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(71) Applicant(s)
Head to Head Games Pty. Ltd.

(72) Inventor(s)
Hickman Kevin Alexander

(74) Agent/Attorney
WATERMARK PATENT TRADEMARK ATTORNEYS

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(54) Title
COMMUNICATION SYSTEM AND METHOD

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(71) Applicant(s)
HEAD TO HEAD GAMES PTY. LTD.

(72) Inventor(s)
KEVIN ALEXANDER HICKMAN

(74) Attorney or Agent
WATERMARK PATENT & TRADEMARK ATTORNEYS , Locked Bag 5, HAWTHORN VIC 3122

(57)

The present invention relates to a communication system and method whereby a direct connection is obtained between at least two people, whilst maintaining the anonymity of the people connected. The present invention has particular application in the computer environment and facilitates interaction in the playing of games by two or more people.

The present invention provides a method and device in which connection information from a server to at least one of the parties is provided, thereafter disconnecting one party from the server, and thereafter one party is directly connected to the other party using the connection information.

ABSTRACT

The present invention relates to a communication system and method whereby a direct connection is obtained between at least two people, whilst maintaining the anonymity of the people connected. The present invention has particular application in the computer environment and facilitates interaction in the playing of games by two or more people.

The present invention provides a method and device in which connection information from a server to at least one of the parties is provided, thereafter disconnecting one party from the server, and thereafter one party is directly connected to the other party using the connection information.

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AUSTRALIA

Patents Act 1990

ORIGINAL
COMPLETE SPECIFICATION
STANDARD PATENT

Application Number:
Lodged:

Invention Title: COMMUNICATION SYSTEM AND METHOD

The following statement is a full description of this invention, including the best method of performing it known to us :-

COMMUNICATION SYSTEM AND METHOD

FIELD OF INVENTION

The present invention relates to a communication system, and also to its method of operation. The present invention is directed to attaining a direct connection between at least two people, whilst maintaining the anonymity of the people connected.

In one particular form, the present invention is embodied in a computer environment and facilitates interaction, including the playing of games, by two or more people.

BACKGROUND ART

There currently exists a number of systems which enable two people to play computer games.

One system is a multiplayer game and is run on a central computer. Figure 1 illustrates such a system. This system suffers from a number of disadvantages, namely:

1. Cost for customers. The cost is usually of the order of $10.00 per hour, paid by credit card over the line connection. There is also usually software purchase costs, and this can be in the order of $50.00.
2. There is a restriction to the number and variety of games that can be played. It has been found that this is resultant from the size, type and number of central computers and telephone networks connected to provide the system configurations illustrated.
3. There are also relatively high hardware and software costs for users.

Another prior art system configuration is illustrated in Figure 2, a two player game system. This system, too, is considered to suffer from a number of disadvantages, namely:

1. Cost for extended use, as the system costs are approximately 49 cents per minute.

2. This system, by its design, is relatively limited in connection speed for games.

Yet another system is disclosed in Australian Patent No. 611530 (AUB-29935/89). Figure 3 illustrates in a relatively basic format the system disclosed therein.

Figure 4 illustrates the method steps adopted by the system of figure 3. The system relies on a central computer or a central switching system of a communication carrier to maintain the connection between the two parties. In use, the central computer is contacted by a first caller. The central computer will then ring a subscriber to instigate voice connection. The central computer, upon receiving an acceptance from the subscriber, hook flashes the first caller and the subscriber together as is illustrated in steps 3, 4, 5 and 6. The end result is that the caller and the subscriber are directly connected together, whilst maintaining anonymity.

OBJECTS

One object of the present invention is to alleviate at least one disadvantage of the prior art.

Another object of the present invention is to provide a communication medium in which at least two players can engage in a computer game.

SUMMARY OF INVENTION

The present invention is predicated on the discovery that a communication system, medium or method can be established and utilized without the need to centralise control or operation of the initial or on-going communication connection.

The direct connection facilitates lower connection fees and charges, whilst anonymity or at least an increase in security is also retained as the direct connection is conducted in a hardware and /or software environment rather than in an environment which is readily perceptible to users of the system.

Further, the present invention provides direct connection which is enabled by the execution of the connection procedure in an environment substantially not intelligible by at least one of the parties connected. In one

particular form, the present invention is embodied in a computer environment and facilitates interaction, including the playing of games, preferably by two or more people. The interaction is conducted in a manner that provides confidentiality of particular details, such as telephone numbers, of the parties participating. The anonymity of the parties can be sustained as long as is desired by the participating parties. This facilitates anonymity or security.

The present invention is also predicated on the provision of connection means associated with each party to the communication connection. The connection means may be embodied as software and/or hardware.

In use, it is envisaged that the users would log information at a central 'challenge room' or 'meeting point'. Having 'met', connection information can be transferred to the connection means of each user, before they are disconnected from the meeting point. At that time, the connection information can be utilized by the connection means associated with one or each party to establish a direct connection with each other.

The present invention provides a communication system and/or method in which direct connection between two parties is established, comprising

transmitting to each party, connection information,

disconnecting at least one of the parties from the meeting point,

directly connecting each party by the use of the connection information by at least one party.

Yet a further feature of the present invention is that the use of the connection means associated with each party may alleviate problems with communication between two parties, for example where the parties are using otherwise incompatible equipment, the connection means may act as a go-between to facilitate communication.

Although the type of traffic which can flow between parties connected by the present invention is not essential to the invention itself, the traffic may be either or both CBR (voice, video, 'non-bursty' data) or non-CBR traffic ('bursty' data,LAN data).

Preferred embodiments of the present invention will now be described.

Figure 5 illustrates one form of the system in accordance with the present invention.

Figures 6a, 6b and 6c illustrate the steps used in the embodiment to effect the direct connection.

Figure 7 illustrates an example meeting room screen.

In the first embodiment disclosed, the present system provides a centralised "meeting point" for people who wish to play computer games via modem.

The system operates by people using their computers special purpose games club communications software to connect with their modem to a centralised games club. The club has provided special purpose software which allows the subscriber to connect with the 'meeting point'.

After receiving the games club software, the users then configure their software for the games which they wish to play and enter their personal details. This configuration is detailed later.

The user may also practice any configured games available locally prior to connection to the server. The user cannot connect to the server unless they have configured one or more games to 'challenge' status. 'Challenge' and 'practice' status are user selectable.

In use, a first party dials the meeting point using the software of the present invention and invites or selects a second party from the meeting point for a specific game. If the second party accepts to play the game, the software accompanying each party's computer automatically disconnects the first party or both parties from the meeting point. The present invention then proceeds to reconnect them directly to each other. The reconnection process is undertaken using the connection information provided by the meeting point. The connection information may include data, such as game information and/or telephone numbers for establishing a direct connection. As noted earlier, the telephone numbers are not disclosed in the user environment, but are used by the present invention (internally). The two

parties can then commence the game independent of centralised control or computer at the meeting point.

A feature of the present invention is that the disconnection and direct connection is done automatically, that is within the hardware and/or software of each party and independent of transferring any connection information to the or each party.

This removes the requirement for switching support from the telecommunications carrier such as "Centel" to effect the direct connection.

It has been found that such support increases the cost of the product and is also limited in availability and suitability to this use.

The present invention will also enable customers to automatically configure their modem as required by the game they wish to play, without requiring specialist technical knowledge. This is detailed later. If the modem is not configured correctly for each game, a successful connection may not occur.

Each game must be "known" to the software program which is run on the user's computer. This involves specifying details such as the name of the game, location on the hard drive and the command which will start the game running. Another item which is required, is the "game code".

The user will obtain the appropriate "game code" from the central system or club licensed for the present invention. (A list will be available showing each game name, and the code to be used.) The "game code" contains the game name (in abbreviated form) plus information such as the required connection mode which must be used. For example, CHQ24-B could be the code for one particular game which must run at a speed of 2400 baud, in mode "B". The various modes are a generalised classification, developed by the present applicant, to describe the type of modem connection. For example, mode "B" is "No compression or error checking" and is required because these modem features can interfere with critical communications timing in some games, and prevent the game from working correctly. Other modes are also available in accordance with the use of modems.

Almost every modem can be configured to work as required, but this requires a degree of technical expertise which the average customer does not have. It therefore presents a considerable barrier to a large percentage of potential users of the present invention.

To address this, during another part of the configuration process, the user specifies which brand and model of modem is being used. This allows the local program to automatically obtain from the central system the appropriate commands which must be sent to that modem for each mode. At the start of each connection to the central system, any information which has changed since the previous connection (for example additional mode definitions) are transferred to the user's computer and saved for later use.

When a particular game is about to start, the local software then sends the stored commands to the modem to configure it correctly. (The appropriate mode to use for the game is obtained from the "game code".)

In this way, users may play games requiring modem configurations beyond their technical knowledge.

Another aspect of the invention is the scoring system and this allows the user to automatically up-date a games ladder.. At the end of the game, while both parties are still connected directly, there is the facility to decide, by mutual agreement, which is the "winner" and which the "loser". If they disagree, the result is deemed to be a "dispute", which is a less desirable result (in terms of points lost etc) than a "loss". The result is stored locally and automatically sent to the central system when either party next connects to it. There is encouragement to do so within a finite time period, as otherwise the system will assume the result is a "dispute", with consequential penalties as discussed above.

- These results may automatically update the competition ladder.
- The users may be given the option to play another game without having to return to the central system. The users may be able to reselect the games they wish to play.

AN ALTERNATIVE METHOD OF CONNECTION

Each party obtains availability information of other players from the "central computer". Using software running locally, a player may view the retrieved schedule of player availability, then choose to establish the connection at the appropriate time. Figure 6c shows that information is exchanged at the central computer and direct dialling can occur. The software would dial the chosen player without revealing their phone number or other details. The software could also restrict such calls to the times and dates each player has chosen. At these times, the player expecting to receive such phone calls would run their copy of the present software, to manage the answering of the call and game choice negotiation.

USE FOR OTHER COMMUNICATIONS

The present system preferably uses computer software running in a personal computer at each user's premises to control the switching. An alternative embodiment of the invention would utilise a "black box" hardware device which would manage the switching phase of the connection, and then remain "transparent" to allow subsequent communications to proceed normally between the connected parties. The present invention may enable connection of modems by use of the software/hardware as an "interface" in the case of otherwise incompatible modems. The communications may be data, voice and/or video.

ANOTHER ALTERNATIVE

The meeting place uses an internet server. Opponents meet via an internet connection.

The "challenge room" or "meeting place" has options to only show other opponents with a specified range of telephone number prefixes. These are known as "local call" opponents. The prefixes shown may be area codes so that the players can choose local rather than interstate direct modem connections.

When an opponent is chosen and the challenge accepted, the internet connection is terminated and a direct call established. A challenger may

also elect to "pay for the call" and challenge an opponent with the "coin toss" method of choosing who dials disabled.

The Direct Call has the following advantages:

1. Not paying Internet Carrier charges while playing the game.
2. Not occupying a port on the present Internet Server.
3. Providing an improved communications path between the two opponents. As the internet improves, faster communications will be available. However, it is very likely that new games will always require close to the maximum communications speed the latest modems can provide. This may be better than the best available through the Internet.

This would allow remote sites to be serviced through one central server. For instance, Perth players may meet via an internet connection to the Server in Melbourne. After selecting an opponent they re-connect with a local call to each other in Perth.

An example of implementation of the present invention is now described:

SETTING DEFAULTS

When the software is first run, it is necessary to tell it both who you are, and what sort of modem you have connected to the computer. This is accomplished using two screens, both accessed from the icon bar at the top of the client screen : MODEM and IDENTITY.

MODEM SETUP

By clicking on the MODEM button, you are presented with a form to fill out, which asks for information concerning the make, speed, com port, and initialisation strings. Follow the steps below to fill out the information required;

1) Select the COM port which your modem is connect to.

2) Select a modem brand and model which matches the model attached to the computer. If you find that your modem is not listed, select UNLISTED from the top of the list.

3) The phone number for the server is provided and a space for your data phone number. Unless you have a specific phone line for your modem, the data line will be your regular phone number.

4) The initialisation strings. The init-string displayed will reflect the modem selected in (2). ie. When you select a new modem, the init-string will change to match the init-string provided by the games club. The init strings are preset in the software to accord with various modems.

5) Select the appropriate speed for the modem by scrolling through the available speeds below the init strings.

With these complete, click on the VERIFY SETUP button, and the users software can confirm the selections by testing the modem on the settings selected.

IDENTITY SETUP

With the modem set, click on IDENTITY ICON from the main screen. A new form is presented, which you can enter your own identity and alias for the client software. To complete the form, follow the steps below:

1) Enter your real name in the first box on the left, and your alias to be used on the server in the second.

2) Enter your password or your Registration Number.

3) There is a space for you to enter your Contact phone number.

4) Lines are also provided for a mailing address.

With these finished, use the mouse to click on the OK button.

All information entered is used in administration purposes only.

CONFIGURING GAMES

In order to create several competitions for each game (ie. for different levels of ability), each competition is given a game-code. For instance, in the game DOOM, many possible competitions can be formed, thus each

competition precedes a different game-code to reflect the individual competition. In most cases, the game-code will reflect the game title (eg. DOOM-A for DOOM - competition A); or an abbreviation of the title (eg. CMHQ-A for Command HQ-competition A). It is important that you note the game-code for each game you configure, as these will help you decide an opponent in the Challenge Room later.

All games played using the present invention are configured in the client, and it is possible to practice these games with the specific scenario rules.

To use these facilities, use the mouse to click on the PRACTICE ICON in the main screen. The configure screen appears, displaying games currently played in the games club. You can browse through these by scrolling up and down the list using the scroll bars on the right hand side of the box.

Configuring a game to play on the present system is achieved by clicking on the competition you wish to configure, and clicking on the CONFIGURE button. A form appears, which needs the information for the game filled in. To fill out the form, follow the steps below:

1) Use the navigation aides to select the drive and directory the game is located in. If the game uses more than one directory, select the directory containing the file which runs the game.
2) When the directory is located, a list of all possible files that could run the game is listed below the navigation aides. From the list, select the file that is used to start the game.
3) Finally, select the appropriate environment for the game from the list beside the navigation aides. For example, if the game is designed to run in DOS, select DOS, and so on.

When the choices are correct, select the OK button, and Practice appears next to the configured competition. To be able to compete in this competition, you must first verify the configuration by practicing the game. This is done by the following steps:

1) Click on any Practice game, and then use the mouse to click on the PRACTICE button.

2) The client will then attempt to run the game by first exiting, and then running the game.

3) Determine whether the game works, exit the game, and the client will reboot.

4) A prompt will appear, asking you if the game did work. If it did, select YES, otherwise select NO to reenter the configuration settings.

Any games which were practiced, and worked will be upgraded to Challenge. These can be challenged on the present system, and also practiced at any time through the client in the OFFLINE mode.

CONNECTING TO THE PRESENT SYSTEM

When the settings are correct in the MODEM and IDENTITY forms, and you have raised some games to Challenge status (see Configuring Games), you are ready to connect to the server. This is where other people who have also configured their games meet to find opponents.

Connecting is a one step process: simply click on the RECEPTION ICON. This will verify that all the required settings are correct, and then make the phone call to the server. The call is fully automated, as is the login process (using the information entered in the MODEM and IDENTITY forms). When the connection is established, the client will become Online, allowing you to then enter either the CHALLENGE room or the UMPIRE room.

If the client finds it has not received enough information from you, it will ask for that information to be entered before you connect.

CHALLENGE ROOM

When you connect to the server, you can enter the Challenge Room: the place where you can select an opponent in any of the games you configured earlier (see Configuring Games). At any time, you may leave the room, by simply pressing the OK button.

When you enter the room, you will be displayed with a screen similar to Figure 7 illustrating an example of a meeting or challenge room screen.

At the top of this screen, you can see which game-codes (see Configuring Games) for competitions you have raised to challenge, as well as the speed of your modem. Underneath this information is an area where all other competitors are displayed (by alias), showing the computer games they wish to play. To start a game, simply click on an opponent's game code. A message will appear to the opponent asking them if they wish to play you; similarly, if you are challenged by an opponent, a message asking you if you wish to play this person will appear.

In either case, you will be presented with the area code, and first four digits of the opponent's phone number, so you will know the relevant cost for the phone call. By accepting the challenge, the software will initiate the connection, and start the game.









THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

1. A method of enabling communication between at least two parties, the method including:

providing connection information from a server to at least one of the parties

disconnecting the one party from the server, and

the one party directly connecting with the other of the two parties using the connection information.

2. A method as claimed in claim 1, wherein the communication is established for the playing of games on computer.

3. A method as claimed in claim 1 or 2, wherein the connection information includes at least one of

phone number of the other of the two parties,

details of game to be played,

initialisation strings for the game,

speed of play of the game.

4. A method of enabling communication between at least two parties for the playing of games on computer, the method including:

providing connection information from a server to at least a first one of the parties;

disconnecting the first party from the server, and the first party directly connecting with a second one of the two parties using the connection information, wherein,

before communication is established, at least one of the two parties can view a part of the phone number of another of the two parties.

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5. A method as claimed in claim 4, wherein the connection information includes at least one of

the phone number of the second one of the two parties,
details of a game to be played,
initialisation strings for a game,
speed of play of a game.

6. A method as claimed in claim 1, wherein the server provides initialisation strings.

7. A method as claimed in any one of claims 1 to 6, wherein the information is exchanged essentially anonymously to the two parties.

8. A method as claimed in claim 1, wherein communication is established only for games with 'challenge' status.

9. A method as claimed in claim 1 or 2, in which, before communication is established, at least one of the two parties can view a part of the other parties' phone number.

10. A method as claimed in claim 9, wherein an area code and first four digits of the phone number is viewed.

11. A method as claimed in claim 2 or 4, wherein communication is established only for games which have been correctly installed and configured on each party's computer.

12. A method as claimed in claim 4, wherein only phone numbers or a part of phone numbers within a predetermined range of numbers is viewable.

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13. A method as claimed in claim 4 or 12, wherein connection is enabled or not established based on a phone number or part of a phone number viewed.

14. A method as claimed in claim 1 or 4, wherein connection is predetermined by a selected time or range of selected times or dates.

15. A method as claimed in claim 4, wherein initial communication between the two parties is via the Internet, before the first party directly connects with another of the two parties.

16. A method as claimed in claim 1, 4 or 15, wherein one of the two parties may elect to pay a cost for communication.

17. Apparatus for enabling communication between at least two parties, including:

means for receiving connection information from a server,

disconnection means for disconnecting from the server at least one of the parties who received the information, and

means for directly connecting the parties using the connection information.

18. Apparatus as claimed in claim 17, adapted for the playing of games on computer.

19. A connecting apparatus for enabling communication between at least two parties, said connecting apparatus including:

a server connected with the two parties, said server receiving connection information from the two parties and communicating connection information to the two parties; and

means for establishing a communication link directly between a first party and a second party of the two parties, said connecting apparatus

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adapted to disconnect said server from the first party, whereby the second party connects directly with the first party so as to establish said communication link, said communication link being established after either one of the first and second parties have viewed a part of the phone number of the other one of the first and second parties.

DATED this 14th day of October, 1998
HEAD TO HEAD GAMES PTY. LTD.

WATERMARK PATENT & TRADEMARK ATTORNEYS
290 BURWOOD ROAD
HAWTHORN VICTORIA 3122
AUSTRALIA

RCS/SMM/SH DOC 3 AU2029395.Wpc

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Fig 1.

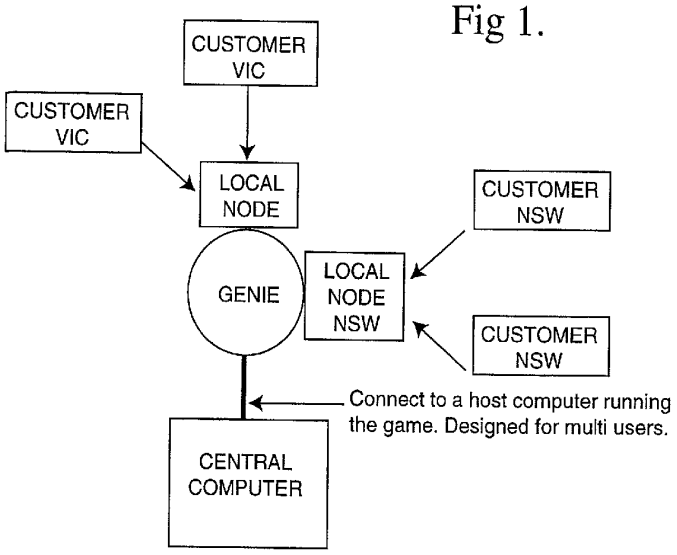
CUSTOMER VIC
CUSTOMER VIC
LOCAL NODE
CUSTOMER NSW
GENIE
LOCAL NODE NSW
CUSTOMER NSW
Connect to a host computer running the game. Designed for multi users.
CENTRAL COMPUTER

Fig 2.

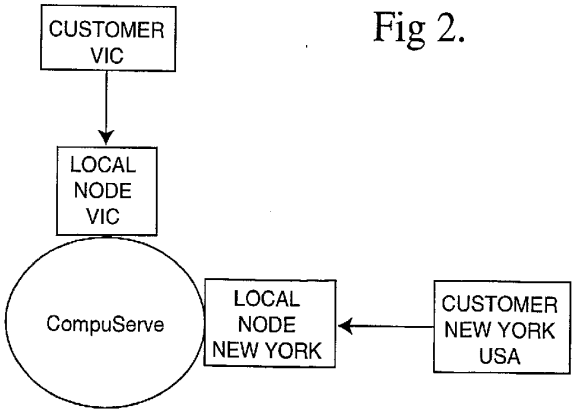
CUSTOMER VIC
LOCAL NODE VIC
CompuServe
LOCAL NODE NEW YORK
CUSTOMER NEW YORK USA

Fig 3.

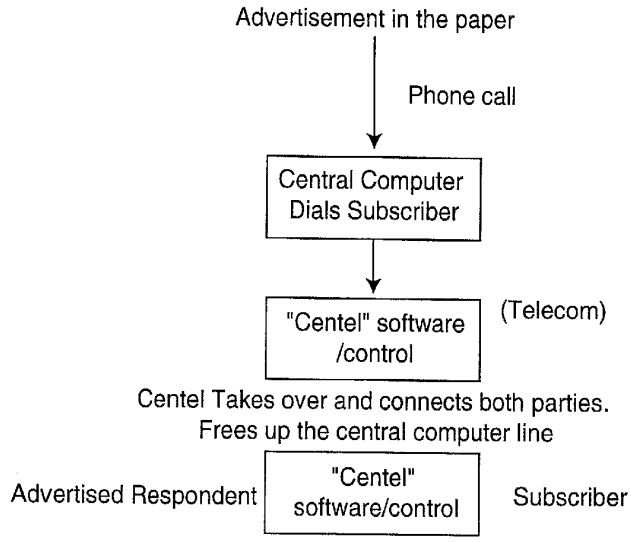
Advertisement in the paper
Phone call
Central Computer Dials Subscriber
"Centel" software /control
(Telecom)
Centel Takes over and connects both parties.
Frees up the central computer line
Advertised Respondent
"Centel" software/control
Subscriber

Fig 4.

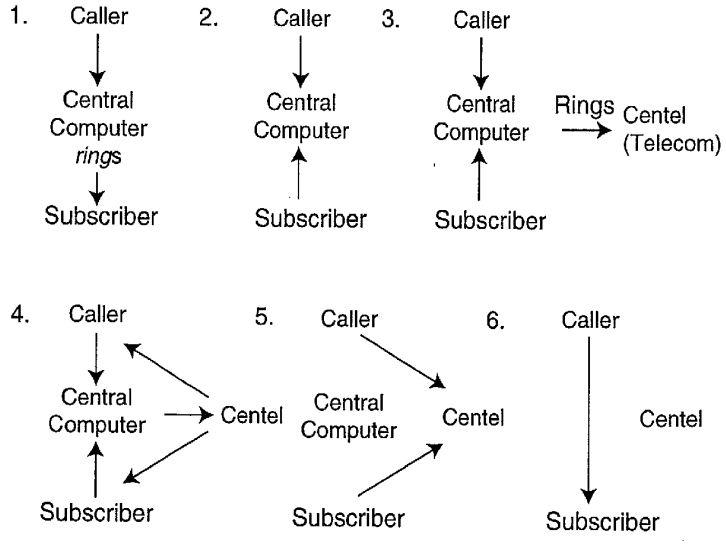
1. Caller
Central Computer rings
Subscriber
2. Caller
Central Computer
Subscriber
3. Caller
Central Computer
Rings
Centel (Telecom)
Subscriber
4. Caller
Central Computer
Centel
Subscriber
5. Caller
Central Computer
Centel
Subscriber
6. Caller
Centel
Subscriber

Fig 5.

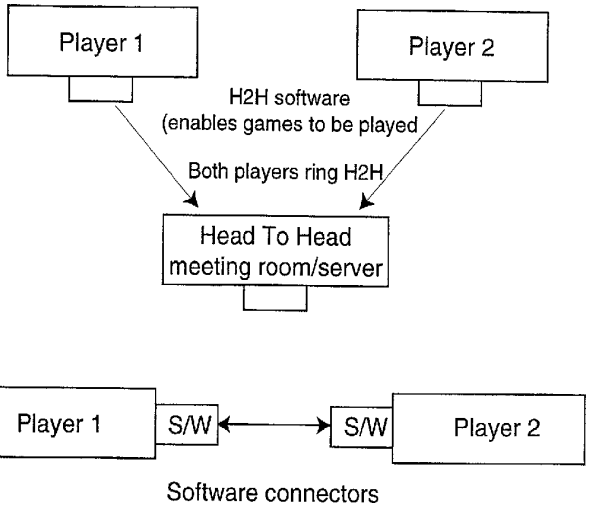

Fig 6a

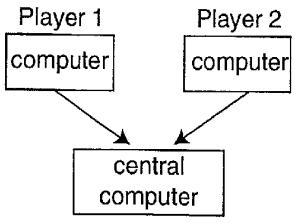

Fig 6b

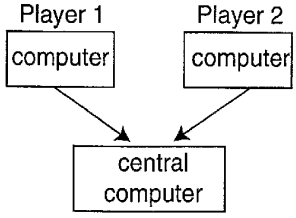

Fig 6c



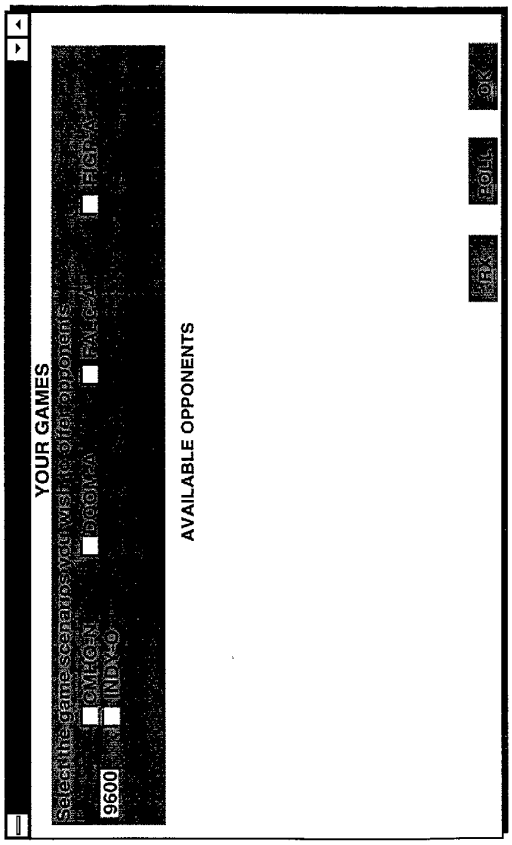

Fig 7.