Embodiments of the present invention relate to an online interactive competitive gaming system having audio and visual components to simulate realistic live play. In one embodiment of the present invention, an interactive gaming system via a global computer network comprises a first client computer connected to the global computer network, a second client computer connected to the global computer network, a non-downloadable competitive gaming application hosted on a remote server, accessible to the first and second client via the network, and a streaming server for enabling multiple-user streaming multimedia data capabilities, communicating with the remote server, the first client computer and the second client computer.
FIG. 3

WEB SERVER 334
Website 335
Web Server Software 338

GAME SERVER 340
Game Software 342
Transfer Module 344
Encryption Module 346
Games 348
DATABASE 349

STREAMING SERVER 350
I/O STREAMS 352
SOFTWARE 354

FIRST CLIENT COMPUTER 302
User Interface 304
Input Device 310
Output Device 312
Web Browser 314
Multimedia Software 308

SECOND CLIENT COMPUTER 316
User Interface 318
Input Device 324
Output Device 325
Web Browser 328
Multimedia Software 322

N CLIENT COMPUTER 330

NETWORK 332
Player accesses the gaming website

Player enters a games lobby

Player selects a game to play

Player plays selected game

FIG. 4
INTERACTIVE GAMING SYSTEM VIA A GLOBAL NETWORK AND METHODS THEREOF

BACKGROUND OF THE INVENTION

[0001] 1. Field of the Invention

[0002] Embodiments of the present invention generally relate to an interactive gaming system via a global network and methods thereof. More specifically, embodiments of the present invention relate to an online interactive gaming network having audio and visual components to simulate realistic live play.

[0003] 2. Description of the Related Art

[0004] Online competitive gaming has taken the computer world by storm. Over the past 10 years, it has grown as quickly as the Internet and can now be found in millions of homes. Online competitive gaming generally includes, but is not limited to, board games, card games, and casino or gambling games, available by logging into a website and/or downloading software from a website in order to play these games. There are currently many websites which offer online gaming.

[0005] With current technology, a player is required to download and install the game software to his or her computer. By downloading software on the client computer, the games often run faster than web-based games given the general premise that CPU processing speeds are usually much quicker than Internet transmission speeds. Thus, the graphics and sound associated with a particular game are usually located within the software client, which has been downloaded on the client computer, to be executed when prompted by instructions from the host server (i.e., the server on which the competitive game is being hosted).

[0006] With the advent of this growth in online competitive gaming, also comes several drawbacks. These drawbacks include the issues of computer security and personal/financial security (particularly where gambling or financial-based transactions are involved), as online competitive gaming sites can become vulnerable to hackers because of the ease of access to private information about the users playing the game. Also, many individuals fear downloadable software because of the increase in computer viruses and other infectious programs, often associated with downloads from an unknown source.

[0007] Furthermore, additional drawbacks exist where competitive gaming attempts to enable players to engage in audio-visual interaction amongst each other due to the varying latency times between each client and the server. In scenarios where basic audio-visual interaction exists, it is generally limited between two individuals (i.e., peer-to-peer) or from one individual to a group (e.g., a presentation broadcast). Even in these scenarios, given the nature of audio-visual data, downloadable software is typically required in order to encode the data in a format suitable for high quality frame rate and resolution, while maintaining a relatively quick transmission rate.

[0008] Therefore, there is a need for an online interactive gaming network having audio and visual components to simulate realistic live play, while overcoming the drawbacks of systems currently available in the industry.

SUMMARY OF THE INVENTION

[0009] Embodiments of the present invention relate to an online interactive competitive gaming system having audio and visual components to simulate realistic live play. In one embodiment of the present invention, an interactive gaming system via a global computer network comprises a first client computer connected to the global computer network, a second client computer connected to the global computer network, a non-downloadable competitive game application hosted on a remote server, accessible to the first and second client via the network, and a streaming server for enabling multiple-user streaming multimedia data capabilities, communicating with the remote server, the first client computer and the second client computer.

[0010] In another embodiment of the present invention, an interactive competitive gaming system via a global computer network comprises a first client computer, having multimedia software for execution of other computer programs and scripts, connected to the global computer network via a web server, a second client computer, having multimedia software for execution of other computer programs and scripts, connected to the global computer network via the web server, a multi-user game server having a non-downloadable competitive gaming application capable of being executed on a virtual machine running on a client computer, accessible to the first and second client via the network, and a real-time streaming server for enabling multiple-user streaming multimedia data capabilities, communicating with the multi-user game server, the first client computer and the second client computer.

[0011] In yet another embodiment of the present invention, a method of hosting an interactive competitive gaming system via a global computer network comprises providing a publicly accessible portal to a game server and a streaming server, through the global computer network, allowing a first user to access a non-downloadable competitive gaming application available on the game server, allowing at least a second user to access the competitive gaming application available on the game server, enabling the transmission of streaming multimedia data between the first user and the second user through the streaming server, and engaging the first user and the second user in the competitive game.
must). Similarly, the words “include”, “including”, and “includes” mean including but not limited to. To facilitate understanding, like reference numerals have been used, where possible, to designate like elements common to the figures.

DETAILED DESCRIPTION

In the following detailed description, for purposes of explanation, numerous specific details are set forth in order to provide a thorough understanding of exemplary embodiments or other examples described therein. However, it will be understood that these examples may be practiced without the specific details. In other instances, well-known methods, procedures, components and circuits have not been described in detail, so as to not obscure the following description. Further, the examples disclosed are for exemplary purposes only and other examples may be employed in lieu of, or in combination with, the examples disclosed.

Embodiments of the present invention generally relate to an interactive gaming system via a global network and methods thereof. More specifically, embodiments of the present invention relate to an online interactive gaming network having audio and visual components to simulate realistic live play. As noted throughout the discussion of embodiments of the present invention contained herein, the competitive games of the present invention are accessible to users via a non-downloadable application hosted on a remote server, having multiple-user streaming multimedia capabilities.

FIG. 1 depicts a block diagram of a general computer system in accordance with one embodiment of the present invention. The computer system 100 generally comprises a computer 102. The computer 102 illustratively comprises a processor 104, a memory 110, various support circuits 108, an I/O interface 106, and a storage system 111. The processor 104 may include one or more microprocessors. The support circuits 108 for the processor 104 include conventional cache, power supplies, clock circuits, data registers, I/O interfaces, and the like. The I/O interface 106 may be directly coupled to the memory 110 or coupled through the processor 104. The I/O interface 106 may also be configured for communication with input devices 107 and/or output devices 109, such as network devices, various storage devices, mouse, keyboard, display, joystick, touchpad, speaker, microphone, and the like. The storage system 111 may comprise any type of block-based storage device or devices, such as a disk drive system.

The memory 110 stores processor-executable instructions and data that may be executed by and used by the processor 104. These processor-executable instructions may comprise hardware, firmware, software, and the like, or some combination thereof. Modules having processor-executable instructions that are stored in the memory 110 may include a capture module 112. The computer 102 may be programmed with an operating system 113, which may include OS/2, Linux, Solaris, Unix, HPUX, AIX, Windows, MacOS, among other platforms. At least a portion of the operating system 113 may be stored in the memory 110.

The memory 110 may include one or more of the following: random access memory, read only memory, optical read/write memory, cache memory, magnetic read/write memory, and the like. It is understood by embodiments of the present invention, a computer, such as the one depicted in FIG. 1, may be connected to a computer network or system, as discussed below with respect to FIGS. 2 and 3. A computer network includes the Internet, a global computer network, an internal computer network, dedicated server networks, and the like.

FIG. 2 depicts a block diagram of a system in accordance with one embodiment of the present invention. The system 200 generally includes a first client device 202, a second client device 204, and additional client devices, up to client device N 206, where N represents any number of client computers practical for operation of embodiments of the present invention. The system 200 further includes a network 208, a server 210, and optionally a plurality of N additional servers 214, 216 (hereinafter “N server”). The network 208 may be any network suitable for embodiments of the present invention, including, but not limited to, a global computer network, an internal network, local-area networks, wireless networks, and the like.

The first client computer 202 comprises a client application 203. The client application 203 is generally software or a similar computer-readable medium capable of at least enabling the first client computer 202 to connect to the proper network 208. In one embodiment, the client application 203 is software, commercially available from a software retailer. In another embodiment, the client application 203 further provides instructions for various inputs (not shown), including a mouse or a keyboard, both analog and digital, and also provides instructions for various outputs (not shown), including a speaker, microphone, a monitor or other output devices. The second client computer 204 and client computer N 206 also comprise respective client applications (205, 207).

The server 210 may be any type of server, suitable for embodiments of the present invention. In one embodiment, the server 210 is a network-based server located at some remote destination (i.e., a remote server). In other embodiments, the server 210 may be hosted by one or more of the client computers. Additional embodiments of the present invention provide the server 210 is located at an Internet service provider or other provider and is capable of handling the transmission of multiple client computers at any given time. The server 210 may also comprise a server application (not shown). The server application may comprise software or a similar computer-readable medium capable of at least allowing client computers to connect to a proper network.

Although structurally similar, suitable common types of servers for embodiments of the present invention may include, but are not limited to, a web server (capable of providing a client access to a global computer network, i.e., the Internet), a gaming server (capable of supporting and providing multiple user access to gaming software, database records, and other necessary applications for online gaming), a streaming server (capable of enabling real-time transmission of data to and from multiple client computers), and/or other similarly structured architecture having necessary applications and/or software to run necessary functions in accordance with embodiments of the present invention.

As is understood with embodiments of the present invention, multiple servers may be the most efficient methods of communication between multiple clients when particular constraints exist. In one embodiment, multiple servers are provided to support multiple clients in a particular game session. For example, in one embodiment, a group of three clients are connected through a first server 210 for a first game session. A group of five clients want to engage in a second
session, but the first server is near capacity. The group of five clients is then connected through a second server 214 to allow for a session to take place.

For example, in another embodiment, a server 210 hosting the game is provided in a system 200. As the server 210 becomes congested with multiple client transmissions, it may be beneficial to allow some of the clients to pass through a second server 214, thus relieving the bandwidth on the server 210. The second server 214 and first server 210 may be connected to one another through the network and/or any other known communication means to provide the most efficient methods of communication. If necessary, additional server N 216, where N represents any number of servers practical for operation of embodiments of the present invention, may be utilized as well.

Where bandwidth is not a concern, multiple servers may still be an optimal solution for particular embodiments of the present invention. In some embodiments, by utilizing separate servers for different sever-based functions for implementing embodiments of the present invention, processing speeds of each respective server may be optimized by limiting the processing to the particular function. For example, providing three servers in an exemplary embodiment, may allow the system administrator to enable separate computer modules for implementing each of web access, gaming function, and real-time transmission of multimedia data.

FIG. 3 depicts a block diagram of an interactive gaming system 300 in accordance with one embodiment of the present invention. The system 300 generally comprises at least a first client computer 302, a second client computer 316, and additional client computers, up to client computer N 330, where N represents any number of client computers practical for operation of embodiments of the present invention. The system further includes a network 332, a web server 334, a game server 340 and a streaming server 350. In one embodiment, the game server 340 and the streaming server 350 are hosted on the same sever as the web server 334; however, for simplicity, each will be described as a separate device within the system 300. Each of these devices may comprise a basic computer console, such as the exemplary embodiment enclosed in FIG. 1, or may be more sophisticated as understood and contemplated by various embodiments of the present invention.

The first client computer 302, second client computer 316, web server 334 and/or game server 340 may be communicatively coupled together via a link or network 332. The first client computer 302, second client computer 316, web server 334 and/or game server 340 may exchange information via one or more communication methods or protocols over the network 332.

The first client computer 302 may be for example, any of or any combination of a personal computer, a portable computer, a handheld computer, a laptop computer, a mobile phone, an interactive TV set-top-box, or combinations thereof. In one embodiment, the first client computer may include a user interface 304, Internet connection 306, multimedia software 308, an input device 310, an output device 312, and web browser 314 or similar medium capable of at least enabling the first client computer 302 to connect to network 332. The first client computer 302 is operable to form user interface 304 from which a player can access the web pages provided by the web-server software 338. To facilitate this, the user interface 304 may be communicatively coupled with the web server host 334 via network 332. The user interface 302 may be, for example, a graphical-user interface (GUI) that is operable to execute a web browser 314 application for rendering the web pages provided by the web-server software 338.

The input device 310 comprises at least one of, but not limited to, a mouse, a keyboard, a touch screen, a microphone, a webcam, and the like. The output device 312 comprises at least one device, including but not limited to headphones, speaker(s), a video monitor, and the like.

In one exemplary embodiment, the input device 310 comprises a webcam having streaming audio and visual data capabilities. The webcam may consist of a digital video camera attached to the first client computer 302, typically through the USB port (not shown), or other available input port on the client. Generally, executable code associated with the webcam, optionally stored on the client, allows audio and digital data from the webcam at a preset interval and transfers it to another location.

In many embodiments, when using a webcam for streaming video, an optimal webcam system would require a sufficiently high frame rate. A frame rate indicates the number of pictures the camera can record or "grab," and transfer in one second. In one embodiment, a frame rate may comprise between at least 1 frame per second (fps) up to 250 fps.

In many embodiments, a high-speed Internet connection 306 may be required to transmit the data obtained from a webcam or digital camera with a high frame rate. In one exemplary embodiment, a high-speed Internet connection 306 may comprise a cable modem, which connects to the Internet using the same pathways as cable television. Other means of connection may include, but are not limited to, DSL, Broadband, wireless network access, FIOS, FTTH or ISDN. A broadband connection generally has a proper bandwidth to carry a large amount of data—i.e., images, text, and video—to and from a computer at a relatively high speed. The greater the frequency of the bandwidth, the greater its capacity to carry data. Embodiments of the present invention generally require a bandwidth suitable to transfer data in accordance with other elements and embodiments set forth herein.

Web Browser 314 enables users to display and interact with text, images, videos, and the like typically located on a web page at a website on the Internet, World Wide Web or any other computer network. Examples of some commercially available web browsers include, but are not limited to, Internet Explorer, Mozilla Firefox, Safari, Opera, and Netscape, each created and owned by their respective recognized manufacturers.

In one embodiment, the multimedia software 308 is Adobe Flash (previously called Shockwave Flash and Macromedia Flash), commercially available from Adobe Systems, Inc. of San Jose, Calif. In other embodiments, multimedia software 308 comprises any suitable commercially available package, capable of running a virtual machine, particularly a virtual machine capable of executing object-oriented scripts, for execution of other computer programs and scripts. Alternatively, any software package capable of supporting the features and embodiments disclosed herein may be suitable for embodiments of the present invention. In one embodiment, the multimedia software 308 comprises a software application written in a Flash programming language, e.g., Actionscript, capable of loading and running directly from a Web Browser 314.

The second client computer 316 and client computer N 330 also includes a user interface 318, Internet connection...
multimedia software 322, an input device 324, an output device 326 and web browser 328. The second client computer 316 and client computer N 330 may be configured substantially similar to the first client computer 302, such that they are independently capable of successfully operating within the system disclosed herein.

The network 332 may be a partial or full deployment of most any communication or computer network or link, including any of, any multiply of, any combination of or any combination of multiples of a public or private, terrestrial wireless or satellite, and wireline networks or links. The network 344 may include, for example, network elements from the Internet, core and proprietary public networks, wireless voice and packet-data networks, such as 1G, 2G, 2.5G and 3G telecommunication networks, wireless local area networks ("WLANs"), including Bluetooth and/or IEEE 802.11 WLANs, wireless personal area networks ("WPANs"), wireless metropolitan area networks ("WMANs") and the like; and/or communication links, such as Universal Serial Bus ("USB") links; parallel port links, Firewire links, RS-232 links, RS-485 links, and the like.

The web server 334 may be of any type of server suitable for embodiments of the present invention. The web server 334 may be deployed in one or more general or specialty purpose computers, personal computers, minicomputers, server-type computers and/or any a processor-based platform that operates on any suitable operating system, such as Windows and/or Linux; and that is capable of executing software. In one exemplary embodiment, the web server 334 comprises a Jetty Open Source server, implemented entirely in JavaScript, commercially available through the Apache Software Foundation.

The web-server software 338, when executed by the processor (not shown), may be operable to provide the user (players or the like) with one or more web pages, to access the games available to play, access to view other players online, and other information associated with game playing activities. In addition, the web-server software 338 when executed by a processor may be operable to allow the user, via the first client device 302, to start a new game with other players, exit a game once it is finished, participate in multiple games at a time, view list of high scoring players based on type of game, and the like.

The website 336 consists of a collection of web pages, which may be hosted on one or several web servers 334, usually accessible via network 332 or the like. A web page is a document, typically written in hypertext markup language (HTML), a protocol that transfers information from the web server 334 to display in the user's web browser 314 and 328 respectively. The various pages of the website may also generally be accessed from a common root universal resource locator (URL), and usually reside on the same web server 334. Web browsers communicate with web servers primarily using hypertext transfer protocol (HTTP) to fetch web pages. HTTP allows web browsers to submit information to Web Servers as well as fetch pages from them.

The game server 340 may be any type of server suitable for embodiments of the present invention. The game server 340 may be deployed in one or more general or specialty purpose computers, personal computers, minicomputers, server-type computers and/or any a processor-based platform that operates on any suitable operating system, such as Windows and/or Linux; and that is capable of executing software.

The game server 340 may include a large number of elements, most of which are not shown in FIG. 3 for simplicity of description. The elements of game server 340 may be formed in a single unitary device and concentrated on a single server, client, peer or other type of node. Alternatively, the elements of game server 340 may be formed from two or more separate devices, and as such, may be distributed among a number of server, client, peer or other type nodes.

The game server 340 generally comprises game software 342, transfer module 344, encryption software 346, a host of games 348 (stored as executable code within a computer readable medium or memory device), and a database 349. The game server 340 serves as the platform/device for maintaining and hosting the competitive games 348 that are accessed and played by one or more client computers 302 and 316. The game software 342 can include program modules for single player or multiplayer games. The games 348 are executed on the game server 340 and each player accesses the games program through the user interface 304 and 318 on their respective client computers 302 and 316. By implementation of the game software 342, no portions of the game programs are executed on the client computers 302 and 316. Thus, as understood by embodiments of the present invention, the competitive gaming application is non-downloadable to the client computers 302 and 316.

In one embodiment, the game server 340 comprises an additional component for handling communication between the client(s) and the game server. For example, the game server 340 may comprise a SmartFoxServer real-time multi-user socket server having built-in port 80 tunneling for overcoming firewall obstacles present in many client computers. In such an embodiment, the game server 340 is capable of handling any gaming logic, managing game room activity, tracking user details, chatting capabilities, private messaging, or other functions of embodiments of the present invention, as set forth below.

The transfer module 344 may be adapted to be in communication with the game server 340 or within the game server 340 as shown in FIG. 3. In general, this transfer module 344 facilitates the transfer of multimedia data signals from one client computer to another, for example the first client computer 302 to the second client computer 316. In another embodiment, the transfer of multimedia data may be among a plurality of computer clients accessing the game system. The multimedia data transferred may be audio, video or the like and related to the actions that are taking place within the competitive game.

The transfer module 344 is provided to perform the transfer of data signals from the first client computer 302 to the second client computer 316 but may also transfer data signals from any N client computers 330 in “real time.” Real-time is used as meaning near-instantaneous, subject to minor
delays caused by network transmission and computer processing functions, and able to support various input and output data streams.

The database 349 may comprise any database management system suitable for embodiments of the present invention. In one embodiment, the database comprises at least of a Relational Database Management System (RDBMS) (e.g., MySQL, Microsoft Access, Oracle, etc.), Post-Relational Database Models, or Object Database Models. In one exemplary embodiment, the database 349 comprises MySQL 5.0, commercially available from MySQL AB of Sweden, a subsidiary of Sun Microsystems, utilizing either of the MySQL Community Server and Enterprise Server. The database 349 may be utilized to store any data associated with the gaming application or client information, as necessary through embodiments of the present invention.

The streaming server 350 generally comprises processing ports for input/output (I/O) streaming data 352 to and from client computers, as well as a software application 354 for direct and manipulating the data streams. In one exemplary embodiment, the streaming server 350 may comprise a Wowza Streaming Server, commercially available from Wowza Media Systems of Evergreen, Colo. Generally, the streaming server 350 is capable of using any standard video codec (e.g., MPEG, DivX, WMV, RealVideo, SPARC, etc.) or transmission protocol (e.g., Real Time Streaming Protocol (RTSP), Real Time Messaging Protocol (RTMP), etc.).

Data signals are transmitted to the game server 340 via standard communication methods. To accomplish the audio data signal is first collected by the respective first client 302 via the input device 310. The data is passed through a sample rate converter (not shown) which accommodates and accounts for the asynchronous time of each client’s respective internal clocks (not shown). From the sample rate converter the data is passed through a data encoder (not shown) where it is compressed for efficient transmission to the server 340. In one embodiment the encoding is performed using a block-processing algorithm, whereby the data is buffered at a predetermined duration, which is then capable of being transmitted as a packet or block. The transmission from the client to the server occurs through the respective interfaces. The interfaces may be capable of handling any known transmission protocols including TCP/IP and/or UDP. Other plausible transmission protocols include FTP, ATM, Frame relay, Ethernet, and the like.

As contemplated by embodiments of the present invention, the encoder of the respective devices may encode data in such a manner to facilitate rapid transmission of a maximum amount of information. For example, in one embodiment, encoding of data may occur using any suitable coding technique capable of complying with the embodiments set forth herein. Exemplary encoding techniques include: American Standard Code for Information Interchange (ASCII), Extended Binary Coded Decimal Interchange Code (EBCDIC), Manchester Phase Encoding (MPE), Differential Manchester Encoding (DME), Frequency Modulation (FM), Phase Modulation (PM), Pulse Code Modulation (PCM), Delta Modulation (DM) and the like.

Encryption software 346 allows for secure connections and protects data from unexpected modifications by hackers or other outsiders when it is being transmitted. In accordance with embodiments of the present invention, two types of encryption, symmetric and asymmetric (also called public key), may be utilized. Generally, with either encryption method, the key length for encrypt can be chosen from among 128 bits, 192 bits, and 256 bits.

The game server 340 hosts a number of different online games. These games 348 can include a wide variety of competitive games such as card games, board games and casino-type gambling games. Examples of such games include poker, blackjack, mahjong, backgammon, checkers, and the like. In one embodiment of the present invention, the game server will host a number of different online poker games such as Texas Hold ’em, Draw, Stud, Omaha, and Omaha Hi/Lo. Many other types of poker games, non-poker card games (e.g., Blackjack, Baccarat, Spanish 21, etc.) and other non-card games (e.g., Craps, Roulette, etc.) may also be hosted. In other embodiments, other games, such as fantasy sports, or other known interactive competitive games may also be included.

Given the nature of the architecture of the system 300, as shown in FIG. 3, embodiments of the present invention provide for a means for adapting to currently existing gaming servers and/or applications. In one embodiment, the game server 340 may comprise a server or system currently being operated by a third party, hosting a plurality of interactive gaming or similarly functional applications. In such an embodiment, the concepts of embodiments of the present invention may be realized with minimal overhaul of the gaming software to utilize the features of the streaming server 350 and transfer module 344.

As understood by embodiments of the present invention, adapting to already existing gaming software, would require no additional “downloading” by the client, whereas the client most likely has the game software application running on his or her computer. In accordance with the principles of the present invention, the additional features provided herein would be accessible to a client via a streaming, non-downloadable interface through a web browser.

FIG. 4 depicts a flow chart illustrating an exemplary method in accordance with one embodiment of the present invention. For convenience, method 400 is described in reference to the system 300 of FIG. 3. It is contemplated however, that method 400 may also be carried out within other system architectures as well.

The exemplary method 400 begins at step 402. At step 404, a user (“player”) enters the game system 300. In order to arrive at the gaming website, the player must first ensure a connection via the client computer 302 to the network 332 is established. For example, Internet connection 306 may be made by the cable modem or alternative medium that the player is utilizing. Once a connection has been established, the web browser 314 software on the first client computer 302 sends the address to web server 334 via network 332 and requests the web page (not shown). The web server software 338 accepts request from first client computer 302 and delivers the appropriate content back to the first client computer. The player then arrives at the game website 336.

In one embodiment, the website 336 contains web pages (not shown) with description of the game site and links to other descriptive aspects of the game system as well as instructions on the games available for new players to the site. At step 406, the player may be directed to a games menu page. On this games menu (not shown), there may be several options for the players to choose to navigate within the system. For example, in one embodiment, the menu includes a
first tab which allows players to start a new game with other players or start a game individually.  

[0062] Optionally, other tabs may exist which allow a player to select a game to watch, to ask for help with any feature or aspect of the website, to view a listing of all the games currently running, and the like. Other features, for example, a list of high scores, may be available from such a menu, but do not need to be discussed herein, whereas such features are commonly found in the current systems available in the industry.

[0063] At step 408, in one embodiment, a player will choose from all the games that are currently available. Once a player selects a game to be played, he or she will enter a game room and be able to take part and play the selected game. 

[0064] At step 410, a player begins to play the selected game. In one example, a player selects poker. At the outset of the game, each participating player may be prompted, or required, to activate their input device 310 on their respective client computers to communicate with the other players. For example, in one game, players may be required to have streaming video and audio communication with the other players in the game via the streaming server 350. In one embodiment, once the input device 310 is activated, the transfer module 344 transmits the data signals between the respective client computers of the players in the game through the streaming server 350, to engage the players in a real-time gaming simulation, as if all players were physically in the same room. Alternatively, the transfer module 344 is responsible for transmitting data between the player and the game server 340, while the streaming server 350, via its own transfer module (not shown), transmits streaming multimedia data between players, to engage in the real-time gaming simulation.

[0065] At step 412, the method 400 ends. However, the method 400 may be repeated for a multitude of players, periodically or as many times as players enter the website and access the gaming system.

[0066] In alternative embodiments of the present invention, the systems as disclosed herein may be utilized to host classrooms or learning sessions, where users can be educated about the rules of particular games. For example, in one embodiment, instead of playing a game of Texas Hold 'Em Poker, users may log onto the gaming website to watch and interact visually and audibly with a Texas Hold 'Em instructor (e.g., a professional poker player).

[0067] In yet another embodiment, spectators may log into the gaming website to monitor or watch the players of a game. For example, a user may log into the gaming website to monitor a round of Texas Hold 'Em being played. In such an example, the user would not input any audio or video, but rather would be able to view and hear all audio and video streams from the persons actually playing the game.

[0068] In yet another embodiment, players may be able to create private games, in a virtual private game room. The virtual private game room may be accessed only by those who enter a valid password, generally controlled by the player who created the virtual private game room. Once in the virtual private game room, players may utilize the other features of the system. In such an embodiment, players have the ability to regulate against whom they interactively compete, providing a simulated private poker-room setting.

[0069] In alternative embodiments of the present invention, the architecture of the system may be utilized apart from traditional gaming applications. In one embodiment, the competitive gaming application may comprise an educational program. For example, the system may be utilized to implement interactive online learning, where one client of the system is a teacher, and the remaining clients are students. In such an embodiment, the teacher may have special features/commands not available for the other clients. For example, the teacher may be able to pause/stop the session, use a whiteboard feature to lecture to all attending students, enable private video chat with one or more of the students, create sub-rules within the system (e.g., deal out cards according to predefined scenario) and the like.

[0070] In one exemplary embodiment, a teacher/student application may be utilized in accordance with the following steps. A teacher may schedule lessons for a particular time & date, at which time the teacher may also add parameters such as type of lesson/game, number of clients/students, cost for attending the lesson, whether the lesson is video enabled, length of the lesson, and the like. A client/student may subscribe to the lesson and pay any requisite subscription fee at that time. When the lesson starts at the prescribed time, the teacher is generally provided with instruments to control the flow of the lesson, as well as the ability to give private advice to the clients/students. Upon completion of the lesson, each student may be given a special electronic diploma recognizing her/his completion of the lesson.

[0071] While the foregoing is directed to embodiments of the present invention, other and further embodiments of the invention may be devised without departing from the basic scope thereof. Similarly, embodiments of the present invention are further scalable to allow for additional clients and servers, as particular applications may require.

What is claimed is:

1. An interactive gaming system via a global computer network comprising:
a first client computer connected to the global computer network;
a second client computer connected to the global computer network;
a non-downloadable competitive gaming application hosted on a remote server, accessible to the first and second client via the network; and
a streaming server for enabling multiple-user streaming multimedia data capabilities, communicating with the remote server, the first client computer and the second client computer.

2. The system of claim 1, wherein the multimedia data comprises at least one of audio or video data.

3. The system of claim 1, wherein the non-downloadable competitive gaming application comprises executable code to simulate the playing of at least one of a card game, a board game, a casino game, a fantasy sports game, or an educational program.

4. The system of claim 1, wherein the streaming server is capable of operating in real-time.

5. The system of claim 1, wherein each of the first client computer and the second client computer comprise multimedia software for execution of other computer programs and scripts.

6. The system of claim 5, wherein the multimedia software comprises a virtual machine capable of executing object-oriented scripts.

7. The system of claim 1, wherein the interactive gaming system is adaptable to conform to a third-party competitive gaming application.
8. The system of claim 1, wherein each of the first client computer and second client computer further comprise at least one of a microphone, a webcam or a digital camera.

9. The system of claim 1, wherein the multimedia data is encoded and encrypted.

10. An interactive competitive gaming system via a global computer network comprising:
   a first client computer, having multimedia software for execution of other computer programs and scripts, connected to the global computer network via a web server;
   a second client computer, having multimedia software for execution of other computer programs and scripts, connected to the global computer network via the web server;
   a multi-user game server having a non-downloadable competitive gaming application capable of being executed on a virtual machine running on a client computer, accessible to the first and second client via the network; and
   a real-time streaming server for enabling multiple-user streaming multimedia data capabilities, communicating with the multi-user game server, the first client computer and the second client computer.

11. The system of claim 10, wherein the multimedia data comprises at least one of audio or video data.

12. The system of claim 10, wherein the non-downloadable competitive gaming application comprises executable code to simulate the playing of at least one of a card game, a board game, or a casino game.

13. The system of claim 10, wherein the multimedia software comprises a virtual machine capable of executing object-oriented scripts.

14. The system of claim 10, wherein the interactive competitive gaming system is adaptable to conform to a third-party competitive gaming application.

15. The system of claim 10, wherein non-downloadable competitive gaming application is coded in Actionscript for Flash applications.

16. A method of hosting an interactive competitive gaming system via a global computer network comprising:
   providing a publicly accessible portal to a game server and a streaming server, through the global computer network;
   allowing a first user to access a non-downloadable competitive gaming application available on the game server;
   allowing at least a second user to access the competitive gaming application available on the game server;
   enabling the transmission of streaming multimedia data between the first user and the second user through the streaming server; and
   engaging the first user and the second user in the competitive game.

17. The method of claim 16, wherein the non-downloadable competitive gaming application is capable of being executed on a virtual machine running on a client computer.

18. The method of claim 17, wherein each of the first user and the second user comprise a computer having multimedia software capable of running a virtual machine for execution of other computer programs and scripts.

19. The method of claim 16, wherein the non-downloadable competitive gaming application comprises executable code to simulate the playing of at least one of a card game, a board game, or a casino game.

20. The method of claim 16, wherein the interactive competitive gaming system is adaptable to conform to a third-party competitive gaming application.