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(54) DIRECTED MEDIA BASED ON USER PREFERENCES

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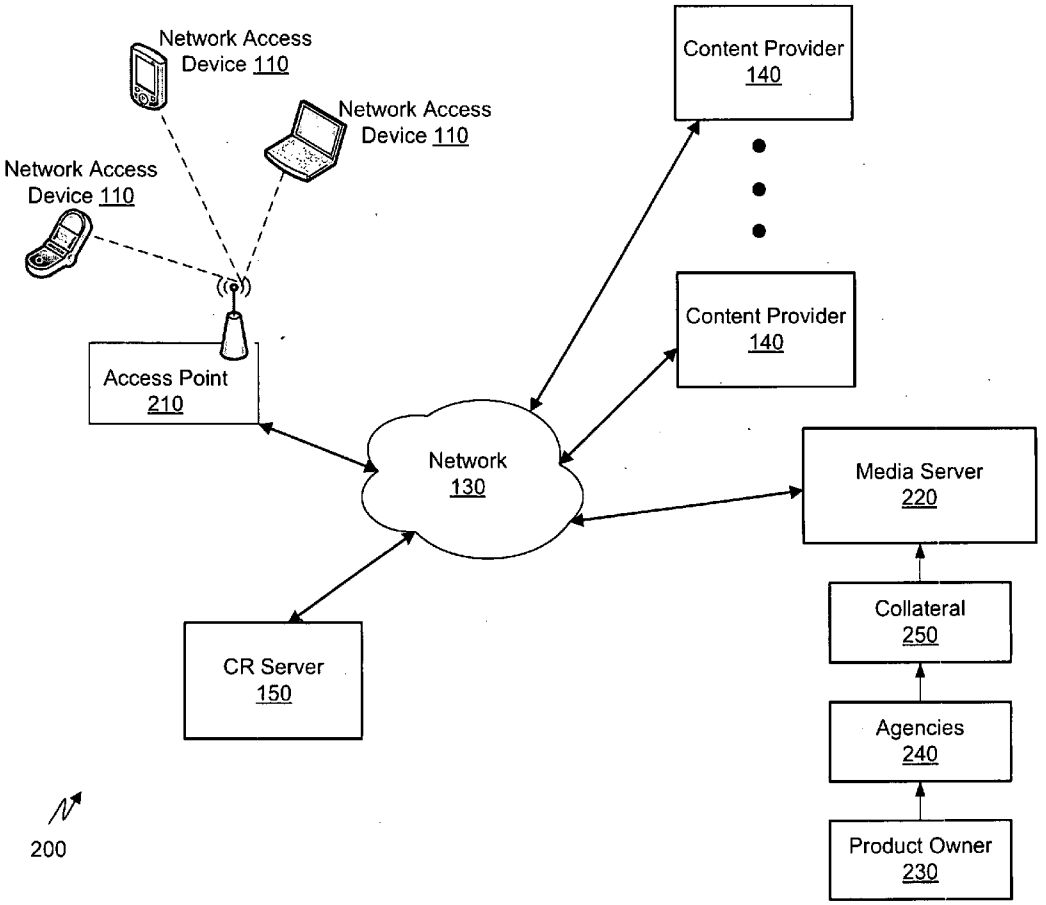
(57) **ABSTRACT**

A system for determining directed media for a user is provided. The exemplary system comprises a media selection optimizer which is configured to determine a directed media component based on a user profile associated, via a device identifier, with a network access device. The media selection optimizer may also utilize access point information, historic information, and access point location-centric information in its determination of the directed media component. The directed media component may then be forward to a media server which provides the corresponding directed media to the user. The directed media may comprise advertisement, coupons, video, music, or any other media which is customizable to the user.



FreeWheel, Ex. 1015

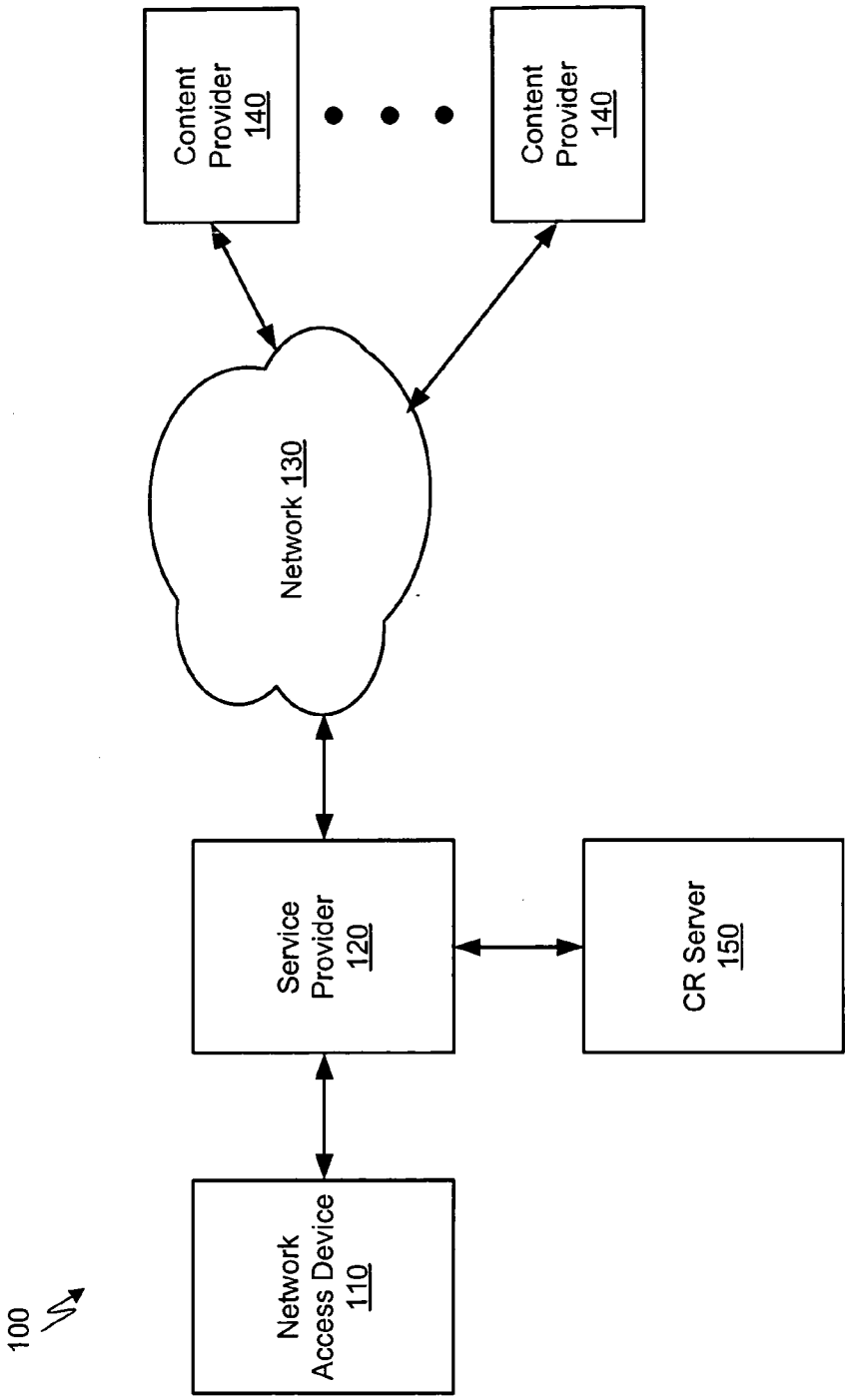

100
Network Access Device 110
Service Provider 120
CR Server 150
Network 130
Content Provider 140
Content Provider 140

FIG. 1

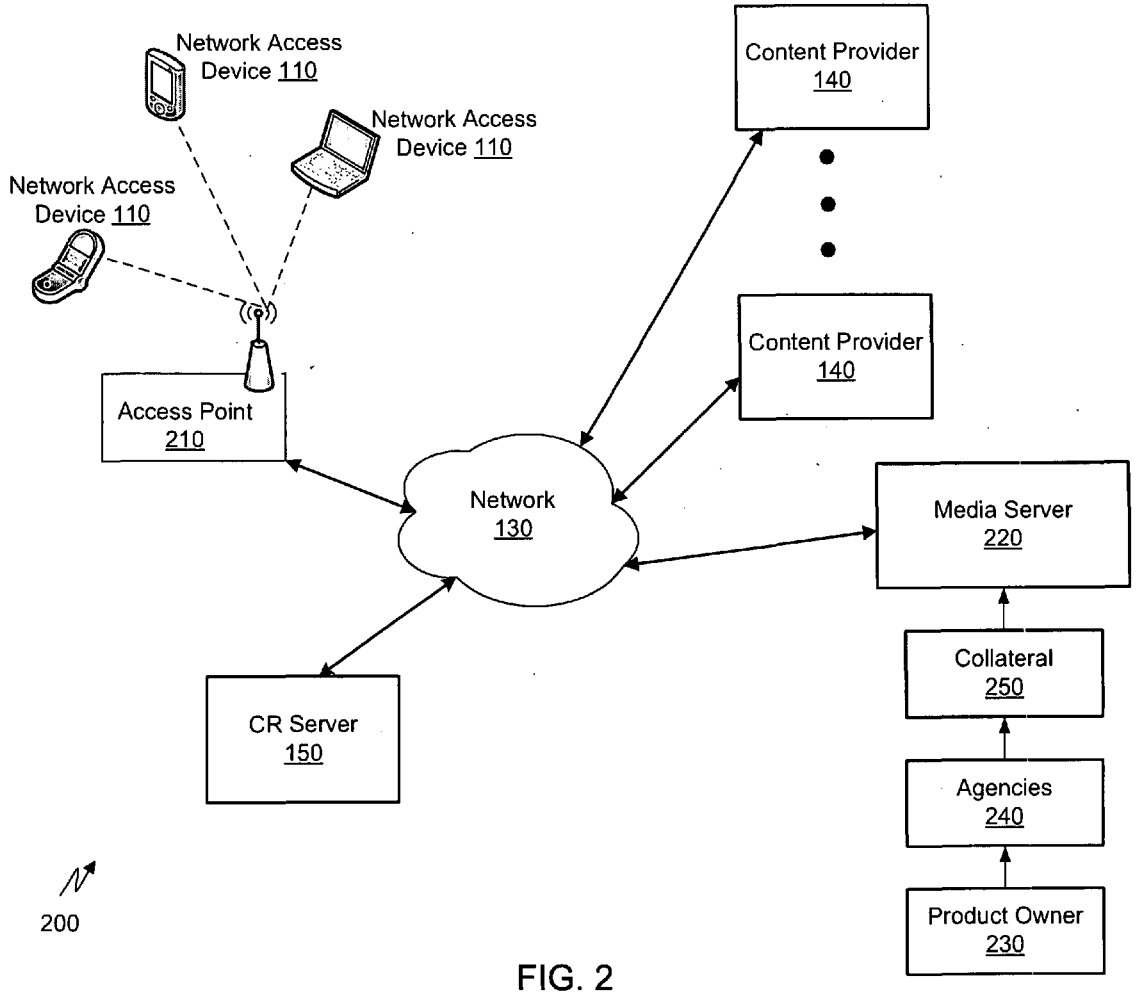

Network Access Device 110
Network Access Device 110
Network Access Device 110
Access Point 210
Network 130
CR Server 150
Content Provider 140
Content Provider 140
Media Server 220
Collateral 250
Agencies 240
Product Owner 230
200

FIG. 2

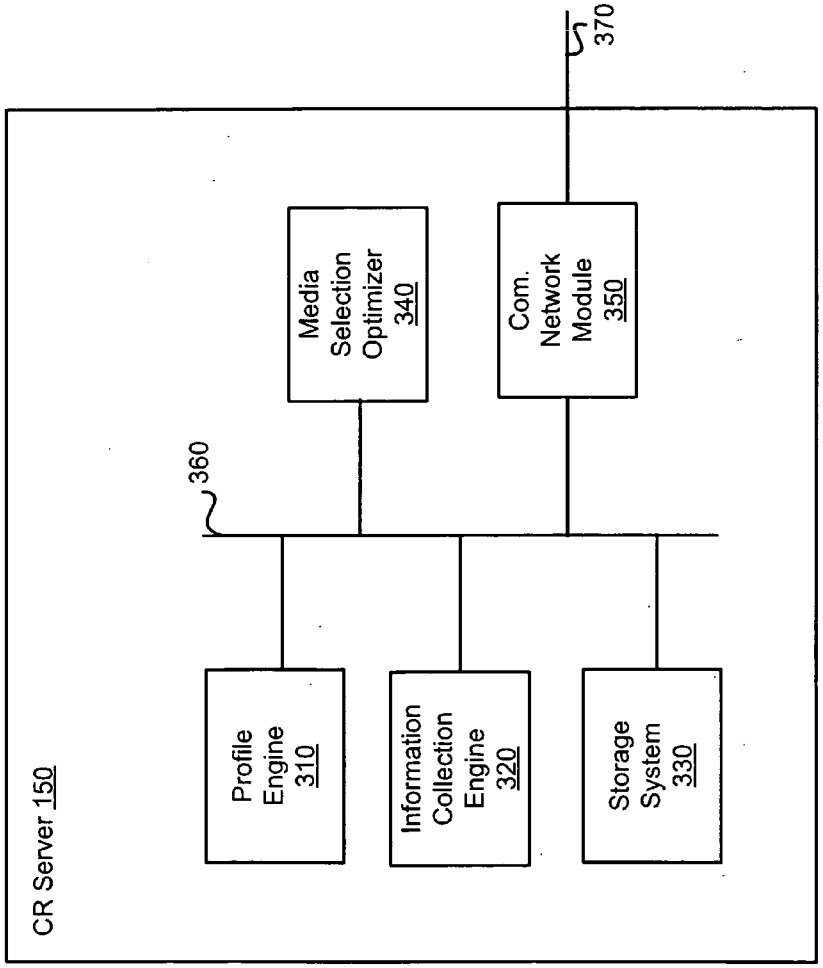

CR Server 150
Profile Engine 310
Information Collection Engine 320
Storage System 330
360
Media Selection Optimizer 340
Com. Network Module 350
370

FIG. 3

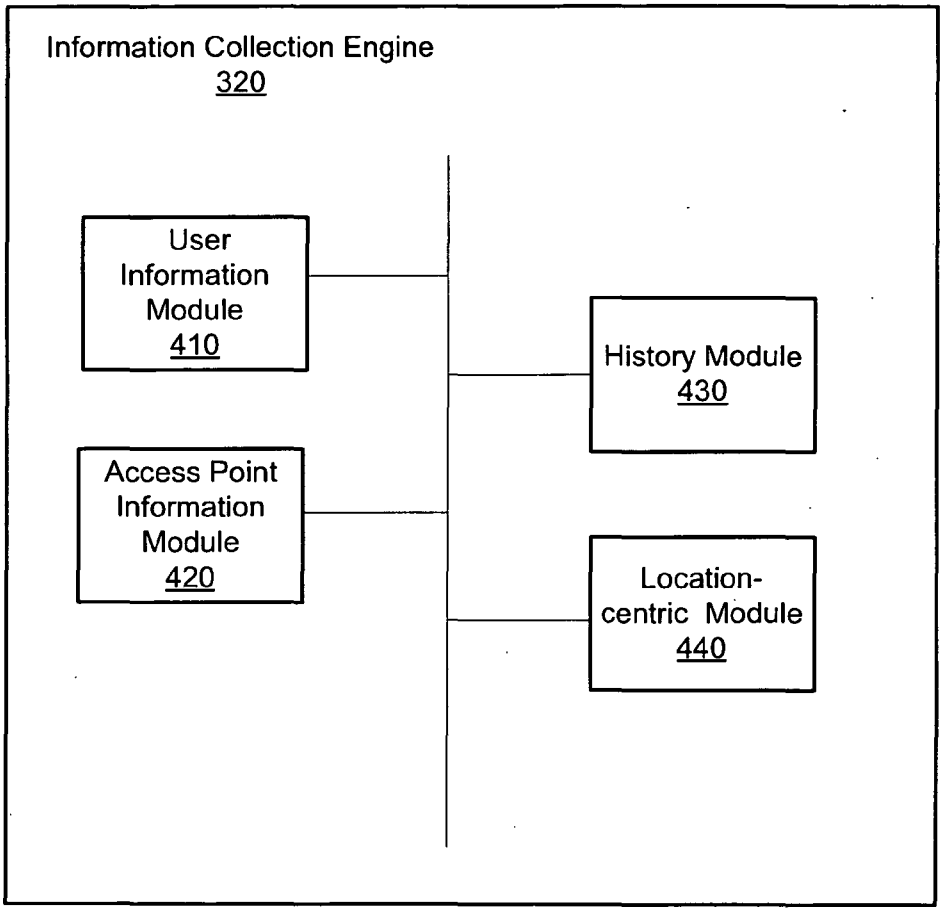

Information Collection Engine
320
User Information Module
410
Access Point Information Module
420
History Module
430
Location-centric Module
440

FIG. 4

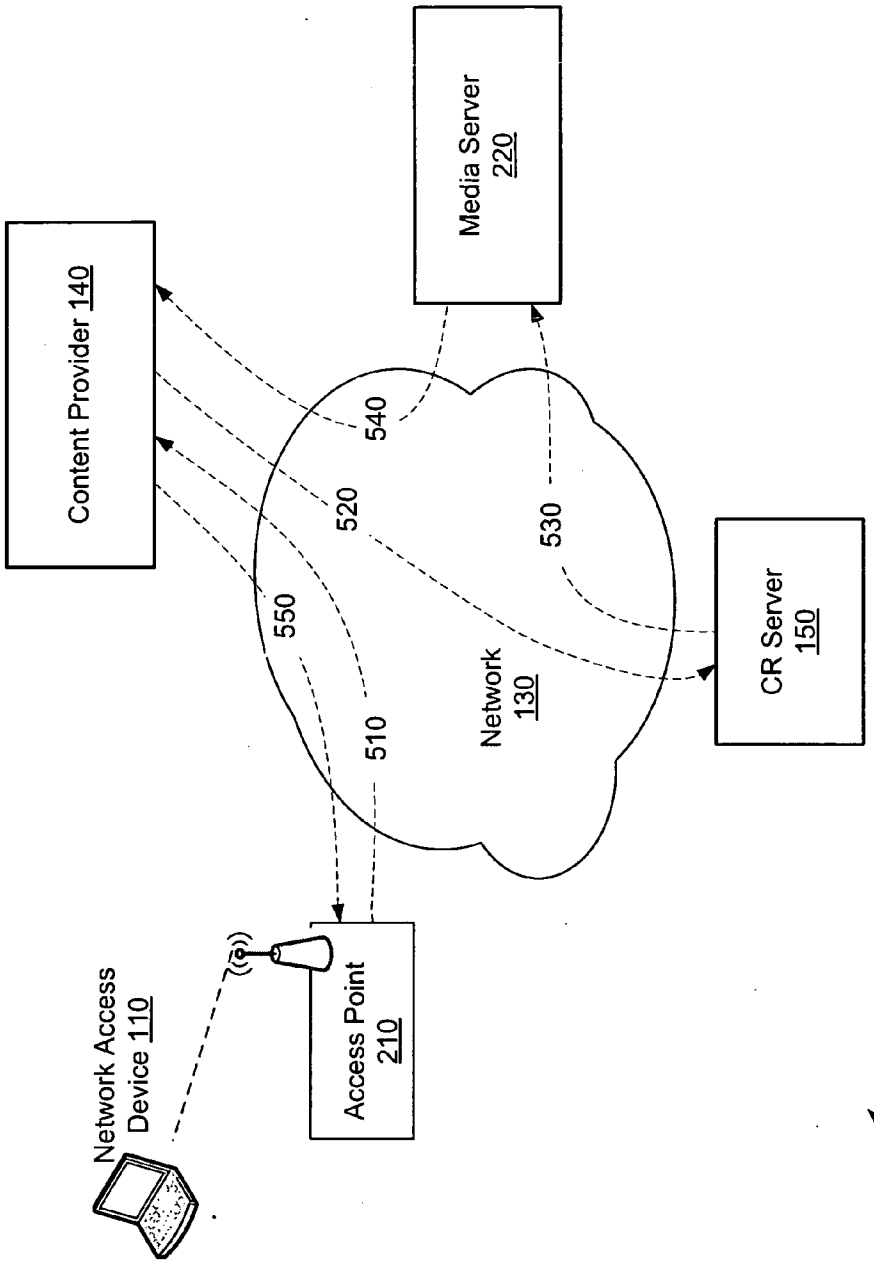

Content Provider 140
Media Server 220
540
520
530
550
510
Network 130
CR Server 150
Network Access Device 110
Access Point 210
200

FIG. 5

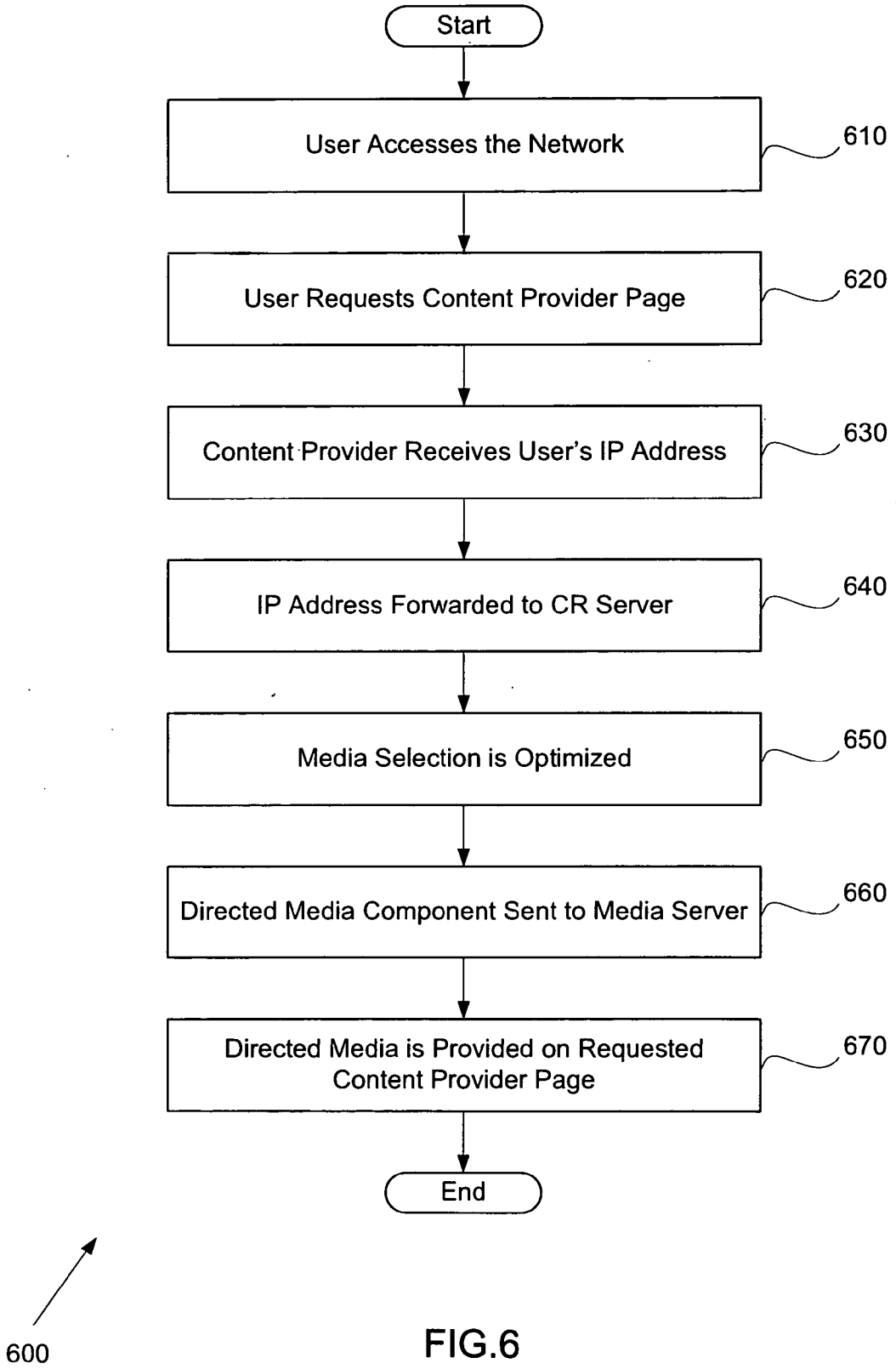

Start
User Accesses the Network
610
User Requests Content Provider Page
620
Content Provider Receives User's IP Address
630
IP Address Forwarded to CR Server
640
Media Selection is Optimized
650
Directed Media Component Sent to Media Server
660
Directed Media is Provided on Requested Content Provider Page
670
End
600

FIG.6

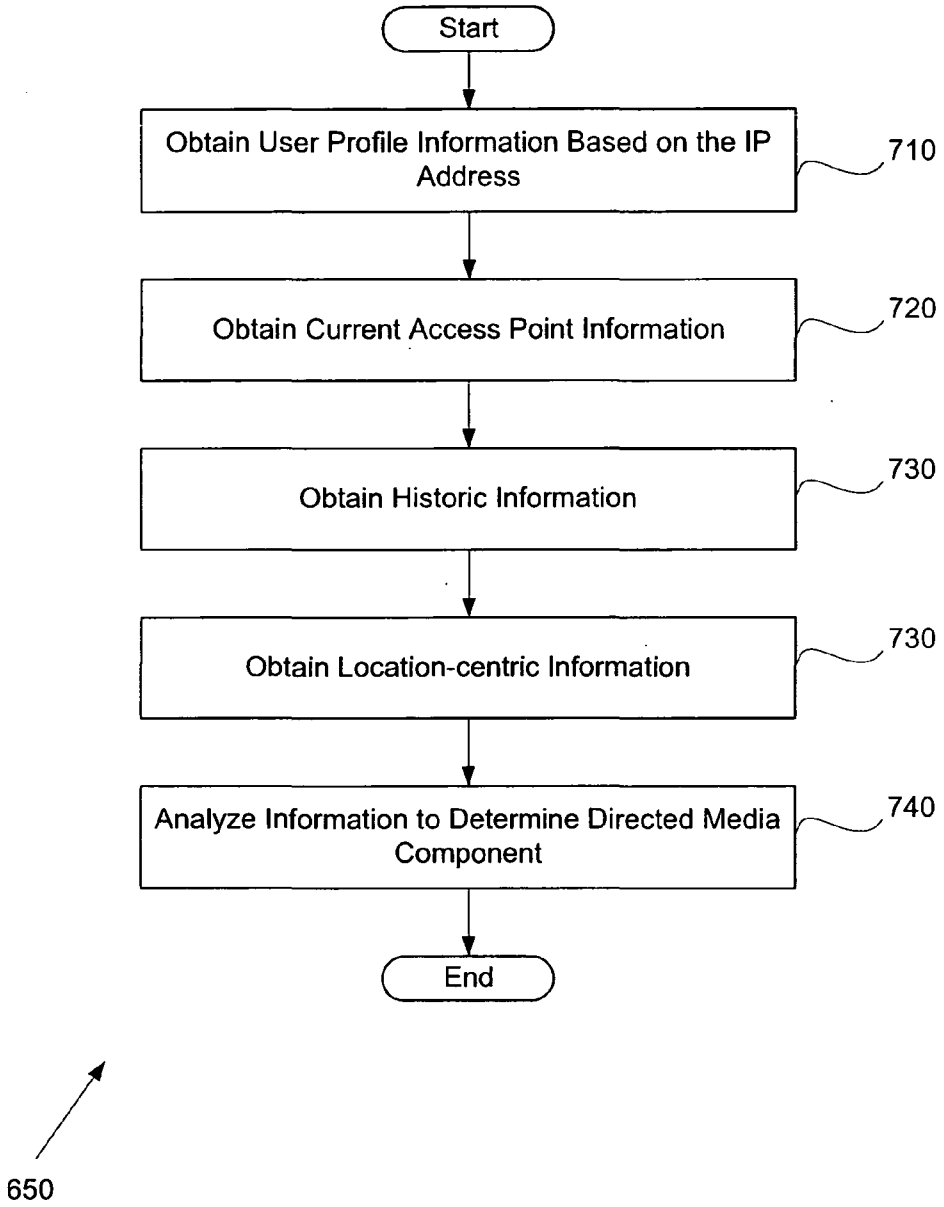

Start
Obtain User Profile Information Based on the IP Address
710
Obtain Current Access Point Information
720
Obtain Historic Information
730
Obtain Location-centric Information
730
Analyze Information to Determine Directed Media Component
740
End
650

FIG.7

DIRECTED MEDIA BASED ON USER PREFERENCES

CROSS REFERENCE TO RELATED APPLICATION

[0001] The present application claims the priority benefit of U.S. Provisional Patent Application No. 60/680,604, filed May 12, 2005, entitled "Systems and Methods of Network Operation and Information Processing, Including Business and Advertising Methods" which is herein incorporated by reference. The present application is also related to U.S. patent application Ser. No. _____ filed May 11, 2006 and entitled "Developing Customer Relationships with a Network Access Point" which is herein incorporated by reference.

BACKGROUND OF THE INVENTION

[0002] 1. Field of the Invention

[0003] Embodiments of the present invention relate generally to network access and more particularly to providing directed media in a network.

[0004] 2. Description of Related Art

[0005] Presently, content providers and advertisers are having increased difficulty in identifying, creating, and maintaining relationships with their user base. These relationships are limited by current technology. Generally, users interact with the content providers and advertiser by accessing a web site via a network access device. Users have traditionally been identified by either the user's current destination on the network through personal accounts or through downloaded programs on the user's network access device (e.g., cookies).

[0006] In some prior art embodiments, content providers request or require users to have personal accounts. When a user creates a personal account, the user is often requested to register and provide personal information that helps the content provider to identify and maintain a relationship with that user. While the registration provides information to the content provider, the content provider is typically not able to use this information in order to tailor/customize media, such as advertisements, to the individual user.

[0007] Alternatively, content providers may place cookies on user's network access device. A cookie is a small text file or program that certain Internet sites attach to the user's hard drive within the computing device. A cookie can contain information such as a user identifier, user preferences, shopping information, personally identifiable information, and a list of web sites previously visited. As the user revisits a content provider's web site, the content provider can retrieve the cookie to identify the user and then update the cookie as appropriate. Many users, however, view cookies as an invasion of privacy. As such, many users disable the function that allows cookies to be stored on their computing devices. Further, users can erase their cookies manually or purchase anti-spyware and anti-virus programs which either prevent cookies from downloading or delete cookies entirely (e.g., cookie churn.). That is, the use of the cookie method lacks persistence (i.e., can be deleted). As with registration, the information typically cannot be used to tailor media to the user.

[0008] Presently, publishers sell inventory (e.g., advertisement space) on a content provider's web site based on aggregated statistical demographics of all visitors to the web site. The demographics may also include a user survey, typically, of 1000 respondents. This survey, however, are of a basic nature (e.g., gender, age, income level), and does not account for individuality of the users.

[0009] Therefore, there is a need for systems and methods for directing media to a user based on user preferences.

SUMMARY OF THE INVENTION

[0010] Embodiments of the present invention provide systems and method for determining directed media to provide to a user on a web site. In exemplary embodiments, a user profile is associated with each network access device. When a user of the network access device attempts to access a content provider's web site, the IP address of the network access device is used by a customer relationship server to identifier the particular network access device. The corresponding user profile is then obtained.

[0011] An exemplary media selection optimizer determines a directed media component based on the user profile. In some embodiments, the media selection optimizer reviews user preferences associated with the user profile to determine the type of media which is best suitable for presentation to the user via a web page of the content provider. The directed media component may be a media tag identifying a media, or type of media, which should be presented to the user. Alternatively, the directed media component may be the directed media, itself.

[0012] In further embodiments, the media selection optimizer utilizes access point information, historic information, and/or access point location-centric information along with the user profile information to determine the directed media component. The access point information is retrieved from an access point through which the network access device is accessing the network. The historic information is based on past interactions which form patterns of usage for the network access device. In some embodiments, the historic information may be incorporated into the user profile. The location-centric information is obtained from any source with knowledge of events, conditions, and other attributes of the location in which the access point is located.

[0013] Once the directed media component is determined, the directed media component may be forward to a media server which provides the corresponding directed media to the user. The directed media may comprise advertisement, coupons, video, music, or any other media which is tailored to the user preferences.

BRIEF DESCRIPTION OF THE DRAWINGS

[0014] **FIG. 1** is an exemplary block diagram of a simplified environment employing embodiments of the present invention;

[0015] **FIG. 2** is an exemplary block diagram of an alternative environment in which embodiments of the present invention may be employed;

[0016] **FIG. 3** is a block diagram of an exemplary CR server;

[0017] **FIG. 4** is a block diagram of an exemplary information collection engine;

[0018] **FIG. 5** is a diagram of an exemplary communication path in the environment of **FIG. 2**;

[0019] **FIG. 6** is a flowchart of an exemplary method for providing directed media to a user; and

[0020] **FIG. 7** is a flowchart of an exemplary method for optimizing selection of the directed media.

DETAILED DESCRIPTION OF EXEMPLARY EMBODIMENTS

[0021] Embodiments of the present invention provide exemplary systems and methods for providing directed media to a user. By utilizing a user profile containing user preferences, the present systems can identify media or media types which are most relevant to the user. The user profile is associated with a device identifier, which is persistent (e.g., may not be deleted nor changed). The present systems also may use real-time information related to the user or user's location to tailor the media presented to the user. This allows a publisher to maximize their advertising revenues.

[0022] Referring to **FIG. 1**, an exemplary environment **100** in which embodiments of the present invention may be practiced is shown. Unlike much of the prior art where users of computing devices are tracked through cookies on their computing devices or sites the users visit over the Internet, users of the present embodiment can be identified and their preferences determined and tracked through a user's act of logging onto a network **130** or obtaining network service through a service provider **120**.

[0023] In the present embodiment, the environment **100** comprises at least one network access device **110**, the service provider **120**, a network **130**, a plurality of content providers **140**, and a client relationship server ("CR server") **150**. In exemplary embodiments, the network **130** is the Internet. Alternatively, the network **130** may be a local area network (LAN), intranet, or extranet.

[0024] In some embodiments, a user activates the network access device **110** in order to communicate with the network **130**. The network access device **110** is any digital device capable of communications over the network **130**. Examples of the network access device **110** include desktops, laptops, personal digital assistants, and cellular telephones. The network access device **110** may comprise a wireless network access driver, a router, a cable modem, a phone modem, or any other device capable of providing access to the network **130**.

[0025] In embodiments of the present invention, the network access device **110** may comprise a device identifier which is used by the CR server **150** to identify the network access device **110**. The device identifier may comprise a media access control address (MAC address), an international mobile station identity (IMSI), an international media equipment identity (IMEI), or any anonymous device identifier. In further embodiments, the network access device **110** may also comprise a software or hardware derived unique identifier. Accordingly, unique identifiers of software or hardware present on the network access device **110** can be indexed and grouped with, for example, MAC addresses, to create a unique anonymous device identifier.

[0026] The service provider **120** is a device configured to provide the network access device **110** access to the communications network **130**. In some examples, the service provider **120** is a switch, bridge, gateway, router, or any combination of these devices. The service provider **120** is typically controlled by a business that supplies network connectivity (e.g., Internet service provider, "ISP"). In one embodiment, the service provider **120** assigns an external IP address to each network access device **110** seeking access to the communications network **130**.

[0027] The exemplary content provider **140** is any digital device configured to provide information to users of network access devices **110** over the network **130**. In some embodiments, the content provider **140** is a web site. In other embodiments, the content provider **140** is an e-mailer or a file transport (FTP) site. The content provider **140** is typically controlled by an individual, group, or business that provides information for viewing or distribution over the network **130**. In some embodiments, content provided may comprise data, video, audio, software, or any combination thereof.

[0028] The exemplary CR server **150** is configured to identify any number of network access devices **110** seeking access to the network **130**, and to generate a user profile for each network access device **110**. The user profile may be used to build and develop relationships between users of the network access devices **110** and the owners or agents of products and/or services. In various embodiments, the CR server **150** may be coupled to the network access device **110**, the service provider **120**, or the network **130**.

[0029] The CR server **150** is further configured to receive a device identifier from the network access device **110** seeking access to the network **130**. The CR server **150** also receives access information and other information associated with the user, such as the current IP address assigned to the network access device **110**. The CR server **150** generates the user profile based on the device identifier, access information, and other information associated with the device identifier.

[0030] In one example, users operate the network access device **110** to connect to the network **130**. The users are identified and their preferences determined by the CR server **150** based on the number of times the user seeks network **130** access, where the user seeks access from, and any other available information. Unlike many examples in the prior art, the CR server **150** does not need to place cookies on user's network access device **110**, nor does the CR server **150** monitor the content provider **140** that the user's visit. Rather, the CR server **150** receives a device identifier from the user's network access device **110** and/or the service provider **120**. Through the device identifier, the user can be recognized and the number of times and where the user accesses the network can be stored to assist in the generation of the user profile.

[0031] In alternative embodiments, cookies may still be placed on the network access device **110**. Because most of the current advertisement industry is based on using cookies, the use of a cookie and/or a device identifier will assist in transitioning the advertisement industry away from the current cookie-only system. As a result, each network access device **110** may be identified by a hybrid cookie/device identifier combination.

[0032] It should be noted that any number of network access devices **110**, service providers **120**, and content providers **140** may be embodied within the environment **100** of **FIG. 1**.

[0033] Referring now to **FIG. 2**, an exemplary block diagram of an alternative environment **200** in which embodiments of the present invention may be employed is shown. The environment **200** comprises a plurality of network access devices **110** coupled to the network **130** via an access point **210**, a plurality of content providers **140**, and the CR server **150**. The environment **200** further comprises a media server **220** that works, directly or indirectly, with product owners **230**, agencies **240**, and collaterals **250**. While the network access devices **110** are show wirelessly coupled to the access point **210**, one or more of the network access devices **110** may be coupled to the access point **210** over a wire (e.g., Ethernet, USB, firewire).

[0034] The access point **210** is a device that couples the network access devices **110** to the network **130**. The access point **210** may comprise a base station, router, hub, or switch. In one example, the access point **210** is a router (wire or wireless) installed within a business (e.g., coffee shop) or location (e.g., city park) that allows users of the network access device **110** access to the network **110** (e.g., a hotspot). Although the access point **210** is shown directly coupled to the network **130**, alternatively, the access point **210** may be coupled to the network **130** via a service provider **120** (**FIG. 1**). In other embodiments, the access point **210** is, or is a part of, the service provider **120**. The access point **210** may comprise hardware, software, or firmware.

[0035] In one embodiment, when the access point **210** is installed, the access point **210** negotiates an IP address from the service provider **120**. As a network access device **110** seeks network access, the network access device provides the access point **210** its device identifier such as a MAC address. The access point **210** may be configured to authenticate the MAC address and assign an IP address to allow the network access device **110** access to the network **130** through the access point **210**.

[0036] The access point **210** directs the device identifier as well as access information to the CR server **150**. Access information may comprise any information associated with the device identifier. In one embodiment, the access information identifies the access point **210**, such as with an IP address or other identifier. The access information may also comprise information identifying the date and time the network access device **110** sought access, a type of business that is operating the access point **210**, and/or the amount charged to the user of the network access device **110** for service. In other embodiments, a router between the access point **210** and the network **130** is configured to direct the device identifier and access information to the CR server **105**.

[0037] The CR server **150** is configured to receive the device identifier and the access information from the access point **210**. The device identifier and access information is then stored within a record. The record tracks the device identifier and access information. Additionally, the record may store any other kind of information associated with the device identifier.

[0038] In exemplary embodiments, when the user visits a web site of a content provider **140**, the user will see directed media on portions of a web page. In some embodiments, the directed media is targeted advertisement. Alternatively, the directed media may comprise targeted audio, video, coupons, or other media tailored to the interests/preferences of the user. The directed media is typically located on particular portions of the content provider's web page (e.g., in a banner ad location).

[0039] In some embodiments, the directed media is placed on the content provider's web page via the media server **220**. The media server **220** works in connection with the CR server **150** to determine the directed media to provide each user. The media server **220** is further associated with the collateral **250** which produces the media and the agency **240** which creates the media based on requirements of the product owner **230**. For example, soda company X (product owner **230**) may hire an ad agency (agency **240**) to design an advertisement (media) for the product owner **230**. The agency **240** may work with a web advertisement designer (collateral **250**) to create the media. The media is then stored in the media server **220** until it is served to the user via the web page of the content provider **140**. In some embodiments, the media comprises a media profile tag which identifies the type of user to which the media should be directed/targeted. More than one media profile tag may be associated with a media.

[0040] Referring now to **FIG. 3**, the exemplary CR server **150** is shown in more detail. In one embodiment, the CR server **150** comprises a profile engine **310**, an information collection engine **320**, a storage system **330**, a media selection optimizer **340**, and a communication network module **350** all coupled via a communication bus **360**. The communication network module **350** communicates with the network **130** (**FIG. 1**) via a network link **370**.

[0041] The profile engine **310** is configured to generate user profiles based on characteristics associated with the user and the user's network access device **110** (**FIG. 1**). Each user profile may comprise one or more device identifiers (of the network access devices **110**), access information, device histories, and any other information associated with the network access devices **110** or device identifier. Each user profile identifies a user (indirectly via the network access device **110** the user is using) through the current IP address and device identifier (or other information) associated with the network access device **110**. In some embodiments, the device identifier is a MAC address. In other embodiments, the device identifier is an IMSI or IMEI. In yet further embodiments, the device identifier may comprise a unique identifier of software or hardware present on the network access device **110**.

[0042] The profile engine **310** can further customize the user profile based on individual characteristics, preferences, and habits of the user of a particular network access device **110**. For example, if the user repeatedly accesses the network **130** with the same network access device **110** through an access point **210** at a particular coffee shop, the user profile associated with the device identifier may indicate that the user has a preference for the coffee shop. As a result, the user profile may indicate that the user prefers coffee or a particular coffee shop.

[0043] The profile engine **310** can also incorporate group characteristics into the user profile. That is, the user profile may include one or more group identifiers indicating a group

type that the user is associated with. For example, a group identifier may be included in the user profile covering a group of users of a particular gender and age living in a specific city and having similar hobbies (e.g., male between 18-30 in the San Francisco area who enjoy baseball). Alternatively, a plurality of group identifiers may be used to identify groupings the user may be associated with. That is, for example, one group identifier may indicate the gender and age, while a second group identifier may indicate the city, and the third group identifier indicates a hobby. Alternatively, other combinations of characteristics and group identifier may be used (e.g., a single group identifier to indicate gender, age, and location).

[0044] In some embodiments, the user profiles collectively identify general trends. For example, a high number of users may be male within a certain range of ages and seek network access within a specific football stadium. As a result, a group identifier may be generated for males within the age range that prefer football. Other group identifier may be generated as well, such as a group identifier for males who prefer sports, or a group identifier that associates users within an age range and sports.

[0045] In another embodiment, predetermined group identifier may be generated and utilized by the profile engine **310**. For example a soft drink company may wish to direct advertisements to a certain demographics. A group identifier can be generated that corresponds to that demographic and user profiles that fall into the demographics will include this group identifier. The generation of the user profile is described in detail in U.S. application Ser. No. _____, entitled "Developing Customer Relationships with a Network Access Point," which is incorporated by reference.

[0046] It should be noted that embodiments of the present invention allow the user to modify or update the user profile associated with their network access device **110**. Additionally, the user may block or hide some information which the user prefers to remain private (e.g., name or address).

[0047] The information collection engine **320** is configured to receive or obtain information from the network access device **110**, the access point **210**, and any other source of information which may be associated with the user profile, user preferences, and the network access device **110**. The information collection engine **320** may be further configured to store the information in the storage system **330**. In some embodiments, the information is stored in a device record. The information collection engine **320** will be discussed in more detail in connection with **FIG. 4**.

[0048] The storage system **330** is configured to store the information from the collection engine **320**. The storage system **330** may also store user profiles.

[0049] The media selection optimizer **340** is configured to determine a directed media which should be presented to a user. In exemplary embodiments, the media selection optimizer **340** receives an IP address of a network access device **110** that is attempted to access a content provider **140**. Based on the IP address, the media selection optimizer **340** can determine the associated network access device **110**, and retrieve user profile information associated with the network access device **110** (e.g., based on the device identifier). The media selection optimizer **340** may also retrieve other information (e.g., access point and location-centric information) via the information collection engine **320**. Using the retrieved information, the media selection optimizer **340** performs an analysis to match up the user profile information, user preferences, and group identifiers with access point and location-centric information to determine the most appropriate media or media type that should be directed to the network access device **110** requesting the content from the content provider **140**. In some embodiments, a media tag identifying the media or media type is forwarded to the media server **220** or the content provider **140**. In alternative embodiments, the actual media may be forwarded to the media server **220** of content provider **140**.

[0050] The communication network module **350** is a communication interface for the CR server **150** to the network access devices **110**, access point **210**, service provider **130**, network **130**, content providers **140**, media server **220**, and any other device in the network **130**.

[0051] **FIG. 4** shows the information collection engine **320** in more detail. In some embodiments, the information collection engine **320** comprises a user information module **410**, an access point information module **420**, a history module **430**, and a location-centric module **440**. Alternative embodiments may comprise more, less, or functionally equivalent modules.

[0052] The user information module **410** obtains user information including information associated with the network access device **110**. For example, the user information module **410** may receive the MAC address and IP address of the network access device **110**, or any other information which may be obtained from the network access device **110**. This information is then stored in the storage system **330**.

[0053] The access point information module **420** obtains information related to the access point **210**. This information may include the location of the access point **210**, type of establishment associated with the access point (e.g., a coffee shop, city park, etc.), and any other information which may be obtained from the access point **210**.

[0054] The history module **430** is configured to collect and maintain historic information regarding a network access device **110**. For example, every time a same device identifier is received by the CR server **150**, a number of times the network **130** is accessed, the corresponding access point **210** used, date and time of access, and so forth may be tracked by the history module **430**. Historical information is then used to establish a pattern for which aspects of the user profile may be developed from. For example, if a user has a history of accessing the network **130** from a particular location at a particular day and time (e.g., corner coffee shop at 10 am every Sunday), the history module **430** will record this pattern. The pattern may then be used to assign group identifiers.

[0055] The location-centric module **440** is configured to obtain location-centric (local) information associated with a location of the access point **210**. The location-centric information may comprise time, weather, special events, types of businesses located nearby, and any other information related to the location. This information may be obtained from the access point **210** or from other sources such as, for example, websites, weather services, and GPS satellites. In some embodiments, the location-centric information may be stored in the storage system **330**. In other embodiments, the

location-centric information is constantly updated and thus is not stored in the CR server **150** but obtained when needed.

[**0056**] Referring now to **FIG. 5**, a diagram of an exemplary communication path in the environment of **FIG. 2** is shown. Initially, a user, via a network access device **110**, accesses the network **130** by way of the access point **210**. Typically, the user will request access to a particular content provider **140**. This request is sent via communication path **510** from the access point **210** to the content provider **140**. The request may also comprise an IP address assigned by the access point **210** to the network access device **110**.

[**0057**] Once the content provider **140** receives the request, the content provider **140** will forward the IP address to the CR server **150** via communication path **520**. In some embodiments, the IP address is forwarded through the media server **220** to the CR server **150**.

[**0058**] Based on the IP address, the CR server **150** can determine the corresponding network access device **110** that is providing the request. In exemplary embodiments, the user information module **410** receives the device identifier (e.g., MAC address) and the corresponding IP address when the network access device **110** accesses the network **130**. Thus, the CR server **150** can determine the particular network access device **110** given the IP address received from the content provider **140**.

[**0059**] With the device identifier of the network access device **110**, the CR server **150** obtains a corresponding user profile associated with the device identifier. The information collection engine **320** (**FIG. 3**) may also obtain location-centric information associated with the access point **210** location along with history information. All of the information is then analyzed by the media selection optimizer **340** to obtain a media tag or media which is most relevant to present to the requesting user. This media tag or media is provided to the media server **220** via communication path **530**.

[**0060**] The media server **220** then provides the directed media (e.g., associated with the media tag) to the content provider **140** via communication path **540**. In some embodiments, the directed media is an advertisement which is placed in a banner ad location.

[**0061**] The content provider **140** then provides the requested content to the requesting user via communication path **550**. The requested content will include the directed media that is tailored to the user profile/preferences of the network access device **110** that the requesting user is utilizing.

[**0062**] It should be noted that the communication paths of **FIG. 5** are exemplary. Alternative embodiments may comprise different paths. For example, the media server **220** may be embodied within the content provider **140**. In this situation, communication paths **530** and **540** will be combined into a single communication path.

[**0063**] Referring to **FIG. 6**, a flowchart **600** of an exemplary method for providing directed media to a user is provided. In step **610**, a user accesses the network **130** (**FIG. 1**). In exemplary embodiments, the network **130** is access via a network access device **110** by way of the access point **210** (**FIG. 2**).

[**0064**] In step **620**, the user will request access, via the network access device **110**, to a particular content provider **140** (**FIG. 1**). This request is sent to the content provider **140** through the access point **210**. In exemplary embodiments, the request is made when a user enters a URL address for the content provider **140** of interest.

[**0065**] The request is received by the content provider **140** (step **630**). In exemplary embodiments, the request includes an IP address assigned by the access point **210** to the network access device **110** during the current network **130** access session. The IP address is unique to the network access device **110** and can used to identify the particular network access device **110**.

[**0066**] In step **640**, the content provider **140** forwards the IP address to the CR server **150**. In some embodiments, the IP address is forwarded directly from the content provider **140** to the CR server **150**. In alternative embodiments, the IP address is first forwarded to the media server **220**, which then forwards the IP address to the CR server **150**.

[**0067**] Media selection is then optimized in step **650** for the network access device **110** associated with the IP address. The optimization analyzes a user profile, access point **210** information, and location-centric information to determine a directed media component that is most relevant for the user. Step **650** will be discussed in more detail in connection with **FIG. 7**.

[**0068**] The directed media component is sent to the media server **220** in step **660**. In some embodiments, the directed media component is a media tag that indicates the media or type of media that should be provided to the user. For example, the media tag may indicate that an advertisement that is directed to a male between 18-30 who likes baseball should be provided. The media server **220** may comprise a plurality of media that is code with corresponding media profile tags. The media server **220** can then take the optimized media tag from the CR server **150** and select a media having the same corresponding media profile tag.

[**0069**] In other embodiments, the directed media component is the directed media, itself. For example, if the user profile indicates that the user is a male between 18-30, the temperature is over 80° (location-centric information), and it's near noon time (location-centric information), then an advertisement (directed media) from Coke® will be provided. It should be noted that step **660** is optional.

[**0070**] In step **670**, the directed media is placed onto the requested web page from the content provider **140**, and the requested page is provided to the user. In exemplary embodiments, the directed media is positioned in a portion of the web page, such as in a banner ad location. The directed media may comprise a static or dynamic advertisement, a video, music, or any other form of media which may be customized to a user based on the user profile and preferences.

[**0071**] It should be noted that the method of **FIG. 6** is exemplary. Alternative embodiments may comprise more, less, or different ordered steps and still be within the scope of embodiments of the present invention. For example, step **660** may be optional. That is, the directed media is provided by the CR server **150** directly to the content provider **140**. In another example, the directed media component may be sent directly to the content provider **140**. In this example, the

content provider **140** comprises a media database and/or server component(s) that contain media which can be provided on the requested web page based on the received directed media component (e.g., media tag).

[**0072**] Referring now to **FIG. 7**, an exemplary flowchart of the exemplary method for optimizing selection of the directed media (step **650**) is provided. In step **710**, the CR server **150** uses the received IP address (from step **640**) to obtain the corresponding user profile information. In one embodiment, the user information module **410** (**FIG. 4**) receives both the device identifier (e.g., MAC address) and the IP address of the network access device **110** when the user first accesses the network **130**. Based on the IP address received from the content provider **140**, the CR server **150** (e.g., the media selection optimizer **340**) can determine the corresponding device identifier and retrieve the user profile associated with the device identifier from the storage system **330**.

[**0073**] In step **720**, the access point information module **420** obtains current access point information. The access point information may comprise the location of the access point **210**, type of establishment associated with the access point (e.g., a coffee shop, city park, etc.), and any other information which may be obtained from the access point **210**.

[**0074**] Historic information is obtained by the history module **430** in step **730**. Historic information may comprise information such as a number of times the network **130** is accessed by the network access device **110**, the corresponding access point **210** used, date and time of access, and so forth which may be tracked by the history module **430**. Historic information is then used to establish a pattern for which aspects of the user profile may be developed from. For example, if a user has a history of accessing the network **130** from a particular location at a particular day and time (e.g., corner coffee shop at 10 am every Sunday), the history module **430** will record this pattern, and recall the information when requested by the media selection optimizer **340**.

[**0075**] In step **730**, location-centric information is obtained via the location-centric module **440**. The location-centric information may comprise time, weather, special events, types of businesses located nearby, and any other information related to the location. This information may be obtained from the access point **210** or from other sources such as, for example, websites, weather services, and GPS satellites. In some embodiments, the local information may be stored in the storage system **330**. In other embodiments, the local information is constantly updated and thus is not stored in the CR server **150** but obtained when needed in real-time.

[**0076**] The user profile information along with any relevant access point information, history information, and/or location-centric information is utilized by the media selection optimizer **340** to determine a directed media component in step **740**. The directed media component may be a media tag or directed media which is most relevant to present to the requesting user.

[**0077**] In exemplary embodiment, the analysis performed by the media selection optimizer **340** takes into consideration the user profile which includes user preferences. The user profile will indicate such information as gender, age range, general location (e.g., city of residence or work), preferred access locations (which may be determined by the history module **430** and stored in the user profile), and other preferences. In some embodiments, the media selection optimizer **340** can determine a directed media component based solely on the preferences in the user profile. For example, the user profile may show the user to be male between 18-30 who lives in San Francisco and likes baseball. Based on this user profile, the media selection optimizer **340** may determine that the optimized media should pertain to baseball related (and possibly team specific) media. A corresponding directed media component is then assigned.

[**0078**] In further embodiments, access point, historical, and/or location-centric information may also be included in the analysis by the media selection optimizer **340**. For example, the user profile will indicate that the user is male between 18-30 who lives in San Francisco. The access point information may indicate that the user is accessing the network **130** from the baseball stadium. The location-centric information will indicate that it is 80° at the stadium and that it is noon (and thus lunchtime). The media selection optimizer **340**, in this example, will factor in the access point and location-centric information to determine that the optimized media should be an advertisement for Coke® since it is a hot day at the ballpark, and the user will likely be getting lunch soon from one of the food vendors (who sells Coke® products). In a less specific example, the directed media component will determine that a soda or food advertisement should be presented.

[**0079**] In an alternative example, the location-centric information may indicate that the baseball team just qualified for post-season playoffs. Based on this new location-centric information, the media selection optimizer **340** may generate a new directed media component that indicates that an advertisement or coupon for purchase of post-season playoff tickets should be presented to the user. A second media component may be generated that offers the user an opportunity to purchase playoff products such as t-shirts and caps, and direct the user to the store across the street from the stadium (i.e., current access point **210** location). Thus, the media selection optimizer **340** may provide more than one directed media component. In some embodiments, the web page from the content provider **140** comprises more than one location for media. In these embodiments, more than one directed media can be provided to the user simultaneously.

[**0080**] It should be noted that the steps of **FIG. 7** are exemplary. Alternative embodiments may comprise the steps of **FIG. 7** in a different order, or one or more steps (e.g., **720**, **730**, and **740**) may be optional.

[**0081**] While exemplary embodiments were discussed above with reference to using an unique IP address to identify the network access device **110**, further embodiments may utilize other unique access information in addition to, or instead of, the IP address. For example, unique browser information, operating system information, or cookie information may be provided by the network access device **110** in the request for access to a web page of the content provider **140**. Examples of browser information include, but are not limited to, browser version, browser type, installation date of browser, and session identifiers. Examples of

operating system information include, but are not limited to, operating system version, operating system type, and date of operating version installation.

[0082] The present invention has been described above with reference to exemplary embodiments. It will be apparent to those skilled in the art that various modifications may be made and other embodiments can be used without departing from the broader scope of the invention. Therefore, these and other variations upon the exemplary embodiments are intended to be covered by the present invention.

What is claimed is:

1. A method for providing directed media to a user on a network, comprising:

retrieving user profile information based on a device identifier associated with a user profile; and

analyzing the retrieved information to determine a directed media component.

2. The method of claim 1 further comprising retrieving location-centric information for a location from which the user is accessing the network.

3. The method of claim 1 further comprising retrieving historic information for the user.

4. The method of claim 1 further comprising retrieving access point information for an access point from which the user is accessing the network.

5. The method of claim 1 further comprising providing the directed media component to a media server.

6. The method of claim 1 further comprising providing the directed media component to a content provider.

7. The method of claim 1 wherein the directed media component is a media tag.

8. The method of claim 1 wherein the directed media component is directed media.

9. The method of claim 1 further comprising receiving an IP address associated with a network access device used by the user, wherein the device identifier is determined based on the IP address.

10. The method of claim 1 wherein the device identifier is a MAC address.

11. The method of claim 1 wherein the device identifier is an IMSI.

12. The method of claim 1 wherein the device identifier is an IMEI.

13. A system for providing directed media to a user on a network, comprising:

a media selection optimizer configured to determine a directed media component based on a user profile, the user profile being associated with a device identifier of a network access device used by the user.

14. The system of claim 13 further comprising a profile engine configured to update and maintain the user profile.

15. The system of claim 13 further comprising a user information module configured to obtain information associated with the network access device

16. The system of claim 13 further comprising an access point information module configured to obtain information associated with an access point from which the network access device is accessing the network

17. The system of claim 13 further comprising a history module configured to maintain historical information associated with the network access device.

18. The system of claim 13 further comprising a location-centric module configured to obtain information associated with a location in which an access point from which the network access device is accessing the network.

19. The system of claim 13 further comprising a media server configured to receive the direct media component and provide directed media to a page of a content provider.

20. A machine-readable medium having embodied thereon a program, the program being executable to provide a method for providing directed media to a user on a network, the method comprising:

retrieving user profile information based on a device identifier associated with a user profile; and

analyzing the retrieved information to determine a directed media component.

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