¶420, 430. And, their user profiles both associate a user's electronic devices and the electronic data

collected therefrom based on a unique device identifier. Ex. 1162, 5:53-66, 7:33-53, 8:9-15, 8:57-67, 9:36-40, 10:10-25; Ex. 1165, [0004], [0006], [0011]-[0012], [0043]-[0047], [0063], [0084]; Ex. 1102, ¶430.

A POSA would have had the skills to implement the combination with a reasonable expectation of success. Ex. 1102, ¶431. For example, it would have been straightforward to program Madhavan's modified systems to collect temporal data for a user's online activities and use this information to deduce patterns within the user's action data (*e.g.*, short-term vs. long-term behavior) to provide enhanced targeting of advertisements. *Id.* Accordingly, Madhavan-Park-Martinez and Madhavan-Park-Kato-Martinez teach Element [26C]. *Id.*

e. 26[D]

Madhavan-Park-Martinez and Madhavan-Park-Kato-Martinez teach Element [26D] because as explained for Element [1B], Madhavan-Park and Madhavan-Park-Kato teach that as a result of delivering user profile information, a television advertisement is sent to media device 140 using the same IP address associated with client machine 130 (*e.g.*, the public IP address of the IP sharing router). §V.A.1.c, *supra*. The inclusion of Martinez's teachings does not affect this analysis. Ex. 1102, ¶432.

2. Independent Claim 38

Claim 38 parallels claim 26 but for requiring device identifier-based associations rather than claim 26's IP address-based associations. Ex. 1115. These are the same differences that distinguish claim 61 from claim 1.

For at least the same reasons as claim 26 and 61, Madhavan-Park-Martinez and Madhavan-Park-Kato-Martinez also render obvious claim 38, because, as explained above, the Madhavan-Park IP address and port number and/or the Madhavan-Park-Kato IP address and MAC address, are device identifiers, which the '260 Patent explains may include any "identifying code or data element," including an IP address. *See* §§V.A.2, V.B.1; Ex. 1101, 14:65-15:2; Ex. 1163, [0031], [0035]-[0038]; Ex. 1164, Abstract, [0009]-[0011], [0031]-[0034], [0040]-[0051]; Ex. 1102, ¶¶433-435. The inclusion of Martinez's teachings does not affect this analysis. Ex. 1102, ¶434.

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

Madhavan discloses that other network entities, such as advertisers, may access entity 100 but does not explicitly discuss payments. Ex. 1162, 4:65-5:2, 5:18-27. Martinez does. Ex. 1102, ¶¶448-450. In Martinez, third-parties (*e.g.*, advertisers) compensate Martinez's system when their advertisements are presented. Ex. 1165, [0047]-[0048], [0073]-[0074], [0076], [0110], [0123]-[0124], [0127]. Thus, Martinez discloses a system **"receiving a revenue amount as a result of**

directing the advertisement.” Ex. 1102, ¶¶450-451. Further, just like Martinez’s system automatically chooses/displays advertisements, it would be obvious for the system to “automatically” receive the agreed-upon payment when the advertisement is presented. *Id.*; Ex. 1165, [0072], [0075], [0083].

A POSA would have found it obvious to modify the proposed combinations to additionally include Martinez’s third-party payment system to allow revenue generation. Ex. 1162, 4:65-5:2, 5:18-27; Ex. 1102, ¶452. This applies a known technique (Martinez’s receipt of payment from advertisers) to a known method (Madhavan-Park’s/Madhavan-Park-Kato’s/Madhavan-Park-Martinez’s/Madhavan-Park-Kato-Martinez’s targeted advertising) ready for improvement to yield predictable results (receiving compensation for directing advertisements). Ex. 1102, ¶¶452-453. A POSA would have had the skills, knowledge, and a reasonable expectation of success to make this modification because it would have merely required routine programming modifications to the system. *Id.*

Accordingly, Madhavan-Park-Martinez and Madhavan-Park-Kato-Martinez render claims 24, 34, 42, and 103 obvious. *Id.*, ¶¶454, 485-487.

4. Dependent Claim 29

As discussed in §V.B.1.b, Madhavan-Park-Martinez and Madhavan-Park-Kato-Martinez teach web servers 102 (part of the “**computer equipment**”) electronically delivering user profile information to a “**computer system,**” which is

operated by an entity independent of the computer equipment. Martinez discloses that the computer system compensates the user profile data gatherer (akin to web servers 102) for that data. Ex. 1165, [0010], [0109], [0115], [0121]. A POSA would have been motivated to add this compensation structure to Madhavan-Park-Martinez and Madhavan-Park-Kato-Martinez because it incentivizes gathering useful data for user profiles, which, for the same reasons described in §V.B.1.b, increases user profile accuracy, allowing for better targeting of advertisements/monetization. Ex. 1102, ¶¶476-478. A POSA would have had the skills, knowledge, and a reasonable expectation of success to make this modification because it would have merely required routine programming modifications to the system. *Id.* Thus, Madhavan-Park-Martinez and Madhavan-Park-Kato-Martinez teach claim 29. Ex. 1102, ¶479.

5. Dependent Claims 31, 39, and 147

As discussed for Elements [26A] and [26D], in Madhavan-Park-Martinez and Madhavan-Park-Kato-Martinez, Madhavan's advertising servers 105 (part of **"computer equipment"**) receive, from processing servers 104, user profile information such as identification information and content classification categories. §§V.B.1.b, V.B.1.e. Advertising servers 105 then select advertisements related to the user profile information to be directed to the STB. Ex. 1162, 9:36-67, 11:44-67, Figs. 6, 10; Ex. 1102, ¶¶480-481. This selection is **"automatic"** because it is done

based on the advertising servers' programming and does not require a user request. Ex. 1162, 4:27-36.

Except for dependency, claims 39 and 147 are identical to claim 31. Accordingly, Madhavan-Park-Martinez and Madhavan-Park-Kato-Martinez render obvious claims 31, 39, and 147. Ex. 1102, ¶¶482, 488.

6. Dependent Claim 33

As discussed for claims 26, 24, and 29, Madhavan-Park-Martinez and Madhavan-Park-Kato-Martinez teach that computer equipment provides to a computer system user profile information used for targeting advertisements, advertisers pay for the directing their advertisements, and the computer equipment receives payment for providing the data. §§V.B.1, V.B.3-4. Claim 33 simply requires that the advertiser pays the computer equipment for delivering the data that caused their advertisement to be sent. Martinez teaches advertisers paying the computer equipment for the data. Ex. 1165, [0010], [0109], [0115], [0121]. A POSA would have been motivated to add this compensation structure to Madhavan-Park-Martinez and Madhavan-Park-Kato-Martinez to incentivize collection of user profile information, which leads to “more accurate user profiles” that promote additional monetization and better targeted advertising, as explained for claims 26, 24, and 29. §§V.B.1, 3-4; Ex. 1102, ¶¶489-490. The POSA would have expected

success because the modification would have required only straightforward programming changes to the system. Ex. 1102, ¶490.

Accordingly, Madhavan-Park-Martinez and Madhavan-Park-Kato-Martinez render claim 33 obvious. Ex. 1102, ¶491.

7. Dependent Claim 35

As discussed for Element [26D] and claim 1, Madhavan-Park-Martinez and Madhavan-Park-Kato-Martinez teach the selection/direction of a television advertisement to a STB based on user profile information. §§V.B.1.e, V.A.1. While Madhavan does not describe the advertisement's path, Madhavan's Figure 2 shows two-way communication between processing servers 104 (part of the claimed **"computer system"**) and advertising servers 105 (part of the claimed **"computer equipment"**). Ex. 1102, ¶¶492-493; Ex. 1162, 9:40-57, 11:44-67, Fig. 2. Advertising servers 105 select advertisements using user profile information and classification categories from processing servers 104. *Id.* While Madhavan does not specify how the advertisement should be directed, Martinez teaches independent profile providers (akin to the "computer system" in Madhavan-Park-Martinez) that generate revenue from advertisers for maintaining user profiles/directing advertisements. Ex. 1165, [0047]-[0048], [0073]-[0074], [0076], [0110], [0123], [0127], Fig. 3; Ex. 1102, ¶496; *see also* §§V.B.1.b, V.B.3, V.B.16.

A POSA would find it obvious and beneficial to modify Madhavan-Park-Martinez and Madhavan-Park-Kato-Martinez so that the maintainer of the user profiles also directs the advertisement, as taught by Martinez. Ex. 1102, ¶¶494-496. This would allow advertisers to pay a single, independent entity for targeted advertising using user profile information. *Id.* The modification would combine prior art elements (Madhavan-Park-Martinez’s and Madhavan-Park-Kato-Martinez’s computer systems and Martinez’s method of an independent profile provider directing advertisements) according to known methods (programming a computer system to send advertisements) to yield predictable results (a computer system that maintains user profiles and directs advertisements). *Id.* A POSA would have had a reasonable expectation of success because the modification would have merely required routine software modifications so that the computer system directs an advertisement (and receives revenue for doing so). *Id.*

Accordingly, Madhavan-Park-Martinez and Madhavan-Park-Kato-Martinez render claim 35 obvious. Ex. 1102, ¶¶497-498.

8. Dependent Claim 36

As discussed for claim 26, Madhavan teaches that advertising servers 105 (part of “**computer equipment**”) receive user profile information and content classification categories from the processing servers 104 (part of “**computer system**”), and in response, retrieve relevant advertisements to direct to the **STB**.

§V.B.1; Ex. 1162, 9:36-67, 11:44-67, Figs. 6, 10; Ex. 1102, ¶¶499-500. The user profile information received by the advertisement server 105 from the processing servers 104 (“**instructions received from the computer system**”) includes the content classification categories that inform advertisement servers 105 which targeted advertisements to select. *Id.*

Accordingly, Madhavan-Park-Martinez and Madhavan-Park-Kato-Martinez render claim 36 obvious. Ex. 1102, ¶¶501-502.

9. Dependent Claim 37

As discussed regarding claim 26, Madhavan-Park-Martinez and Madhavan-Park-Kato-Martinez teach that web servers 102 deliver identification information from client machine 130 that includes an IP address (“**the first user online access IP address**”). §V.B.1.

Accordingly, Madhavan-Park-Martinez and Madhavan-Park-Kato-Martinez render claim 37 obvious. Ex. 1102, ¶¶503-506.

10. Dependent Claim 40

Regarding Element [40A], as discussed for claims 38 and 39, Madhavan-Park-Martinez and Madhavan-Park-Kato-Martinez teach that web servers 102 deliver identification information from client machine 130, which includes an IP address (“**the first user online access IP address**”), port number, and/or MAC

address, to processing servers 104. §§V.B.2, V.B.5; Ex. 1162, 7:33-67, 8:45-48, 10:6-11:6, 11:34-37; Ex. 1102, ¶¶507-508.

Regarding [40B], Madhavan teaches that processing servers 104 (part of **“computer system”**) generate/send content classification categories to advertising servers 105, where they are used to select a targeted advertisement for delivery to a user device. Ex. 1162, 8:57-9:67, 11:38-61. Because the content classification categories (part of **“user profile information”**) are generated at processing servers 104 (part of **“computer system”**) and then delivered to advertising servers 105 (part of **“computer equipment”**) for use in advertisement selection and delivery (*e.g.*, the content classification categories are not delivered to processing servers 104), Madhavan teaches **“the selection of a television advertisement is based on user profile information that is not delivered to the computer system.”** Ex. 1102, ¶¶509-510.

Accordingly, Madhavan-Park-Martinez and Madhavan-Park-Kato-Martinez render claim 40 obvious *Id.*, ¶511.

11. Dependent Claims 106 and 128

As discussed in regards to claims 1, 26, 44, and 62, Madhavan-Park and Madhavan-Park-Kato teach this feature, which would not have been affected by the additional reliance on Martinez for claims 26 or 38. §§V.A.1, V.A.5, V.B.1; Ex. 1102, ¶512.

Accordingly, Madhavan-Park-Martinez and Madhavan-Park-Kato-Martinez render claims 106 and 128 obvious. Ex. 1102, ¶512.

12. Dependent Claims 107 and 129

As discussed for claims 1, 26, 45, and 63, Madhavan-Park-Kato teaches this feature, which would not have been affected by the additional reliance on Martinez for claims 26 or 38. §§V.A.1, V.A.6, V.B.1; Ex. 1102, ¶513.

Accordingly, Madhavan-Park-Kato-Martinez renders claims 107 and 129 obvious. Ex. 1102, ¶513.

13. Dependent Claims 108 and 130

As discussed for claim 46, Madhavan-Park-Kato teaches this feature, which which would not have been affected by the addition reliance on Martinez for claims 26 or 38, or claim 46's inconsequential wording changes. §§V.B.1-2, V.A.7; Ex. 1102, ¶514.

Accordingly, Madhavan-Park-Kato-Martinez renders claims 108 and 130 obvious. Ex. 1102, ¶514.

14. Dependent Claims 109 and 131

As discussed for claims 47 and 65, Madhavan-Park-Kato teaches this feature, which would not have been affected by the additional reliance on Martinez for claims 26 or 38. §§V.B.1-2, V.A.8; Ex. 1102, ¶515.

Accordingly, Madhavan-Park-Kato-Martinez renders claims 109 and 131 obvious. Ex. 1102, ¶515.

15. Dependent Claim 110

As discussed for claim 48, Madhavan-Park-Kato teaches this feature, which would not have been affected by the additional reliance on Martinez for claim 26. §§V.B.1, V.A.9; Ex. 1102, ¶516.

Accordingly, Madhavan-Park-Kato-Martinez renders claim 110 obvious. Ex. 1102, ¶516.

16. Dependent Claims 114 and 134

As discussed for claims 52 and 68, Madhavan-Park-Kato teaches this feature, which would not have been affected by the additional reliance on Martinez for claims 26 or 38. §§V.B.1-2, V.A.10; Ex. 1102, ¶517.

Accordingly, Madhavan-Park-Kato-Martinez renders claims 114 and 134 obvious. Ex. 1102, ¶517.

17. Dependent Claim 121

As discussed for claim 24, Madhavan-Park-Martinez and Madhavan-Park-Kato-Martinez teach “[automatically] receiving a revenue amount as a result of directing the advertisement.” *See* §V.B.3. Martinez’s management module receives third-party requests for user profiles having certain demographic characteristics; the third party then delivers targeted advertisements using qualifying user profiles and compensates the management module for access to the user profiles (**“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”). Ex. 1165, [0047]-[0048], [0072]-[0074], [0076], [0110], [0123], [0127]; Ex. 1102, ¶¶525-527. For the same reasons discussed in claims 24 and 26, a POSA would have found it obvious to incorporate this teaching into Madhavan-Park-Martinez and Madhavan-Park-Kato-Martinez because it allows revenue generation from advertisers in exchange for access to more accurate user profiles for targeted advertising. §§V.B.1, V.B.3; Ex. 1102, ¶526.

Accordingly, Madhavan-Park-Martinez and Madhavan-Park-Kato-Martinez render claim 121 obvious. Ex. 1102, ¶527.

18. Dependent Claim 122

Claim 122 is dependent on claim 121, but is otherwise identical to claim 31. Claim 122 is thus rendered obvious by Madhavan-Park-Martinez and Madhavan-Park-Kato-Martinez for the same reasons. §V.B.5; Ex. 1102, ¶528.

19. Dependent Claims 137-140

Except for dependencies, claims 137-140 are identical to claims 71-74. Ex. 1102, ¶¶535-538. As discussed for claims 71-74, Madhavan-Park and Madhavan-Park-Kato teach the claimed features, which would not have been affected by the additional reliance on Martinez for claim 38. *Id.*; §§V.B.1-2, V.A.11-14.

Accordingly, Madhavan-Park-Martinez and Madhavan-Park-Kato-Martinez render claims 137-140 obvious. Ex. 1102, ¶¶535-538.

20. Dependent Claim 146

As discussed for claim 24, Madhavan-Park-Martinez and Madhavan-Park-Kato-Martinez teach “[automatically] receiving a revenue amount as a result of directing the advertisement.” *See* §V.B.3. Martinez discloses that its management module allows advertisers to bid “for the right to present media to the users associated with selected user profiles.” Ex. 1165, [0047]-[0048], [0073]-[0074], [0076], [0110], [0123], [0127]. Further, both Madhavan and Martinez disclose that a user’s profile information includes whether they have visited an Internet site and Madhavan teaches that its television ads may be sent to a website (each “**audience of an Internet site**”). Ex. 1162, 3:1-34, 5:1-32, 6:13-19, 7:45-55, 8:26-33; Ex. 1165, [0068]. For the same reasons discussed in claims 24 and 26, a POSA would have found it obvious to incorporate this teaching to allow further revenue generation from advertisers for providing more accurate user profiles for targeted advertising. §§V.B.1, V.B.3; Ex. 1102, ¶¶539-540.

Thus, Madhavan-Park-Martinez and Madhavan-Park-Kato-Martinez teach claim 146. Ex. 1102, ¶541.

C. Grounds G-H: Obviousness in view of Madhavan-Park-Black or Madhavan-Park-Kato-Black

1. Dependent Claims 10 and 89

Madhavan-Park’s and Madhavan-Park-Kato’s systems select an advertisement from a plurality of advertisements. *See* Ex. 1162, Abstract, 1:7-11,

1:46-54, 3:55-63, 4:27-36, 9:4-8, 9:36-67, 11:27-67; Figs. 6, 10; Ex. 1102, ¶¶555-556. Black teaches selecting an advertisement based on television content (*e.g.*, a particular video-on-demand) that the advertisement will accompany (claimed **“television content viewed at the time the first television advertisement is to be presented by the set-top box”**). Ex. 1134, [0008], [0012]; Ex. 1102, ¶¶556-557. In Black, presentation of this selected advertisement is then restricted to “the time at which the requested video runs on the viewer’s television”. Ex. 1134, [0025]-[0026], [0030].

A POSA would have found it obvious to apply Black’s method of selecting advertisements based on the television content to Madhavan-Park’s and Madhavan-Park-Kato’s systems, because this additional advertisement targeting criteria would improve the effectiveness of the targeted advertising by selecting an advertisement that is relevant to the accompanying content. *Id.*, [0009], [0015]-[0016], [0025]-[0026], [0030]; Ex. 1102, ¶558.

This combination would have been the use of a known technique to improve similar systems in the same way (increasing the effectiveness of the advertising). Ex. 1102, ¶¶559-560. The systems are similar because they target advertising using user profile information. *Id.* A POSA would have had a reasonable expectation of success because this combination would have required straightforward

programming modifications to include the additional criteria, which was well within the ordinary level of skill in the art. *Id.*

Except for dependency, claim 89 is identical to claim 10. Accordingly, Madhavan-Park-Black and Madhavan-Park-Kato-Black render claims 10 and 89 obvious. *Id.*, ¶¶561-562.

D. Ground I: Obviousness in view of Madhavan-Park-Kato-Gerken

1. Dependent Claims 11 and 90

As discussed for Element [1A], Madhavan-Park-Kato electronically associates the IP address of a client machine 130 and the IP address of STB based on those devices' use of a shared IP router's public IP address ("**common IP address**"). §V.A.1.b. Gerken further teaches the use of dynamically assigned IP addresses, which were ubiquitously known. Ex. 1102, ¶¶563-565.

Gerken's system targets advertising based on user IP addresses, and continually updates the IP address to reflect changes, such as "when a user's IP address is dynamically changed during an online session." Ex. 1167, 5:44-57, Abstract, 4:59-62. A POSA would have understood this changing of IP addresses as "**dynamically assigned to a modem or router used by the user for online access,**" as claimed. Ex. 1102, ¶565.

It would have been obvious to a POSA to use a dynamically-assigned IP address, as taught by Gerken, as the IP sharing router's common IP address in

Madhavan-Park-Kato's systems, and to track (store and update) the changing IP address. Ex. 1167, Abstract, 4:31-62, 5:44-57, 6:55-7:7; Ex. 1102, ¶566. A POSA would have known there are a finite number of available IP addresses, and would have been motivated to use dynamically-changing IP addresses because they make more efficient use of the available supply of IP addresses and provide additional privacy and security. Ex. 1102, ¶566; Ex. 1163, [0010]. The dynamically-changing IP address would not interfere with Madhavan-Park-Kato's abilities to associate devices using their MAC addresses, and the system would readily continue to update the user profiles to keep track of the newly-assigned IP addresses. Ex. 1102, ¶566; *see also* §§V.A.1.b, V.A.6-9.

Madhavan-Park-Kato-Gerken combines known prior art elements (Madhavan-Park-Kato's IP sharing router that requires an IP address and Gerken's dynamic IP addresses) according to known methods (assigning the IP sharing router a dynamic IP address) to yield predictable results (the common IP address is dynamically-assigned). Ex. 1102, ¶¶566-567; Ex. 1167, Abstract, 4:31-45, 4:59-62, 5:44-57, 6:55-7:7. A POSA would have had a reasonable expectation of success because this combination would have required only basic network design knowledge and/or simple hardware and programming modifications, which was well within the ordinary level of skill in the art, particularly since dynamically-changing IP addresses were ubiquitous. Ex. 1102, ¶¶567-568.

Accordingly, Madhavan-Park-Kato-Gerken renders claims 11 and 90 obvious. *Id.*, ¶¶569-573.

E. Grounds J-K: Obviousness in view of Madhavan-Park-Martinez-Koningstein or Madhavan-Park-Kato-Martinez-Koningstein

1. Dependent Claim 30

As discussed for claim 29, Madhavan-Park-Martinez and Madhavan-Park-Kato-Martinez teach the computer equipment receiving revenue from the computer system for providing user data. §V.B.4. Madhavan-Park-Martinez and Madhavan-Park-Kato-Martinez also teach that this payment can come from advertisers rather than proprietors of the computer system. Ex. 1165, [0115]; Ex. 1102, ¶¶574-576. Koningstein teaches this **“revenue amount [being] received in response to each instance in which revenue is generated as a result of presenting the selected television advertisement,”** as claimed. Ex. 1102, ¶577.

Koningstein discloses a method of delivering targeted advertisements where advertisers only pay when a user takes some revenue-generating action. Ex. 1124, [0039]-[0040], [0043]-[0048]. Specifically, Koningstein teaches a method in which advertisers are obligated to pay when “some [] monetization event occurs,” such as a purchase of an item by a user. *Id.*, [0045], [0048]. Thus, Koningstein teaches a method in which advertisers pay to have their advertisements shown, but only when revenue is generated as a result of presenting the selected advertisement. Ex. 1102, ¶578.

Applying these teachings, Madhavan-Park-Martinez-Koningstein and Madhavan-Park-Kato-Martinez-Koningstein would result in a payment system in which advertisers only pay profile providers as a result of revenue generated by presentation of a particular targeted advertisement. *Id.*, ¶579. A POSA would have had the skills, knowledge, and motivation to modify Madhavan-Park-Martinez's and Madhavan-Park-Kato-Martinez's systems to include Koningstein's method of payment where the targeted advertisement system specifies that the advertiser pay when revenue is generated as a result of a presented advertisement. *Id.* A POSA would have been motivated to make this combination because it incentivizes advertisers to purchase profile information to more effectively reach targeted users. *Id.* This would have been nothing more than combining prior art elements (Madhavan-Park-Martinez's and Madhavan-Park-Kato-Martinez's systems, and Koningstein's payment method) according to known methods to yield predictable results (a targeted advertisement system where advertisers only pay when revenue is generated as a result of the presentation of the advertisement). *Id.* A POSA would have had a reasonable expectation of success because it would have required minimal software modifications so that the computer equipment receives revenue from an advertiser when the advertisement results in generation of revenue. *Id.*

Accordingly, Madhavan-Park-Martinez-Koningstein and Madhavan-Park-Kato-Martinez-Koningstein render claim 30 obvious. *Id.*, ¶580.

2. Dependent Claim 43

Claim 43 parallels claim 30, but depends on claim 42, which Madhavan-Park-Martinez and Madhavan-Park-Kato-Martinez teach. §V.B.3. As discussed for claim 30, Madhavan-Park-Martinez-Koningstein or Madhavan-Park-Kato-Martinez-Koningstein teach receiving revenue in response to each instance in which revenue is generated as a result of presenting or displaying the selected television advertisement. §V.E.1. Thus, for the same reasons described in claim 30, Madhavan-Park-Martinez-Koningstein and Madhavan-Park-Kato-Martinez-Koningstein render claim 43 obvious. Ex. 1102, ¶¶581-582.

F. Grounds L-M: Obviousness in view of Madhavan-Park-Martinez-Minor or Madhavan-Park-Kato-Martinez-Minor

1. Dependent Claims 105 and 127

As discussed for claims 26 and 38, Madhavan-Park-Martinez and Madhavan-Park-Kato-Martinez's computer equipment (*e.g.*, web servers 102) electronically delivers user profile information to its computer system (*e.g.*, Madhavan's processing servers 104). §§V.B.1-2. Minor, similar to Madhavan, teaches a system in which user information is automatically delivered to a computer system (remote web site 34A). Ex. 1169, 1:8-25, 3:45-52, 3:62-4:3, 4:19-33, Fig. 2. In Minor, when the operator of an end-computer uses a browser to view a displayed document, such as a webpage, the webpage may include a “‘hyperlink hot spot’, which, when activated, results in a call to a second web computer.” *Id.*, 1:20-25, 3:62-4:33. Minor

teaches that a remote web site 34A receives demographic information of the operator (“**electronically delivering** [user profile information]”) in the form of a demographic hyperlink transfer request containing the demographic information. The information is received when the operator activates a hyperlink hotspot in a displayed document, leading the entry web site 32A to cause the end-user computer 30 to pass the demographic hyperlink transfer request from the entry web site 32A to the remote web site 34A (“**redirecting the user’s online user interface device to a server of the computer system**”). *Id.*, 3:45-4:33, 5:34-6:5, Figs. 2-3.

A POSA would have found it obvious to apply Minor’s method of delivering user profile information via a redirect to Madhavan-Park-Martinez and Madhavan-Park-Kato-Martinez because this was a known method for more efficiently and privately sending demographic information, with and without encryption, for use in providing demographic-tailored replies (*e.g.*, targeted advertisements). *Id.*, 4:50-5:7, 6:10-17; Ex. 1102, ¶¶583-584. Applying Minor’s teachings to the Madhavan-Park-Martinez and Madhavan-Park-Kato-Martinez systems would have resulted in web servers 102 (part of claimed “**computer equipment**”) providing client machine 130 with a redirect to processing servers 104 (part of claimed “**computer system**”) while the client machine 130 is accessing an online site in order to provide profile information about the user of client machine 130 to

processing servers 104 directly, reducing the amount of inner network traffic between web servers 102 and processing servers 104. Ex. 1102, ¶584.

The combination represents the use of a known technique to improve similar systems in the same way. *Id.*, ¶585. Similar to Madhavan-Park-Martinez and Madhavan-Park-Kato-Martinez, Minor derives user profile information from a user's online activity and provides it to a server (such as Madhavan's processing servers or Minor's remote web site 34A). *Id.*; Ex. 1169, 3:45-4:33, Fig. 2. Minor describes using redirection as an effective way to deliver encrypted user information to the server, and it would do so in the modified Madhavan systems as well. Ex. 1169, 3:45-4:33, 5:34-6:5, Figs. 2-3. Additionally, Minor explains that using redirection to communicate user profile information from one server to another reduces the communication requirements between servers and eliminates the need to share identifiers between those servers. *Id.*, 4:54-5:7; Ex. 1102, ¶585. A POSA would have had a reasonable expectation of success because this combination would have required only basic network design knowledge and/or simple hardware and programming modifications, which was well within the ordinary level of skill in the art. *Id.*

The proposed combination is also the simple substitution of one known element for another to obtain predictable results. Ex. 1102, ¶586. In particular, the combination would substitute Madhavan-Park-Martinez's and Madhavan-Park-

Kato-Martinez’s transmission of profile information to the processing servers with Minor’s redirect. *Id.*; Ex. 1169, 3:45-4:33, 5:34-6:5, Figs. 2-3. The predictable result is the computer equipment of the combined systems (*i.e.*, including web servers 102) having the user profile information sent directly to the processing servers 104 (part of claimed “computer system”) via a redirect. Ex. 1102, ¶586.

Accordingly, Madhavan-Park-Martinez-Minor and Madhavan-Park-Kato-Martinez-Minor render claims 105 and 127 obvious. *Id.*, ¶¶587-589.

2. Dependent Claim 41

Claim 41 is substantially similar to claims 105 and 127, but requires that the redirection of the user’s online interface device occurs **“during the first user’s accessing of an online site via the first online access IP address.”** As discussed above, Minor teaches delivering user profile information using redirection of the user online access interface device to a separate server (claimed **“automatically electronically delivering of user profile information includes redirecting a user’s device to the computer system server”**). Ex. 1169, 3:45-52, 3:62-4:3, 4:19-33, 5:34-43, 5:61-6:5, Figs. 2-3; Ex. 1102, ¶¶590-592; §V.F.1. Because Minor’s redirect occurs when the user activates a hyperlink hot spot on a webpage while accessing the webpage, the redirection is **“during the first user’s accessing of an online site via the first online access IP address.”** Ex. 1102, ¶592; Ex. 1169, 3:62-4:3.

Accordingly, Madhavan-Park-Martinez-Minor and Madhavan-Park-Kato-Martinez-Minor render claim 41 obvious. Ex. 1102, ¶¶592-596.

G. Grounds N-O: Obviousness in view of Madhavan-Park-Howcroft or Madhavan-Park-Kato-Howcroft

1. Dependent Claims 23 and 102

As described above for Element [1B], Madhavan-Park and Madhavan-Park-Kato cause an advertisement to be directed to a STB. §V.A.1.c. Howcroft allows an SSO subscriber (user) to set “SSO subscriber advertising profile settings.” Ex. 1116, [0048], [0055], [0083]-[0084]. These settings determine, *e.g.*, the “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. *Id.*, [0031]; Ex. 1102, ¶¶597-599. This represents the use of a known technique to improve similar systems in the same way. Ex. 1102, ¶599. Howcroft stores user-defined advertising criteria (a known technique) in order to increase relevance of advertising (an improvement) as discussed. *Id.*; Ex. 1116, [0030]-[0031]. And because Madhavan similarly teaches an electronic advertisement system for targeting users based on profile information, applying Howcroft’s technique would have improved Madhavan’s goals of tailored

advertising in the same way. Ex. 1102, ¶599. A POSA would have had a reasonable expectation of success because this combination would have required only straightforward programming modifications, which were well within the ordinary level of skill in the art. *Id.*

Except for dependency, claim 102 is identical to claim 23. Accordingly, Madhavan-Park-Howcroft and Madhavan-Park-Kato-Howcroft render claim 102 obvious. Ex. 1102, ¶¶600-601.

2. Dependent Claims 49 and 66

Claims 49 and 66 require that the online user interface device identifier include a cookie. As discussed for claims 1 and 61, the identification information for a user device can include different device identifiers. §§V.A.1.b, V.A.2. Howcroft teaches (as was ubiquitously known) that cookies can likewise usefully identify devices across networks. Ex. 1116, [0061]. For example, Howcroft explains how a cookie may be stored on and uniquely identify a device, so that when the device connects to a computer system from different networks, the device would not need to re-authenticate. *Id.* Rather, the unique cookie provides sufficient identification. *Id.*; Ex. 1102, ¶¶602-604.

It would have been obvious to use a cookie as part of a device identifier. Ex. 1102, ¶605. Doing so combines prior art elements according to known methods, as described in Howcroft, to yield predictable results. *Id.* The prior art elements are

Madhavan-Park's or Madhavan-Park-Kato's user activity tracking and profile management that uses device identifiers and Howcroft's cookies as device identifiers. *Id.* The method of combination is placing a cookie on the user device, as taught by Howcroft. Ex. 1116, [0061]. The predictable result is that the cookie identifies the device to the system, which can then track and store data regarding the device's online activities. Ex. 1102, ¶¶605-607. Cookies and their uses were well known to a POSA and the change would have only required minor programming modifications, leading to an expectation of success. *Id.*

Accordingly, due to differences in dependencies, Madhavan-Park-Kato-Howcroft renders claim 49 obvious, and Madhavan-Park-Howcroft and Madhavan-Park-Kato-Howcroft render claim 66 obvious. *Id.*, ¶¶605-609.

3. Dependent Claims 50 and 70

Claims 50 and 70 require that the online user interface device identifier includes a tag. As explained for claims 49 and 66, Madhavan-Park-Howcroft and Madhavan-Park-Kato-Howcroft use a cookie as an online user interface device identifier. §V.G.2. The '260 Patent refers to cookies and tags interchangeably (Ex. 1101, 17:40-18:14) and the '260 inventor has explained elsewhere that a cookie is an example of a tag. Ex. 1138, 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. 1102, ¶¶610-613.

Accordingly, for the same reasons and considering similar differences in dependencies, Madhavan-Park-Kato-Howcroft renders claim 50 obvious, and Madhavan-Park-Howcroft and Madhavan-Park-Kato-Howcroft render claim 70 obvious. Ex. 1102, ¶¶613-614.

H. Grounds P-Q: Obviousness in view of Madhavan-Park-Martinez-Howcroft or Madhavan-Park-Kato-Martinez-Howcroft

1. Dependent Claims 111, 132

Claims 111 and 132 require that the online user interface device identifier include a cookie. As discussed for claims 49 and 66, Madhavan-Park-Howcroft and Madhavan-Park-Kato-Howcroft teach this feature, which would not have been affected by the additional reliance on Martinez for claims 26 or 38. §§V.B.1-2, V.G.2; Ex. 1102, ¶615.

Accordingly, for the same reasons and considering similar differences in dependencies, Madhavan-Park-Kato-Martinez-Howcroft renders claim 111 obvious, and Madhavan-Park-Martinez-Howcroft and Madhavan-Park-Kato-Howcroft render claim 132 obvious. Ex. 1102, ¶615.

2. Dependent Claims 112, 136

Claims 112 and 136 require that the online user interface device identifier include a tag. As discussed for claims 50 and 70, Madhavan-Park-Howcroft and Madhavan-Park-Kato-Howcroft teach this feature, which would not have been

affected by the additional reliance on Martinez in claims 26 or 38. §§V.B.1-2, V.G.3; Ex. 1102, ¶616.

Accordingly, for the same reasons and considering similar differences in dependencies, Madhavan-Park-Kato-Martinez-Howcroft renders claim 112 obvious, and Madhavan-Park-Martinez-Howcroft and Madhavan-Park-Kato-Howcroft render claim 136 obvious. Ex. 1102, ¶616.

I. Grounds R-S: Obviousness in view of Madhavan-Park-Branam or Madhavan-Park-Kato-Branam

1. Dependent Claims 51 and 67

Claims 51 and 67 require that the STB identifier includes a device serial number or a portion thereof. As discussed for claims 1 and 61, in Madhavan-Park and Madhavan-Park-Kato, the user profile information includes different device identifiers. §§V.A.1-2. Branam discloses that in a network environment providing targeted advertising and customized content, a STB may be identified using a serial number (which beneficially will not change between or during online sessions), allowing for the reliable delivery of customized content to the STB. Ex. 1170, Abstract, [0033]-[0038], [0043]-[0048], [0053], [0061], Figs. 1-2; Ex. 1102, ¶617.

It would have been obvious to similarly use a serial number as a device identifier in Madhavan-Park and Madhavan-Park Kato. Ex. 1102, ¶618. Doing so would have been the combination of prior art elements according to known methods, as described in Branam, to yield predictable results. *Id.*, ¶¶618-620. The prior art

elements are Madhavan-Park's and Madhavan-Park-Kato's systems that identify and track STBs over a network to collect user profile information, and Branam's method of using a product serial number to identify STBs. *Id.* The method of combination is tracking and storing the serial number in the user profile as a device identifier. *Id.*, ¶620; Ex. 1170, [0043]-[0046]. The predictable result is that the serial number is an unchanging piece of data used to identify the STB in addition to other identifiers in the user profile. Ex. 1170, [0060]-[0065]; Ex. 1102, ¶620. A POSA would have had a reasonable expectation of success because this combination would have required only straightforward programming modifications. Ex. 1102, ¶621.

Accordingly, Madhavan-Park-Branam and Madhavan-Park-Kato-Branam render claims 51 and 67 obvious. *Id.*, ¶¶622-623.

2. Dependent Claims 53 and 69

Claims 53 and 69 require that the STB identifier includes a username, a pseudonym, or a confirmation number. As discussed for claims 1 and 61, in Madhavan-Park or Madhavan-Park-Kato, the user profile information includes device identifiers. §§V.A.1-2. Branam discloses that a device may be identified based on a username or name assigned to that device, such as LIVINGROOM_TV. Ex. 1170, [0053]-[0054], [0061], [0063], [0080]. This teaches the claimed “pseudonym.” Ex. 1102, ¶¶624-626. Additionally, and as explained for claims 51

and 67, Branam teaches that devices may be identified using an association between a device identifier and user profile in order to direct advertisements. §V.I.1; Ex. 1170, [0033]-[0038], [0043]-[0048], [0060]-[0065], [0079]-[0080], Figs. 1-2. Accordingly, Branam discloses a STB identifier that is a pseudonym or a username, or both. *Id.*, [0056], [0061]-[0065], [0079]-[0080]; Ex. 1102, ¶627.

It would have been obvious to use a username and/or pseudonym in addition to other device identifiers (*e.g.*, IP addresses) to allow for more efficient authentication, the ability to track users and devices when a device's IP address changes or when a user changes devices, as well as the ability to differentiate between different users of the same device to provide customized content such as targeted advertisements. Ex. 1170, [0043]-[0046], [0056], [0060]-[0065], [0079]-0080], [0107]; Ex. 1102, ¶628. The inclusion of a username or device name (pseudonym) in a user profile, as taught by Branam, would have been the mere combination of prior art elements according to known methods, for the same reasons discussed for claims 51 and 67 regarding product serial numbers. §V.I.1; Ex. 1170, [0043]-[0046], [0051]-[0054], [0063]-[0065], [0071]-[0080], Fig. 10; Ex. 1102, ¶629. A POSA would have had a reasonable expectation of success because this combination would have required only straightforward programming modifications. Ex. 1102, ¶629.

Accordingly, Madhavan-Park-Branam and Madhavan-Park-Kato-Branam render claims 53 and 69 obvious. *Id.*, ¶¶630-631.

J. Grounds T-U: Obviousness in view of Madhavan-Park-Martinez-Branam or Madhavan-Park-Kato-Martinez-Branam

1. Dependent Claims 113 and 133

Claims 113 and 133 require that the STB identifier includes a device serial number or a portion thereof. As discussed for claims 51 and 67, Madhavan-Park-Branam and Madhavan-Park-Kato-Branam teach this feature, which would not have been affected by the additional reliance on Martinez for claims 26 or 38. §§V.B.1-2, V.I.1; Ex. 1102, ¶632.

Accordingly, for the same reasons and considering differences in dependencies, Madhavan-Park-Kato-Martinez-Branam renders claim 113 obvious, and Madhavan-Park-Martinez-Branam and Madhavan-Park-Kato-Martinez-Branam render claim 133 obvious. Ex. 1102, ¶632.

2. Dependent Claims 115 and 135

Claims 115 and 135 require that the STB identifier includes a username, a pseudonym, or a confirmation number. As discussed for claims 53 and 69, Madhavan-Park-Branam and Madhavan-Park-Kato-Branam teach this feature, which would not have been affected by the additional reliance on Martinez for claims 26 or 38. §§V.B.1-2, V.I.2; Ex. 1102, ¶633.

Accordingly, for the same reasons and considering differences in dependencies, Madhavan-Park-Kato-Martinez-Branam renders claim 115 obvious, and Madhavan-Park-Martinez-Branam and Madhavan-Park-Kato-Branam render claim 135 obvious. Ex. 1102, ¶633.

VI. GROUNDS FOR STANDING & FEE PAYMENT

Petitioner hereby certifies that the '260 Patent is available for, and Petitioner is not barred or estopped from requesting, *inter partes* review of the challenged claims.

Pursuant to 37 C.F.R. § 42.103, the undersigned authorizes the charge of any required fees to Deposit Account No. 19-0733.

VII. CONCLUSION

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

Dated: March 1, 2024

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CERTIFICATION UNDER 37 CFR § 42.24(d)

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 13,844, which is less than the 14,000 allowed under 37 CFR § 42.24(a)(1)(i). This total includes 13,844 words as counted by the Word Count feature of Microsoft Word and 0 words used in annotations.

Pursuant to 37 C.F.R. § 42.24(a)(1), this count does not include the table of contents, the table of authorities, mandatory notices under § 42.8, the certificate of service, this certification of word count, the claims listing appendix, or appendix of exhibits.

BANNER & WITCOFF, LTD

Dated: March 1, 2024

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CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. § 42.105, I hereby certify that I caused a true and correct copy of this Petition for *Inter Partes* Review in connection with U.S. Patent No. 7,861,260 and supporting evidence to be served via FedEx Priority Overnight on March 1, 2024, on the following:

INTENT IQ, LLC
37-18 Northern Boulevard
Suite 404
Long Island City, NY 11101

Dated: March 1, 2024

By: /Frederic M. Meeker/

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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	
[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

Designation	Claim Language
	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 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	

Designation	Claim Language
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 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

Designation	Claim Language
	corresponding to specific online 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	
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.

Designation	Claim Language
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	
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

Designation	Claim Language
	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 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

Designation	Claim Language
	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.
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

Designation	Claim Language
	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 computer equipment, automatically selecting the first television advertisement based on the user profile information.
Claim 40	
[40A]	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
[40B]	(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	

Designation	Claim Language
44	44. The method of claim 1 wherein the first online access IP address and the common IP address are the same.
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.
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	

Designation	Claim Language
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 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.

Designation	Claim Language
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 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	

Designation	Claim Language
67	67. The method of claim 61 wherein the set-top box identifier includes a device serial number or a portion thereof.
Claim 68	
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.
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	

Designation	Claim Language
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 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

Designation	Claim Language
	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	
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	

Designation	Claim Language
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.
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 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	
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

Designation	Claim Language
	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.
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.

Designation	Claim Language
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.
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	

Designation	Claim Language
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.
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 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

Designation	Claim Language
	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	
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	

Designation	Claim Language
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	
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.
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.

Designation	Claim Language
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 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

Designation	Claim Language
	the second online user interface device identifier and its associated set-top box identifier includes personally identifiable information.