(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
26 July 2007 (26.07.2007)

PCT

(10) International Publication Number
WO 2007/084226 A1

(51) International Patent Classification:
G06Q 30/00 (2006.01)

(21) International Application Number:
PCT/US2006/047326

(22) International Filing Date:
11 December 2006 (11.12.2006)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
11/335,952 20 January 2006 (20.01.2006) US

(71) Applicant *(for all designated States except US)*: **MICROSOFT CORPORATION** [US/US]; One Microsoft Way, Redmond, Washington 98052-6399 (US).

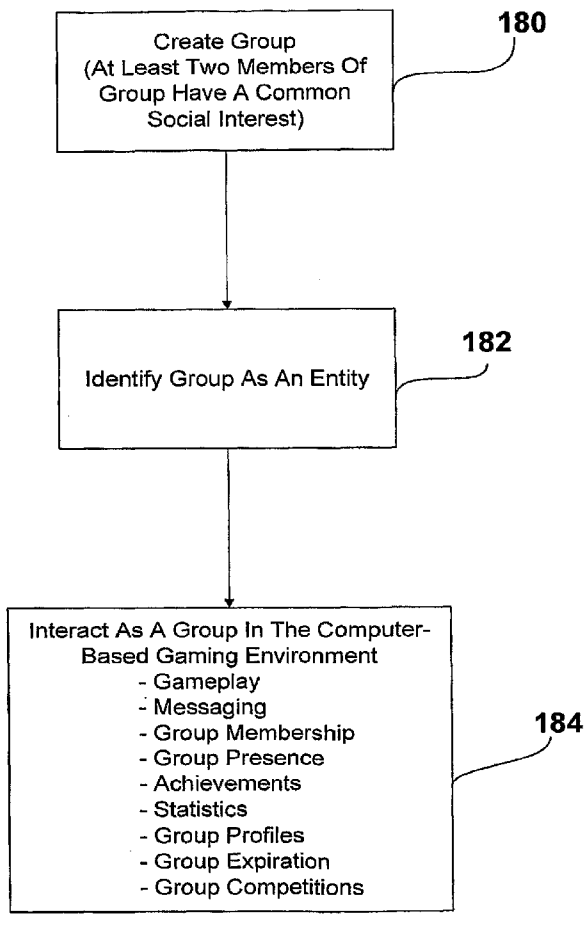
(72) Inventors: **MULTERER, Boyd Cannon**; One Microsoft Way, Redmond, Washington 98052-6399 (US). **JOHNSON, Jerry Alan**; One Microsoft Way, Redmond, Washington 98052-6399 (US). **HANSEN, Johan Peter**; One Microsoft Way, Redmond, Washington 98052-6399 (US). **BORTNIK, Michal**; One Microsoft Way, Redmond, Washington 98052-6399 (US). **O'KELLEY, Patrick W.**; One Microsoft Way, Redmond, Washington 98052-6399 (US).

(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,

[Continued on next page]

(54) Title: COMPUTER-BASED GAMING GROUPS



(57) Abstract: Groups are formed, in a computer-based (e.g., on-line) gaming environment, based on social relationships between players. The group is assigned an identity. The identity of the group is maintained within a single game title, across multiple sessions of a game title, and across multiple game titles. The group can interact within the gaming environment much like an individual user can interact. Group interaction provides a mechanism for social and cooperative game play. Groups can play games with other groups. Group members can play games with each other. Group statistics and achievements can be accumulated and aggregated. Group profiles provide information about the group, such as a list of the members of the group. Via group profiles, a member of a group can see information about other members of the group, such as other groups to which they belong. Group members can send and receive intra-group messages.

WO 2007/084226 A1

ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Declarations under Rule 4.17:

— *as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii))*

— *as to the applicant's entitlement to claim the priority of the earlier application (Rule 4.17(iii))*

Published:

— *with international search report*

— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

COMPUTER-BASED GAMING GROUPS

Copyright Notice / Permission

[0001] A portion of the disclosure of this patent document contains material, which is subject to copyright protection. The copyright owner has no objection to the facsimile reproduction by anyone of the patent document or the patent disclosure, as it appears in the Patent and Trademark Office patent files or records, but otherwise reserves all copyright rights whatsoever. The following notice applies to the software and data as described below and in the drawings hereto: Copyright © 2004, Microsoft Corporation, All Rights Reserved.

Technical Field

[0002] The technical field generally relates to gaming and multimedia devices, and more particularly relates to on-line gaming.

Background

[0003] Computer-based game players tend to participate in games as individuals. Further, game players (gamers) tend to focus activities around a game. For example, it is not uncommon for an individual on-line gamer to attempt to become the best player of a specific game title (*e.g.*, HALO). This game player may also, as an individual, attempt to become the best player at other game titles (*e.g.*, PROJECT GOTHAM RACING, PGR). This type of behavior does not afford the gamer an opportunity to enjoy the benefits of social interaction with other players. Further, typical on-line game systems do not provide mechanisms to encourage social interaction.

Summary

[0004] This Summary is provided to introduce a selection of concepts in a simplified form that are further described below in the Detailed Description Of The Illustrative Embodiments. This Summary is not intended to identify key features or

essential features of the claimed subject matter, nor is it intended to be used to limit the scope of the claimed subject matter.

[0005] A group of gamers is identified in an on-line gaming environment. The identity of the group, based on a group profile, is maintained within a single game title, across multiple sessions of a game title, and across multiple game titles. Groups are formed based on social relationships between players. A computer-based gaming system provides the ability to create a group, to delete a group, to manage group membership, to provide message communications between members of a group, to determine if members of a group are present, to accumulate and aggregate achievements and statistics pertaining to the group, to edit a group profile, and to allow group competitions.

Brief Description Of The Drawings

[0006] The foregoing summary, as well as the following detailed description of computer-based gaming groups, is better understood when read in conjunction with the appended drawings. For the purpose of illustrating computer-based gaming groups, there is shown in the drawings exemplary constructions thereof; however, computer-based gaming groups are not limited to the specific methods and instrumentalities disclosed. In the drawings:

[0007] Figure 1 is a block diagram of an exemplary computer network environment in which aspects of computer-based gaming groups can be implemented;

[0008] Figure 2 is a block diagram illustrating an exemplary console that can be incorporated into a network computing environment such as the network computing environment of Figure 1;

[0009] Figure 3 is a block diagram illustrating the interaction of a console with the remote service;

[0010] Figure 4 illustrates sources of information that provide input to a Gamer Profile;

[0011] Figure 5 through Figure 13 illustrate various graphical user interfaces in accordance with the present invention; and

[0012] Figure 14 is a flow diagram of an exemplary process for computer-based gaming group creation and interaction.

Detailed Description Of Illustrative Embodiments

[0013] Groups are formed, in a computer-based (e.g., on-line) gaming environment, and the groups are maintained across different games and across multiple session of the same game. The groups are based on social relationships between players. The group is assigned an identity, and the identity of the group is maintained within a single game title, across multiple sessions of a game title, and across multiple game titles. The group can interact within the gaming environment much like an individual user can interact. Group interaction provides a mechanism for social and cooperative game play. Groups can play games with other groups. Group members can play games with each other. Group statistics and achievements can be accumulated and aggregated. Group profiles provide information about the group, such as a list of the members of the group. Via group profiles, a member of a group can see information about other members of the group, such as other groups to which they belong. Group members can send and receive intra-group messages. To facilitate an understanding of computer-based gaming groups, a description of an exemplary gaming environment is provided followed by a more detailed description of computer-based gaming groups.

[0014] Figure 1 is diagram of an exemplary computer network that serves to illustrate aspects of group interaction in a computer-based gaming environment. Here computers 100a-100e can host various ones of the computing objects such as games and other applications. Although the physical environment shows the connected devices as computers, such illustration is merely exemplary and can comprise various digital devices such as PDAs, game consoles, etc. Moreover, communications network 160 can itself comprise a number of computers, servers and network devices such as routers and the like.

[0015] There is a variety of systems, components, and network configurations that support distributed computing environments. For example, computing systems can be connected together by wireline or wireless systems, by local networks or widely distributed networks. Currently, many of the networks are coupled to the Internet, which provides the infrastructure for widely distributed computing and encompasses many different networks. Aspects of computer-based gaming groups can be usable to distribute computer-readable

instructions, code fragments, applications and the like to various distributed computing devices.

[0016] The network infrastructure enables a host of network topologies such as client/server, peer-to-peer, or hybrid architectures. The "client" is a member of a class or group that uses the services of another class or group to which it is not related. Thus, in computing, a client is a process (*i.e.*, roughly a set of instructions or tasks) that requests a service provided by another program. The client process utilizes the requested service without having to "know" any working details about the other program or the service itself. In a client/server architecture, particularly a networked system, a client is usually a computer that accesses shared network resources provided by another computer (*i.e.*, a server). A server is typically a remote computer system accessible over a remote network such as the Internet. The client process can be active in a first computer system, and the server process can be active in a second computer system, communicating with one another over a communications medium, thus providing distributed functionality and allowing multiple clients to take advantage of the information-gathering capabilities of the server.

[0017] Clients and servers communicate with one another utilizing the functionality provided by a protocol layer. For example, Hypertext-Transfer Protocol (HTTP) is a common protocol that is used in conjunction with the World Wide Web (WWW) or, simply, the "Web." Typically, a computer network address such as a Uniform Resource Locator (URL) or an Internet Protocol (IP) address is used to identify the server or client computers to each other. Communication among computing devices is provided over a communications medium. In particular, the client and server can be coupled to one another via TCP/IP connections for high-capacity communication.

[0018] In general, the computer network can comprise both server devices and client devices deployed in a network environment (in a peer-to-peer environment devices can be both clients and servers). Communications network 160 can be a LAN, WAN, intranet or the Internet, or a combination of any of these that facilitates communication among a number of computing devices 100a-100e. Moreover, communication network 160 can comprise wireless, wireline, or combination wireless and wireline connections. Additionally, the computer network can comprise a distributed computing environment. In

such an environment a computing task can be spread over a number of computing devices that are addressable elements in a computer network.

[0019] According to an aspect of computer-based gaming groups, communication network 160 can host a service 150 that is accessible from the plurality of computers 100a-100e. The service 150 gathers information and tracks users of computers 100a-100e to provide computing services for all of the users of the service 150.

[0020] Figure 2 illustrates functional components of a multimedia/gaming console 100 that can be used as the computers 100a-100e in the network of Figure 1. The multimedia console 100 has a central processing unit (CPU) 101 having a level 1 cache 102, a level 2 cache 104, and a flash ROM (Read Only Memory) 106. The level 1 cache 102 and a level 2 cache 104 temporarily store data and hence reduce the number of memory access cycles, thereby improving processing speed and throughput. The CPU 101 can be provided having more than one core, and thus, additional level 1 and level 2 caches 102 and 104. The flash ROM 106 can store executable code that is loaded during an initial phase of a boot process when the multimedia console 100 is powered ON.

[0021] A graphics processing unit (GPU) 108 and a video encoder/video codec (coder/decoder) 114 form a video processing pipeline for high speed and high resolution graphics processing. Data is carried from the graphics processing unit 108 to the video encoder/video codec 114 via a bus. The video processing pipeline outputs data to an A/V (audio/video) port 140 for transmission to a television or other display. A memory controller 110 is connected to the GPU 108 to facilitate processor access to various types of memory 112, such as, but not limited to, a RAM (Random Access Memory).

[0022] In an exemplary embodiment, the multimedia console 100 includes an I/O controller 120, a system management controller 122, an audio processing unit 123, a network interface controller 124, a first USB host controller 126, a second USB controller 128 and a front panel I/O subassembly 130 that can be implemented on a module 118. The USB controllers 126 and 128 serve as hosts for peripheral controllers 142(1)-142(2), a wireless adapter 148, and an external memory device 146 (*e.g.*, flash memory, external CD/DVD ROM drive, removable media, etc.). The network interface 124 and/or wireless adapter 148 provide access to a network (*e.g.*, the Internet, home network, etc.) and can be

any of a wide variety of various wired or wireless adapter components including an Ethernet card, a modem, a Bluetooth module, a cable modem, and the like.

[0023] System memory 143 is provided to store application data that is loaded during the boot process. A media drive 144 is provided and can comprise a DVD/CD drive, hard drive, or other removable media drive, etc. The media drive 144 can be internal or external to the multimedia console 100. Application data can be accessed via the media drive 144 for execution, playback, etc. by the multimedia console 100. The media drive 144 is connected to the I/O controller 120 via a bus, such as a Serial ATA bus or other high speed connection (*e.g.*, IEEE 1394).

[0024] The system management controller 122 provides a variety of service functions related to assuring availability of the multimedia console 100. The audio processing unit 123 and an audio codec 132 form a corresponding audio processing pipeline with high fidelity and stereo processing. Audio data is carried between the audio processing unit 123 and the audio codec 132 via a communication link. The audio processing pipeline outputs data to the A/V port 140 for reproduction by an external audio player or device having audio capabilities.

[0025] The front panel I/O subassembly 130 supports the functionality of the power button 153 and the eject button 152, as well as any LEDs (light emitting diodes) or other indicators exposed on the outer surface of the multimedia console 100. A system power supply module 136 provides power to the components of the multimedia console 100. A fan 138 cools the circuitry within the multimedia console 100.

[0026] The CPU 101, GPU 108, memory controller 110, and various other components within the multimedia console 100 are interconnected via one or more buses, including serial and parallel buses, a memory bus, a peripheral bus, and a processor or local bus using any of a variety of bus architectures. By way of example, such architectures can include a Peripheral Component Interconnects (PCI) bus, PCI-Express bus, etc.

[0027] When the multimedia console 100 is powered ON, application data can be loaded from the system memory 143 into memory 112 and/or caches 102, 104 and executed on the CPU 101. The application can present a graphical user interface that provides a consistent user experience when navigating to different media types available on

the multimedia console 100. In operation, applications and/or other media contained within the media drive 144 can be launched or played from the media drive 144 to provide additional functionalities to the multimedia console 100.

[0028] The multimedia console 100 can be operated as a standalone system by simply connecting the system to a television or other display. In this standalone mode, the multimedia console 100 allows one or more users to interact with the system, watch movies, or listen to music. However, with the integration of broadband connectivity made available through the network interface 124 or the wireless adapter 148, the multimedia console 100 can further be operated as a participant in the larger network community as illustrated in Figure 1.

[0029] According to an aspect of computer-based gaming groups, when a game is executed on console 100, it provides information to a service 150 operating on communications network 160. The service 150 tracks the information for all of the users connected to the service 150 to provide a rich user experience. The service 150 also can allow players to form a group, and track information for the group. The service 150 tracks user/group information across games, consoles, computing devices, etc. By tracking the information for all users/groups of the service 150, the service 150 can aggregate statistics for all users/groups and measure game playing ability, provide a richer user experience by providing information about friends and/or other groups (*e.g.*, what game they are playing and what skill level they have attained), track user/group achievements, and generally measure statistics for a game aggregated over a large user community.

[0030] In order to provide a consistent data set across games, the system contemplates a schematized, configuration driven process where each game generates a configuration file (according to the schema defined by the service) that defines the game data for a particular game. Through a game configuration process, games describe the data the game generates about each game player. By using the configuration process, the service 150 is able to understand the data as it flows from the game, and is be able to integrate it in meaningful ways with the other data that the service understands to create a rich profile of each user and/or group of the service. The profile will follow the user wherever he goes on the service, *i.e.* it is game and location independent.

[0031] For each user (alternatively referred to as a player or gamer) and for each group, the service collects a number of pieces of data (called Profile Data) to build the User Profile and/or Group Profile in every game session—and even after a game session is concluded. In general, the pieces of the service experience that feed a profile include:

1. What the user/group says about himself/herself/itself (including account set up and the construction of an elaborate personal/group profile, including the preferred social gameplay "zone").
2. What others say about the user/group (feedback scores and a publicly visible reputation).
3. What the games say about the user/group (game configuration and integration of data that comes out of game play to compute a player's skill, among other things).
4. What the system says about the user/group (time online, aggregates of games played, Friends list, console behavior etc.)

[0032] The system creates a "User Profile" and a "Group Profile" which serve as a building block for services and applications that aim to create a social community of gamers and grow relationships among players. The User/Group Profile is the entirety of information (*e.g.*, metadata) related to a specific user/group (*i.e.*, the game player's/group's digital identity). The User/Group Profile is developed from a set of services that collect and expose this information in a meaningful way to the community. The User/Group Profile also provides for personalization such that users and groups can customize and enhance their gaming experience. The User/Group Profile comprises various components, including, but not limited to, a Gamercard, game achievements, and gamer preferences. User profiles can be used by player to help determine group formation.

[0033] Referring to Figure 3, there is illustrated an overview of an exemplary architecture that can be used to implement the User Profile and Group Profile interaction as well as user and group interaction with the game session service. The console 100 interacts with a remote service 158 that provides services 161 such as voice/chat, a friends list, matchmaking, content download, roaming, feedback, tournaments, voice messaging, group formation, and updates to gamers. The service 158 also maintains the Profiles in a profile database 162 and configuration data 164 used by the services 158 and games 154. The

service 158 collects Profiles, aggregates, processes information supplied by other services 158, and fulfills real-time client requests for retrieving Profile-related services. The Profiles in the database 162 are also used by the games 154 to enable, among other things, personalization and customization, group interaction, etc.

[0034] Using the console 100, the user can interact with a Guide 156. The Guide 156 provides an interface by which the user can navigate to, and enter, various online areas and options provided by the remote service 158. The configuration data 164 stored by the service can be used to determine features and options provided by the Guide 156. When the game 154 is running, a defined set of APIs (including SetContext, SetProperty, SetAchievement, and Session APIs for writing data about players and groups, and a number of specialized read APIs for viewing statistics, achievements, and other Profile data) are used to call and interact with the services 158. When requesting Profile information via the APIs, the game 154 can pass a unique identifier of a user/group. The service can return a Gamercard (discussed below), game statistics, game achievements, affiliations, game settings, etc. pertaining to a user/group. Additional details of the various aspects of the exemplary architecture are provided below.

[0035] Service 158 assists in tracking and displaying a wide-variety of in-game statistics, such as number of kills, best lap times, and (importantly, for calculating the skill value needed in Matchmaking) win/loss. These statistics can be provided for a user and/or for a group of users. All statistics are provided by the various games that a user/group plays and provided to the service for inclusion in a player's User Profile and/or in a group's Group Profile. For example, a first-person shooter title may want to define a 'Kills' Property to be tracked independently for each 'Map' Context (*e.g.* 5 Kills on Blood Creek vs. 10 Kills on Battle Range). Also, a group may want to define a similar 'Kills' Property. That information could be displayed as:

"PER-MAP KILLS"	
Map	**Kills**
Blood Creek	*5*
Battle Range	*10*

[0036] Referring to Figure 4, the Profile 166 represents a User Profile or a Group Profile. The Profile 166 is created when a user creates a profile (selected from the guide

156) and chooses his/her/the group's unique Gamertag (a unique name), tile (picture/avatar associated with the user or group), and other options during an account sign-up phase. From there, a base Profile 166 is created. The Profile 166 can then be populated from several sources. For example, the Profile 166 can include self-described data 168 from the Profile owner, the group administrator, and/or members of a group. Other gamers 170 can provide feedback regarding the Profile owner. The service 158 can track the gamer's and/or the group's online and offline activity. In addition, the games 154 can report the gamer's and group's statistics and game achievements.

[0037] The owner of a Profile can edit his/her/its Profile 166 directly and control who can view each section of the Profile. The Profile 166 can be edited via general fields (e.g., tile, country, language, gender, greeting, etc.) and/or system settings (e.g., voice output, controller vibration, character name, game format, game mode, etc.). Privacy/Opt-out Settings can be tuned for the Profile to, e.g., restrict presence information only to friends, allow game achievements to be visible to all, etc.

[0038] The Profile 166 can include feedback provided by other players 170. Feedback helps others learn about a particular gamer or group. For example, if the gamer or group uses foul language or aggressive play in game sessions, other gamers or groups can submit feedback to the service 158. The feedback mechanism improves user experience by building reputations. Players and groups are therefore anonymous, but not unknown because of the accumulated feedback.

[0039] In another aspect of the invention, the service 158 and games 154 track online and offline activity of gamers and groups to provide usage statistics in the Profile 166. When a gamer and/or group plays online, a particular game title is added to list of games played that is made visible to others. While offline, the game console 100 and game 154 track the gamer's/group's activity via a mechanism for instrumenting games to collect detailed information about a specific player's/group's in-game statistics and accomplishments. The Profile 166 is updated during the next connection to the service 158 to reflect the offline play. Game achievements can be reported to the service 154 by games via the Gamer Profile and Group Profile data mechanisms.

[0040] As noted above the Profile 166 can be used for customization and preference setting on a global level, as well as a per game level. Gamer and Group

preferences aid games 154 in choosing defaults for common settings such as game profile name, controller inversion and controller vibration, etc. For example, if a gamer likes using an inverted controller, this preference will be used for new titles as they are played. Games 154 have access to Gamer Profiles and Group Profiles via the database 162 and services 161. In addition, game usage data can be mined to tune the game 154 to the user's/group's particular preferences and game features updated after the initial game launch.

[0041] A presence service can be included to provide information about users' or group's whereabouts and activities. Presence information will be available to those users and groups that the gamer/group wishes to share it. The Gamer Profile and the Group Profile are the primary ways to access the presence information.

[0042] It is to be understood that the following description of Gamer Profiles is also appropriately applicable to Group Profiles, and the following description of Gamercards is appropriately applicable to Groupcards. For the sake of brevity, Gamer Profiles and Gamercards are described as illustrative embodiments. Referring to Figure 5 through Figure 13, the Gamer Profile (Group Profile) can be viewed in a number of ways and forms, and is typically displayed in the Gamercard 172 (Groupcard). In various embodiments, a Group Profile comprises a Groupcard. The Gamercard 172 is the visual representation of the Gamer Profile (*e.g.*, Profile 166 as applied to a gamer) that is available to games on the console 100 and, *e.g.*, the web. The Gamercard 172 serves as a summary or snapshot of a player's Gamer Profile (*e.g.*, Profile 166 as applied to a gamer). Similarly, the Groupcard serves as a summary or snapshot of a group's Profile. Gamers can use the Gamercard to set up a matchmaking list where gamers are added to a preferred players list to play again in the future.

[0043] As shown in Figure 5, the Gamercard 172 can be divided into two regions, a base area 174 and a context-specific (or extended) area 176. It is again emphasized that the following description pertaining to Gamercards is also appropriately applicable to Groupcards. The base area 174 is provided a set of Gamer Profile information in a standard and consistent way across multiple contexts, whereas the extended area 176 can be customized to fit a specific context. Although the Gamercard 172 of Figure 5 through Figure 13 are shown in the context of the guide 156, the Gamercard 172 can be visually separated from the rest of the screen and adopt the background color of the screen it is

displayed on. In addition, the Gamercard 172 can be temporarily replaced by an animation while it is being loaded for viewing.

[0044] The base area 174 can be provided in different variants corresponding to differing contexts, while being a consistent view within each context. For example, an online Gamercard 172 is shown when one player is looking at another player's Gamercard 172 during an online session. The online base area 174 includes details such as the player's Gamertag, gamer tile, overall community rating, gamer Cred (a points-based reward points system), gamer zone, country, membership tier, awards, etc. An offline Gamercard 172 is shown when a player is looking at his/her own Gamercard 172. The offline base area 174 can include a subset of the online base area and can further include information regarding titles played and time played. The base area 174 of a Gamercard 172 is preferably fixed in size, has a consistent, static layout and has a fixed placement of all information elements, such as Tile or Gamer Cred.

[0045] The extended area 176 can include a set of Gamercard Actions, such as "View Profile" and "Send Feedback," etc. In an exemplary embodiment, the extended area of the Gamercards is not fixed in size, because it can vary based on the context. As shown in Figure 5 through Figure 13 a user can scroll through the list of other users via the guide 156 and a friends list 178. The Gamercard for other users can be displayed as the user scrolls among his/her friends or the user can be presented with an option to see a full view of the Gamer Profile. The full view mode consists of different views of the extended area 176 and can include several sections, such as a Profile Summary, Community Feedback, Game Achievements, Activity, and Social Network. The guide 156 can advance through the list of friends, recent players (and summary sections for each player), a user home page for navigating to various options and settings, etc.

[0046] The profile summary includes information regarding number of games played, time played, tile, greeting, etc. The community feedback includes ratings on style, sportsmanship, language, cooperation, etc. The game achievements section includes recent titles, experience points (gamer Cred), time played, game-specific stats and achievements, etc. The activity section includes Gamer Cred earned, sessions played, total time played, active days on the service, etc. The social network includes friends, groups, positive/negative feedback count, etc.

[0047] In accordance with the above, Figure 6 illustrates a list of Recent Players in the guide 156. The Gamercard displayed, when browsing recent players, can show the base area and an extended area that provides information regarding recent games, feedback, and presence of the recent players. Figure 6 through Figure 9 illustrate further details that can be obtained about recent players, such as general achievements and gamer Cred (Figure 7); game specific achievements, gamer Cred, times/sessions played (Figure 8); and a date-sorted achievement display (Figure 9).

[0048] Figure 10 illustrates an exemplary user home page from which the user may navigate among the various options provided by the service 158, edit Gamercard information, change game settings, set preferences and privacy settings, etc. Such settings and preferences can be accessed using the exemplary user interfaces of Figure 11 through Figure 13.

[0049] There can be differences, however, between how the guide 156, games 154, and players trigger Gamer Profile viewing. One instance is a user-instantiated Gamercard. Here, if a user receives a request from another gamer, the user can pause the game 154 and bring up the Gamercard 172 to find out who is sending the request. There can also be a game-instantiated Gamercard 172, where a user can select to view the Gamercard 172, which brings up a Gamercard system application.

[0050] It is emphasized that the user interfaces (UIs) of Figures 5 through Figure 13 are provided for exemplary purposes only and are not intended to limit computer-based gaming groups as recited in the claims.

[0051] Computer-based gaming groups enhance both user involvement and the quality of social interactions among users. Utilizing user profiles, group interaction provides a mechanism for social and cooperative game play. It is accepted that that gameplay is more enjoyable when a user is playing with people he knows and likes. Playing in groups and playing as a group having a group identity, makes playing with known and liked people much easier, especially as favorite games change over time. It is further envisioned that computer-based gaming groups (*e.g.*, on-line gaming) will amplify social dimension of gamplay, meaningfully connect users to one another, help users build shared commitment to play with each other, smooth out the path for new users to become

empowered participants in a gaming community, and help users establish group identities within and across games.

[0052] A group is an association of users who agree to be part of the group. A group can comprise users across games. It is envisioned that users having a common social interest will form into a group. For example, siblings in a family could form a group, high school or college buddies could form a group, members of a bowling league or softball league could form a group, or a combination thereof. Although, players of a particular computer-based game can form a group, the common social interest does not have to be game related. A group differs from a Friends list, in that constituents of a Friends list do not necessarily have a social interest in common. Members of a Friends list may not even know each other or realize that both of them are on one player's Friends list. Further, it is possible that members of a player's Friends list may not even like each other. In contrast, members of a group have at least one social interest in common and realize that they all are part of the same group.

[0053] Groups can be formed (created) via a game-instantiated system application or out of a game context. Thus, a player does not have to be playing a game to join or leave a group. Group size is not limited. In an exemplary embodiment, however, group size is limited to conserve system resources. For example, group size could be limited to ten members. When a group is formed, the group is given a group name. The group name is assigned by a user. The service manages the formation of the group. The service assigns the group a Globally Unique Identifier and maintains this Globally Unique Identifier for the group. Players can be invited to join a group at any time. Typically, players are invited to join a group by a player that is already a member of the group. Any invited player can join a group.

[0054] Any member of a group can invite any other player to join a group. In an exemplary embodiment, one member of a group is assigned the role of group administrator. The group administrator is given the authority to eject members from a group. Any group member can leave a group at any time. In an exemplary embodiment, once a member leaves a group or is ejected from a group, a new invitation from another group member is needed to rejoin.

[0055] In an exemplary embodiment, the service automatically assigns the creator of a group the role of group administrator. One group member can be group administrator at any given time. A group member can determine who the group administrator is by enumerating the group membership. A group administrator can transfer the group administrator role to another group member. That is, the role of group administrator is transferable within a group. If a group administrator transfers the role of group administrator to another group member, that other group member is notified of the transfer by the service via a system message. In an exemplary embodiment, the group administration role comprises two modes: exclusive and shared. In the exclusive group administration mode, only the group administrator can edit group settings and/or profiles. In the shared group administrator mode, all group members can edit group settings and/or profiles. The group administrator mode can be toggled between the exclusive mode and the shared mode. In an exemplary embodiment, only the group administrator can toggle the group administrator mode.

[0056] Unless privacy settings preclude the listing of group members, the members of a group can be obtained via the system and/or via a game title. Any player can see all the groups to which another player belongs. Any group member can list all the groups in which he/she is a member. Any game title and/or the service can list all the groups that a player is a member of. Any group member can list all the group members of every group in which he/she is a member.

[0057] Members of a group can send messages to other members of the group. A message sent to a group is distributed to all members of the group. The UI identifies a message to a group as a message to a group (rather than a message to a single user). Example messages include a group recruitment message, a group inactivity warning message, a group expiration notification message, and a group administration transfer confirmation message.

[0058] A member of a group can review a group presence summary. The group presence summary provides the total number of members in a group and the total number of group members that are currently on-line. A member of a group also can review a group presence list. The group presence list provides more detailed information than provided by the group presence summary. The group presence list provides on-line and off-line

information pertaining to group members. Further, a member of a group can enumerate a group presence summary for all groups in which he/she is a member.

[0059] Figure 14 is an exemplary flow diagram of a process for computer-based gaming group creation and interaction. A group is formed at step 180. Group formation is based on a social interest. In an exemplary embodiment, at least two members of the group have a common social interest. Examples social interests include family interests, work interests, sports interests, hobby interests, belonging to non-game related club, non-game related interests, or any appropriate social interest. The group can play games as a group, compete as a group, and aggregate statistics as a group. As described above, the service manages the formation of a group. Any user can form a group. The group is assigned an identity, such as a Globally Unique Identifier, at step 182. The group identity is associated with the group across games and across multiple sessions of the same game. The group can be treated as a single entity, entitled to many of the benefits enjoyed by individual users. The group interacts within the computer-based gaming environment at step 184. In an exemplary embodiment, the computer-based gaming environment is an on-line gaming environment. Group interaction can comprise any appropriate interaction such as activities related to group membership; group messaging; group presence; group achievements and group statistics; group profiles; administratively managing groups; group expiration; and group competitions, for example.

[0060] An exemplary scenario is provided to illustrate aspects of computer-based gaming groups. In this exemplary scenario, a player, G-Man, has a reputation for being the ring-leader who gets his friends together to play on-line games. When G-Man notices the Groups page in the Guide, G-Man creates a Group of his own. G-Man names the group H-Group. G-Man invites all his friends to join the group. A few days later, when his seven best friends accept the invites, G-Man schedules the first in the long series of H-Group game nights. In the text of the message, G-Man specifies Thursday 8:00 PM to Midnight and suggests PGR3 as the starting game title.

[0061] When 8:00 PM on Thursday rolls around, G-Man takes a peek at his Group presence information and sees that 3 of 9 members are on-line. G-Man invites them all into a chat.

[0062] Game after game, members of H-Group are becoming more enthusiastic about group interaction. Arguably the best shooters of H-Group, is D-Blue. D-Blue begins to wonder about challenging other Groups to play. He scouts out the overall rankings for Groups to find suitable opponents.

[0063] None of the other members of H-Group can understand why D-Blue invited his neighbor to join H-Group. D-Blue's neighbor is obnoxious; he doesn't like any of the games that H-Group likes to play. Tired of his constant complaining, G-Man expels D-Blue's neighbor from H-Group.

[0064] A few weeks later, H-Group begins to sense that a group identity is developing. G-Man proposes that their latest Halo trophy image represent the H-Group 'in public'. In the Guide, G-Man edits the Group Profile, adding the Tile and recording a Group Motto.

[0065] D-Blue doesn't like the Group Motto and goes into the Group Profile to change it himself. As a result, a brief flame war erupts between the members of H-Group. Fed up with the situation, G-Man takes control and flips the Group Administrative Mode from Shared to Exclusive. From now on only G-Man can edit the Group Profile.

[0066] The following summer, G-Man takes off to backpack in Australia and transfers the Administrative controls to D-Blue. But, because D-Blue feels that he is so much better than the rest of the members of H-Group, D-Blue loses his interest in playing with H-Group. No one else takes initiative and after 30 days of inactivity H-Group gets a message that the group will expire in 30 days if inactivity continues.

[0067] Those of ordinary skill in the art will understand that there are various modifications that will fall within the scope of the appended claims. While computer-based gaming groups have been described in connection with the illustrative embodiments of the various Figures, it is to be understood that other similar embodiments can be used or modifications and additions can be made to the described embodiments for performing the same function of computer-based gaming groups without deviating therefrom.

What is Claimed:

1. A method for computer-based gaming group interaction, said method comprising:

forming, based on at least one social interest, a group of computer-based game players;

providing a group profile (166) for said group;

providing a capability to interact as a group across different games, within a computer-based gaming environment (100).

2. A method in accordance with claim 1, wherein at least two of said game players within said group have at least one common social interest on which said group is based.

3. A method in accordance with claim 1, wherein said act of interacting comprises at least one of playing a game, conducting non-game activities, and transferring messages among members of said group.

4. A method in accordance with claim 1, further comprising:

determining game performance statistics for game players of said group; and

determining game performance statistics for said group in accordance with said determined statistics for game players of said group.

5. A method in accordance with claim 1, wherein:

said group is managed by a service;

said service is maintained on a server; and

game players within said group connect to said service over a network via a game console.

6. A method in accordance with claim 1, wherein said group maintains said group profile across multiple sessions of a game.

7. A method in accordance with claim 1, wherein said group profile is maintained across different games, said method further comprising:

providing information pertaining to a presence of individual members of the group; and

providing information pertaining to a presence of said group as an entity.

8. A method in accordance with claim 1, further comprising providing group specific information observable by all members of a group.

9. A system for group interaction within a computer-based game environment (100), said system comprising:

a database, within said computer-based game environment (100), for storing information about game players;

a service, within said computer-based game environment, for:

accessing said database;

forming a group of game players based on information stored in said database, wherein at least two of said game players within said group have at least one common social interest;

providing a group profile (166) for said group as a single entity; and

allowing said group to interact with other game players not within said group, wherein groups can interact across different games.

10. A system in accordance with claim 9, wherein:

said service is maintained on a server; and

game players within said group connect to said service over a network via a game console.

11. A system in accordance with claim 9, wherein said service:

determines game performance statistics for game players within said group; and

determines game performance statistics for said group in accordance with said determined statistics for game players within said group.

12. A system in accordance with claim 9, wherein said service maintains said group profile across multiple sessions of a game.

13. A system in accordance with claim 9, wherein said service maintains said group profile across different games.

14. A system in accordance with claim 9, wherein said group interacts with other game players not within said group by at least one of playing a game, conducting non-game activities, and transferring messages among members of said group.

15. A game console comprising:

memory for:

storing information about a group of game players, wherein at least two of said game players within said group have at least one common social interest; and

storing information pertaining to a group profile (166) for said group as a single entity; and

a processor for:

accessing said memory; and

allowing game play with said group, wherein said group can interact across different game consoles.

16. A game console in accordance with claim 15, wherein said game console is connected to players within said group connect over a network.

17. A game console in accordance with claim 15, wherein:

said game console receives game performance statistics for game players within said group; and

said game console receives game performance statistics for said group in accordance with said statistics for game players within said group.

18. A system in accordance with claim 15, wherein said group profile is maintained across multiple sessions of a game.

19. A system in accordance with claim 15, wherein said service group profile is maintained across different games.

20. A game console in accordance with claim 15, wherein said game console provides interaction with other game players not within said group by at least one of playing a game, conducting non-game activities, and transferring messages among members of said group.

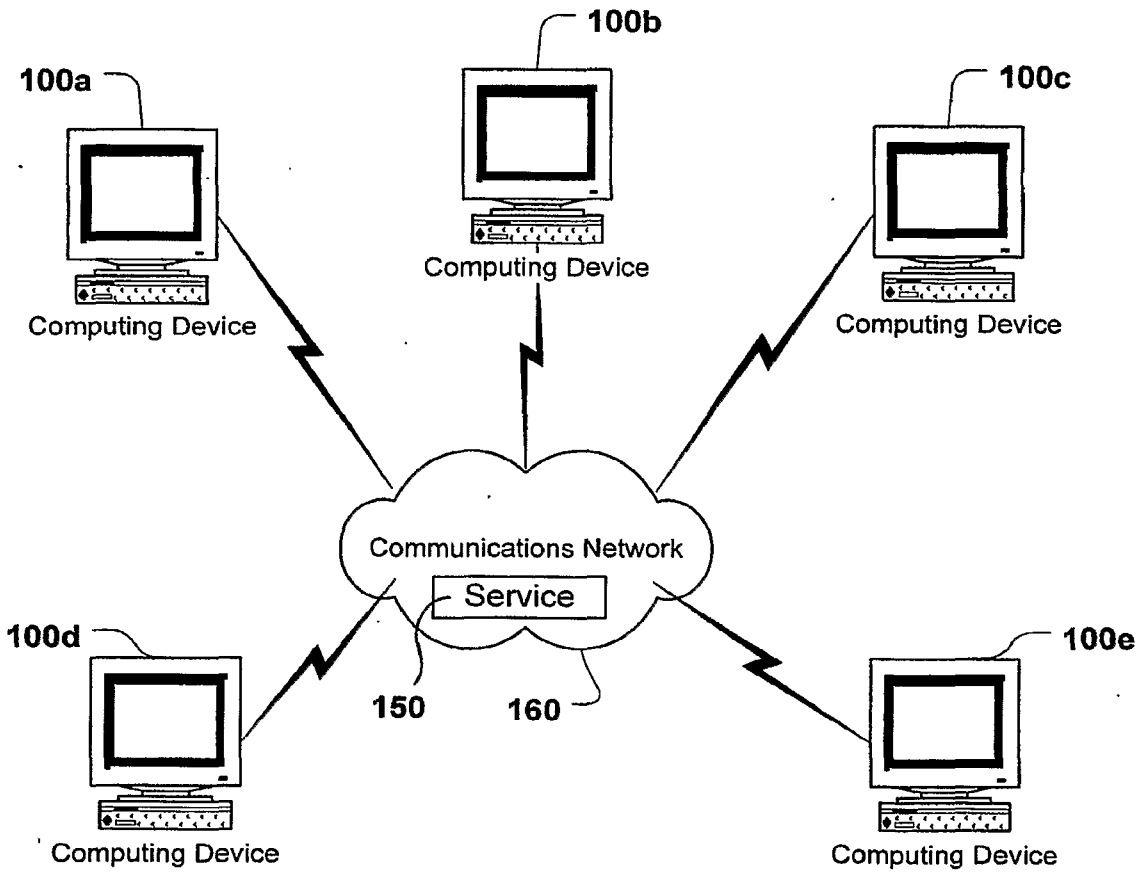

100a
100b
100c
Computing Device
Computing Device
Computing Device
Communications Network
Service
150
160
100d
100e
Computing Device
Computing Device

FIGURE 1

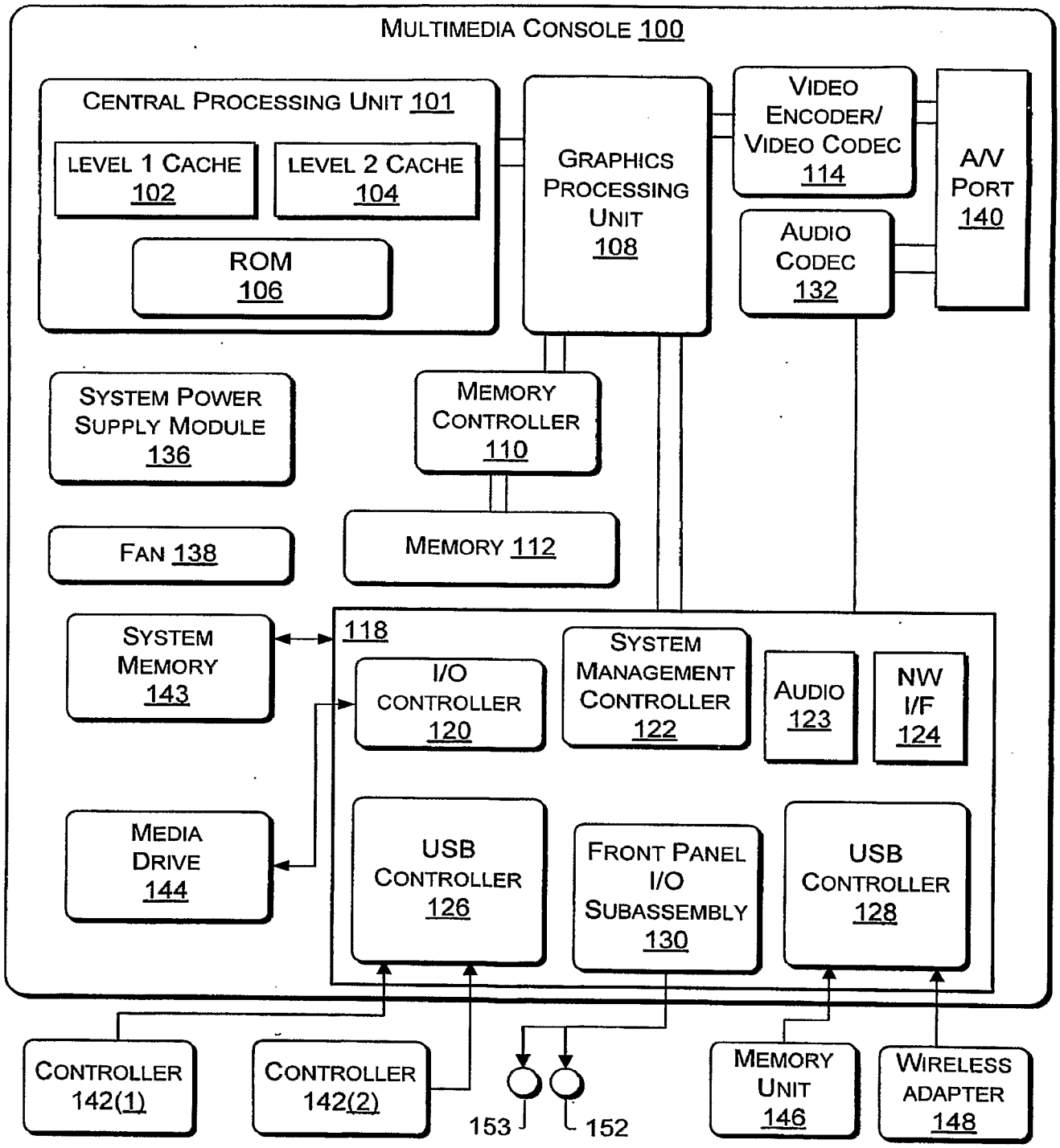

MULTIMEDIA CONSOLE 100
CENTRAL PROCESSING UNIT 101
LEVEL 1 CACHE 102
LEVEL 2 CACHE 104
ROM 106
GRAPHICS PROCESSING UNIT 108
VIDEO ENCODER/ VIDEO CODEC 114
A/V PORT 140
AUDIO CODEC 132
SYSTEM POWER SUPPLY MODULE 136
MEMORY CONTROLLER 110
FAN 138
MEMORY 112
118
SYSTEM MEMORY 143
I/O CONTROLLER 120
SYSTEM MANAGEMENT CONTROLLER 122
AUDIO 123
NW I/F 124
MEDIA DRIVE 144
USB CONTROLLER 126
FRONT PANEL I/O SUBASSEMBLY 130
USB CONTROLLER 128
CONTROLLER 142(1)
CONTROLLER 142(2)
153
152
MEMORY UNIT 146
WIRELESS ADAPTER 148

FIGURE 2

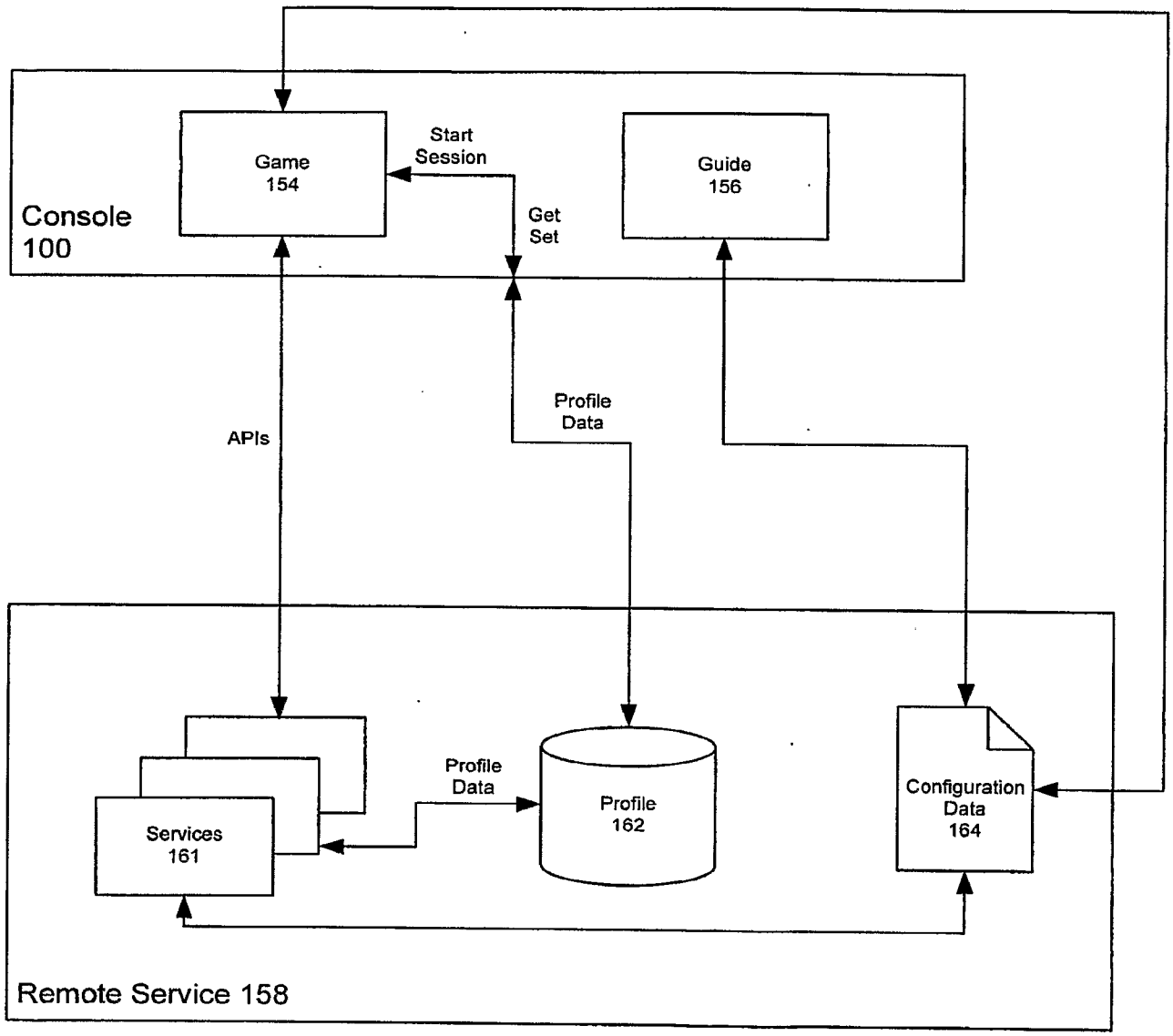

Console
100
Game
154
Start
Session
Get
Set
Guide
156
APIs
Profile
Data
Services
161
Profile
Data
Profile
162
Configuration
Data
164
Remote Service 158

FIGURE 3

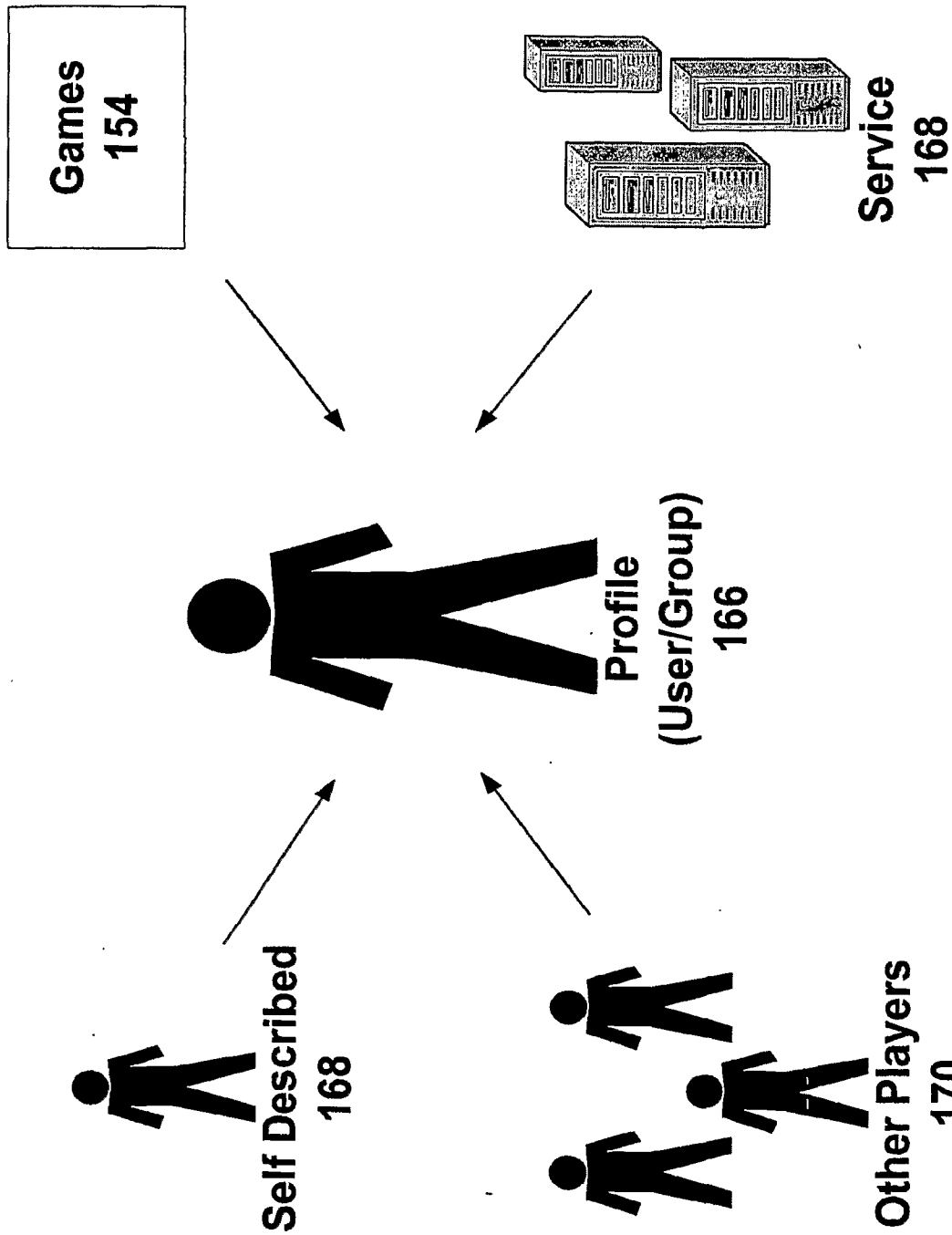

Games
154
Service
168
Profile
(User/Group)
166
Self Described
168
Other Players
170

FIGURE 4

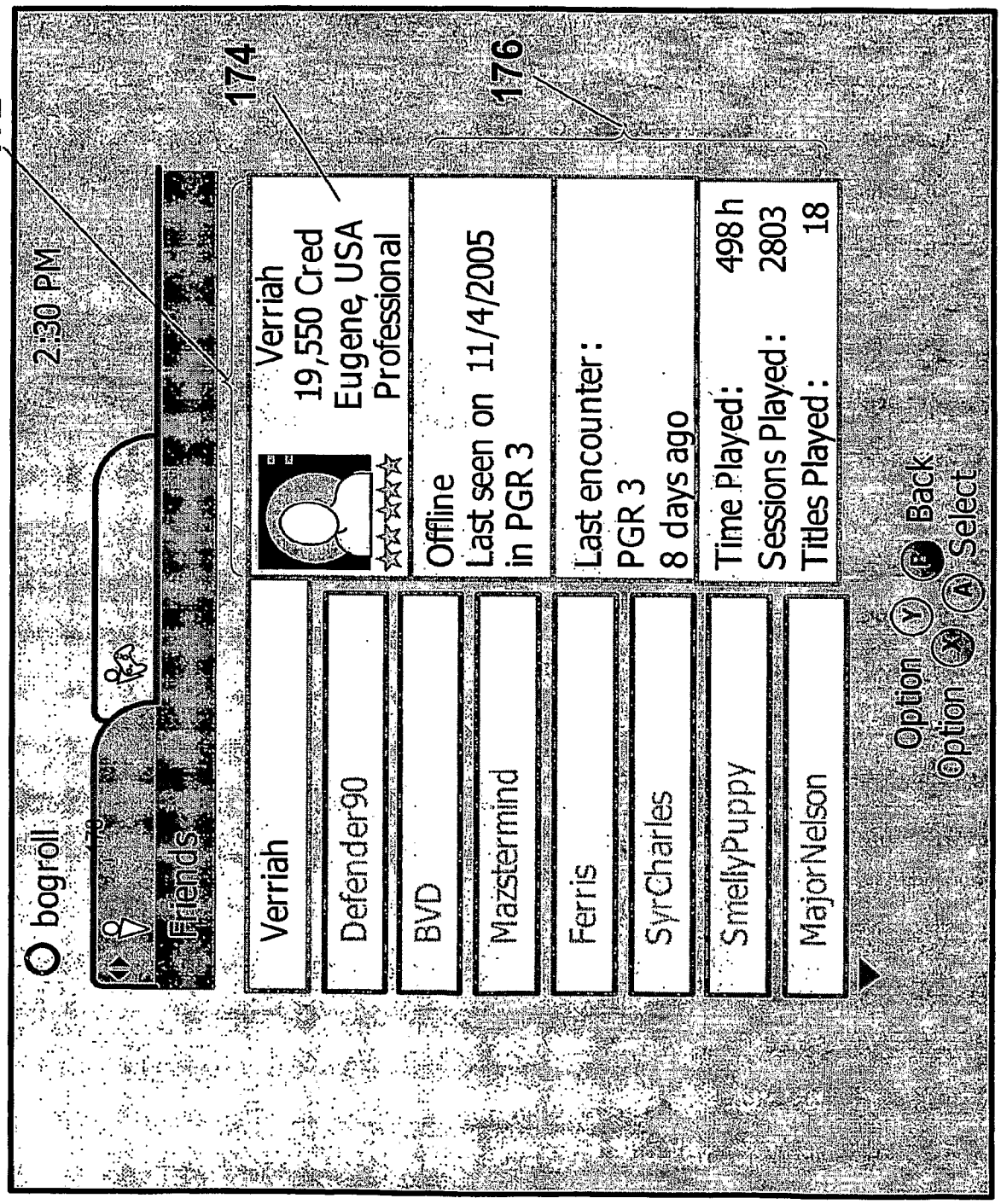

172
bogroll
2:30 PM
Friends
174
176
Verriah
19,550 Cred
Eugene, USA
Professional
Offline
Last seen on 11/4/2005
in PGR 3
Last encounter:
PGR 3
8 days ago
Time Played: 498 h
Sessions Played: 2803
Titles Played: 18
Verriah
Defender90
BVD
Mazstermind
Ferris
SyrCharles
SmellyPuppy
MajorNelson
Option
Back
Option
Select

FIGURE 5

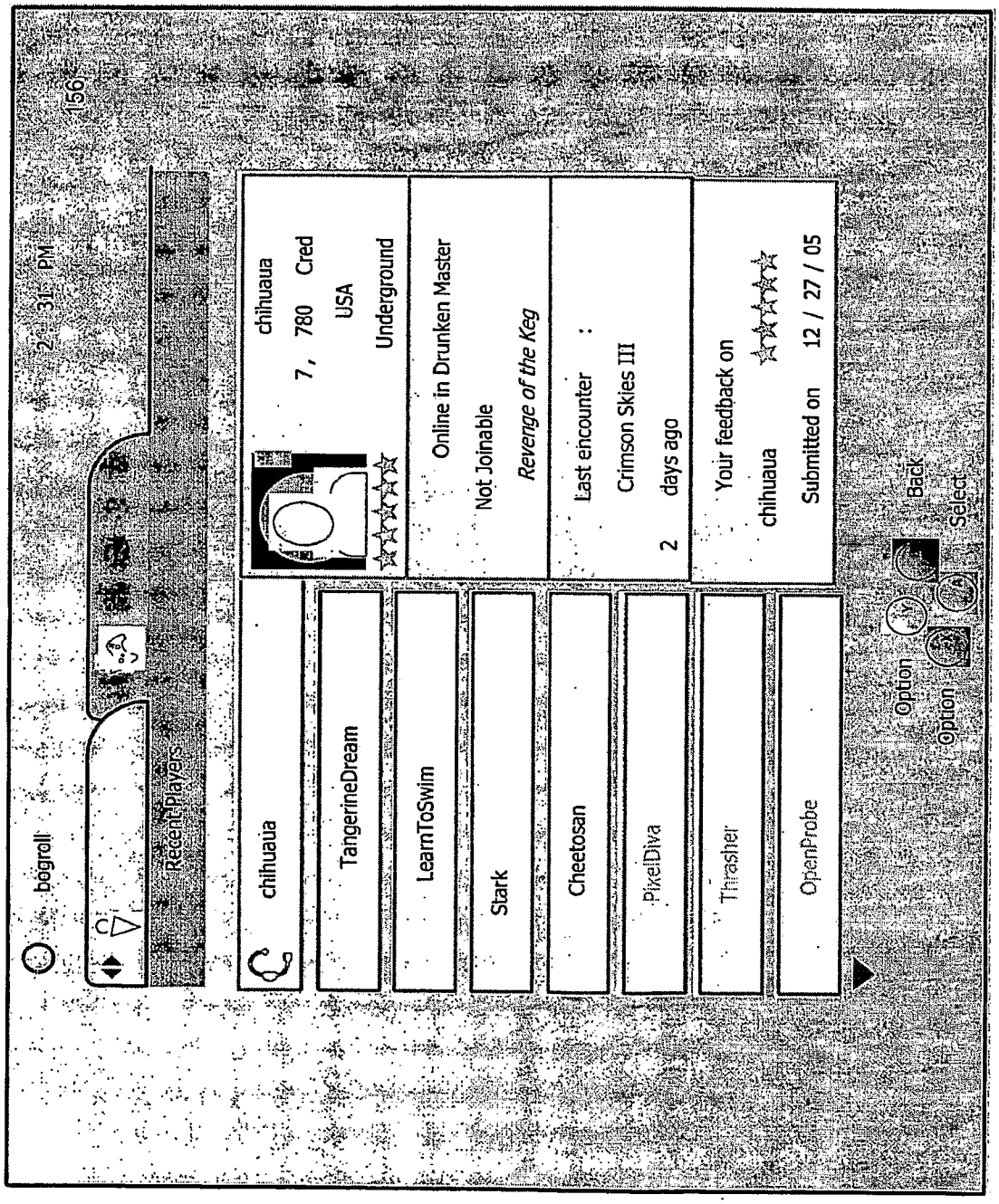

bogroll
2:31 PM
156
Recent Players
chihuaua
TangerineDream
LearnToSwim
Stark
Cheetosan
PixelDiva
Thrasher
OpenProbe
chihuaua
7, 780 Cred
USA
Underground
Online in Drunken Master
Not Joinable
Revenge of the Keg
Last encounter :
Crimson Skies III
2 days ago
Your feedback on
chihuaua
Submitted on 12 / 27 / 05
Option
Option
Back
Select

FIGURE 6

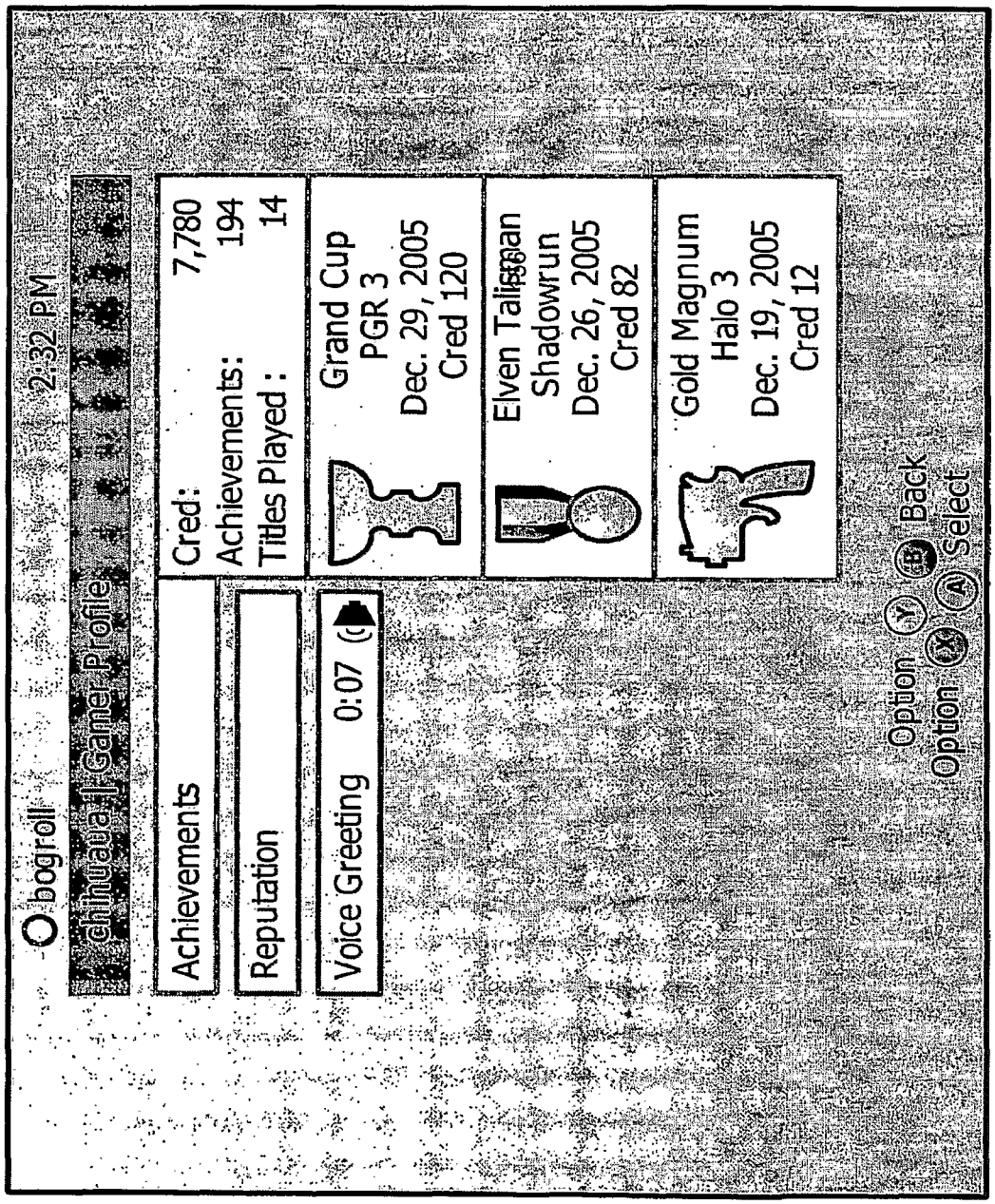

Obogroll
2:32 PM
chihuaua1 Gamer Profile
Achievements
Reputation
Voice Greeting 0:07
Cred: 7,780
Achievements: 194
Titles Played : 14
Grand Cup
PGR 3
Dec. 29, 2005
Cred 120
Elven Talisman
Shadowrun
Dec. 26, 2005
Cred 82
Gold Magnum
Halo 3
Dec. 19, 2005
Cred 12
Option Y Back
Option X Select

FIGURE 7

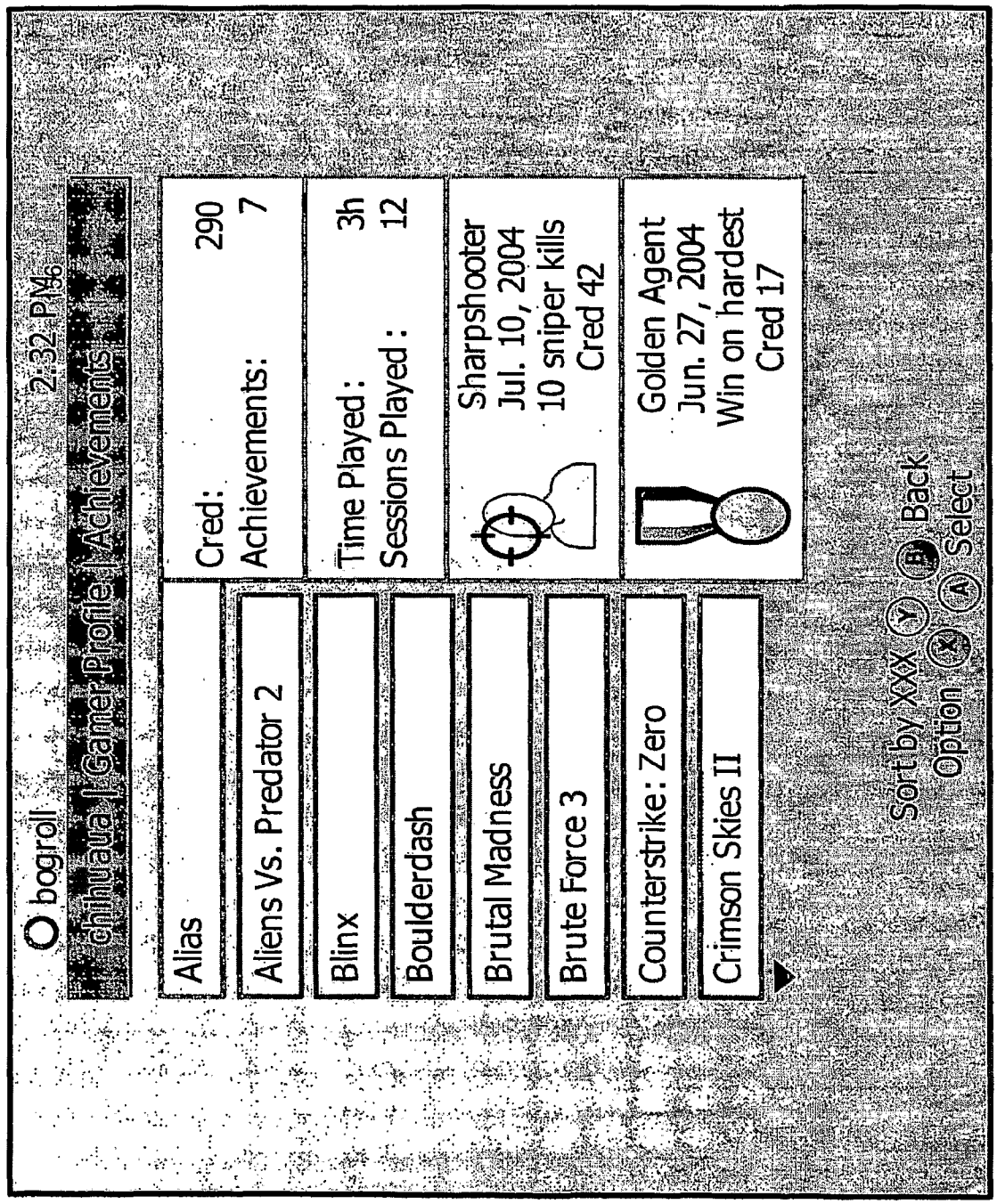

bogroll
2:32 PM
chihuaua | Gamer Profile | Achievements
Alias
Aliens Vs. Predator 2
Blinx
Boulderdash
Brutal Madness
Brute Force 3
Counterstrike: Zero
Crimson Skies II
Cred: 290
Achievements: 7
Time Played: 3h
Sessions Played: 12
Sharpshooter
Jul. 10, 2004
10 sniper kills
Cred 42
Golden Agent
Jun. 27, 2004
Win on hardest
Cred 17
Sort by XXX
Option
Back
Select

FIGURE 8

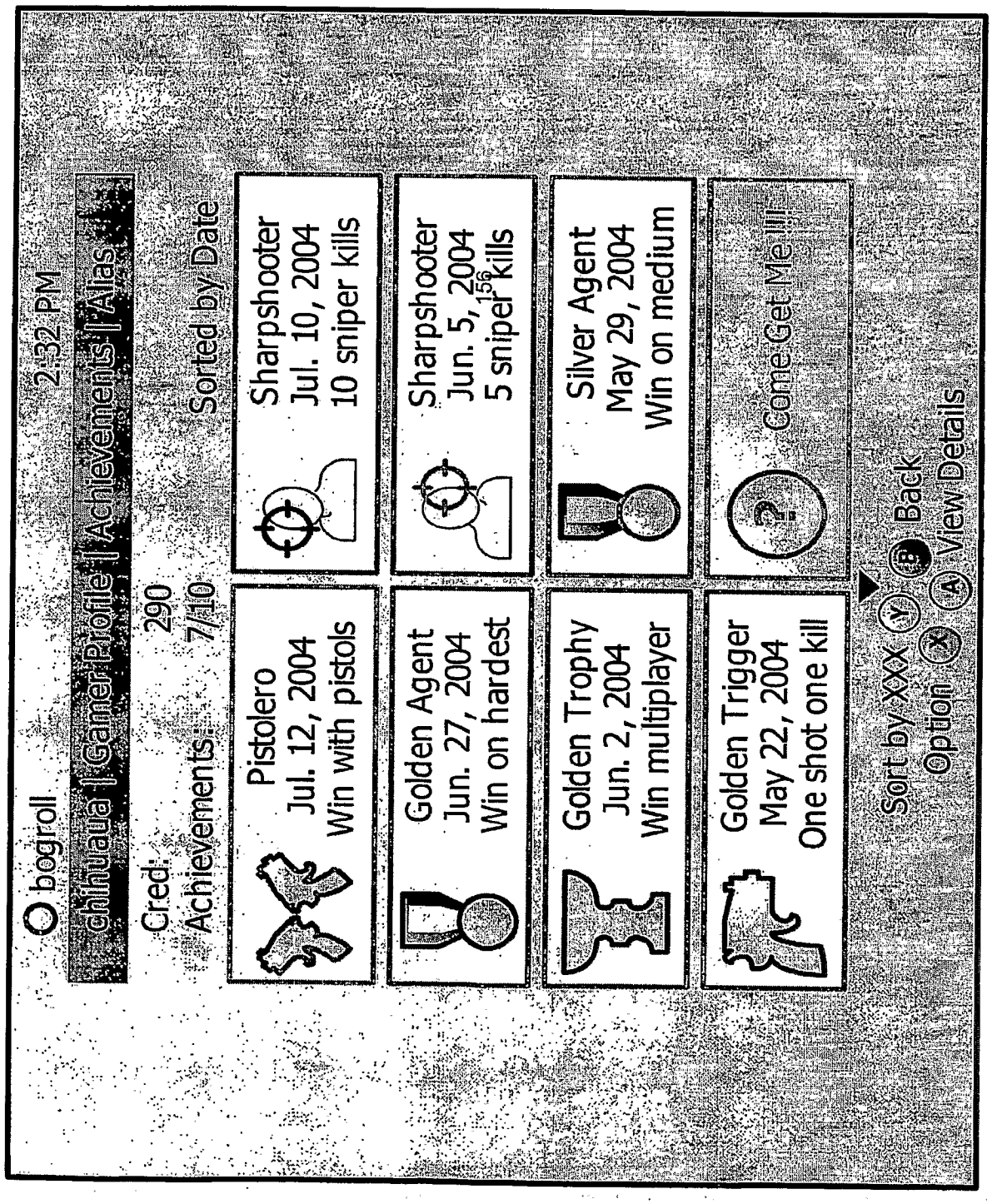

bogroll
2:32 PM
chihuaua | Gamer Profile | Achievements | Alias
Cred: 290
Achievements: 7/10
Sorted by Date
Pistolero
Jul. 12, 2004
Win with pistols
Sharpshooter
Jul. 10, 2004
10 sniper kills
Golden Agent
Jun. 27, 2004
Win on hardest
Sharpshooter
Jun. 5, 2004
5 sniper kills
Golden Trophy
Jun. 2, 2004
Win multiplayer
Silver Agent
May 29, 2004
Win on medium
Golden Trigger
May 22, 2004
One shot one kill
Come Get Me !!!
Sort by XXX (Y) (B) Back
Option (X) (A) View Details

FIGURE 9

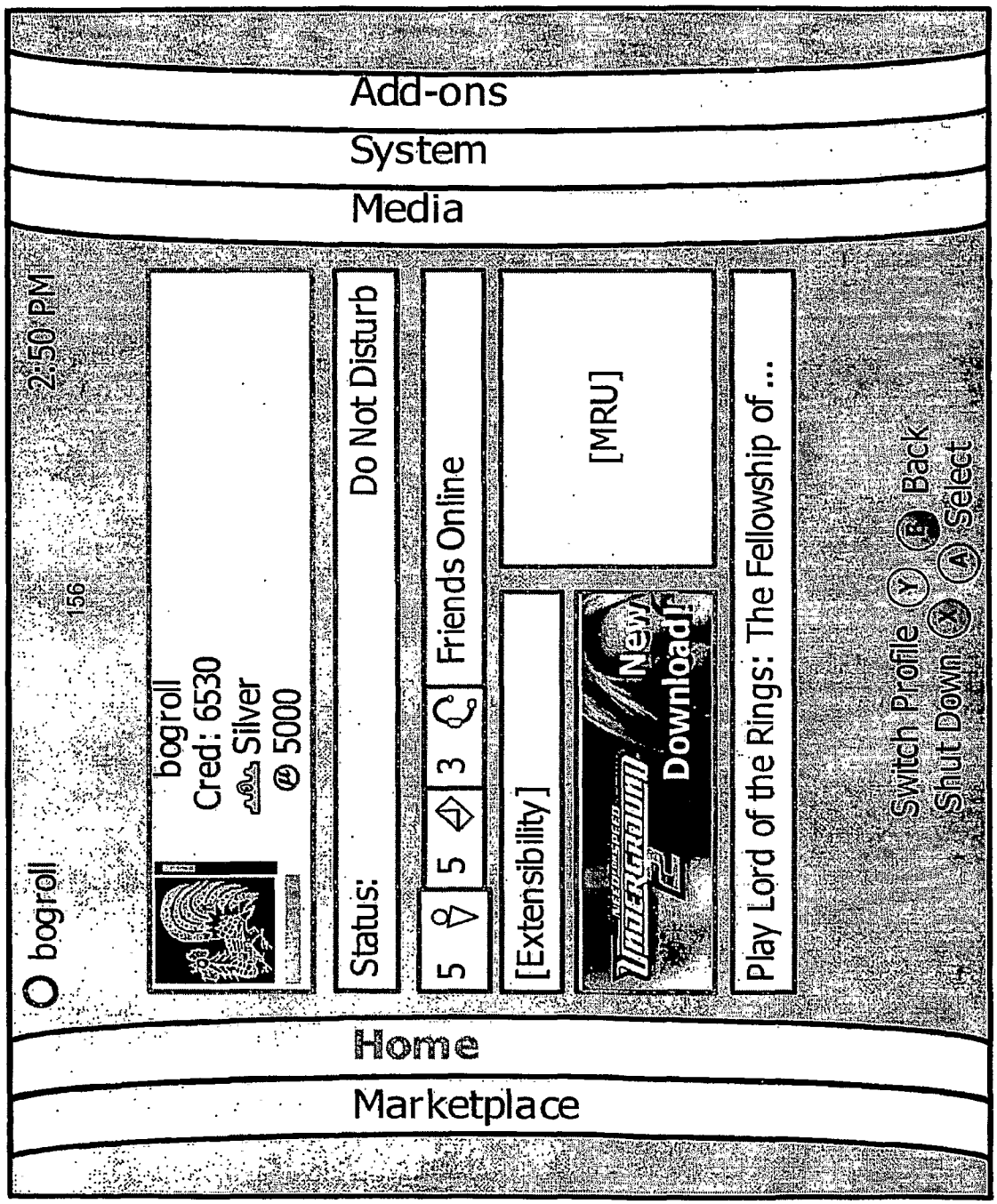

Add-ons
System
Media
2:50 PM
bogroll
156
bogroll
Cred: 6530
Silver
@ 5000
Status:
Do Not Disturb
5
5
3
Friends Online
[Extensibility]
[MRU]
Download!
Play Lord of the Rings: The Fellowship of ...
Switch Profile Y B Back
Shut Down X A Select
Home
Marketplace

FIGURE 10

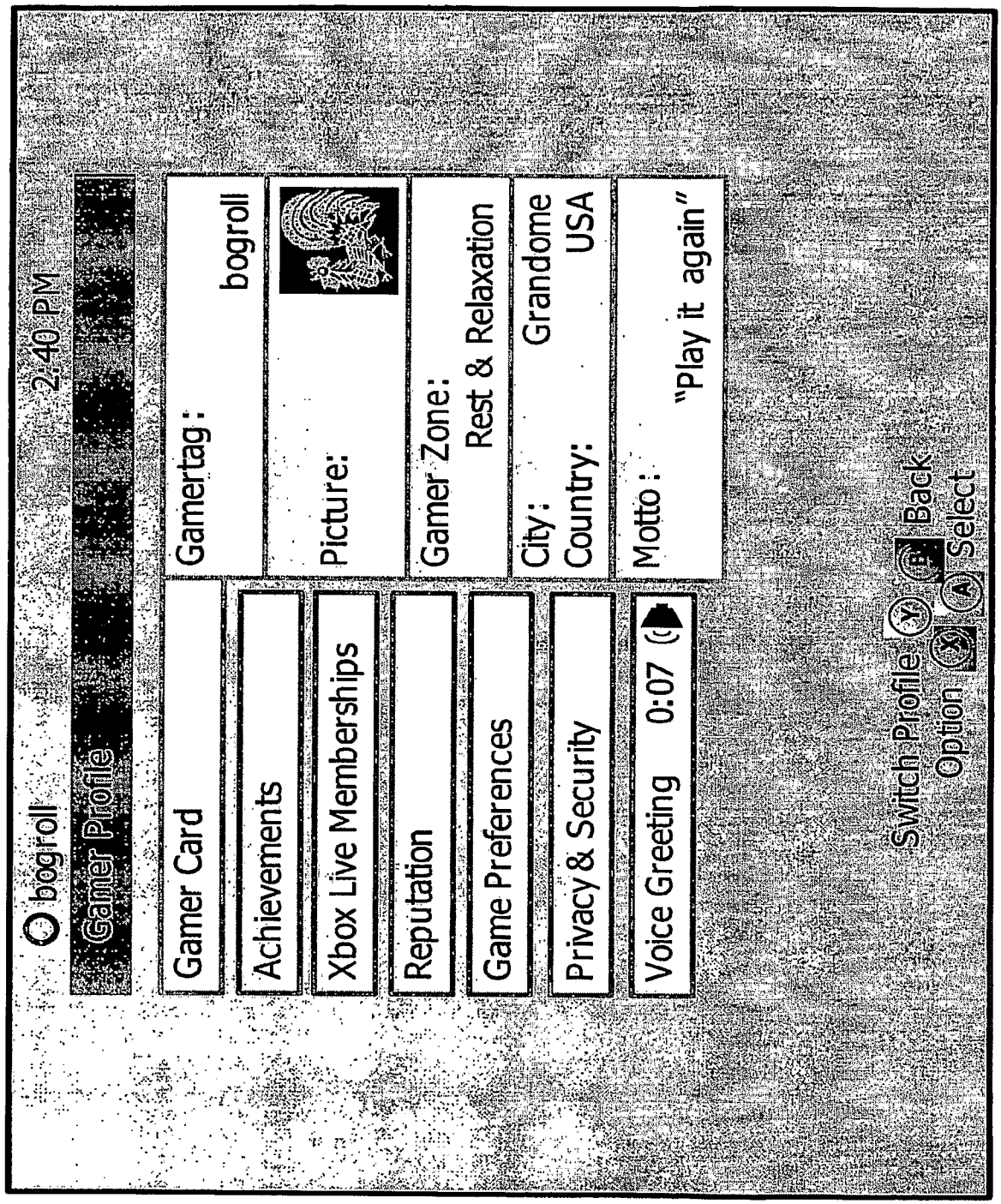

bogroll
2:40 PM
Gamer Profile
Gamer Card
Achievements
Xbox Live Memberships
Reputation
Game Preferences
Privacy & Security
Voice Greeting 0:07
Gamertag: bogroll
Picture:
Gamer Zone: Rest & Relaxation
City: Grandome
Country: USA
Motto: "Play it again"
Switch Profile Y B Back
Option X A Select

FIGURE 11

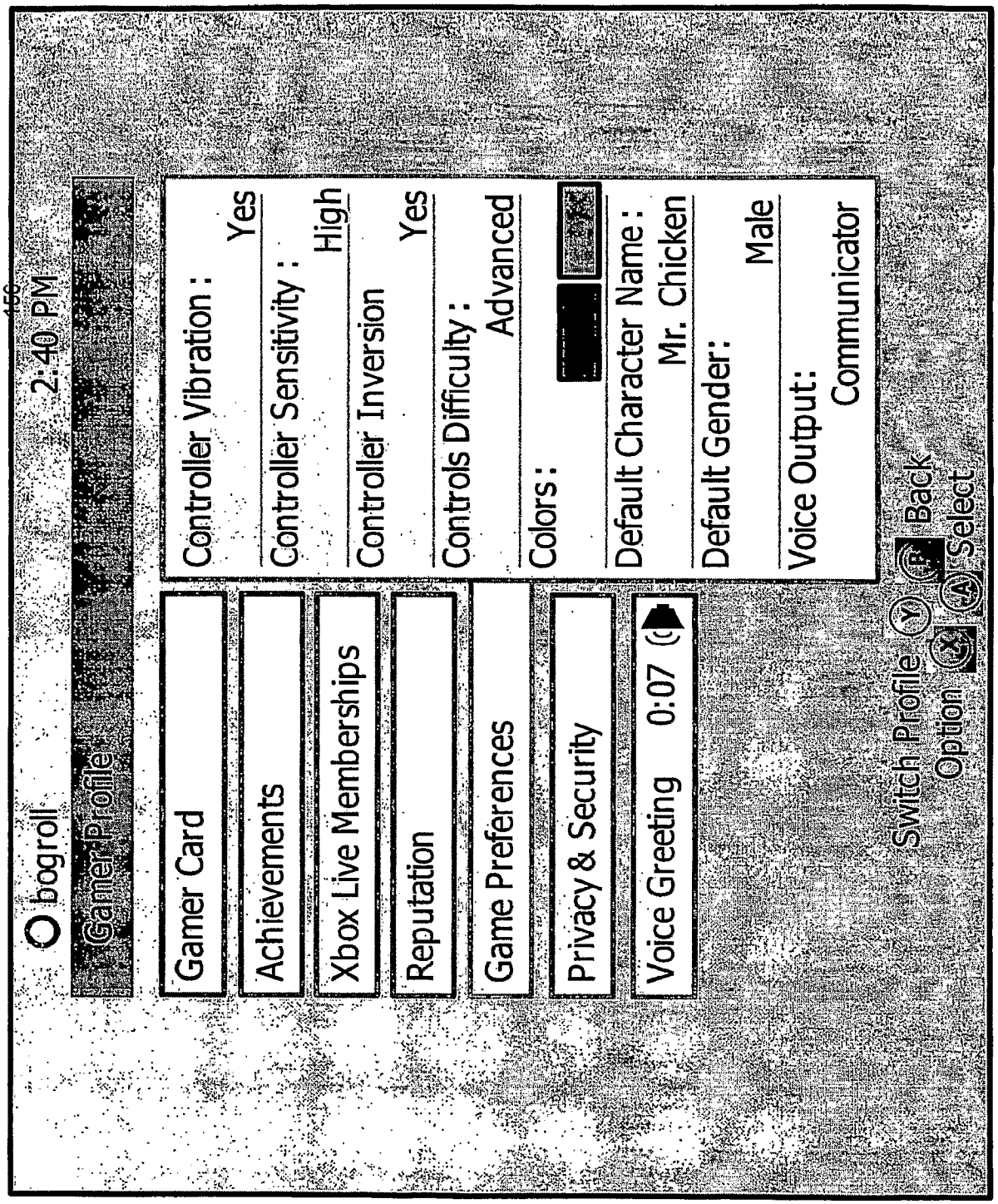

150
bogroll
2:40 PM
Gamer Profile
Gamer Card
Achievements
Xbox Live Memberships
Reputation
Game Preferences
Privacy & Security
Voice Greeting 0:07
Controller Vibration : Yes
Controller Sensitivity : High
Controller Inversion Yes
Controls Difficulty : Advanced
Colors :
Default Character Name : Mr. Chicken
Default Gender : Male
Voice Output: Communicator
Switch Profile Y
Back B
Option X
Select A

FIGURE 12

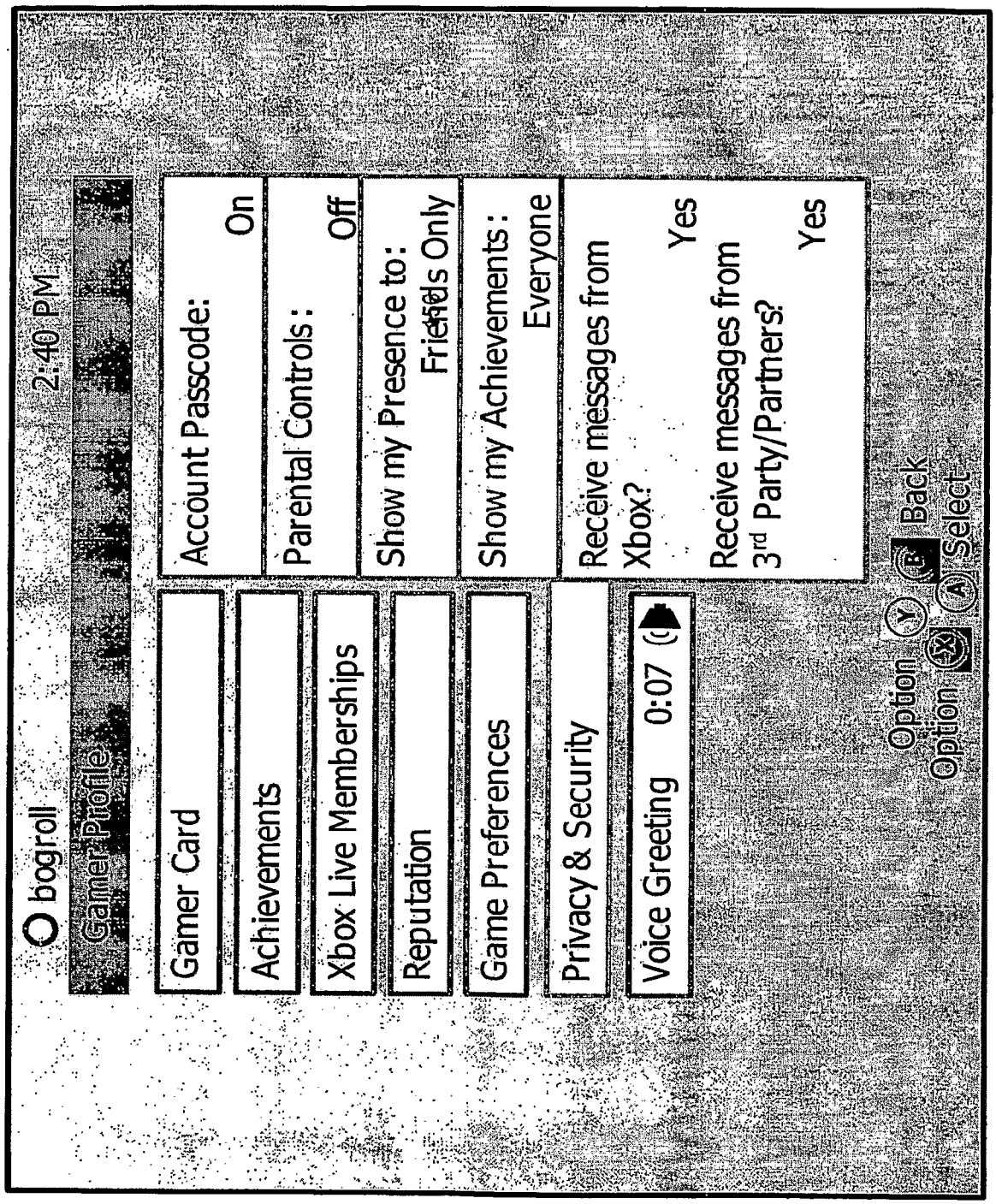

bogroll
2:40 PM
Gamer Profile
Gamer Card
Achievements
Xbox Live Memberships
Reputation
Game Preferences
Privacy & Security
Voice Greeting 0:07
Account Passcode: On
Parental Controls: Off
Show my Presence to: Friends Only
Show my Achievements: Everyone
Receive messages from Xbox? Yes
Receive messages from 3rd Party/Partners? Yes
Option Y Back
Option X A Select

FIGURE 13

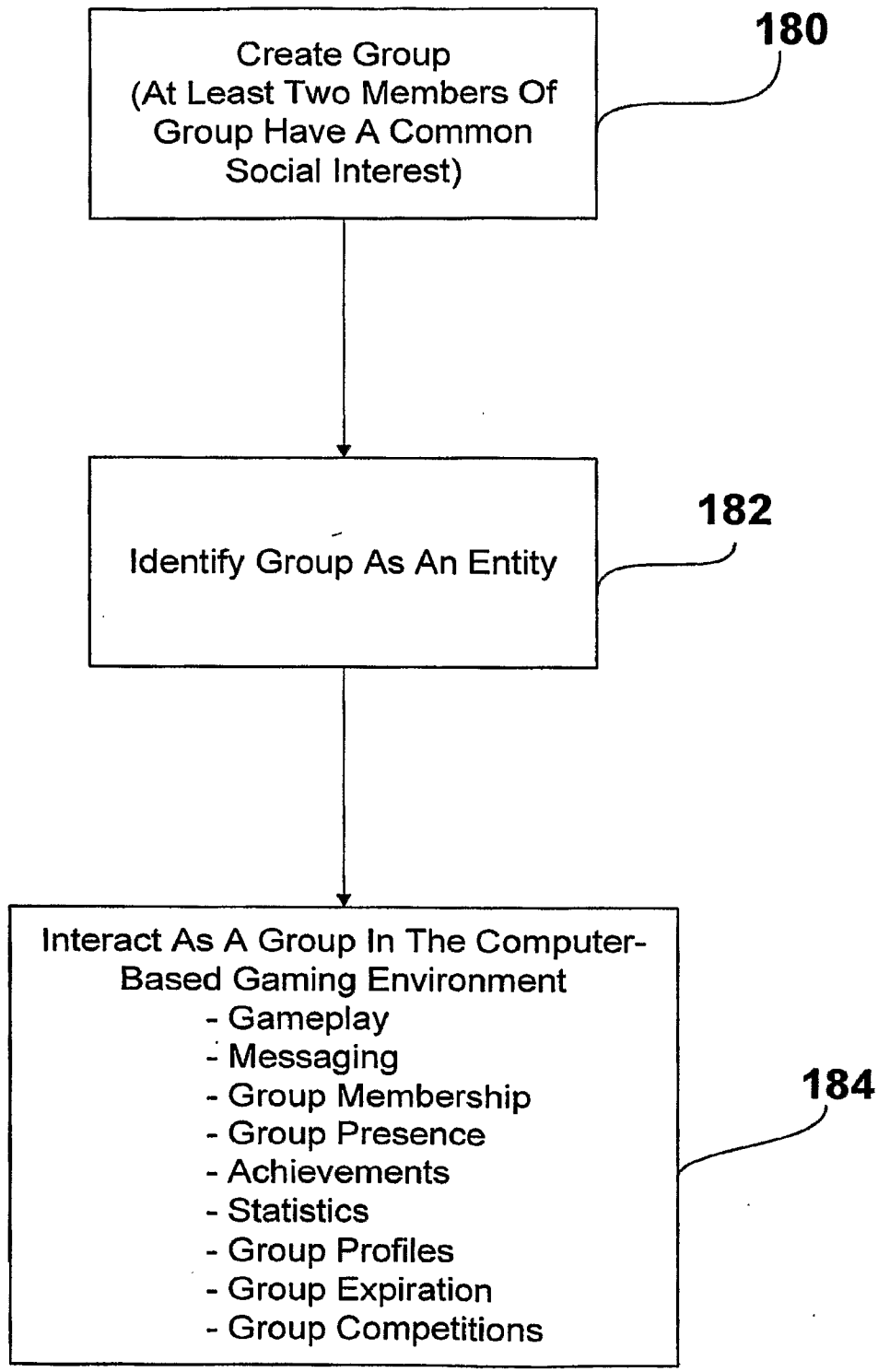

Create Group
(At Least Two Members Of
Group Have A Common
Social Interest)
180
Identify Group As An Entity
182
Interact As A Group In The Computer-
Based Gaming Environment
- Gameplay
- Messaging
- Group Membership
- Group Presence
- Achievements
- Statistics
- Group Profiles
- Group Expiration
- Group Competitions
184

FIGURE 14

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2006/047326

A. CLASSIFICATION OF SUBJECT MATTER

G06Q 30/00(2006.01)i

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC8 G06Q 30/00; G06F 17/00; G06F 17/60

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean utility models and applictions for utility models since 1975.
Japanese utility models and application for utility models since 1975.

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

e-KIPASS "GAME, GROUP, COMMUNITY"

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	KR 10-2000-0030338 A (NC SOFT CORPORATION) 5 June 2000 See abstract; claim 1; fig. 1	1-20
Y	US 6,755,743 B1 (YAMASHITA, N. et al.) 29 June 2004 See abstract; fig 2	1-20
A	KR 10-2005-0105396 A (NHN CORPORATION) 4 November 2005 See abstract	1-20
A	KR 10-2005-0003224 A (DIGICELL ENTERTAINMENT CO., LTD.) 10 January 2005 See abstract	1-20

☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

* Special categories of cited documents:
"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier application or patent but published on or after the international filing date
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified)
"O" document referring to an oral disclosure, use, exhibition or other means
"P" document published prior to the international filing date but later than the priority date claimed
"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents,such combination being obvious to a person skilled in the art
"&" document member of the same patent family

Date of the actual completion of the international search	Date of mailing of the international search report
14 MAY 2007 (14.05.2007)	**15 MAY 2007 (15.05.2007)**
Name and mailing address of the ISA/KR Korean Intellectual Property Office 920 Dunsan-dong, Seo-gu, Daejeon 302-701, Republic of Korea Facsimile No. 82-42-472-7140	Authorized officer YUK, SEONG WON Telephone No. 82-42-481-8213

Form PCT/ISA/210 (second sheet) (April 2007)

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/US2006/047326

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
KR1020000030338A	05.06.2000	None	
US06755743B1	29.06.2004	JP2001224865A2	21.08.2001
		KR1020010015341A	26.02.2001
		KR1020050077501A	02.08.2005
		US20040198497A1	07.10.2004
		US20040198498A1	07.10.2004
		US6932708BB	23.08.2005
KR102005105396A	04.11.2005	None	
KR102005003224A	10.01.2005	None	