

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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Title:	PROVIDING COLLECTED PROFILES TO MEDIA PROPERTIES HAVING SPECIFIED INTERESTS	

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PETITION FOR *INTER PARTES* REVIEW OF UNITED STATES
PATENT NO. 10,984,445 PURSUANT TO 35 U.S.C. §§ 311–319,
37 C.F.R. § 42

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EXHIBITS

EX1001	U.S. Patent No. 10,984,445 to Shkedi (“the ’445 Patent”)
EX1002	Excerpts from the Prosecution History of the ’445 Patent (“the Prosecution History”)
EX1003	Declaration and Curriculum Vitae of Dr. Michael Mitzenmacher
EX1004	U.S. Pub. No. 2005/0165644 to Gil Beyda <i>et al.</i> (“Beyda”)
EX1005	U.S. Pub. No. 2009/0254971 to Frederick S. M. Herz <i>et al.</i> (“Herz”)
EX1006	U.S. Pat. No. 7,949,562 to Robert J. Collins
EX1007	U.S. Pub. No. 2005/0096979 to Ross Koningstein

CLAIM LISTING

Element Label	Claim Element
[1.pre]	A method of causing delivery of electronic advertisements based on provided profiles comprising:
[1.a.i]	with a computer system automatically storing, in a central database associated with the computer system, profile information associated with a visitor, as a result of electronic receipt from a profile owner computer of indicia of the profile information, which profile information associated with the visitor matches a profile or kind of profiles requested by an entity controlling the computer system,
[1.a.ii]	wherein a tag associated with a visitor device serves as a link to the profile information associated with the visitor;
[1.b.i]	wherein the profile owner computer is programmed: (i) to automatically select a media property entity of a plurality of media property entities based on a comparison of (A) profile information about a visitor who electronically accessed electronic apparatus of a profile supplier with (B) a plurality of stored requests from the plurality of media property entities, one of which media property entities is the entity controlling the computer system, each stored request being for requested profiles or kinds of profiles, which plurality of stored requests includes the profile or kind of profiles requested by the entity controlling the computer system,
[1.b.ii]	wherein the profile owner computer is programmed: . . . (ii) when the media property entity is the entity controlling the computer system, to automatically arrange for electronic storage of a requested profile linked to the tag that is associated with the visitor device, the tag being readable by equipment that is part of the computer system of part (a);
[1.c]	later, when the visitor device is available to receive an advertisement, with the computer system, (i) using the tag of

	part (a) that is associated with the visitor device to access the profile information stored in the central database, and (ii) using the profile information linked to the tag of part (a) to automatically cause delivery of an electronic advertisement to the visitor device, wherein the electronic advertisement is dependent on the profile information associated with the visitor.
[2]	The method of claim 1 wherein the profile information associated with the visitor is derived from the visitor's activity using a first device, and wherein the visitor device that is available to receive an advertisement is a second device of the visitor.
[3]	The method of claim 2 wherein the first device is a computer of the visitor and the second device is a mobile phone of the visitor.
[4]	The method of claim 3 wherein the tag identifies the mobile phone.
[5]	The method of claim 3 wherein the profile owner computer is programmed to automatically select a media property entity using profile information about the visitor that was derived from the visitor's activity using the computer of the visitor, which profile information was received by the profile-owner computer as a result of URL redirection from a website that is served by the electronic apparatus of the profile supplier, which website is accessed by the computer of the visitor.
[6]	The method of claim 2 wherein the second device is a computer and further comprising, after parts (a) and (c), with the computer system electronically reporting information about delivery of the advertisement to the second device, which report is provided to a profile owner controlling the profile owner computer.
[7]	The method of claim 6 wherein electronically reporting comprises automatically placing the second device in communication with computer equipment controlled by the

	profile owner, via URL redirection from the computer system, when the computer system utilizes the tag to cause delivery of the advertisement.
[8]	The method of claim 1 further comprising, after parts (a) and (c), with the computer system electronically reporting information about delivery of the advertisement to the visitor device that is available to receive an advertisement, which report is provided to a profile owner company controlling the profile owner computer.
[9]	The method of claim 8 wherein reporting further comprises automatically electronically identifying to the profile owner company one of a plurality of profiles or kind of profiles used in association with delivery of the advertisement.
[10]	The method of claim 1 wherein the profile owner computer is programmed to automatically select a media property entity using profile information about the visitor that was derived from the visitor's activity using the visitor device.
[11]	The method of claim 10 wherein the profile information was received by the profile-owner computer as a result of URL redirection from a website that is served by the electronic apparatus of the profile supplier, which website is accessed by the visitor device.
[12]	The method of claim 1 wherein the tag comprises personally identifiable information identifying the visitor.
[13]	The method of claim 1 wherein the profile owner computer being programmed to automatically arrange for electronic storage of the profile information linked to the tag associated with a visitor device comprises the profile owner computer being programmed to perform automatic redirection to a URL provided by the selected entity to place the visitor device in communication with computer equipment controlled by the selected entity to enable storage, in a central

	database associated with the computer equipment of the selected entity, of the profile information linked to the tag that is associated with the visitor device.
[14]	The method of claim 1 wherein the apparatus of the profile supplier operates in the Internet and the equipment of the selected entity utilizes the profile data to cause delivery of the electronic advertisements on a television of the visitor.

LiveIntent, Inc. (“Petitioner”) petitions for *Inter Partes* Review (“IPR”) of claims 1-14 (“the Challenged Claims”) of U.S. Patent No. 10,984,445 (“the ’445 Patent”).

I. REQUIREMENTS FOR IPR

A. Grounds for Standing

Petitioner certifies that the ’445 Patent is available for IPR. This petition is being filed within one year of service of the complaint against Petitioner. Petitioner is not barred or estopped from requesting review of the Challenged Claims on the below-identified grounds.

B. Challenge and Relief Requested

Petitioner requests an IPR of the Challenged Claims on the grounds noted below. Dr. Mitzenmacher provides supporting testimony in his Declaration. *See generally* EX1003.

Ground	Claim(s)	35 U.S.C. §103
1	1-14	Beyda and Herz

Reference	Effective Filing Date	Publication Date
Beyda	8/10/2001	9/5/2002
Herz	10/27/2000	10/08/2009

II. THE '445 PATENT

A. Brief Description

The '445 Patent “generally relates to profile-based behavioral targeting advertisement placement services.” EX1001, 1:19-20. The '445 Patent “more specifically relates to an automatic system operated by a profile owner company ('PO company') for identifying media properties interested in having a collected profile made available to them.” EX1001, 7:19-22. The profile is collected from a “profile supplier,” who “transfers profile information, such as behavioral information, demographic information, etc.” EX1001, 2:24-27. “The automatic system makes the identification by recognizing a collected profile as one that a media property has previously requested or one that is within a category that a media property has previously requested.” EX1001, 7:22-26. “Thereafter, the PO company arranges for the visitor to be tagged with a tag readable by the media property that requested such a profile.” EX1001, 7:26-28. “When an identified media property (*e.g.*, MP2 in FIG. 2) recognizes (at time t_2) a tagged visitor (tagged previously, at time t_1) within its ad space, the media property will serve an ad 30 to the visitor (*e.g.*, visitor 20) based on the profile provided by the PO company 10.” EX1001, 10:24-31.

For example, following a redirect (not shown) from a server 10 of a PO company #1, weather.com might place a weather.com cookie on a visitor's computer 20 marking the visitor as interested in “travel” (profile category “A”) and indicating that the profile originated with

PO company #1. Later, if and when the weather.com ad server (MP2) recognizes that the same visitor 20 had happened to visit weather.com's site (weather.com can recognize the visitor by reading its own weather.com cookie), the weather.com ad server (MP2) can choose to deliver a travel-related ad 30 to the visitor 20 within the weather.com ad space.

EX1001, 11:1-11.

B. Prosecution History

The '445 Patent issued from U.S. Appl. No. 15/893,354. All claims in the application were initially rejected under 35 U.S.C. § 103 based on U.S. Pub. No. 2007/0067297 (Kublickis), U.S. Pub. No. 2007/0130005 (Jaschke), and U.S. Pub. No. 2005/0097204 (Horowitz). EX1002, 464-488. In response, Applicant argued:

The rejection is incorrect primarily because Jaschke's advertisers are not "media property entities" construed according to the Office Action, so part (b)(i) is missing from the combined references. Also, the combined references would choose and deliver an ad while a visitor is on a given website at a given time, rather than facilitating later delivery of an ad when the visitor appears on a website after the selection is made.

EX1002, 454-461.

In a Final Office Action dated October 18, 2018, the Examiner maintained the original rejections under § 103, and disagreed with Applicant's "narrow" characterization of a "media property entity," concluding "that an Advertiser controls

an ad space when the advertiser purchases the ad space.” EX1002, 414-439.

Applicant filed an appeal of this rejection, arguing that the Board should construe “media property equipment” as “equipment, which is part of the computer system that controls an ad space viewed by a visitor, at least temporarily” and “media property entity” as “an entity that controls media property equipment (as defined above).” EX1002, 169. While the Board agreed that the terms “media property equipment” and “media property entity” are distinct terms, the Board arrived at different conclusions for the construction of these terms. EX1002, 171-172. Specifically, the Board determined “that ‘media property entity’ (shortened to ‘entity’ at page 5 of the Specification) refers to an ‘owner’ in a legal/business context; and ‘media property equipment’ refers to hardware or hardware/software such as a web site, a computer, a mobile device, a TV set, a TV set top box, or any other device (Spec. 5) in a technology context.” *Id.* The Board then “recommend[ed] that the Examiner reevaluate the appropriateness of a rejection under 35 U.S.C. § 103 based on the teachings of the Kublickis, Jaschke, and Horowitz references in light of the proper claim construction,” noting that the Jaschke reference teaches “an advertiser entity 110 and advertiser equipment 132 as distinct items” and “a profiler entity 100 and profiler equipment 131” as distinct items. EX1002, 172.

Thereafter, the Examiner proposed an amendment to the claims that ultimately led to allowance. *See* EX1002, 61-64. Specifically, the Examiner amended

the independent claim that issued as Claim 1 of the '445 Patent to include the limitation that, "(ii) when the media property entity is the entity controlling the computer system, to automatically arrange for electronic storage of a requested profile linked to the tag that is associated with the visitor device, the tag being readable by equipment that is part of the computer system of part (a)." EX1002, 62.

In allowing the claims, the Office never considered Herz, which is the basis for Ground 1 and which, as described below, discloses the features that led to allowance. EX1002, *generally*. Further, though Beyda was cited in an IDS submitted by Applicant on February 9, 2018 along with over 350 other references, neither the Examiner nor Applicant discussed Beyda on the record or explained how the claims distinguished the teachings of Beyda. EX1002, 612-627.

C. Level of Ordinary Skill in the Art

A person of ordinary skill in the art ("POSITA") relating to the subject matter of the '445 Patent as of June 19, 2006 would have had at least a combination of (1) at least a bachelor's degree in computer science, computer engineering, electrical engineering, or a related field, and (2) at least two years of industry experience with e-commerce computing systems, including systems that support targeted advertising. EX1003, [65]. More education could substitute for work experience, and *vice versa*. *Id.*

D. Claim Construction

Petitioner submits that no formal claim constructions are necessary because “claim terms need only be construed to the extent necessary to resolve the controversy.” *Wellman, Inc. v. Eastman Chem. Co.*, 642 F.3d 1355, 1361 (Fed. Cir. 2011). Petitioner reserves the right to respond to any constructions offered by Patent Owner or adopted by the Board. Petitioner is not conceding that each challenged claim satisfies all statutory requirements, nor waiving arguments/grounds that cannot be raised in this proceeding.

III. THE CHALLENGED CLAIMS ARE UNPATENTABLE

A. Ground 1: The combination of Beyda and Herz renders claims 1-14 obvious

1. Beyda

Like the '445 Patent, Beyda “relates generally to audience targeting and more particularly to matching an audience with deliverable content such as advertising.” EX1004, [0003]. Beyda recognized that “an effective marketing system may appreciate the characteristics and preferences of a specific user regardless of the number or type of channels through which contact with the user is made.” EX1004, [0006]. Therefore, “it may be desirable to have a system and method for delivering content that integrates with and aggregates data from various sources, including the underlying systems that deliver content to the consumer.” EX1004, [0007]. “These sources may include databases and servers, as well as multiple web

properties within a network of affiliated websites.” EX1004, [0006].

Data collection and profile generation are the first step in Beyda’s process for targeting content. EX1004, [0043]. “Initial profile information about individual audience members may be collected from available databases, such as a registration database [] and a subscription database” EX1004, [0044]. Profile data may also be collected “directly from the audience member computer [] and/or [a] targeting engine [] that indicates the website pages visited, the web searches conducted, and the emails received by the audience member.” EX1004, [0046]. “By combining the profile data obtained from the offline databases with the profile data updates that occur as a result of the audience member visiting website pages, a complete set of profile data may be collected for an audience member, reflecting both offline and online behavior and characteristics for the audience member.” EX1004, [0049].

Beyda’s system tracks audience members’ online behavior by utilizing unique identifiers for each audience member. EX1004, [0050], [0074]. “This tracking may be accomplished by combining a unique identifier for each audience member with website pages in the network that the audience member has visited.” EX1004, [0050]. “The unique identifier may be so used by including it in a domain cookie associated with each website page visited by the audience member.”

EX1004, [0049]. Thus, as an audience member interacts with a webpage or a network of related webpages, the cookies stored in the audience member's browser can be used to associate the audience member with a profile, and to update that profile as the audience member interacts with the webpages. *See* EX1004, [0051]-[0054], [0074]; EX1003, [14].

In Beyda's system, each network of related webpages (*i.e.*, a domain) may develop its own profiles for its audience members. *See* EX1004, [0133]-[0135]; *see also id.*, [0047]-[0054], [137], [158], [203]; EX1003, [15]. "These domains may, for example, each correspond to a separate publisher." EX1004, [0135]. In Beyda's system, each publisher's domain or set of domains includes an Audience Targeting System (ATS) that collects and stores profile information for audience members who visit the publisher's websites, segments members of the audience into groups based on information in their profiles, and targets content and ads based on the segmentation. *See* EX1004, [0067]-[0074], [0133]-[0136]; EX1003, [15].

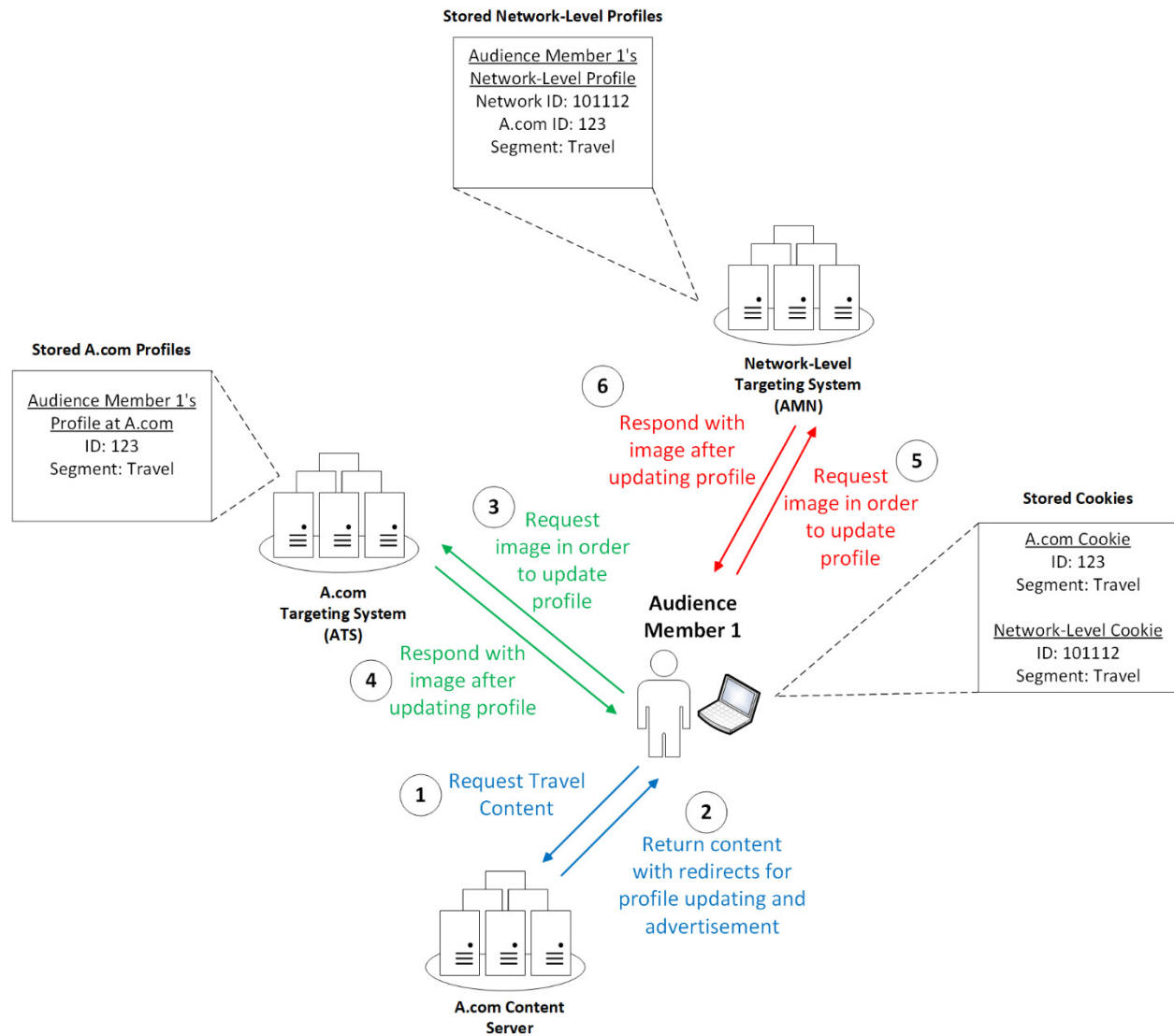
However, the ATS for any given publisher's domain is only able to collect information about audience members when they visit the publisher's websites. *See* EX1004, [0136]-[0141]. To broaden the ability of its system to collect the most complete information about audience members and better target content to them, Beyda further describes an Audience Matching Network (AMN) for collecting and

managing profile data across different publishers' targeting systems. *See* EX1004, [0133]-[0135]; EX1003, [17]. In effect, the AMN is a central targeting system that gathers audience profile information from all participating domains and creates a network-level profile for audience members. *See* EX1004, [0133]-[0135]; EX1003, [17]. "As such, the AMN 1420 is able to organize and manage segments based upon attributes that collectively traverse the network, and that otherwise would not have been identifiable by individual sites." EX1004, [0136].

In FIGS. 14A, 14B, 16A, and 16B, Beyda provides examples of how the network-level targeting system and domain-level targeting systems work together to target advertisements to audience members. *See generally* EX1004, [0133]-[0149], [0164]-[0176]. In effect, every time an audience member visits a site of one of the domains participating in the network, "code . . . added to those pages in connection with which data collection is sought" (referred to as a "data agent") causes the audience member's browser to provide the domain-level targeting system and network-level targeting system with information about the visit so that the user's domain-level profile and network-level profile may be updated with relevant information about the visit. *See* EX1004, [0077], [0159], [0165]-[0167]; EX1003, [20].

To help illustrate this process, Dr. Mitzenmacher provided the following dia-

gram based on FIGS. 16A-1 to 16A-3 that shows an abstracted view of the message passing that happens in order to update an audience member's profiles when they visit a webpage. EX1003, [21].



As shown, the process starts when an audience member visits a webpage at one of the domains (*e.g.*, A.com) within the network. EX1004, [0165]. In this example, at (1), the audience member requests a page related to travel. EX1004,

[0165]. At (2), the page is returned including data agent code that assists “in the gathering of information from website visitors” by redirecting the visitor’s browser to the domain’s targeting system (*i.e.*, ATS) and the network’s targeting system (*i.e.*, AMN). *See* EX1004, [0077], [0145], [0159], [0165]-[0167]; EX1003, [22].

At (3), the audience member’s browser is redirected to the domain’s targeting system in order to update that member’s profile with information extracted from the visited webpage and the member’s interaction with it, usually by requesting a small transparent image. EX1004, [0165]-[0166]; *see also id.*, [0052]-[0053] (explaining the use of an image request for “blank.gif” in order to update a visitor’s profile). This update process may include several redirects to different constituent parts of the domain’s targeting system (*see* EX1004, [25], [53], [149], [0165]-[0166], [0169], [0176]), but Beyda clarifies that the targeting system may be made of any number of components executed on any number of computers (*see* EX1004, [0067]-[0069]). EX1003, [23]. Whether through multiple redirects or not, the domain’s targeting system attempts to identify the audience member by determining whether the audience member has previously visited the domain by checking for the domain’s cookie in the user’s browser. EX1004, [0166]; *see also id.*, [0049] (describing the setting of cookies); EX1003, [23].

If the user’s browser is storing a domain cookie, the domain’s targeting sys-

tem determines the audience member's unique identifier from the cookie and retrieves the profile associated with the unique identifier. EX1004, [0165]-[0166], *see also id.* [0049]-[0054] (describing that a "unique identifier may be so used by including it in a domain cookie associated with each website page visited by the audience member," and "[b]ecause these domain cookies include the unique identifier that identifies the particular audience member, the extractor may use these cookies to modify the profile data for a particular audience member to reflect that the audience member visited the website pages associated with the cookies"), [0058]; EX1003[24]. If the user's browser is not storing a domain cookie, the domain's targeting system creates a new profile with a new unique identifier and stores a new domain cookie on the user's browser. *See id.* In either case, the user's profile and cookies are updated with targeting information (*e.g.*, audience segments) used to target content to the audience member. EX1004, [0165]-[0166], *see also id.* [0055]-[0061].

At (4), the domain's targeting system returns the requested transparent/blank image, and at (5) and (6), the data agent causes the user's browser to initiate a similar profile updating process with the network's targeting system. *See* EX1004, [0165]-[0168]; *see also id.*, [0052]-[0053]; EX1003, [25]. As shown in FIG. 15, the network targeting system (*i.e.*, "AMN") is similar in structure and operation to the individual domain targeting systems but is able to gather profile information

whenever the audience member visits any of the domains within the overall network. *See* EX1004, [0159]-[0164] (“when an audience member logs onto a page for the first time in the domain, the [AMN] places a cookie on their browser, which contains a unique identifier”); EX1003, [25].

Each audience member that visits the AMN is assigned a network-level unique identifier (*i.e.*, “NPRID”), which is set in a network cookie and allows the network targeting system to track audience members across all of the domains participating in the network. *See* EX1004, [0167]-[0168]; *see also id.*, [0142] (describing the NPRID), [0145] (“One example uses a local cookie corresponding to the local domain and a network cookie corresponding to the network domain” and the AMN may “retain a listing of PRIDs corresponding to an NPRID”); EX1003, [26]. Because the data agent code for each participating domain directs the audience member’s browser to visit the AMN, the AMN “is able to recognize that an audience member that is (separately) uniquely profiled in different domains is in fact the same audience member, and to assemble segments that collectively traverse the numerous domains in the network, so as to determine that such an audience member is a member of a complex segment based upon information collected in the local domains.” EX1004, [0141]. Thus, for example, if an audience member visits a travel related page in the a.com domain and a business page in the b.com domain, the network-level targeting system is able to identify the audience

member as part of a “business traveler” segment, while each domain is only able to identify the audience member in the less specific segments of “travel” and “business,” respectively. EX1004, [0146], [0174].

In addition to accumulating robust network-level profiles, the network-level targeting system also sets “an AMN cookie (AMNC),” which is an “indication whether an audience member currently has any values in the network segment cookie that may be targeted against.” EX1004, [0148], [0157]. The AMN cookie effectively “indicate[s] that an AMN network ad should be served.” EX1004, [0176]. When it is set, the data agent code causes the audience member’s browser to request advertisements from the network-level targeting system. EX1004, [0148]-[0149], [0168]-[0169], [0175]-[1076]; EX1003, [27]. Otherwise, the domain level targeting system serves its own advertisement. EX1004, [0149], [0169]; EX1003, [27].

Beyda leaves open to the designer those instances where the AMN cookie is set to ‘N’ indicating that an AMN network ad should not be served. See EX1004, [0148]-[0149], [0157], [0168]-[0169], [0175]-[1076]; *see also id.*, [0144] (teaching that in another context “[t]he network designer is free to establish the system as desired,” which a POSITA would have understood to apply more generally); EX1003, [28]. However, a POSITA would have understood or at least found obvious that, because the purpose of the AMN is “to organize and manage segments

based upon attributes that collectively traverse the network, and that otherwise would not have been identifiable by individual sites” (*see* EX1004, [0136], [0141]) and the AMN cookie indicates “whether an audience member currently has any values in the network segment cookie that may be targeted against” (*see* EX1004, [0148], [0157]), the AMN cookie would be typically set to Y where the network-level profile has more information from other domains than is available in the domain-level profile. EX1003, [28]. “As is well known, publishers may display online advertisements on pages, and advertisers typically pay publishers to place these advertisements.” EX1004, [0135]. Thus, a POSITA would have understood or at least found obvious that a domain would only want to share revenue with the network-level targeting system to serve an advertisement where the network-level targeting system has more specific/valuable targeting information than the domain already has available. *See* EX1004, [0196]-[0197] (describing the “standard practices in the industry where by two or more partners agree to split the revenue generated by an ad placement”); EX1003, [28].

In the above-described examples provided by Beyda, the network-level targeting system is described as receiving information from participating domain-level targeting systems in order to build a cross-domain profile. EX1003, [29]. However, Beyda also describes that the network-level targeting system may act as “a clearing house for global, non-personally identifiable consumer data that may be

shared across some or all publishers within the network.” EX1004, [0204]. “The assets of each publisher are [] protected by not sharing this data with other publishers, unless specific agreements exist to share data within the network.” EX1004, [0208]. In the presence of such agreements, the network-level targeting system may “share limited anonymous profile data across the network, based upon the publisher’s willingness to opt-in certain information and also in compliance with the publisher and network privacy policies.” EX1004, [0212]. In other words, the network-level targeting system may share profile information received from a domain with other domains within the network, under appropriate privacy constraints. *See* EX1004, [0204], [0208], [0212]; EX1003, [29].

Beyda does not limit the techniques by which profile information contributed by one domain is shared by the network-level targeting system with other domains in the network. *See* EX1004, [0201]-[0213]; EX1003, [30]. And Beyda explains in the context of defining segments that “[t]he network designer is free to establish the system as desired,” which a POSITA would have understood or at least found obvious reflects the overall flexibility of Beyda’s disclosure. *See* EX1004, [0144]; *see also id.*, [0090], [0216]. Accordingly, a POSITA would have understood or at least found obvious that, in designing Beyda’s system to share profile information amongst domains, he/she would have relied upon his/her own

knowledge as well as techniques used in similar systems to provide this functionality. EX1003, [30]. One similar system that provides example mechanisms by which a central profile collecting entity may share profile information amongst different participating publishers was described by Herz. *Id.*

2. Herz

Herz describes “a system to allow a privacy-protected market for data exchange between multiple self-interested parties.” EX1005, [0003]. Generally, Herz provides “a central data warehouse that maintains data submitted by different users, and executes queries and programs on the data.” EX1005, [0003]. “In application, the invention enables new systems for the delivery of personalized information, profiling and automated matchmaking and information exchange, all within a framework that protects privacy and maintains data security.” EX1005, [0043].

Every actor within Herz’s system is referred to as an “agent.” *See* EX1005, [0044]. “Agents may represent any party with individual goals, autonomy of control, and a persistent identity.” EX1005, [0044]. One agent may be “an individual browsing the Internet” who interacts with other agents “representing vendors and content providers.” EX1005, [0032]. “Examples in business-to-consumer e-commerce include business such as newspapers, book stores and travel companies, that wish to receive data about the profiles and buying habits of users so that they can

personalize the information, products and services that are sold to users.” EX1005, [0044].

“The central SDI [Secure Data Interchange] data warehouse is the core system in SDI, managing data records on behalf of agents.” EX1005, [0078]. The central SDI data warehouse contains data submitted by agent computers, including, for example, “data that represents user profiles (i.e. what types of books they like to read, what there [sic] political interests are, etc.), or data that represents business rules (i.e. what type of customer a business is seeking, what types of products it offers, what type of strategic agreements it is looking to make with other businesses, etc.).” EX1005, [0083]. Herz teaches that “providers of information provide the central SDI warehouse with a certain amount of autonomy to control how the information is used: the types of uses that are permitted, the type that are not prohibited, and what types of rewards (financial or otherwise) are required for access to the information.” EX1005, [0084].

“Agents can **submit queries to the SDI data warehouse, [which] are placed ... in the persistent queries queue** if they are to be executed periodically, as the data in the repository changes.” EX1005, [0086]. “Persistent queries check for certain information to reside in the data warehouse, and notify a requesting agent whenever these conditions exist, perhaps automatically making an action.” EX1005, [0093]. “One typical use of such a query is to say ‘introduce me to other

users with property P’, such that the system introduces user A_1 with user A_2 if A_1 has the property required by A_2 and also A_2 has the property required by A_1.” EX1005, [0556].

In one use case for queries to the SDI data warehouse, Herz describes that “[v]endors can use information in the central SDI data warehouse for users’ cross vendor and within vendor browsing and purchasing habits, and also with respect to profiling information about a user.” EX1005, [0796]. “One key application is first-time personalization, so that information and products can be targeted to a user when he/she first hits a web page, based on profile information that the user is willing to release.” EX1005, [0797]. To facilitate this type of “first-time personalization,” Herz teaches that the SDI data warehouse allows “[v]endors and users [to] sell this information to other vendors.” EX1005, [0797]. In this way, vendors can “perform collaborative-filtering style data-mining across different data sets from multiple vendors, but only with the explicit authorization of owners of that information, as presented by price-rules associated with that data in the main data warehouse.” EX1005, [0422]. And user’s (*i.e.*, website visitors) can indicate whether they are “willing to release profile information to enable useful advertising as specified in their price rules for regular data.” EX1005, [0808].

Therefore, consistent with Beyda’s description of sharing profile information between publishers’ domain-level targeting systems (*see* § III.A.1, *supra*), a

POSITA would have understood or at least found obvious that Herz's system was configured to allow vendors to exchange profile information with one another consistent with their respective privacy policies and user agreements. *See* EX1005, [0422], [0796]-[0797], [0808]; EX1003, [36]. And, as described above, one mechanism Herz provides for the exchange of information between agents, such as two vendors, was the use of "a persistent query [that] allows an agent to maintain a permanent 'searching' presence in the central database, always on the lookout for useful information." EX1005, [0037]; *see also id.*, [0030] ("We also propose to allow 'persistent queries', which reside on the server for a fixed period of time and return a response to the querying agent whenever conditions are met in the data."), [0086], [0093], [0147], [0271], [0557], [1166]; EX1003, [36]. In other words, a persistent query causes a response to occur whenever profile data is updated and the update leads to the criteria of the query being matched. *See id.* For example, where a vendor is interested in tailoring content to first-time website visitors with specific interests (*see, e.g.*, EX1005, [0012], [0667], [0719], [0738]), Herz's system was configured to permit the vendor to submit a persistent query for users with profiles that indicate the users have those interests. EX1003, [36].

3. The Combination, Reasons to Combine, & Expectation of Success

As discussed in Section III.A.1, *supra*, Beyda's network-level targeting system may share profile information received from a domain with other domains

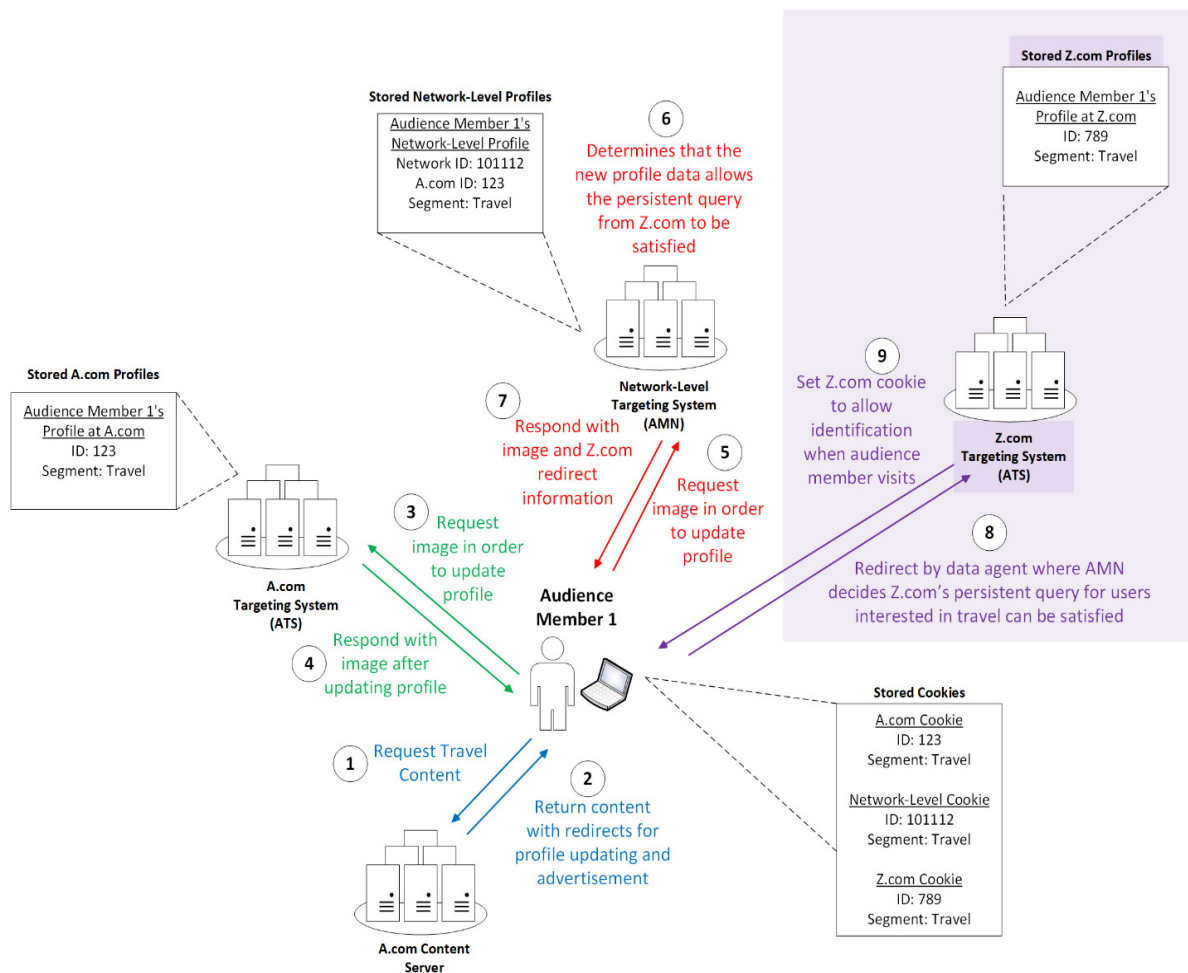
within the network, under appropriate privacy constraints. *See* EX1004, [0204], [0208], [0212]; EX1003, [37]. However, Beyda does not require or otherwise limit a methodology for sharing by the network-level targeting system profile information contributed by one domain with other domains in the network. *See* EX1004, [0201]-[0213]; EX1003, [37]. As of the Critical Date, a POSITA would have found obvious that at least one way of facilitating the sharing of profile information between publisher domains would have been the use of the queries—and particularly the persistent queries—described by Herz. EX1003, [37].

In the proposed combination, Beyda’s network-level targeting system would use persistent queries to allow domains to request profile information for website visitors who meet certain criteria (*e.g.*, visitors with certain interests), consistent with the teachings of Herz. EX1004, [0212] (teaching that the network-level targeting system may “share limited anonymous profile data across the network, based upon the publisher’s willingness to opt-in certain information and also in compliance with the publisher and network privacy policies.”); EX1003, [38]. Implemented in the context of Beyda’s system, Herz’s persistent queries would be submitted by publisher domains to Beyda’s network-level targeting system, which plays a similar role to Herz’s SDI as a central data warehouse for network-wide consumer/visitor profile data. *See, e.g.*, EX1004, [0136] (describing the capability

of the AMN to organize and manage profile data “based upon attributes that collectively traverse the network, and that otherwise would not have been identifiable by individual sites”), [0163]; EX1005, [0371], [0574] (“SDI is intended to function as the intermediary between a vast web of vendors . . .”), [0719], [0728] (describing that the SDI “can track users across multiple domains, to allow fine level control over ads that the user sees”); EX1003, [38].

In order to satisfy persistent queries in the context of Beyda’s system, a POSITA would have found it obvious that, when the network-level targeting system received updated profile information as a result of a redirect by a data agent, the network-level targeting system (using, for example, a query execution module like the one described by Herz) would have determined whether the new profile information satisfied any pending persistent queries. *See* EX1004, [0145] (describing how a data agent directs an audience member’s browser to targeting systems), [0165]-[0166] (describing same); EX1005, [0147]-[0156] (describing how the central SDI’s query execution module “[m]onitor[s] conditions for the persistent queries, and provide a response to a query if conditions are satisfied”); EX1003, [43]. If the new profile information satisfied a pending persistent query, the network-level targeting system would have returned an indication to the data agent to direct the audience member’s browser to the domain that submitted the persistent query,

which would allow the querying domain to create a profile for the audience member with the profile information and set a cookie on the audience member's computer so that the audience member can be identified during future visits. *See id.* This additional redirect is illustrated in the following diagram that updates the diagram based on Beyda's FIGS. 16A-1 to 16A-3 introduced in Section III.A.1, *supra*. EX1003, [43].



To illustrate one example of how the combination might be implemented,

we offer the above updated diagram for reference. When the data agent code directs audience member's browser to the network-level targeting system to update the audience member's network-level profile (5), the network-level targeting system determines whether the new profile data (*e.g.*, that the audience member is interested in travel) satisfies any persistent queries submitted by other domains, and, in this example, determines that the new profile data allows the persistent query from Z.com to be satisfied (6). *See* EX1005, [0147]-[0156]; EX1003, [44]. Where the new profile data satisfies a persistent query, the network-level targeting system returns information that causes the data agent code to direct the user's browser to the domain-level targeting system associated with the satisfied persistent query (7). *See* EX1004, [0159], [0165]-[0167] (describing data agent code directing an audience member's browser to multiple targeting systems); EX1003, [44]. Similar to the redirects to the A.com targeting system and network-level targeting system, the data agent code causes the audience member's browser to pass the profile data to the Z.com targeting system (8), which creates a profile for the user with a new ID for the audience member (*e.g.*, "789") and the profile information, and sets a cookie on the audience member's browser (9) to allow the Z.com targeting system to identify the audience member in the future. *See* EX1004, [0135]-[0145] (describing the identification of new audience members and collection of their profile data through the use of cookies); EX1003, [44].

The following independent reasons support the Beyda-Herz combination.

First, Herz provides one example of implementation details that Beyda does not otherwise limit to any specific approach. EX1003, [59]. As discussed above, Beyda teaches that the network-level targeting system may act as “a clearing house for global, non-personally identifiable consumer data that may be shared across some or all publishers within the network.” EX1004, [0204]. However, Beyda does not further limit how this sharing occurs and leaves the implementation details to POSITAs. *See* EX1004, [0144]; EX1003, [59]. Herz provides one example of implementation details a POSITA would have found obvious to utilize when implementing the described sharing of profile data. *See* EX1004, [0204], [0208], [0212], [0216]; EX1003, [59]. A POSITA would have understood or at least found obvious from Herz’s description that one benefit of persistent queries was that they facilitated the sharing of data based on the needs/desires of specific domains, and permitted fast updating across domains based on those specific data interests. *See* EX1005, [0034], [0093], [0147], [0557]; EX1003, [59].

Second, consistent with the teachings of Herz, a POSITA would have recognized that utilizing persistent queries would have permitted a domain to provide “first-time personalization, so that information and products can be targeted to a user when he/she first hits a web page, based on profile information that the user is willing to release.” EX1005, [0797]; EX1003, [60]. By allowing the sharing of

this information, audience members receive “personalized content that reflects his/her interests based on the types of information that other agents with similar profiles like to receive.” *See* EX1005, [0365]; *see also id.*, [0371]; EX1003, [60].

Third, consistent with the teachings of Herz, a POSITA would have recognized that allowing the sharing of profile information between domains using, for example, persistent queries would have opened a new source of revenue for vendors. *See* EX1005, [0796]-[0797]; EX1003, [61]. Beyda describes a revenue-sharing model in which domains that provide profile data to the network-level targeting system that is used to place ads are allotted a share of the ad placement revenue. *See* EX1004, [0183] (describing that “revenue may also be allocated 1808 corresponding to the delivery of the advertisement based upon participation as a data provider in the collection of information”), [0196]-[0199] (describing how a “data provider is compensated based upon the fraction of the data used in the targeted delivery provided by the data provider”); EX1003, [61]. However, the revenue from each of these ad placements was known to be comparatively small, and Beyda further describes that the value of contributed profile data decreases with time. *See* EX1004, [0193] (describing “data half-life analysis” and how it was “used to influence the value of a particular data value when evaluating a segment that contains that data value”); EX1006, 10:59-11:13 (describing a contemporaneous example in which an advertiser determines that an advertisement impression is

worth between ten and fifty cents); EX1007, [0094] (describing a contemporaneous example in which an advertiser set a price of twenty cents “per some level of performance (e.g., click through, conversion, etc.)”); EX1003, [61]. Allowing a domain to sell its profile data to other domains would have allowed the domain to set a higher price for the data and sell it before its half-life reduces its value. *See* EX1005, [0530]-[0532] (describing the financial motivation of sharing data across the “main SDI service”), [0598] (describing a vendor pricing its data for sale), [0762]-[0768] (describing an example where a vendor is “willing to sell its entire database [of profile data] for a flat fee”), [0797] (describing vendors selling profile information to other vendors and an example in which “information that a user likes a particular type of music is very valuable for vendors that sell content-based products, for example books, and CDs”); EX1003, [61]. And a POSITA would have understood and found obvious that persistent queries provide a fast and easy mechanism for the exchange of data between domains and the resulting production of revenue for the profile supplier, because persistent queries are fulfilled automatically by the query engine. *See* EX1005, [0034], [0093], [0147]; EX1003, [61].

4. Analysis

a) [1.pre]

To the extent the preamble is limiting, the Beyda-Herz combination renders it obvious.

As described in Section III.A.1, *supra*, Beyda’s “invention relates generally to audience targeting and more particularly to matching an audience with deliverable content such as advertising.” EX1004, [0003]. More specifically, Beyda describes that the first stage of operation of its system is “data collection and profile generation.” EX1004, [0043]. FIG. 3 illustrates “an example of generating audience member profiles,” which “show[s] the manner in which the extractor 122 obtains profile data indicating the online website pages visited by an audience member.” EX1004, [0047]. “[T]he profile data includes attributes that are correlated to audience members, and is the basis of the audience segment definitions that are used to target audience members with advertisements and/or other content.”

EX1004, [0091].

Accordingly, a POSITA would have understood and found obvious that the Beyda-Herz combination provides *a method of causing delivery of electronic advertisements based on provided profiles*, as recited in [1.pre]. EX1003, p. 47.

b) [1.a.i]

The Beyda-Herz combination renders obvious Element [1.a.i].

As described in Section III.A.1, *supra*, Beyda describes publishers of websites that each collect profile information with respect to audience members that visit the sites within their domain. *See* EX1004, [0133]-[0136], [0165]-[0166], [0171]-[0172]; EX1003, [15].

The profile data for audience members may be collected across numerous sites having the audience targeting functionality (e.g., ATS 1440-1444). Each of these sites offers potential segments and population of such segments with members in their respective domains.

These domains may also be referred to as “local” domains. These domains may, for example, each correspond to a separate publisher.

EX1004, [0135]. Each domain includes its own targeting system, called an “ATS.” *See* EX1004, [0135]. These domain-level targeting systems “define segments and collect profile data for audience members in the relevant domain.”

EX1004, [0137]. “For example, ATS 1440 may uniquely profile a.com audience member ‘123’, under a unique identifier denoted as PRID₁₂₃.” EX1004, [0137].

These domain-level targeting systems each include a data warehouse “for storing audience member profile data.” EX1004, [0042]-[0048], [0055], [0127]-[0128]. “Initial profile information about individual audience members may be collected from available databases, such as a registration database [] and a subscription database” EX1004, [0044]. Profile data may also be collected “directly from the audience member computer [] and/or [a] targeting engine [] that indicates the website pages visited, the web searches conducted, and the emails received by the audience member.” EX1004, [0046].

Beyda further describes that a group of domains can formally partner as part of an audience matching network. *See* EX1004, [0134]-[0136], [0147], EX1003, [17]. This network is managed by a network-level targeting system, called an

AMN system. *See* EX1004, [0150]-[0154]. The network-level targeting system also includes a data warehouse that “is populated with and stores the various profile data as previously described, but does so at the network level.” EX1004, [0163].

In order to populate the domain-level and network-level profiles, each of the domains place code in their respective websites, called a “data agent,” that facilitates collection of profile data from audience members who visit the sites. *See* EX1004, [0077], [0145], [0159], [0165]-[0167], [0171]-[0172]; EX1003, [18]. This data agent code directs a visiting audience member’s browser to both the domain’s and network’s targeting systems, passing relevant data to the targeting systems about the audience member’s online activity (*e.g.*, details about the page the audience member is viewing) for inclusion in their profile. *See id.* In this regard, both the domain from which a visiting audience member requests a website and the network both receive and store profile information associated with the audience member’s visit. *See id.* By collecting information in this fashion from visitors to all of the participating domains, the network-level targeting system “is able to recognize that an audience member that is (separately) uniquely profiled in different domains is in fact the same audience member, and to assemble segments that collectively traverse the numerous domains in the network, so as to determine that

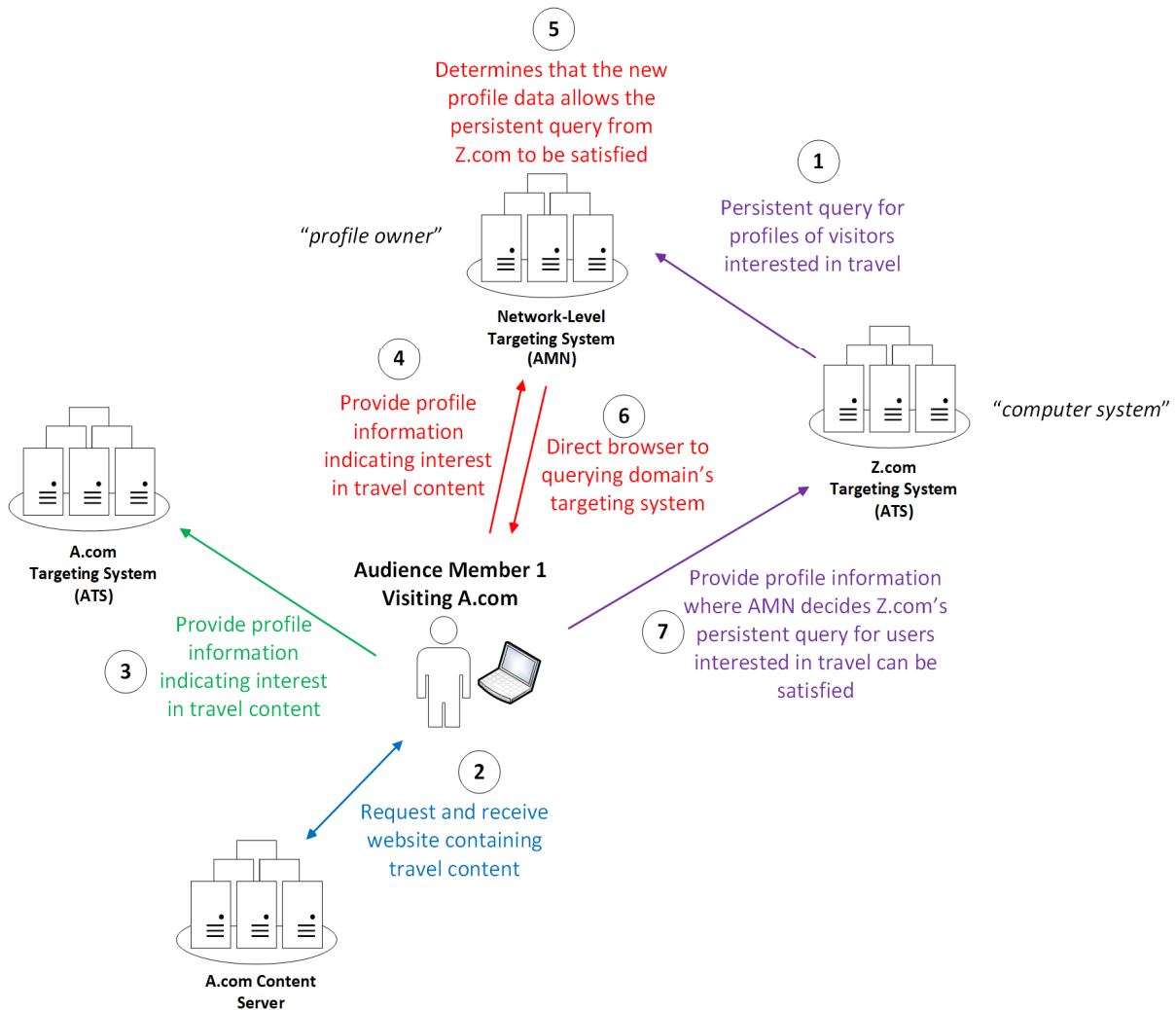
such an audience member is a member of a complex segment based upon information collected in the local domains.” EX1004, [0141].

Each of the domains are incentivized to participate in the network for at least two reasons. EX1003, [19]. First, each publisher domain can rely upon the network-level targeting system to utilize its greater level of profile data and more “complex” segmentation therefrom to place higher value advertisements and increase the publisher’s revenue. *See* EX1004, [0141]-[0142] (describing the ability of the network-level targeting system to determine membership in “complex” segments as a result of the “combination of segments defined in separate local domains in the network”); [0184] (describing that the network-level targeting system makes “publisher (web site) revenue paramount in [advertisement] placement determinations”); *see also id.*, [0005]-[0011] (describing that increased targeting information leads to delivery of more relevant content to visitors and maximization of revenue for web properties); EX1003, [19]. Second, each publisher domain that contributes profile data to the network-level targeting system that is used to place advertisements is considered a “data provider” and the network-level targeting system includes a revenue sharing module that compensates data providers for contributing profile data for the visitors to their domain. *See* EX1004, [0197]-[0199]; EX1003, [19].

As described in Section III.A.1, *supra*, Beyda also describes that the network-level targeting system may act as “a clearing house for global, non-personally identifiable consumer data that may be shared across some or all publishers within the network.” EX1004, [0204]. “The assets of each publisher are [] protected by not sharing this data with other publishers, unless specific agreements exist to share data within the network.” EX1004, [0208]. In the presence of such agreements, the network-level targeting system may “share limited anonymous profile data across the network, based upon the publisher’s willingness to opt-in certain information and also in compliance with the publisher and network privacy policies.” EX1004, [0212]. In other words, the network-level targeting system may share profile information received from a domain with other domains within the network, under appropriate privacy constraints. *See* EX1004, [0204], [0208], [0212]; EX1003, [29]. As a result, a domain-level targeting system not only receives profile information directly from visitors to its domain but may also receive profile data from other domains via the network-level targeting system. *See id.*

For the reasons described in Section III.A.3, *supra*, a POSITA would have found it obvious to utilize the persistent queries described by Herz as at least one of the mechanisms by which a publisher domain in Beyda’s system would have been able to obtain profile information for an audience member from another publisher domain. EX1003, [37], [58]-[61]. Below is a diagram that illustrates the

submission and fulfillment of a persistent query based on the combined teachings of Beyda and Herz. EX1003, [46].



Implemented in the context of Beyda's system, Herz's persistent queries would be submitted (1) by publisher domains to Beyda's network-level targeting system in order to receive audience member profile information that meets certain criteria. *See, e.g.*, EX1004, [0136], [0163]; EX1005, [0371], [0574], [0719], [0728]; EX1003, [47]. In order to satisfy persistent queries in the context of

Beyda's system, a POSITA would have found it obvious that, when the network-level targeting system received updated profile information as a result of a redirect by a data agent (4), the network-level targeting system (using, for example, a query execution module like the one described by Herz) would have determined whether the new profile information satisfied any pending persistent queries (5). *See* EX1004, [0145], [0165]-[0166]; EX1005, [0147]-[0156]; EX1003, [47]. If the new profile information satisfies a pending persistent query, the network-level targeting system would have returned an indication to the data agent to direct the audience member's browser to the domain that submitted the persistent query (6), which would allow the querying domain to create a profile for the audience member with the profile information and set a cookie on the audience member's computer so that the audience member can be identified during future visits (7). *See id.*

The '445 Patent describes a "profile owner" as an entity "who either own[s] the profiles or ha[s] the right to resell the profiles on behalf of another profile owner." EX1001, 5:50-62; *see also id.*, 7:45-49 (describing that the profile owner company either "owns profiles directly or acts as a databank representing other profile owners"). In the context of the Beyda-Herz combination, the network-level targeting system is a "profile owner," as that term is used in the '445 Patent, at least because the network-level targeting system (*i.e.*, AMN) acts "as a clearing house for global, non-personally identifiable consumer data that may be shared

across some or all publishers within the network.” EX1004, [0204]; EX1003, [45].

Beyda describes that the data warehouse of the network-level targeting system “is populated with and stores the various profile data . . . at the network level,” resulting in the network-level targeting system being “able to recognize that an audience member that is (separately) uniquely profiled in different domains is in fact the same audience member, and to assemble segments that collectively traverse the numerous domains in the network, so as to determine that such an audience member is a member of a complex segment based upon information collected in the local domains.” EX1004, [0141], [0163]; EX1003, [45]. And, in combination with Herz, Beyda’s network-level targeting system is further able to resell the profiles on behalf of another profile owner. *See* EX1005, [0797] (describing that Herz’s central SDI data warehouse allows “[v]endors and users [to] sell this [profile] information to other vendors”); EX1003, [45].

Accordingly, a POSITA would have at least found obvious that the Beyda-Herz combination would *with a computer system* [e.g., the domain-level targeting system of a first publisher domain] *automatically stor[e], in a central database associated with the computer system* [e.g., in the data warehouse of the first publisher domain’s targeting system], *profile information associated with a visitor* [e.g., audience member profile data received from the network-level targeting system in response to a persistent query by the first publisher domain], *as a result of*

electronic receipt from a profile owner computer of indicia of the profile information [e.g., as a result of receiving new profile data from a second, data-providing domain's targeting system, the network-level targeting system evaluates persistent queries and directs sale/provision of responsive profile information by the data agent code], *which profile information associated with the visitor matches a profile or kind of profiles requested by an entity controlling the computer system* [e.g., the data is provided to the first publisher's targeting system as a result of a persistent query, which "check[s] for certain information to reside in the data warehouse" and is satisfied "whenever these conditions exist"], as recited in [1.a.i].

EX1003, p. 47.

c) [1.a.ii]

The Beyda-Herz combination renders obvious Element [1.a.ii].

The '445 Patent describes that cookies are a type of "tag," as that term is used in the '445 Patent. *See e.g.*, EX1001, 2:14-21, 2:50-51 ("software can place a cookie or another kind of tag on the user's computer"), 3:24-29 ("a cookie is only one example of a possible tag"); EX1003, [53].

Beyda describes identifying audience members that visit domains using unique identifiers included in "domain cookies . . . stored on the computer associated with the audience member." EX1004, [0049]. "[W]hen an audience member logs onto a page for the first time, the [targeting system] places a cookie on their

browser.” EX1004, [0074]. Thereafter, “[w]henver that audience member returns to the site, the unique identifier is sent back to” the targeting system.

EX1004, [0074]. Beyda describes that these cookies can be set as a result of redirecting an audience member’s browser to a domain’s targeting system, as well as redirects to the network-level targeting system. *See* EX1004, [0145]-[0146], [0165]-[0172], [0175]; *see also id.*, [0051]-[0053] (describing setting cookies within a publisher’s domain through a series of redirects); EX1003, [23].

As described in Section III.A.3, *supra*, a POSITA would have found it obvious that, in the context of Beyda’s system of redirects and cookies, at least one way to implement persistent queries would have been for the network-level targeting system to cause the audience member’s browser to be directed to a querying domain’s targeting system when that audience member’s profile data satisfies a query submitted by the querying domain. *See* EX1004, [0135]-[0145] (describing the identification of new audience members and collection of their profile data through the use of cookies); EX1003, [39]. Beyda describes that these redirects are facilitated by the data agent code included in each participating domain’s websites. *See* EX1004, [0145] (describing that the “the data agent associated with ATS 1440[] directs the particular audience members browser to the AMN 1420”), [0159] (describing components of the data agent “sending data” within various domains), [0165] (a “data agent for the domain causes a communication to be sent”), [0173]

(describing the data agent “prompt[ing] the visitor’s browser to provide 1656 information to the AMN”); EX1003, [42]. By redirecting the audience member’s browser to the querying domain’s target system, the audience member’s browser would be able to provide the profile information to the querying domain’s target system and would allow the querying domain’s target system to set a cookie to identify the user during future visits to that domain—exactly as is done for the visited domain’s targeting system and the network-level targeting system. *See* EX1004, [0164]-[0175]; EX1003, [42].

Accordingly, a POSITA would have at least found obvious that, in the Beyda-Herz combination, *a tag associated with a visitor device serves as a link to the profile information associated with the visitor* [e.g., a cookie set by the querying domain’s targeting system uniquely identifies the audience member associated with the profile information that satisfies the persistent query], as recited in [1.a.ii]. EX1003, p. 48.

d) [1.b.i]

The Beyda-Herz combination renders obvious Element [1.b.i].

As discussed in Section III.A.3 and with respect to Element [1.a.i], *supra*, a POSITA would have found it obvious to utilize the persistent queries described by Herz as at least one of the mechanisms by which a publisher domain in Beyda’s system would have been able to obtain profile information for an audience member

from another publisher domain. EX1003, [37], [58]-[61]. Herz describes that “[p]ersistent queries check for certain information to reside in the data warehouse, and notify a requesting agent whenever these conditions exist, perhaps automatically making an action.” EX1005, [0093]. “A persistent query allows an agent to maintain a permanent ‘searching’ presence in the central database, always on the lookout for useful information.” EX1005, [0034]. A newly received persistent query is placed in a queue with “the set of persistent queries,” which “are periodically checked by the query execution module and executed when the correct conditions exist in the data warehouse.” EX1005, [0271]. Herz describes that the query execution module is part of the central data warehouse and receives the queries from agents. EX1005, [0557], [0808], [0810].

Applied in the context of Beyda, where the central data warehouse is part of the network-level targeting system (*see, e.g.*, EX1004, [0163]), a POSITA would have at least found it obvious that, in order to facilitate the described sharing of profile data between publishers (*see, e.g.*, EX1004, [0204], [0208], [0212]), a query execution module would receive and periodically evaluate persistent queries submitted by domains seeking “to maintain a permanent ‘searching’ presence in the central database.” *See* EX1005, [0034], [0271]; EX1003, [40]. As data agent code on publisher’s websites directed an audience member’s browser to provide updated profile information to the network-level targeting system (*i.e.*, when the

condition exists that certain information would come to reside in the data warehouse), a POSITA would have found it obvious for a query execution module associated with the network-level targeting system to evaluate any pending persistent queries that would be satisfied by the newly added profile information. *See* EX1004, [0163]-[0168] (describing data agent code directing a user's browser to the network-level targeting system to provide profile information); EX1005, [0034], [0093], [0271]; EX1003, [40].

In order to evaluate persistent queries, the query execution module periodically checks the queries and check for certain information to reside in the data warehouse consistent with the query. *See* EX1005, [0093], [0271]; EX1003, [41]. A POSITA would have understood or at least found obvious that such evaluation would have involved comparing the profile information newly added to the data warehouse of the network-level targeting system with the information identified in the persistent requests as being of interest to a requesting domain. *See id.* For example, if an audience member's visit to A.com results in provision of profile information indicating the audience member is interested in travel, the query execution module would compare this profile information against the pending persistent queries to determine whether any requesting publisher domains were seeking a "match" with audience members interested in travel. *See* EX1004, [0165]-[0168] (describing a use case in which an audience member visiting A.com is determined

to belong to the “travel” segment and this information is added to the audience member’s domain-level and network-level profiles); EX1005, [0057] (describing that persistent queries may provide a “matchmaking” function by which an agent’s query says “introduce me to other users with property P”), [0093], [0271]; EX1003, [41].

Accordingly, a POSITA would have at least found obvious that, in the Beyda-Herz combination, *the profile owner computer is programmed* [e.g., the network-level targeting system, which “is preferably provided by software that may be executed on any conventional processing system”]: *(i) to automatically select a media property entity of a plurality of media property entities* [e.g., selecting the first publisher domain as a targeting system to which an audience member’s browser should be redirected as a result of determining that a persistent query submitted by the first domain is satisfied by profile information provided by the audience member, where the first domain’s persistent query is located in a “queue” that includes a “set of persistent queries”] *based on a comparison of (A) profile information about a visitor who electronically accessed electronic apparatus of a profile supplier with* [e.g., the query execution module associated with the network-level targeting system evaluates newly received profile information collected when an audience member visits a website associated with the second, data-providing domain] *(B) a plurality of stored requests from the plurality of media property*

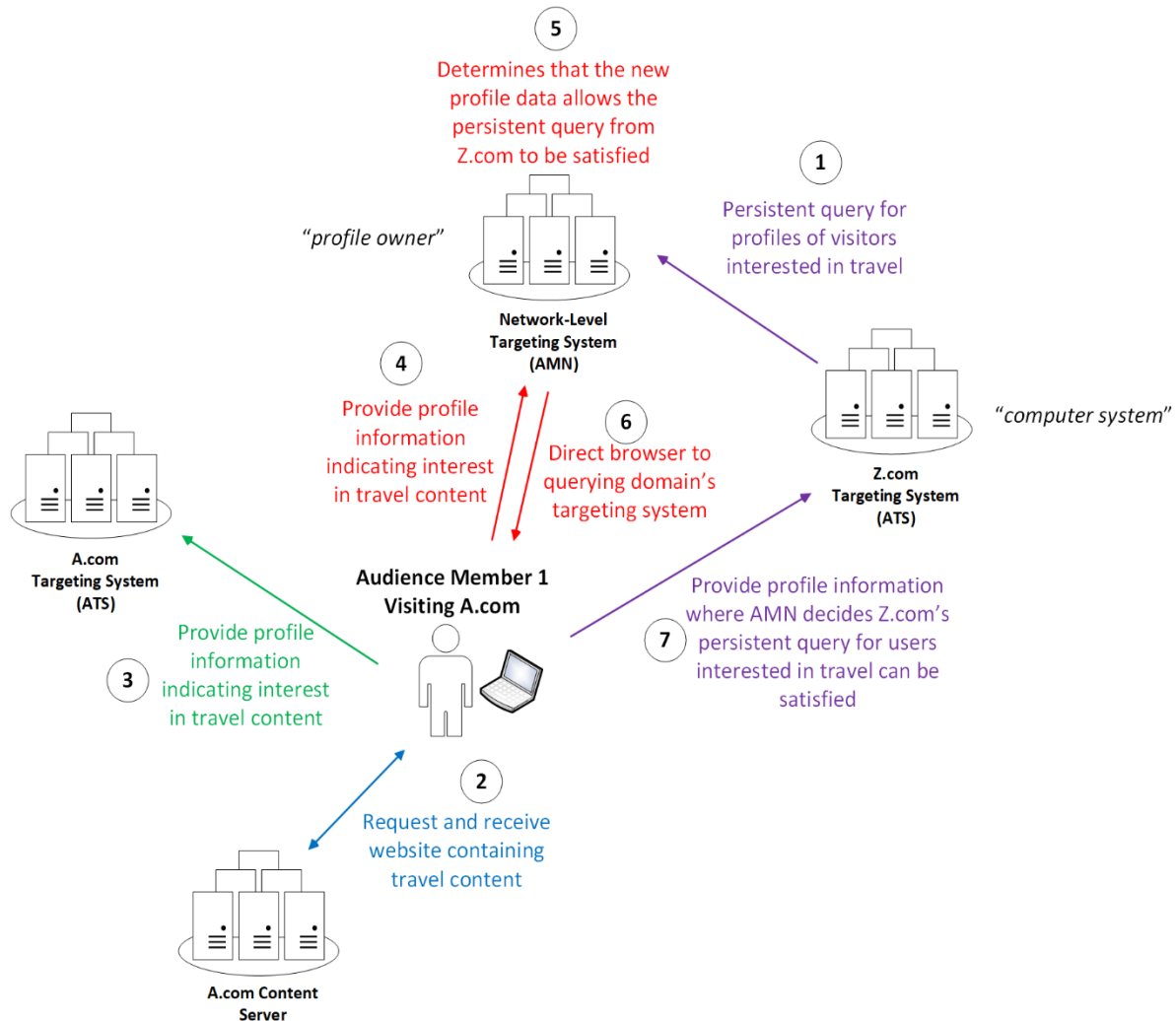
entities, one of which media property entities is the entity controlling the computer system [e.g., the query execution module associated with the network-level targeting system evaluates the newly received profile information with respect to the “queue” with a “set of persistent queries” that includes the first domain’s persistent query], *each stored request being for requested profiles or kinds of profiles* [e.g., the persistent queries “check for certain information to reside in the data warehouse” and allow “an agent to maintain a permanent ‘searching’ presence in the central database,” where the data warehouse of the network-level targeting system “is populated with and stores the various profile data”], *which plurality of stored requests includes the profile or kind of profiles requested by the entity controlling the computer system* [e.g., like all other queries, the first domain’s persistent query would “check for certain information to reside in the data warehouse” and allow “an agent to maintain a permanent ‘searching’ presence in the central database”], as recited in [1.b.i]. EX1003, pp. 48-50.

e) [1.b.ii]

The Beyda-Herz combination renders obvious Element [1.b.ii].

As discussed in Section III.A.3 and with respect to [1.a.i], *supra*, a POSITA would have found it obvious to utilize the persistent queries described by Herz as at least one of the mechanisms by which a publisher domain in Beyda’s system would have been able to obtain profile information for an audience member from

another publisher domain. EX1003, [37], [58]-[61]. Below is a diagram that illustrates the submission and fulfillment of a persistent query based on the combined teachings of Beyda and Herz. EX1003, [46].



As discussed with respect to [1.a.i], *supra*, if the new profile information satisfies a pending persistent query, the network-level targeting system would have returned an indication to the data agent to direct the audience member’s browser to the domain that submitted the persistent query (6), which would allow the querying

domain to create a profile for the audience member with the profile information and set a cookie on the audience member's computer so that the audience member can be identified during future visits (7). *See id.*

“Cookies implemented in conjunction with the visitor's browser [] include the particular [unique profile identifier] and are used to collect profile data for that visitor.” EX1004, [0115]. “Whenever that audience member returns to the site, the unique identifier is sent back to the” targeting system, and “can be used for the delivery of targeted content such as ads.” EX1004, [0074].

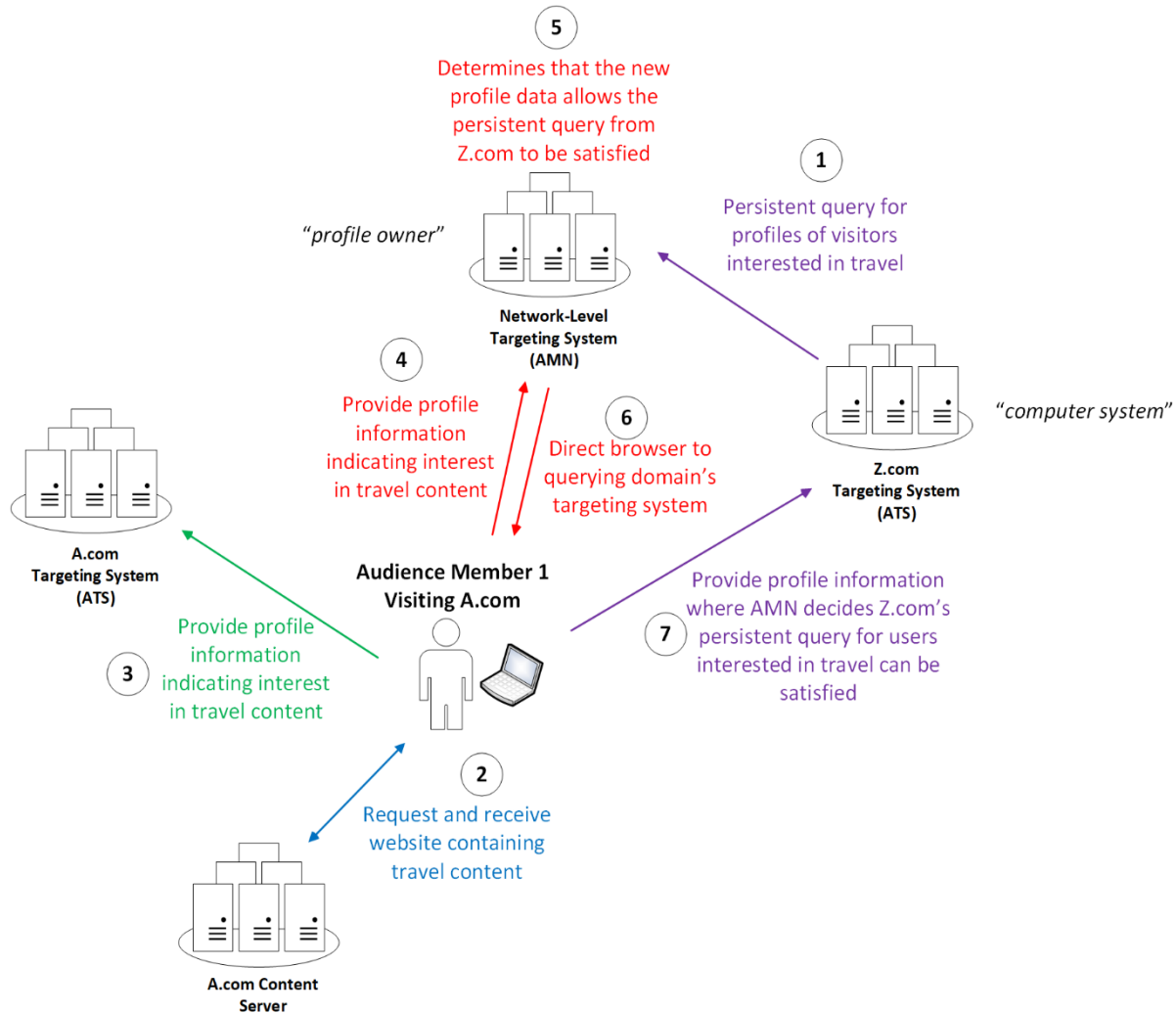
Accordingly, a POSITA would have at least found obvious that, in the Beyda-Herz combination, *the profile owner computer is programmed, when the media property entity is the entity controlling the computer system, to automatically arrange for electronic storage of a requested profile linked to the tag that is associated with the visitor device* [e.g., when new profile information satisfies a pending persistent query, the network-level targeting system would have returned an indication to the data agent code included in the website of the second, data-providing domain to direct the audience member's browser to the domain that submitted the persistent query, which would allow the querying domain to create a profile for the audience member with the profile information and set a cookie on the audience member's computer so that the audience member can be identified

during future visits], *the tag being readable by equipment that is part of the computer system of part (a)* [e.g., because the cookie is set by the querying domain, the querying domain is able to read the cookie on the user's browser], as recited in [1.b.ii]. EX1003, p. 50.

f) [1.c]

The Beyda-Herz combination renders obvious Element [1.c].

As discussed with respect to [1.a.i], *supra*, below is a diagram that illustrates the submission and fulfillment of a persistent query based on the combined teachings of Beyda and Herz. EX1003, [47].



“Cookies implemented in conjunction with the visitor’s browser [] include the particular [unique profile identifier] and are used to collect profile data for that visitor.” EX1004, [0115]. “Whenever that audience member returns to the site, the unique identifier is sent back to the” targeting system, and “can be used for the delivery of targeted content such as ads.” EX1004, [0074]. Specifically, in the context of the “method of delivering targeted content to an audience member based on the segment affinity data” illustrated in FIG. 6, “[o]nce a website domain cookie

is provided with a unique identifier, . . . the Targeting Engine may query the data warehouse for any segment affinity data associated with the audience member.”

EX1004, [0058]-[0059]. For example, “[i]n connection with visiting site A, the audience member browser is also directed 1628 to the a.com domain Ad Server A to for advertisements (these may be those populating the currently visited page).”

EX1004, [0169]. If, for example, the AMN cookie is set to ‘N’, the “Ad Server A would simply serve a local advertisement.” EX1004, [0169]; EX1003, [48].

Accordingly, a POSITA would have at least found obvious that the Beyda-Herz combination, *later, when the visitor device is available to receive an advertisement* [e.g., “[w]henever that audience member returns to the site” of the first, querying domain], *with the computer system, (i) us[es] the tag of part (a) that is associated with the visitor device to access the profile information stored in the central database* [e.g., the first, querying domain’s targeting system checks the audience member’s browser for the cookie stored as a result of the persistent query, and uses the unique profile identifier contained in the cookie to access the audience member’s profile], *and (ii) us[es] the profile information linked to the tag of part (a) to automatically cause delivery of an electronic advertisement to the visitor device* [e.g., the first, querying domain’s targeting system can use segment data associated with the audience member’s profile to deliver targeted advertising],

wherein the electronic advertisement is dependent on the profile information associated with the visitor [e.g., “the profile data includes attributes that are correlated to audience members, and is the basis of the audience segment definitions that are used to target audience members with advertisements and/or other content,” as described by Beyda], as recited in [1.c]. EX1003, pp., 50-51.

g) [2]

The Beyda-Herz combination renders obvious Claim [2].

Beyda describes that its system “is adapted to segment and target audience members for delivering content to an audience member across a plurality of digital mediums.” EX1004, [0062]. “The digital mediums may be heterogeneous, and may include, but are not limited to, a website network, a cable system, a non-web based internet network, a wireless communications system, such as a cellular phone or RF network, and/or any digital medium in which the means for interfacing the audience member with the digital content is uniquely addressable.” EX1004, [0062]. Further, “[a]nother aspect of [Beyda’s] invention provides profile synchronization” allowing the association of multiple profiles where an audience member “access[es] various computers throughout the day and week, such as a home computer, office computer, mall kiosk, or the like.” EX1004, [0114], [0118]. Beyda provides an example in which information about a user’s website

browsing on his/her computer contained in the user's profile is used to serve "targeted content via the set-top box 480 and the audience member's home television." See EX1004, [0066]; EX1003, [50].

Accordingly, a POSITA would have at least found obvious that, in the Beyda-Herz combination, *the profile information associated with the visitor is derived from the visitor's activity using a first device* [e.g., Beyda's system collects profile information from an audience member when the audience member uses a "computer 180" to visit a website provided by a web server], *and wherein the visitor device that is available to receive an advertisement is a second device of the visitor* [e.g., Beyda's system "target[s] audience members for delivering content . . . across a plurality of digital mediums" including, for example, "a wireless communications system, such as a cellular phone" or a set-top box in a cable system] as recited in [2]. EX1003, p. 51-52.

h) [3]

The Beyda-Herz combination renders obvious Claim [3].

Beyda describes that its system "is adapted to segment and target audience members for delivering content to an audience member across a plurality of digital mediums." EX1004, [0062]. "The digital mediums may be heterogeneous, and may include, but are not limited to, a website network, a cable system, a non-web based internet network, a wireless communications system, such as a cellular

phone or RF network, and/or any digital medium in which the means for interfacing the audience member with the digital content is uniquely addressable.”

EX1004, [0062]. One way that Beyda describes an audience member can access content is to use a “computer” to “visit a website provided by a web server 170.”

EX1004, [0062].

Accordingly, a POSITA would have at least found obvious that, in the Beyda-Herz combination, *the first device is a computer of the visitor* [e.g., Beyda’s system collects profile information from an audience member when the audience member uses a “computer 180” to visit a website provided by a web server] *and the second de-vice is a mobile phone of the visitor* [e.g., Beyda’s system “target[s] audience members for delivering content . . . across a plurality of digital mediums” including, for example, “a wireless communications system, such as a cellular phone”], as recited in [3]. EX1003, p. 52.

i) [4]

The Beyda-Herz combination renders obvious Claim [3].

Beyda suggests using the initially collected registration information to assist in profile synchronization. *See generally* EX1004, [0115]-[0132]; EX1003, [51]. “Profile synchronization entails a recognition that audience members, and the potential multiple identifiers that they may become associated with, may be associated with an authoritative identifier (ID).” EX1004, [0123]. “In one embodiment,

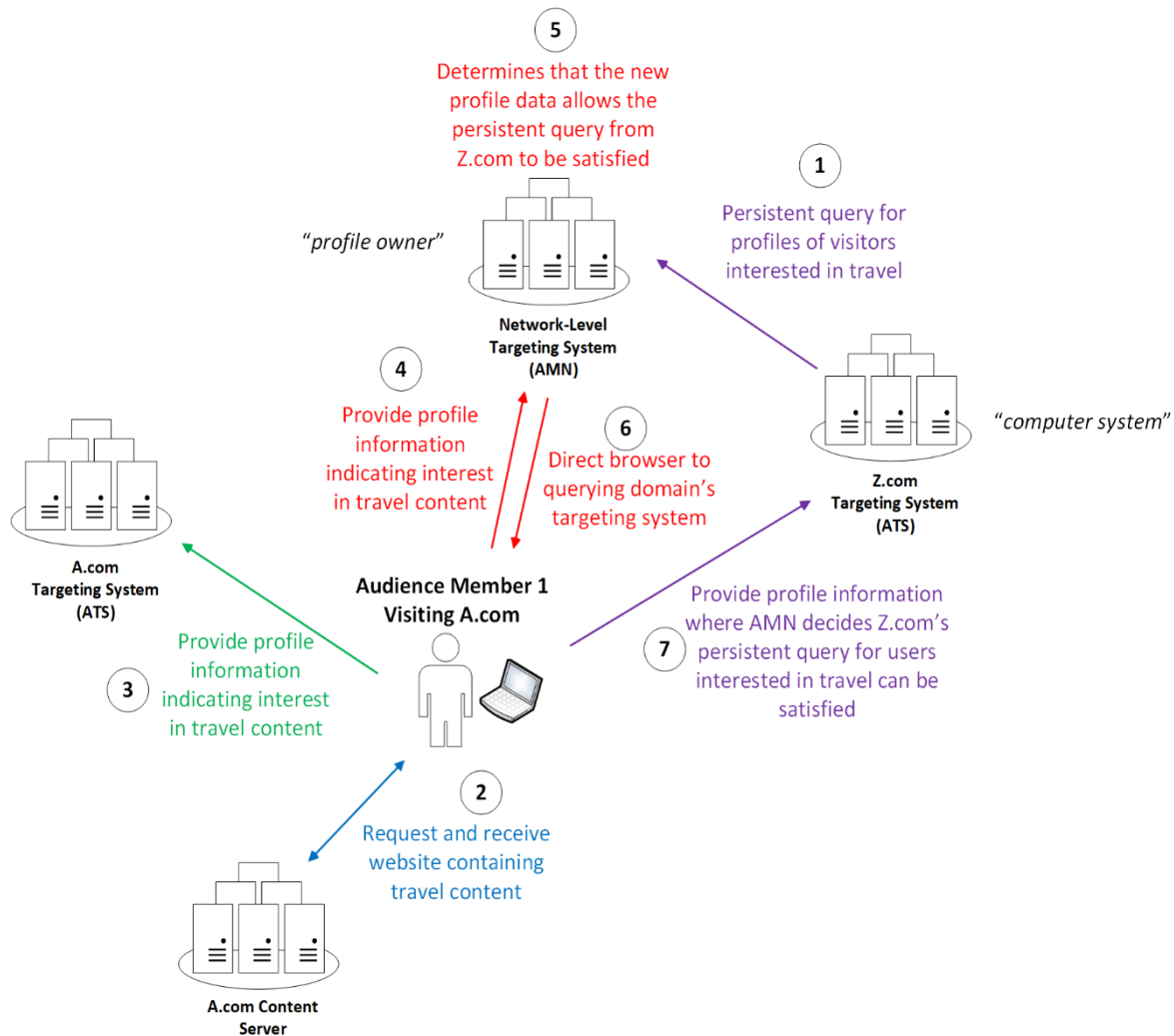
the Authoritative ID is associated to registration (e.g., login credentials, REGID) for the user web site.” EX1004, [0123]. While Beyda describes that, “[p]referably, the demographic data will be non-personal data,” (*see* EX1004, [0134]) Beyda’s system nonetheless provides for the collection and use of personally identifiable information (*e.g.*, registration data) to form an Authoritative ID as part of profile synchronization. EX1004, [0123]; EX1003, [51]. For example, as part of the registration data, Beyda describes that the targeting system may collect “telephone numbers.” *See* EX1004, [0044]. A POSITA would have at least found it obvious that one Authoritative ID would include the audience member’s telephone number. EX1003, [51].

Accordingly, a POSITA would have at least found obvious that, in the Beyda-Herz combination, *the tag identifies the mobile phone*, as recited in [4]. EX1003, p. 52.

j) [5]

The Beyda-Herz combination renders obvious Claim [5].

As discussed with respect to [1.a.i], *supra*, below is a diagram that illustrates the submission and fulfillment of a persistent query based on the combined teachings of Beyda and Herz. EX1003, [46].



As discussed with respect to [1.a.i], *supra*, Herz's persistent queries would be submitted (1) by publisher domains to Beyda's network-level targeting system in order to receive audience member profile information that meets certain criteria. *See, e.g.*, EX1004, [0136], [0163]; EX1005, [0371], [0574], [0719], [0728]; EX1003, [47]. In order to satisfy persistent queries in the context of Beyda's system, a POSITA would have found it obvious that, when the network-level targeting system received updated profile information as a result of a redirect by a data agent

(4), the network-level targeting system (using, for example, a query execution module like the one described by Herz) would have determined whether the new profile information satisfied any pending persistent queries (5). *See* EX1004, [0145], [0165]-[0166]; EX1005, [0147]-[0156]; EX1003, [47].

As discussed with respect to Claim [2], the profile information collected by the network-level targeting system may be collected from an audience member's "computer" as a result of the audience member accessing a website of a web server with the computer. *See* EX1004, [0065]-[0066]; *see also id.*, [0043] ("The web servers 170 may provide website pages to an audience member computer 180 in a conventional manner"), [0049] ("Each of these domain cookies may be stored on the computer associated with the audience member"); EX1003, [50].

Accordingly, a POSITA would have at least found obvious that, in the Beyda-Herz combination, *the profile owner computer* [e.g., the network-level targeting system] *is programmed to automatically select a media property entity using profile information about the visitor that was derived from the visitor's activity using the computer of the visitor* [e.g., selecting the first publisher domain as a targeting system to which an audience member's computer browser should be redirected as a result of determining that a persistent query submitted by the first domain is satisfied by profile information provided by the audience member as a re-

sult of accessing and interacting with the website of a second, data provider domain], *which profile information was received by the profile-owner computer as a result of URL redirection from a website that is served by the electronic apparatus of the profile supplier, which website is accessed by the computer of the visitor* [e.g., when the audience member accesses and interacts with the website of a second, data provider domain and the resulting profile data is determined to satisfy the persistent query, the data agent code on the website redirects the audience member's browser to the URL of the network-level domain's targeting system, and to the URL of the first querying domain's targeting system when the audience member's profile information satisfies the first querying domain's persistent query], as recited in [5]. EX1003, pp. 52-53.

k) [6]

The Beyda-Herz combination renders obvious Claim [6].

As discussed with respect to Claim [3], Beyda describes that its system “is adapted to segment and target audience members for delivering content to an audience member across a plurality of digital mediums.” EX1004, [0062]. “The digital mediums may be heterogeneous, and may include, but are not limited to, a website network, a cable system, a non-web based internet network, a wireless communications system, such as a cellular phone or RF network, and/or any digital me-

dium in which the means for interfacing the audience member with the digital content is uniquely addressable.” EX1004, [0062]. One way that Beyda describes an audience member can access content is to use a “computer” to “visit a website provided by a web server 170.” EX1004, [0062]. Thus, a POSITA would have understood or at least found obvious from Beyda that either or both of the devices used by an audience member to access content could have been “computers.” See EX1004, [0062], [0114], [0118]; EX1003, [49]-[50]. Further, Beyda teaches that its system is configured to associate and “synchronize” the profile information collected across multiple devices and mediums, so that it may be used in targeting content related to all devices and mediums associated with a particular audience member. See *id.*

With respect to FIGS 18 and 19, Beyda describes the network-level targeting system (the “*profile owner*”) collecting and analyzing information about the delivery of advertisements by the network-level targeting system itself, and does not focus on information collected when a domain-level targeting system (the “*computer system*”) “simply serve[s] a local advertisement.” See generally EX1004, [0177]-[0200]; see also *id.*, [0169]; EX1003, [54]. However, as part of the standard audience monitoring functionality, any time that an audience member requests and interacts with a website of one of the participating domains, Beyda describes collecting audience member “behavioral data” for inclusion in the audience member’s

profiles. *See* EX1004, [0017], [0049], [0056], [0066], [0072], [0093]-[0094], [0134]; EX1003, [54].

Beyda describes that the collected behavioral data “may include attributes such as which sections were viewed on a site (e.g., sports, entertainment, health), which advertisements were seen (e.g., mortgage rates, allergy medication), referers (e.g., AOL, Yahoo), the time of visiting the site (point in time, or range), and the frequency of visits to the site.” EX1004, [0072]; *see also id.*, [0093] (“Behaviors (e.g., Page Views, Ad Clicks)”). “Audience segments may be defined based upon” this collected behavioral data, and the segments “form the basis for the information that is extracted for analysis, reporting and targeting audience members in relevant segments.” EX1004, [0072]. Beyda describes that the mechanism for gathering and reporting this behavioral data to a targeting system is through data agent code included on the domain’s website with respect to which the behavior relates. *See* EX1004, [0046] (describing that the data warehouse of a targeting system “may be used to store the profile and segment affinity data relating to audience members”), [0049] (describing that the extractor of the targeting system “may use [] cookies to modify the profile data for a particular audience member to reflect that the audience member visited the website pages associated with the cookies” such that “a complete set of profile data may be collected for an audience member, reflecting both offline and online behavior and characteristics for the audience

member”), [0099] (describing that the data warehouse of a targeting system is populated “with profile data that identifies various attributes “), [0144] (describing that the “the local domains may collect behavioral and characteristic information”), [0159] (“a data agent [] is employed to assist in the gathering of information from website visitors, again provided in the form of code that is added to those pages in connection with which data collection is sought”); EX1003, [55].

Because Beyda describes that the data agent code included in each participating website is “employed to assist in the gathering of information from website visitors” both at the domain-level and the network-level, a POSITA would have understood or at least found obvious that any profile information collected by the domain-level data agent could also have been collected by the network-level data agent—including the advertising exposure and interaction data described above. *See* EX1004, [0077], [0159]; *see also id.*, [0206] (describing example network-level data agent functionality that allows the data agent “to know what data points each publisher has authorized for capture and where to find that data” and for this data to be passed “via HTML tags”); EX1003, [56]. Thus, when the domain-level and network-level data agents collect and direct reporting of behavior data to their respective targeting systems for inclusion in audience member profiles, a POSITA

would have understood or at least found obvious that the behavior data would reflect advertising exposure and interaction data. *See* EX1004, [0072], [0077], [0093], [0159], [0206]; EX1003, [56].

Accordingly, a POSITA would have at least found obvious that, in the Beyda-Herz combination, ***the second device is a computer*** [*e.g.*, at least one of the devices utilized by an audience member to access the first domain after the persistent query has been fulfilled is a “computer”] ***and further comprising, after parts (a) and (c), with the computer system electronically reporting information about delivery of the advertisement to the second device*** [*e.g.*, after the first domain’s targeting system serves a local advertisement to the audience member based on the profile information returned in response to the persistent query, data agent code associated the first domain’s targeting system included in the site viewed by the audience member collects behavior data including information about delivery of the advertisement, such as whether the advertisement was viewed or clicked by the audience member], ***which report is provided to a profile owner controlling the profile owner computer*** [*e.g.*, because the first domain is a participant in the network-level targeting system, the data agent code included in the first domain’s website causes profile data to be passed to both the first domain’s targeting system and the network-level targeting system], as recited in [6]. EX1003, pp. 53-54.

D) [7]

The Beyda-Herz combination renders obvious Claim [7].

As discussed with respect to Claim [6], *supra*, because Beyda describes that the data agent code included in each participating website is “employed to assist in the gathering of information from website visitors” both at the domain-level and the network-level, a POSITA would have understood or at least found obvious that any profile information collected by the domain-level data agent could also have been collected by the network-level data agent—including advertising exposure and interaction data. *See* EX1004, [0077], [0159]; *see also id.*, [0072], [0093], [0206]; EX1003, [56]. Thus, when the domain-level and network-level data agents collect and direct reporting of behavior data to their respective targeting systems for inclusion in audience member profiles, a POSITA would have understood or at least found obvious that the behavior data would reflect advertising exposure and interaction data. *See* EX1004, [0072], [0077], [0093], [0159], [0206]; EX1003, [56]. And when a data agent directs reporting of profile data, Beyda describes that it does so through redirects of an audience members browser to the targeting system to which profile data is being reported. *See* EX1004, [0077], [0145], [0159], [0165]-[0167], [0171]-[0172]; *see also id.*, [0052]-[0053] (describing the use of redirects to targeting systems for assignment of unique identifiers and placement of cookies); EX1003, [56].

Accordingly, a POSITA would have at least found obvious that, in the Beyda-Herz combination, *electronically reporting comprises automatically placing the second device in communication with computer equipment controlled by the profile owner* [e.g., the data agent code included in the first domain's website collects behavior data of the audience member for reporting to the network-level targeting system in order to update the audience member's network-level profile], *via URL redirection from the computer system, when the computer system utilizes the tag to cause delivery of the advertisement* [e.g., the data agent code causes reporting of profile information by redirecting the user's browser to the domain-level and network-level targeting systems in conjunction with displaying the first domain's website, including any advertisements delivered therewith], as recited in [7]. EX1003, p. 54.

m) [8]

Claim [8] is substantially the same as at least portions of Claim [6]. The Beyda-Herz combination renders obvious Claim [8] for at least the same reasons described above with respect to Claim [6]. *See* Claim [6], *supra*; EX1003, pp.54-55.

n) [9]

The Beyda-Herz combination renders obvious Claim [9].

As discussed with respect to Claim [6], *supra*, any time that an audience member requests and interacts with a website of one of the participating domains, Beyda describes collecting audience member “behavioral data” for inclusion in the audience member’s profiles. *See* EX1004, [0017], [0049], [0056], [0066], [0072], [0093]-[0094], [0134]; EX1003, [56]. Beyda describes that the mechanism for gathering and reporting this behavioral data to a targeting system is through data agent code included on the domain’s website with respect to which the behavior relates. *See* EX1004, [0046], [0049], [0099], [0144], [0159]; EX1003, [56].

Examples of parameters that the data agent collects and reports “the version of the data agent, the page referrer, the page URL, time information, and the [network profile identifier] NPRID.” EX1004, [0077]. In other words, when the data agent reports audience member data to the network-level targeting system, the data agent identifies the profile with which the audience member data is associated via the network profile identifier. *See* EX1004, [0077]; *see also id.* [0142] (“The AMN 1420 uses a unique identifier referred to as a network PRID (NPRID) to manage the unique identification of audience members at the network level”); EX1003, [57].

Accordingly, a POSITA would have at least found obvious that, in the Beyda-Herz combination, *reporting further comprises automatically electronically identifying to the profile owner company one of a plurality of profiles or*

kind of profiles used in association with delivery of the advertisement [e.g., when the data agent reports the behavior data, it includes a profile identifier that identifies the profile used to deliver the targeted advertisement], as recited in [9].

EX1003, p. 55.

o) [10]

Claim [10] is substantially the same as at least a first portion of Claim [5]. The Beyda-Herz combination renders obvious Claim [10] for at least the same reasons described above with respect to Claim [5]. *See* Claim [5], *supra*; EX1003, p. 55.

p) [11]

Claim [11] is substantially the same as at least a second portion of Claim [5]. The Beyda-Herz combination renders obvious Claim [11] for at least the same reasons described above with respect to Claim [5]. *See* Claim [5], *supra*; EX1003, p. 55.

q) [12]

The Beyda-Herz combination renders obvious Claim [9].

Beyda describes “[i]nitial profile information about individual audience members may be collected from available databases, such as a registration database 112 and a subscription database 114,” and “[t]hese registration and subscription databases may include a wide variety of profile information such as name,

gender, age, birth date, home and work addresses, telephone numbers, credit and charge card information, ...” EX1004, [0044].

Moreover, Beyda suggests using this registration information to assist in profile synchronization. *See generally* EX1004, [0115]-[0132]. “Profile synchronization entails a recognition that audience members, and the potential multiple identifiers that they may become associated with, may be associated with an authoritative identifier (ID).” EX1004, [0123]. “In one embodiment, the Authoritative ID is associated to registration (e.g., login credentials, REGID) for the user web site.” EX1004, [0123]. While Beyda describes that, “[p]referably, the demographic data will be non-personal data” (*see* EX1004, [0134]), Beyda’s system nonetheless provides for the collection and use of personally identifiable information (*e.g.*, registration data) to form an Authoritative ID as part of profile synchronization. EX1004, [0123]; EX1003, [51].

Beyda describes that one approach to network-level synchronization involves the audience member’s client side browser storing the Authoritative ID using plug-in technology. *See* EX1004, [0209]. Such implementations of “authoritative identifiers along with the collective information of the network [] provide[s] a robust network profile that can help overcome the problems associated with cookie blocking technologies.” EX1004, [0203]. Based on these teachings, a POSITA

would have at least found it obvious to supplement or replace cookie-based identification with storage of Authoritative IDs using plug-in technology such that an audience member can be definitively identified as part of data gathering. *See* EX1004, [0206]-[0210]; EX1003, [52].

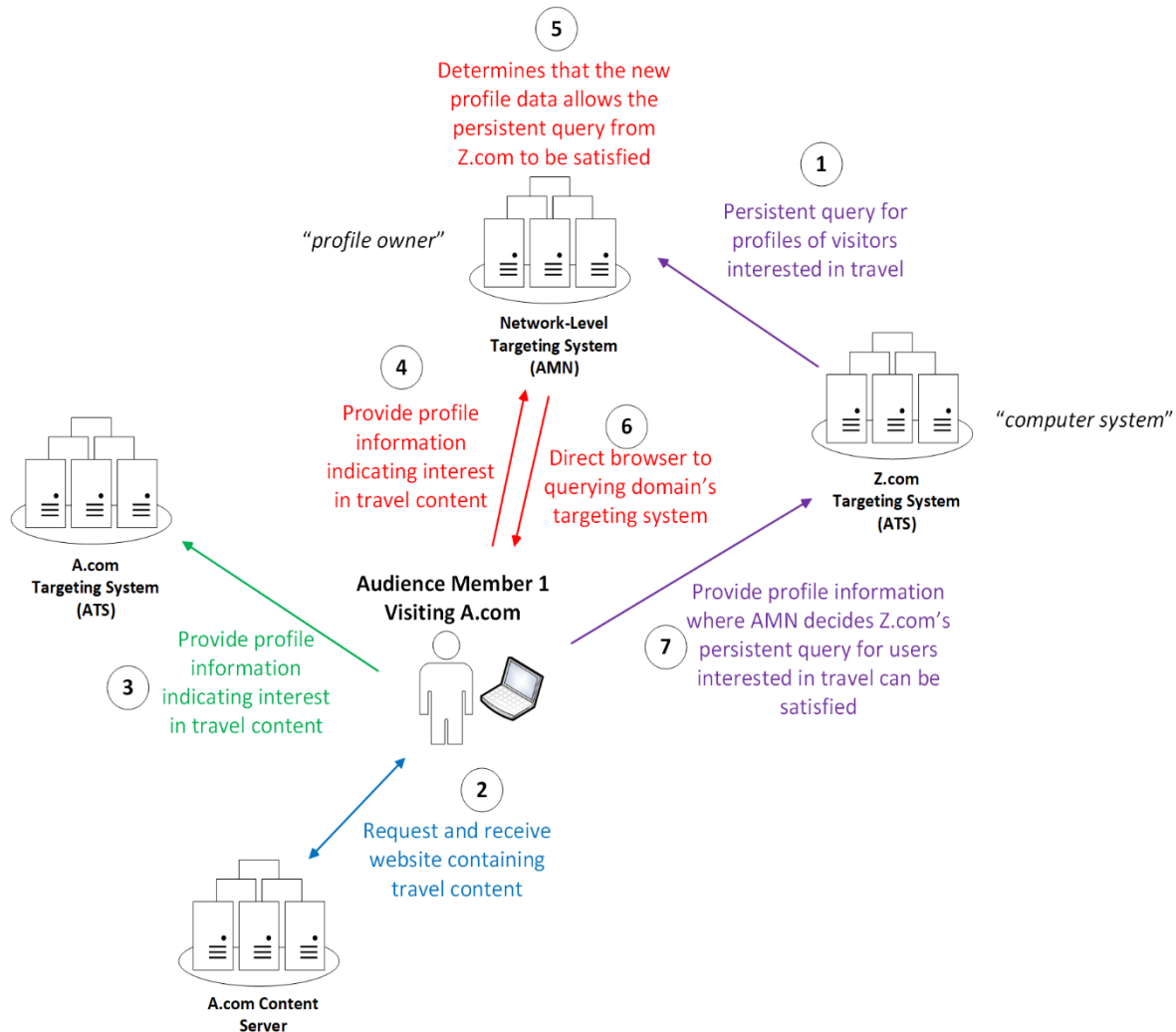
The '445 Patent describes that “[a] tag generally is a unique identifier used to mark a person electronically visiting a media property, such as a web site, TV channel, radio show, or the like, using a computer, a mobile device, a TV set, a TV set top box, or any other device.” EX1001, 3:25-29. Thus, consistent with the '445 Patent, the Authoritative ID—which may include personally identifiable information—stored on the audience member’s browser may be a tag, or at least a portion of a tag, used to associate an audience member with their profile data when visiting publisher’s sites. EX1004, [0206]-[0210]; EX1003, [53].

Accordingly, a POSITA would have at least found obvious that, in the Beyda-Herz combination, *the tag* [e.g., the Authoritative ID stored through the use of plug-in technology] *comprises personally identifiable information identifying the visitor* [e.g., the Authoritative ID is based on registration information that Beyda describes as including personally identifiable information, like name and address], as recited in [12]. EX1003, p. 56.

r) [13]

The Beyda-Herz combination renders obvious Claim [13].

As discussed with respect to [1.a.i], *supra*, below is a diagram that illustrates the submission and fulfillment of a persistent query based on the combined teachings of Beyda and Herz. EX1003, [46].



As discussed with respect to [1.a.i], *supra*, if the new profile information satisfies a pending persistent query, the network-level targeting system would have returned an indication to the data agent to direct the audience member’s browser to the domain that submitted the persistent query (6), which would allow the querying

domain to create a profile for the audience member with the profile information and set a cookie on the audience member's computer that include a unique profile identifier so that the audience member can be identified during future visits (7). *See id.* Beyda describes that a targeting engine may direct an audience member's computer through the user of browser redirects to URLs associated with other targeting systems, and that the URLs sent to an audience members browser to facilitate the redirect may themselves include URLs to other locations (e.g., "http://te.primarydomain.com/blank.gif?te.domain1.com"). *See* EX1004, [0052]-[0053]; EX1003, [47].

Accordingly, a POSITA would have at least found obvious that, in the Beyda-Herz combination, *the profile owner computer being programmed to automatically arrange for electronic storage of the profile information linked to the tag associated with a visitor device comprises the profile owner computer [e.g., the network-level targeting system] being programmed to perform automatic redirection to a URL provided by the selected entity [e.g., when the network-level targeting system determines that newly received profile information satisfies a persistent query, the network-level targeting system redirects the audience member's browser to a URL associated with the querying domain's targeting system] to place the visitor device in communication with computer equipment controlled*

by the selected entity [e.g., as part of the redirect to the querying domain's targeting system, the audience member's browser and computer communicate with the querying domain's targeting system by providing the profile data to the querying domain] *to enable storage, in a central database associated with the computer equipment of the selected entity, of the profile information linked to the tag that is associated with the visitor device* [e.g., in response to receiving profile information from the audience member's computer, the querying domain's targeting system creates a profile for the audience that includes the received profile information and returns a cookie to be stored on the audience member's computer that includes a profile identifier associated with the new profile], as recited in [13].

EX1003, pp. 56-57.

s) [14]

The Beyda-Herz combination renders obvious Claim [14].

As discussed with respect to Claim [2], Beyda describes that its system "is adapted to segment and target audience members for delivering content to an audience member across a plurality of digital mediums." EX1004, [0062]. In one example of cross-medium content delivery, Beyda describes that an audience member may use his/her computer to visit a website provided by a web server, where "a unique audience member identifier related to the website network is assigned to the audience member, and profile data is collected and stored." EX1004, [0065].

When the user visits another website associated with a cable network, the cable network “may read the audience member's web network identifier, and associate the audience member's cable network identifier with this identifier.” EX1004, [0066]. Using segment information associated with the audience member’s web network identifier, an “appropriate digital signal is then sent to the cable head-end 450, and the head-end 450 delivers the audience member targeted content via the set-top box 480 and the audience member's home television.” EX1004, [0066]. “In this manner, the audience member’s preference and behavioral data is synchronized across a plurality of mediums into a common profile, and the content delivered to the audience member via those mediums may be customized based upon the characteristics of the profile.” EX1004, [0066].

Accordingly, a POSITA would have at least found obvious that, in the Beyda-Herz combination, *the apparatus of the profile supplier operates in the Internet and the equipment of the selected entity utilizes the profile data to cause delivery of the electronic advertisements on a television of the visitor*, as recited in [14]. EX1003, p. 57.

IV. CONCLUSION AND FEES

The Challenged Claims are unpatentable. Petitioner authorizes charge of fees to Deposit Account 06-1050.

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

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

LiveIntent, Inc. is the real party-in-interest.

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

To Petitioner's knowledge, the '445 Patent is the subject of the following pending civil actions:

- *Datonics LLC v. Oracle Corporation*, 7:25-cv-00059 (W.D. Tex.);
- *Datonics LLC v. Adobe Inc.*, 7:25-cv-00180 (W.D. Tex.);
- *AlmondNet, Inc., Intent IQ, LLC and Datonics LLC v. LiveIntent, Inc.*, 1:24-cv-00831 (D. Del.);
- *AlmondNet, Inc. and Datonics LLC v. Amazon.com, Inc. et al*, 6:24-cv00234 (W.D. Tex.); and
- *AlmondNet Inc., and Datonics LLC v. Zeta Global Corp. and Zeta Global Holdings Corp.*, 1:25-cv-00579 (D. Del.).

To Petitioner's knowledge, the '445 Patent is the subject of the following terminated civil action: *AlmondNet, Inc. et al v. Lotame Solutions, Inc.*, Case No. 1-24-cv-00376 (DDE).

To Petitioner's knowledge, the '445 Patent is the subject of the following IPRs:

- *Amazon.Com, Inc. v. Datonics, LLC*, IPR2025-00873

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

Petitioner provides the following designation of counsel.

Lead Counsel	Backup counsel
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D. Service Information

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

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Respectfully submitted,

Dated July 18, 2025

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CERTIFICATION UNDER 37 CFR § 42.24

Under the provisions of 37 CFR § 42.24(d), the undersigned hereby certifies that the word count for the foregoing Petition for *Inter Partes* Review totals 13,878 words, which is less than the 14,000 allowed under 37 CFR § 42.24.

Dated July 18, 2025

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CERTIFICATE OF SERVICE

Pursuant to 37 CFR §§ 42.6(e)(4)(i) *et seq.* and 42.105(b), the undersigned certifies that on July 18, 2025, a complete and entire copy of this Petition for *Inter Partes* Review and all supporting exhibits were provided by Federal Express, to the Patent Owner, by serving the correspondence address of record as follows:

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