69416

SPRUSON&FERGUSON

Australia

Patents Act 1990

Notice Of Entitlement

I, GUY CHATER

of 4/6 THE PARAGON, BLACKHEATH, LONDON SE3 0NY.

being authorised by John Charles Chater, Ian Chater and Guy Chater (hereinafter called the applicants), state the following:-

1. The applicants made application for an Australian Patent now numbered 61128/94.

2. The applicants are entitled to the invention of said application by virtue of the following:

   The applicants together with Martin David Keywood and Ian William Henley are the actual inventors of the invention and said Martin David Keywood and Ian William Henley assigned all their rights and interest in said invention in respect of Australia to the applicants.

3. The applicants are the applicants of the Great Britain Patent Application No. 9303998.0 filed on 26 February 1993.

DATED this 5 12 1997

IRN: 313886

Instructor Code: 058030

[N:\LIBM]10226.BFD

AU9461128

(12) PATENT ABRIDGMENT (11) Document No. AU-B-61128/94
(19) AUSTRALIAN PATENT OFFICE (10) Acceptance No. 694416

(54) Title
COMMUNICATION SYSTEM

International Patent Classification(s)
(51)[5] H04N 007/14

(21) Application No. : 61128/94 (22) Application Date : 25.02.94

(87) PCT Publication Number : WO94/19907

(30) Priority Data

(31) Number	(32) Date	(33) Country
9 03998	26.02.93	GB UNITED KINGDOM

(43) Publication Date : 14.09.94

(44) Publication Date of Accepted Application : 23.07.98

(71) Applicant(s)
JOHN CHARLES CHATER; IAN CHATER; GUY CHATER

(72) Inventor(s)
JOHN CHARLES CHATER; IAN CHATER; GUY CHATER; MARTIN DAVID KEYWOOD; IAN WILLIAM HENLEY

(74) Attorney or Agent
SPRUSON & FERGUSON , GPO Box 3898, SYDNEY NSW 2001

(56) Prior Art Documents
US 5018186
DE 4006172
GB 2223911

(57) Claim

1. A communication system for facilitating introductions comprising a plurality of terminals, means for recording a visual image of an individual at said terminal, means for storing said image and means for networking said image amongst other said terminals, images of individuals at other said terminals likewise being recorded, stored and networked, means enabling an individual to select an image from amongst those transmitted to his/her terminal and to indicate such selection to the terminal from which the selected image originated, and communication means controlled by the individual at the selected terminal enabling the individuals at the selecting and selected terminals to effect live communication with each other.

30. A method of establishing communication between persons wishing to be introduced comprising recording and storing a visual image of an individual inputted at an audio-visual terminal, storing corresponding images of other individuals inputted at other said terminals, networking the stored images amongst said terminals, selecting at a said terminal an image from amongst those transmitted to that terminal, indicating such selection to the terminal from which the selected image was inputted, and initiating under the control of the selected terminal live communication between the selecting and selected terminals.

OPI DATE 14/09/94 APPLN. ID 61128/94
AOJP DATE 17/11/94 PCT NUMBER PCT/GB94/00377

AU9461128

INT

(51) International Patent Classification 5 :
H04N 7/14

A1

(11) International Publication Number: WO 94/19907

(43) International Publication Date: 1 September 1994 (01.09.94)

(21) International Application Number: PCT/GB94/00377

(22) International Filing Date: 25 February 1994 (25.02.94)

(30) Priority Data:
9303998.0 26 February 1993 (26.02.93) GB

(71)(72) Applicants and Inventors: CHATER, John, Charles [GB/GB]; 4/6 The Paragon, Blackheath Village, London SE3 0NY (GB). CHATER, Ian [GB/GB]; 4/6 The Paragon, Blackheath Village, London SE3 0NY (GB). CHATER, Guy [GB/GB]; 4/6 The Paragon, Blackheath Village, London SE3 0NY (GB).

(72) Inventors; and .
(75) Inventors/Applicants (*for US only*): KEYWOOD, Martin, David [GB/GB]; 130 St Dunstans Road, Hammersmith, London W6 8RB (GB). HENLEY, Ian, William [GB/GB]; 29 Ventnor Drive, Totteridge, London N20 (GB).

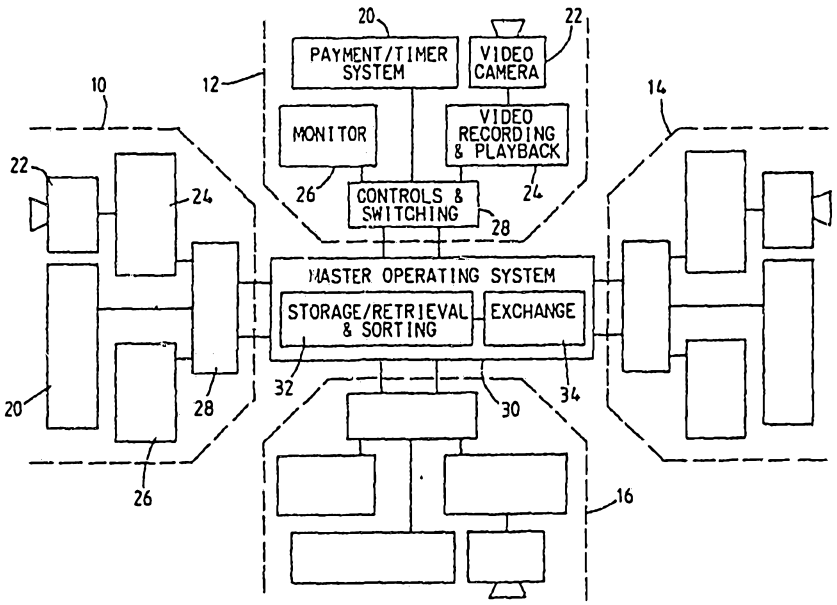
(74) Agent: MOIR, Michael, Christopher; Mathys & Squire, 10 Fleet Street, London EC4Y 1AY (GB).

(81) Designated States: AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB, GE, HU, JP, KG, KP, KR, KZ, LK, LU, LV, MD, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SK, TJ, UA, US, UZ, VN, European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG).

Published
With international search report.

694416

(54) Title: COMMUNICATION SYSTEM



(57) Abstract

A communication system for facilitating introductions comprising a plurality of terminals, recording means for recording a visual image of an individual at said terminal and for storing said image in a store together with corresponding images from other said terminals, networking means for networking images from said store amongst terminals from which the images do not originate, selecting means enabling said individual to select an image from amongst those transmitted to his/her terminal, indicating means to indicate such selection to the terminal from which the selected image originated, and communication means controlled by the individual at the selected terminal enabling the individuals at the selecting and selected terminals to communicate with each other.

COMMUNICATION SYSTEM

This invention relates to a communication system for facilitating introductions. Its primary purpose is for effecting social introductions between members of the opposite sex (dating) but it may also find applications for other purposes, for example at employment exchanges or job centres, particularly in circumstances where an employer intends to recruit a substantial number of staff and wishes to make a preliminary selection on a sounder basis than is possible from only written particulars of the candidates.

Video dating agencies are known in which a person seeking introductions subscribes to an agency and makes a short video of him/herself, which is then made available by the agency to other subscribers who have expressed an interest in the individual. Those who wish to be introduced then contact the agency, who puts the two parties in contact.

This known service has the disadvantage that it is an off-line procedure, so there is often a considerable delay between an individual registering with the agency and making a video, and receiving a response. The present invention has as an object the provision of a system in which the lead-time between registering and receiving a response from another individual is substantially reduced.

According to one aspect of the invention, there is provided a communication system for facilitating introductions comprising a plurality of terminals, means for recording a visual image of an individual at said terminal, means for storing said image and means for networking said image amongst other said terminals, images of individuals at other said terminals likewise being recorded, stored and networked, means enabling an individual to select an image from amongst those transmitted to his/her terminal and to indicate such selection to the terminal from which the selected image originated, and communication means controlled by the individual at the selected terminal enabling the individuals at the selecting and selected terminals to effect live communication with each other.

Preferably stored images are sent to a terminal only after a said recorded visual image originating at said terminal has been stored.

AUSTRALIAN PATENT OFFICE

The storing means may be configured to accept said image whilst simultaneously permitting the networking of other stored images.

Preferably, a recorded image from the selecting terminal to the selected terminal is transmitted as an indication of said selection. Preferably the live communication is audio-visual communication.

The recording means may be configured to record an audio-visual recording at the terminal, and to transfer the recording to the storing means for access by other terminals.

Alternatively the recording means may be configured to transfer data to form an audio visual recording to a said storing means remote from the terminal for access by other terminals. Alternatively the recording means may be configured to record an audio-visual recording at the terminal, the recording being stored at the terminal for access by other terminals.

The visual image may be accompanied by data regarding the individual.

The recorded image is a still image in the preferred embodiment, and may for example be a video freeze-frame or other still extracted from the audio-visual recording. For example, it may be selected directly from a camera image projected on the terminal screen.

Each terminal may comprise means for displaying simultaneously a plurality of the visual images transmitted thereto.

The audio-visual recording of the individual may be stored on videotape or in digital or other format.

The indicating means may be adapted to cause transmission of the visual image of the individual at the selecting terminal to the selected terminal together with an indication of interest.

The networking means may be adapted to network the visual image from a said terminal to other terminals in a defined geographical area.

Each terminal may comprise means for charging a fee for use of the system by said individual.

The system may comprise means which, when the user of a terminal logs-off controls the store to permit data relating to that individual to be erased or transferred

to a secondary storage means.

There may be a single store in which all said images of individuals at terminals are stored.

Alternatively, there may be a plurality of stores, each store communicating with at least one other store.

In a preferred embodiment each said image is initially stored at predetermined respective one of said stores.

Transmission between the elements of the system may be effected digitally.

The or each store may permit access to a particular audio-visual recording by a plurality of terminals at the same time.

The video recording may be streamed to the receiving terminal as a data stream.

The system may utilise a public ISDN telephone network eg., a cable network or other means of data networking.

The networking means may be controlled by the said selected terminal to permit direct communication via the ISDN between the selected and selecting terminal.

A said terminal may be a personal computer equipped with a VDU, a video camera, a microphone and a loudspeaker or earphone.

The system may comprise a plurality of geographically or otherwise physically separate stations each comprising at least one terminal, each terminal being screened and acoustically insulated its surroundings.

The invention also provides a method of establishing communication between persons wishing to be introduced comprising recording and storing a visual image of an individual inputted at an audio-visual terminal, storing corresponding images of other individuals inputted at other said terminals, networking the stored images amongst said terminals, selecting at a said terminal an image from amongst those transmitted to that terminal, indicating such selection to the terminal from which the selected image was inputted, and initiating under the control of the selected terminal live communication between the selecting and selected terminals.

Other preferred features of the various aspects of the invention, if not referred to above, are as set out in the

subordinate claims, which are deemed repeated here as consistory clauses.

The invention will now be described merely by way of example with reference to the accompanying drawings, wherein:

Figure 1 is a block diagram of a system according to the invention;

Figures 2 to 7 identify the components of the system of Figure 1 which

are utilised in successive operating modes;

Figure 8 shows another embodiment of the invention; and

Figures 9 and 10 show a further embodiment.

Referring to Figure 1, the system comprises a plurality of terminal stations 10,12,14,16 which are geographically spaced apart, say in neighbouring towns, or in different districts of a city. In a fully developed system there would be a network of such terminal stations throughout the country.

Each terminal station is intended for use by members of one sex at any one time. In each locality served by the system there are separate terminal stations for men and women, either in different buildings or perhaps in separate parts of the same building. To cater for variations in demand, each station, or discrete parts of each station may "change sex" by being re-designated at the controller 30 described hereafter.

Each terminal station comprises a number of terminals each in a separate booth screened and sound-proofed from neighbouring terminal booths. For convenience, only one such terminal is shown at each station 10,12,14,16.

Each terminal booth contains a bench, facing mirror, a timer 20 activated by a token or coin-freed apparatus or credit/charge card reader, a video camera and microphone 22, recording and playback equipment 24, a VDU monitor (CRT or LCD) 26, a loudspeaker or headphones and simple push-button controls and associated switching 28 as hereinafter described.

The terminals are connected to a networking controller 30 by conventional communication links suitable for video signal transmission, for example either through the telephone system, microwave links, or dedicated fibre-optic or other hard-wired circuits. The video signal may be digitised and compressed for transmission.

The controller 30 contains a store 32 for the storage and retrieval of still frame pictures as described hereafter, and exchange switching 34 for transmitting selections of the still pictures to opposite-sex terminals, the

selections being made for example on the basis of the geographical locations of the originating and receiving terminals.

A person making use of the system enters the booth in (say) station 12 (Figure 2) and accesses the terminal by inserting a token or card. Upon pressing a start button, instructions are displayed on the monitor

Press RECORD

Give your: First name

Age and sex

Occupation

District in which you live

The user's sex is requested because although it can be deduced from the terminal location in a segregated-sex station, this is not so for a single terminal as described hereafter.

The person then arranges him/herself in the mirror, perhaps rehearses first, and then records a short (eg. twenty-second) video. The components 22,24,26,28 of the system utilised at this stage are shown in bold in Figure 2. The video camera 22 is pre-focused to film a head-and-shoulders shot of the booth occupant and to provide an instant display thereof on the monitor whilst recording sound and picture in the equipment 24 for future playback.

Upon completion of recording the recording equipment 24 rewinds enabling the booth occupant to review his/her performance.

If not happy with the results he/she can re-record over the previous attempt until a satisfactory result is obtained. The occupant then selects a single still frame from the video which he/she considers the best for storage in the central store 32.

Referring now to Figure 3, the booth occupant presses a "transmit" button and his/her video recording and selected still frame are sent to the central store 32 and retained therein until the payment/timer system 20 switches off. The central store 32 sorts the still frames in its memory according to original

terminal station and transmits each frame to opposite-sex booths at neighbouring stations. Alternatively or in addition the booth occupant may specify stations to which he/she does or does not wish the frame to be sent.

If the store has sufficient installed capacity the system can also allow the video to be sent to the store and retained there, enabling faster access and review by opposite-sex terminals.

The still frames received at a terminal are displayed on the monitor 26 in a composite array or bitmap showing in this example nine frames each with an identifying reference number, the one originating from the terminal at station 12 above being indicated at 36 in the monitor 20 of station 14.

The booth occupant at station 12 likewise receives a bitmap of nine still frames on his/her monitor, as indicated in Figure 4. If none appeal, then further selections may be accessed by pressing a "more" button.

If the booth occupant at station 12 finds one of the still frames of interest, say that of the occupant at the illustrated booth at station 14, he/she selects that frame by keying the appropriate number and presses a "play" button which initiates replay of the video recording from which the selected still frame was taken, as shown in Figure 5. If having seen and heard the video recording the booth occupant at station 12 is no longer interested he/she can revert to further arrays of nine stills until an acceptable one is found.

Alternatively, if the booth 12 occupant finds the person in the video recording interesting, he/she indicates interest by pressing a "this is me" button which causes his/her video still to be displayed at that person's terminal, eg. at station 14 as shown in Figure 6, with a message or emphasis showing the sender's interest.

The video still is presented as a window 38, so as not to interrupt excessively the use of the screen by the person at station 14. Alternatively a marker may be shown on the screen inviting him/her to view the video still when convenient.

The person at station 14 can respond either by pressing a "busy" button if he/she is already talking to someone, or is just not interested, or by calling-up the booth 12 occupant's video recording. If interest is confirmed on seeing the recording, the booth 14 occupant presses a "talk" button, thereby establishing audio-visual contact with the person at booth 12, as shown in Figure 7. The parties are then free to converse as they wish until the time purchased through the timers 20 at either of the stations expires, or one party breaks the communication link by pressing the "MORE" button, which causes both the terminals to revert to the nine-image selection mode discussed with reference to Figure 4.

Figure 8 shows how the invention may be realised by the use of an ISDN (Integrated Services Digital Network) system.

The controller 30 of Figure 1 is constituted by a number of call-controller PCs 134 which in combination with an ISDN 135 perform the function of the exchange switching 34. One or more central file servers 132 act as the store 32. The PCs and servers are linked by a LAN hub 140. The stations 10,12,14,26,etc., include terminal PCs 142 to function as the controls and switching 28, monitor 26 and video recording and playback facility 24 of Figure 1 in combination with a video camera (not shown). High-quality recording, playback and communication are achieved by equipping the PCs 142 with MPEG record and playback cards, a British Telecommunications plc VC8000 video conferencing card for compressed audio visual and data transmission via the ISDN to the call controller PCs 134. MPEG is the Moving Pictures Expert Group's standard for digital compression of PAL video signals.

Connection between users via the public ISDN network provides sufficient data bandwidth to allow video conference calls to be made. The H320 series of standards that are applicable to this medium include a subset dealing with the compression of synchronised video and audio output. The terminal PCs 142 are fitted with video conferencing cards to permit this; the

VC8000 card is preferred amongst currently available cards. This card performs three functions: video overlay on to PC screen, video and data screen compression and decompression, and communications handling across the ISDN.

The VC8000 requires a PAL input which can be either the camera for live communication, or the MPEG stream converted back to PAL for a recorded sequence. It is preferred to store the recorded sequences in H320 format so that multiple transformations are not required. Whilst this cannot be achieved with a VC8000 card, it may be possible using a Telsys product (newly available in 1994) which provides H320 storage to disc using a server architecture. This would also enable the MPEG cards to be dispensed with.

The terminal stations 10,12,14,16 may each comprise a number of PCs 142, or some or all could have just a single PC 142'; such single terminals stations could find applications in outlets such as bars, restaurants, shops, etc.

A terminal may alternatively be provided by means of a videophone 144. In such cases the video recording is made at the master station by means of one of the call controller PCs 134 and servers 132.

Revenue collection by the system operator from terminal operators may be made automatically by arranging for access to the system to be achieved by dialling a premium-rate number (eg. 0898 numbers in the United Kingdom). Then a terminal is automatically billed by its' telephone service provider for time-on-line to the system. In such situations, or indeed generally if desired, the software for the terminals 142,142' may be downloaded from the controller PCs 134 via the ISDN or other public telephone network eg. by dialling a toll-free number (0800 in the UK).

Site servers 132 receive all of the stills and recordings for new live users by calls via the ISDN from terminal PCs 142 to the controller PCs 134. The user software in the terminal PCs holds the ISDN numbers of the controller PCs.

The LAN hub 140 uses a very high bandwidth backplane and allows a

large number of controller PCs to be provided, although limitations on the server hard disc access may require multiple servers to be provided to hold and present the user clips.

The servers 132 maintain and keep track of which users are viewing which composite bitmaps. As a new user joins or leaves the system the relevant composite bitmaps are updated centrally and then distributed by a short VC8000 data call to each of the receiving terminal PCs 142.

The MPEG record card at the terminal PC 142 is used to record the 20 second clip and to select the still image. When the still and recording are transferred to the server (where each 20 second recording requires 3.75 megabytes of disc space), the information transferred will include the ISDN number of the terminal 142 at which the new user is signing on to the system. This number is used to set up direct connections between the terminals of users who have agreed to speak to each other. However, a call re-direction facility is provided so that if a terminal operator, eg. a single terminal does not wish his ISDN number to be made known the connection is made via the controller PC 134.

When a user requests to view a recording, the controller PC 134 finds the clip on one of the servers 132 . The controller reads the MPEG sequence from the server and converts the stored sequence into PAL. The PAL output becomes the source for the VC8000 card which transmits the sequence to the user's terminal PC 142 as an H261 and G728 data stream.

When a session has been completed the user has the option of saving his/her still and recorded sequence for subsequent use, or by default it will be deleted.

Figure 9 shows a further development of the system in which the storage of video recordings and the compilation of bitmaps is performed at or in the locality of the terminal station at which they originate. The terminal PCs 142 of terminal station 10 are connected via LAN hub 140 to local controller PCs

134 and local servers 132, both of which are at or close by the terminal station location. Terminals 142 for men and women for a given neighbourhood which are located close to each other, eg. in separate parts of the same building, will share the same controller PCs and servers. Video recordings of users of the terminals 142 are stored in those servers. Terminal PCs 142 of terminal station 12 communicate via LAN 146 with controller PCs 134 and local server 132. The station 12 is shown as having fewer controller PCs and servers than station 10, to illustrate that different stations may have different installed capacities, depending on demand. Each LAN 146 can accommodate a server and five controller PCs 142. If more than five PCs 142 are to be serviced, then the LAN may be duplicated or resort may be had to the hub system shown for station 10. Single terminal stations 142',144 communicate with controller PCs 134 at one of the stations 10,12 via the ISDN 148.

The servers 132 communicate with each other via the ISDN network and exchange bitmaps. Each server (or group of servers at a single location) in fact communicates with the servers at its four closest neighbouring terminal stations, as shown in Figure 10.

In that figure "site 1" corresponds for example to terminal station 10 of Figure 9, "site 2" to station 12, "site 3" to station 13, and "site 4" to station 14. Each individual server creates and maintains its own composite bitmaps of users from the closest four sites.

When a new user starts a session the initial set of bitmaps he views are those from the four geographically closest sites. Should the user make use of the "More" control then the system presents images of people from a progressively wider geographical area. The system detects when the user is nearing the end of a set of images and automatically prepares the next set to view to ensure smooth continuation of the selection process. These images are mixed so that people from each of the four sites that make up an area are viewed at the same time.

In order to maximise the initial choice, three areas are available for immediate access during the initial viewing period. These bitmaps are collated from these area sites while the user is making his own video clip and selecting his chosen still. Other areas are progressively made available on demand.

The user effectively "ripples" out the search from the four closest sites onwards. Referring to Figure 10, the first set of bitmaps are those for Sites 2–5 following 6–9 and then 10–13 and so on. Once this level has been exhausted the user can move out to the bitmap that covers the Sites 22–25 and then the ones connected to Site 7. The system monitors the user and keeps a minimum number of bitmaps prepared for viewing at all times. Each site composes and maintains only the composite bitmap for its four closest sites, and periodically updates the other sites of changes in the bitmap composition.

The user has the ability to move backwards as well as forwards among the composite bitmaps already presented.

In order that the storage capability for the recordings is as flexible as possible, and to allow multiple users to view the same video clip simultaneously, storage is by means of PC hard disc. The format of storage is preferably to compress the camera and audio streams into MPEG formats as used by CD–I units.

The recordings are kept on the local server and played to remote users via the controller PCs 134. Using this approach it is possible to service up to five simultaneous requests to view a single recording from within one site or, alternatively, five requests to view different recordings from within one site, or any intermediate combination.

Providing that all of the controller PCs are not busy, the time from requesting to view to receiving the requested recording should be only a few seconds. During this time the system moves the bitmap of the selected user to centre focus on the screen at the requesting terminal 142, enlarges the image and provides a brief introductory sequence "counting down" to the arrival of the

clip.

If a remote site is temporarily unable to play the requested clip because all its controller PCs 134 are busy, the user can choose to wait or continue and select an alternative. The system can if requested play the original choice when it becomes available.

The method of use of the systems shown in Figures 8, 9 and 10 is basically the following. Although this sequence is described in the context of a terminal at a dedicated multi-terminal station, it also applies to a single terminal.

1. The user purchases sufficient credits for a session from a machine or cashier and inserts either one of these or a credit card into the booth.

2. The user moves PC 142 out of wait state and receives a promotional and instructional video message.

3. New users must enter their name and sex. Regular users may obtain a system generated PIN (personal identification number).

4. The user is then offered the opportunity to record a video clip of a maximum length of 20 seconds by using simple record, stop, play and rewind commands. A record, review re-record cycle can occur at this point.

5. Once the sequence has been saved in the PC 142, the user is prompted to capture a still image which will be the one used by the system to show the user at other sites. Again there can be simple commands and a capture, review and capture cycle until the user is satisfied.

6. Regular users of the system may wish to save their introduction sequence which when the user signs-off can be transferred to a secondary store (eg. another server, not shown in the figures). The user may subsequently access it by using his/her system generated PIN. The default case will be to erase the sequence following a declined option to store.

7. The still is then transferred to the server 132 and transmitted to all the other sites that are currently viewing bitmaps from the site.

8. The user is presented with bitmaps of the users from the nearest four sites. The bitmaps are presented such that users from all of the four sites are mixed on any one screen. A simple "More" command enables the user to view further sets of bitmaps. As the user continues to view bitmaps the geographical spread of the search will widen. The system automatically detects when sets of bitmaps have been completed and cue up further sets in advance.

9. The user selects a remote user whose clip he/she wishes to view by using the keyboard or mouse. The system informs the user that the request to view the clip has been received and the selected bitmap is enlarged and given centre focus.

10. The remote users clip is then viewed by the user who then has the choice of attempting to present his/her own still or going back to the bitmap.

11. If the user wishes to present his still, the remote (selected) user is presented with a flashing image of the selecting user, who is informed that the image is flashing at the remote end.

12. The remote user can then view the selecting user's clip or decline to do so. The user is informed of the outcome of this decision.

13. The remote user also has the option to bypass the clip review and go straight to live communication. If live communication is selected the remote user immediately appears live on the user's monitor and vice versa.

14. If the recorded sequence is reviewed by the remote user, another option is given when it completes either to go live or to reject the invited contact. The selecting user is informed if the outcome of this decision is to reject. Whilst the clip is being viewed the original user is still able to view the bitmap selection screens.

15. When the user's session is running out, a warning is given leaving sufficient time to input more credits.

16. When the session is complete the system erases all details of the user unless a selection is made to save those details.

CLAIMS:

1. A communication system for facilitating introductions comprising a plurality of terminals, means for recording a visual image of an individual at said terminal, means for storing said image and means for networking said image amongst other said terminals, images of individuals at other said terminals likewise being recorded, stored and networked, means enabling an individual to select an image from amongst those transmitted to his/her terminal and to indicate such selection to the terminal from which the selected image originated, and communication means controlled by the individual at the selected terminal enabling the individuals at the selecting and selected terminals to effect live communication with each other.

2. A system as claimed in claim 1 wherein stored images are sent to a terminal only after a said recorded visual image originating at said terminal has been stored.

3. A system as claimed in any preceding claim wherein the storing means is configured to accept said image whilst simultaneously permitting the networking of the other stored images.

4. A system as claimed in any preceding claim wherein a said image originating from the selecting terminal is transmitted to the selected terminal as an indication of selection.

5. A system as claimed in any preceding claim, wherein each terminal comprises means for displaying simultaneously a plurality of the said images transmitted thereto.

6. A system as claimed in any preceding claim wherein the live communication is audio–visual communication.

7. A system as claimed in claim 6 wherein each terminal has a video camera and a screen.

8. A system as claimed in any preceding claim wherein the recording means is configured to record an audio–visual recording at the terminal, and to transfer the recording to the storing means for access by other terminals.

9. A system as claimed in any of claims 1 to 7 wherein recording means is configured to transfer data to form an audio visual recording to a said storing means remote from the terminal for access by other terminals.

10. A system as claimed in any of claims 1 to 7 wherein the recording means is configured to record an audio-visual recording at the terminal, the recording being stored at the terminal for access by other terminals.

11. A system as claimed in claim 8, 9 or 10, configured to enable the individual at the selected terminal to review the recording of the individual at the selecting terminal before activating the communication means.

12. A system as claimed in claim 8, 9, 10 or 11, configured to enable an individual at a selecting terminal to review the recording of a person at a selected terminal before operating the indicating means.

13. A system as claimed in any of claims 8 to 12 configured to permit access to a particular recording by a plurality of terminals at the same time.

14. A system as claimed in claims 11, 12 or 13 wherein the recording is streamed to the receiving terminal as a data stream.

15. A system as claimed in any preceding claim, wherein the said image is a still image.

16. A system as claimed in claim 15 when dependent from claim 8, 9 or 10, wherein the said image is a still from the recording.

17. A system as claimed in any preceding claim wherein the terminals amongst which images are networked are limited to a defined geographical area.

18. A system as claimed in any preceding claim, comprising means for charging a fee for use of the system by a said individual.

19. A system as claimed in any preceding claim, comprising means which, when the user of a terminal logs-off, controls the store to permit data relating to that individual to be erased or transferred to a secondary storage means.

20. A system as claimed in any preceding claim, wherein there is a single store in which all said images of individuals at terminals are stored.

21. A system as claimed in any of claims 1 to 19, wherein there are a plurality of stores, each store communicating with at least one other store to exchange said images of individuals at terminals.

22. A system as claimed in claim 21, wherein each said image is initially stored at a predetermined respective one of said stores.

23. A system as claimed in any preceding claim wherein transmission between the elements of the system is effected digitally.

24. A system as claimed in claim 23 wherein the system utilises a public telephone network to effect said transmission.

25. A system as claimed in claim 23 wherein the networking means comprises a network of computers utilising a public telephone network.

26. A system as claimed in claim 24 or 25, wherein the networking means is controlled by the said selected terminal to permit direct communication via the telephone network between the selected and selecting terminal.

27. A system as claimed in any preceding claim, having a plurality of geographically or otherwise physically separate stations each comprising at least one said terminal, each terminal being screened and acoustically insulated from its surroundings.

28. A system as claimed in claim 6 or any claim dependent therefrom wherein a said terminal is a computer equipped with a screen, a video camera, a microphone and a loudspeaker or earphone, or is a video phone.

29. A system as claimed in any preceding claim, when used for facilitating introductions.

30. A method of establishing communication between persons wishing to be introduced comprising recording and storing a visual image of an individual inputted at an audio–visual terminal, storing corresponding images of other individuals inputted at other said terminals, networking the stored images amongst said terminals, selecting at a said terminal an image from amongst those transmitted to that terminal, indicating such selection to the terminal from which the selected image was inputted, and initiating under the control of the selected terminal live communication between the selecting and selected terminals.

31. A method as claimed in claim 30 comprising indicating such selection by sending to the selected terminal the stored image inputted at the selecting terminal.

32. A method as claimed in claim 30 or 31 comprising adding the said image from the first–mentioned terminal to a store when said store already contains said images from other said terminals and whilst said visual images are being networked.

33. A method as claimed in claim 30, 31 or 32 wherein a terminal is supplied with networked images only after the image from that terminal has been made available for networking.

34. A method as any of claims 30 to 33, wherein said selection is indicated from the selecting terminal only after that terminal has received an audio visual recording originating from the selected terminal.

35. A method as claimed in any of claims 30 to 34 comprising initiating live communication only after the selected terminal has been offered an audio visual recording originating from the selecting terminal.

36. A method as claimed in any of claims 30 to 35, comprising storing all of said images in a single store.

37. A method as claimed in any of claims 30 to 35 wherein storage of said images is distributed amongst a plurality of stores.

38. A method as claimed in claim 30 wherein each image is stored with an associated audio visual recording originating from the same terminal.

39. A method as claimed in claim 38 comprising erasing data relating to a user of a terminal from the store or transferring it to a secondary store when the user of the terminal logs off.

40. A method as claimed in claim 30 wherein the communication is audio-visual communication.

41. A method as claimed in claim 40 comprising recording an audio-visual recording by means of a video camera at the terminal, and storing the recording at the terminal, said recording then being accessible from other terminals.

42. A method as claimed in claim 40 comprising transferring data to form an audio-visual recording from a video camera at the terminal to a store remote from the terminal, said recording then being accessible from other terminals.

43. A method as claimed in claim 40 comprising recording an audio-visual by means of a video camera at the terminal and transferring the recording to a store remote from the terminal, said recording then being accessible from other terminals.

44. A method as claimed in claim 34, 35, 38, 41, 42 or 43 wherein the same audio-visual recording is accessed by a plurality of terminals at the same time.

45. A method as claimed in claim any of claims 34, 35, 38, 41, 42, 43 or 43 wherein the audio-visual recording is streamed to the receiving terminal.

46. A communication system substantially as described herein with reference to Figs. 1 to 7, Fig. 8, or Figs. 9 and 10 of the accompanying drawings.

DATED this Eighteenth Day of June 1998

John Charles Chater

Ian Chater

Guy Chater

Patent Attorneys for the Applicants

SPRUSON & FERGUSON

6/12.9/94

1/9

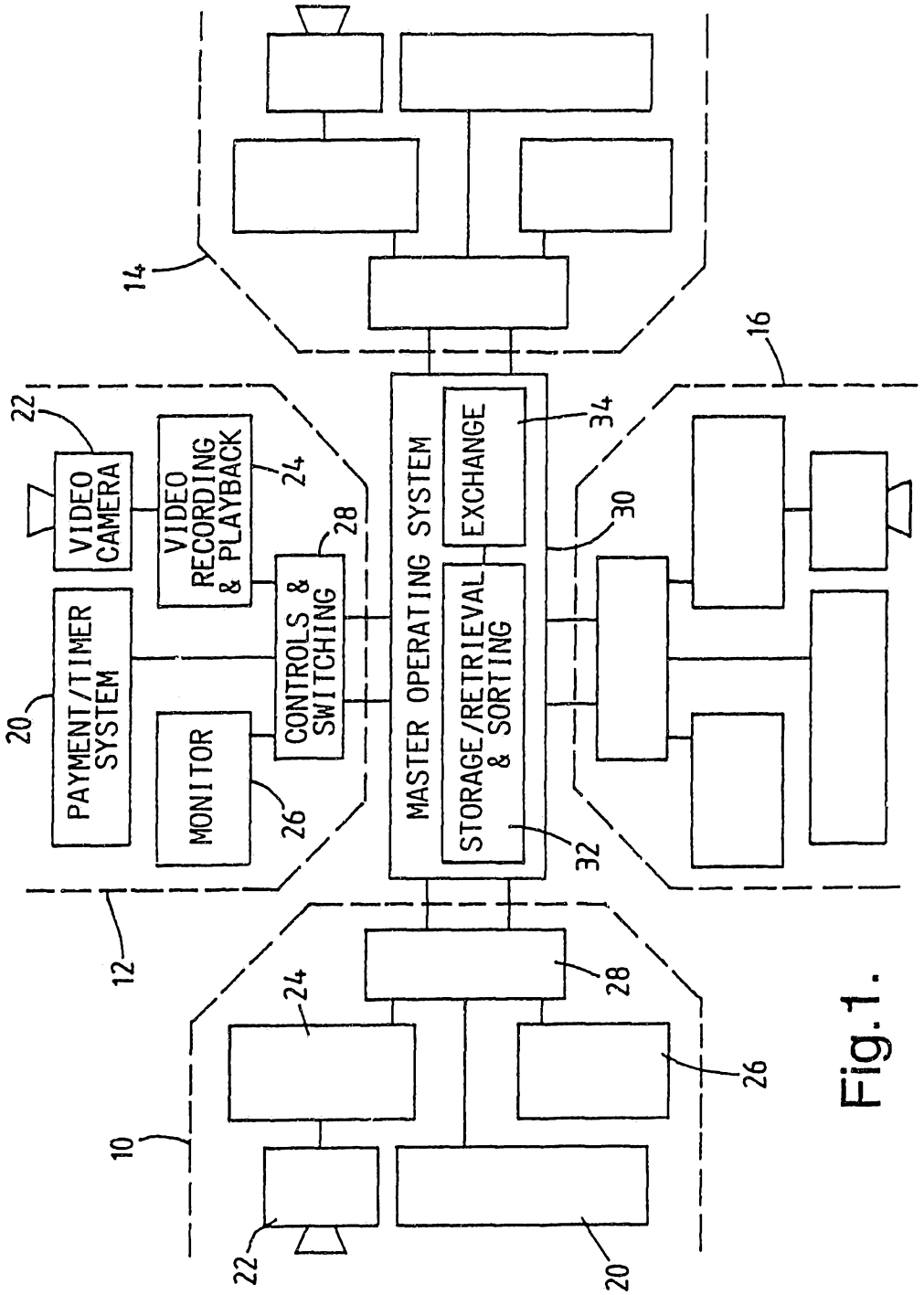


Fig.1.

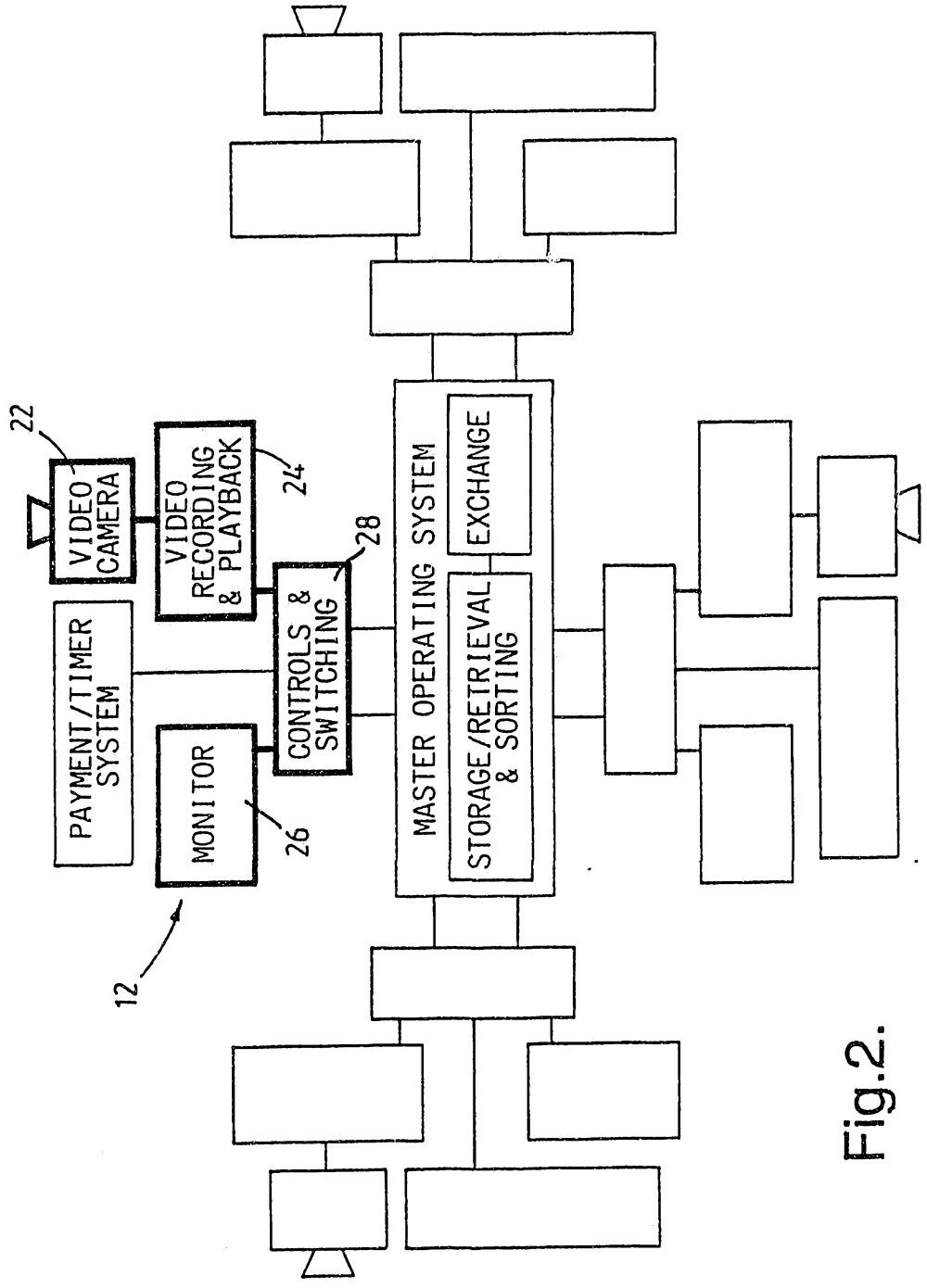

22
VIDEO CAMERA
VIDEO RECORDING & PLAYBACK
24
28
CONTROLS & SWITCHING
PAYMENT/TIMER SYSTEM
MONITOR
26
12
MASTER OPERATING SYSTEM
EXCHANGE
STORAGE/RETRIEVAL & SORTING

Fig.2.

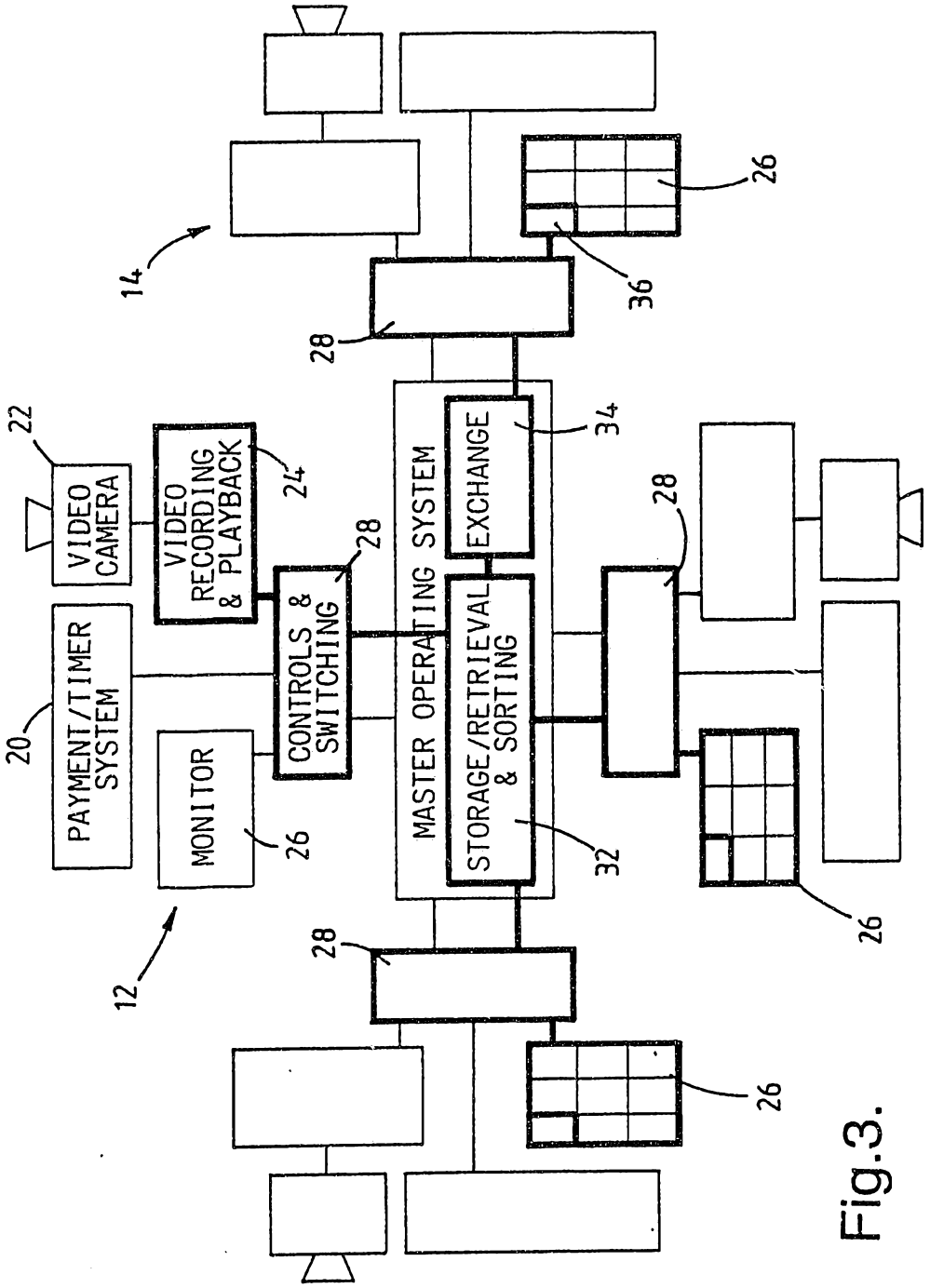

14
26
36
28
22
VIDEO CAMERA
VIDEO RECORDING & PLAYBACK
24
28
MASTER OPERATING SYSTEM
EXCHANGE
34
28
20
PAYMENT/TIMER SYSTEM
MONITOR
CONTROLS & SWITCHING
26
STORAGE/RETRIEVAL & SORTING
32
26
12
28
26

Fig.3.

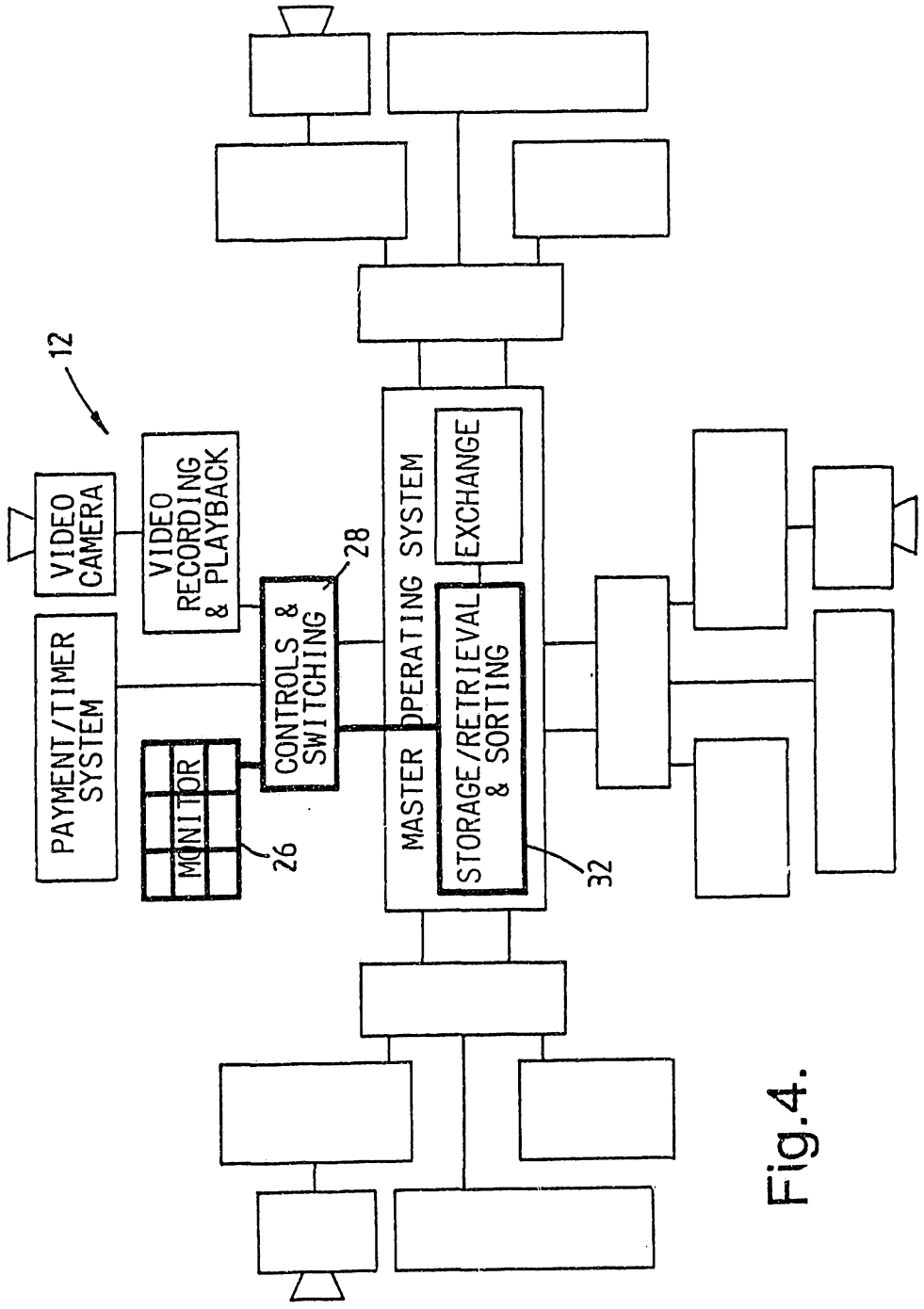

12
VIDEO CAMERA
VIDEO RECORDING & PLAYBACK
PAYMENT/TIMER SYSTEM
MONITOR
26
CONTROLS & SWITCHING
28
MASTER OPERATING SYSTEM
EXCHANGE
STORAGE/RETRIEVAL & SORTING
32

Fig.4.

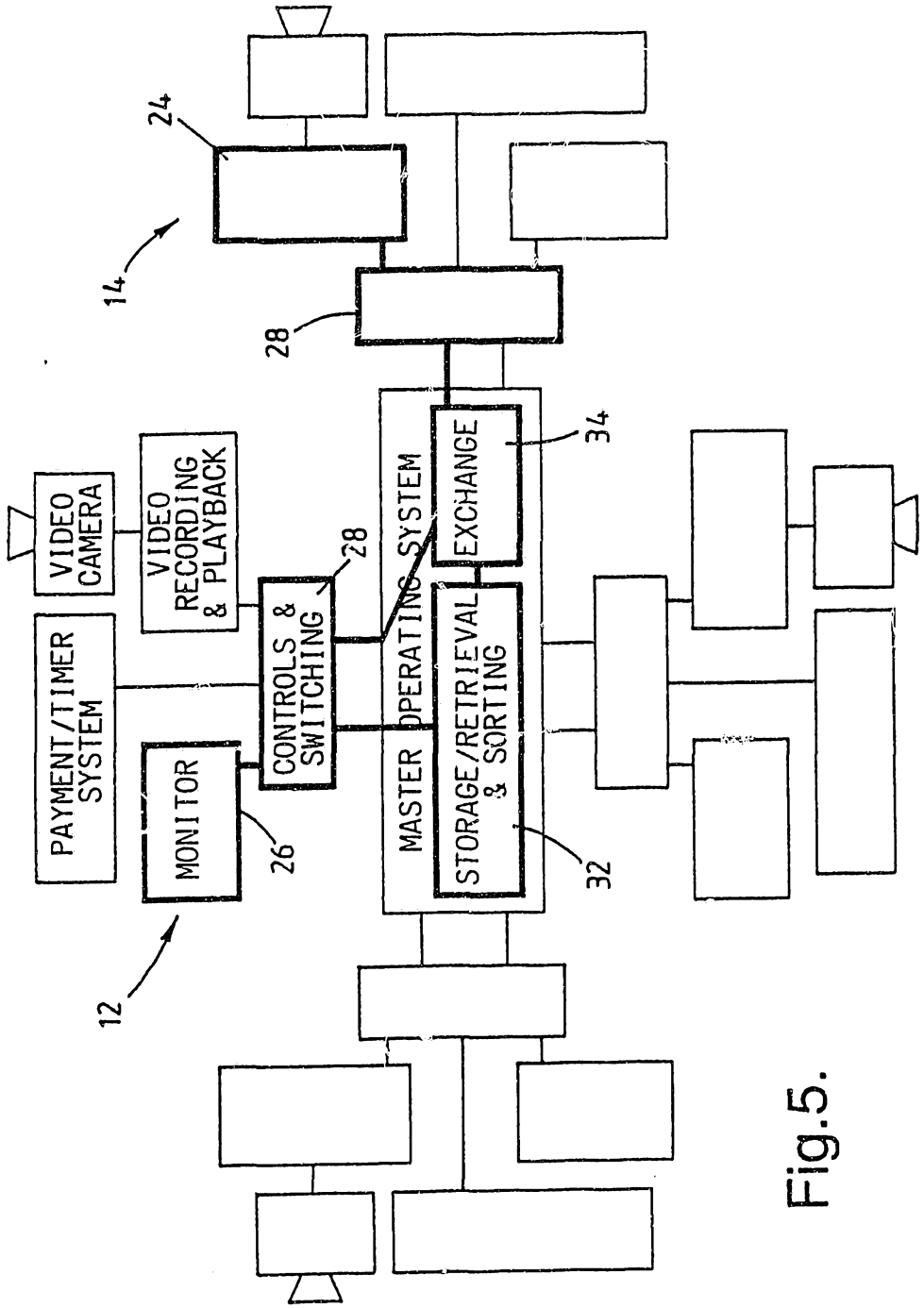

24
14
28
34
VIDEO CAMERA
VIDEO RECORDING & PLAYBACK
28
MASTER OPERATING SYSTEM
EXCHANGE
PAYMENT/TIMER SYSTEM
CONTROLS & SWITCHING
MONITOR
26
STORAGE/RETRIEVAL & SORTING
32
12

Fig.5.

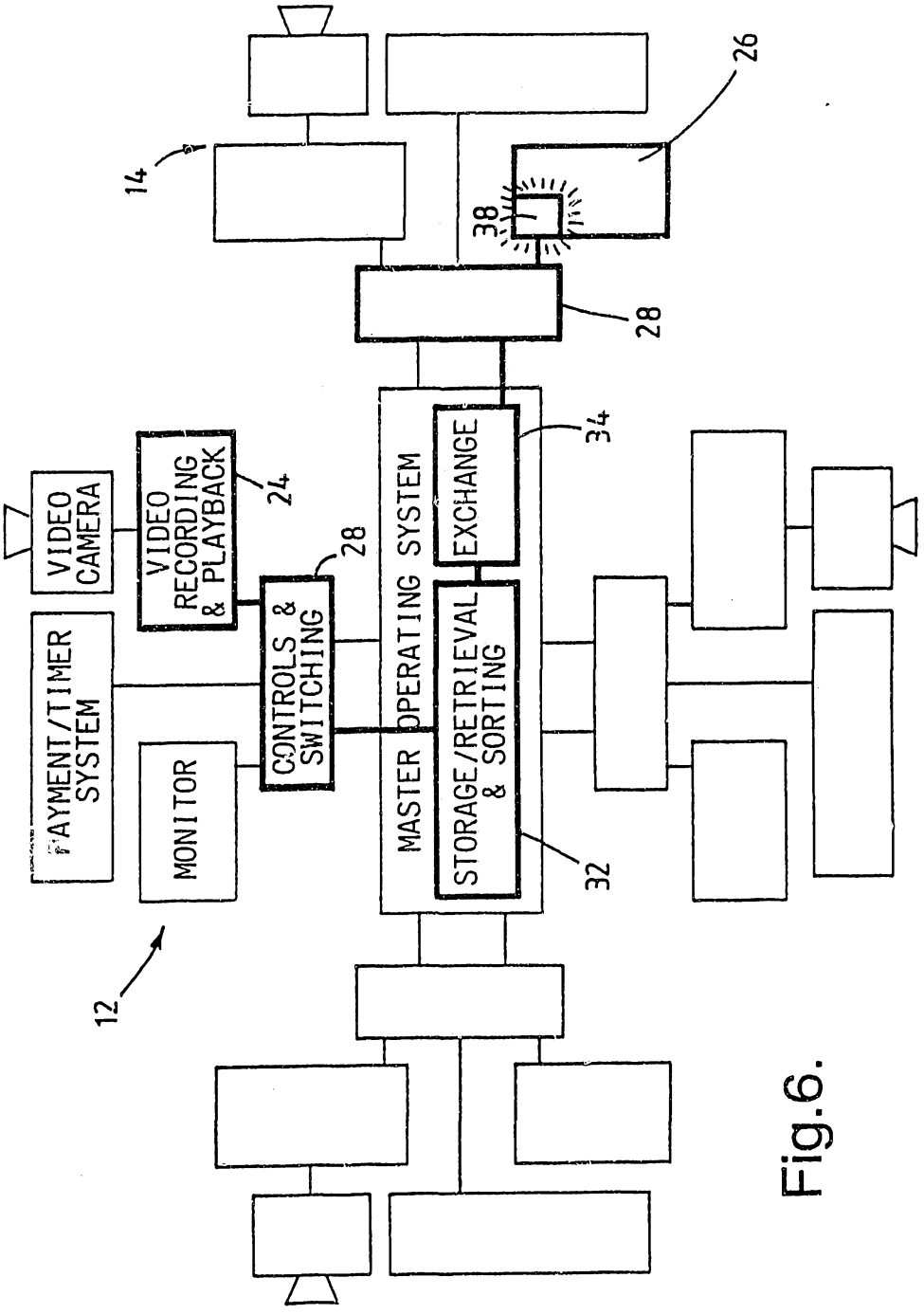

14
26
38
28
34
VIDEO CAMERA
VIDEO RECORDING & PLAYBACK
24
28
CONTROLS & SWITCHING
MASTER OPERATING SYSTEM
EXCHANGE
STORAGE/RETRIEVAL & SORTING
32
PAYMENT/TIMER SYSTEM
MONITOR
12

Fig.6.

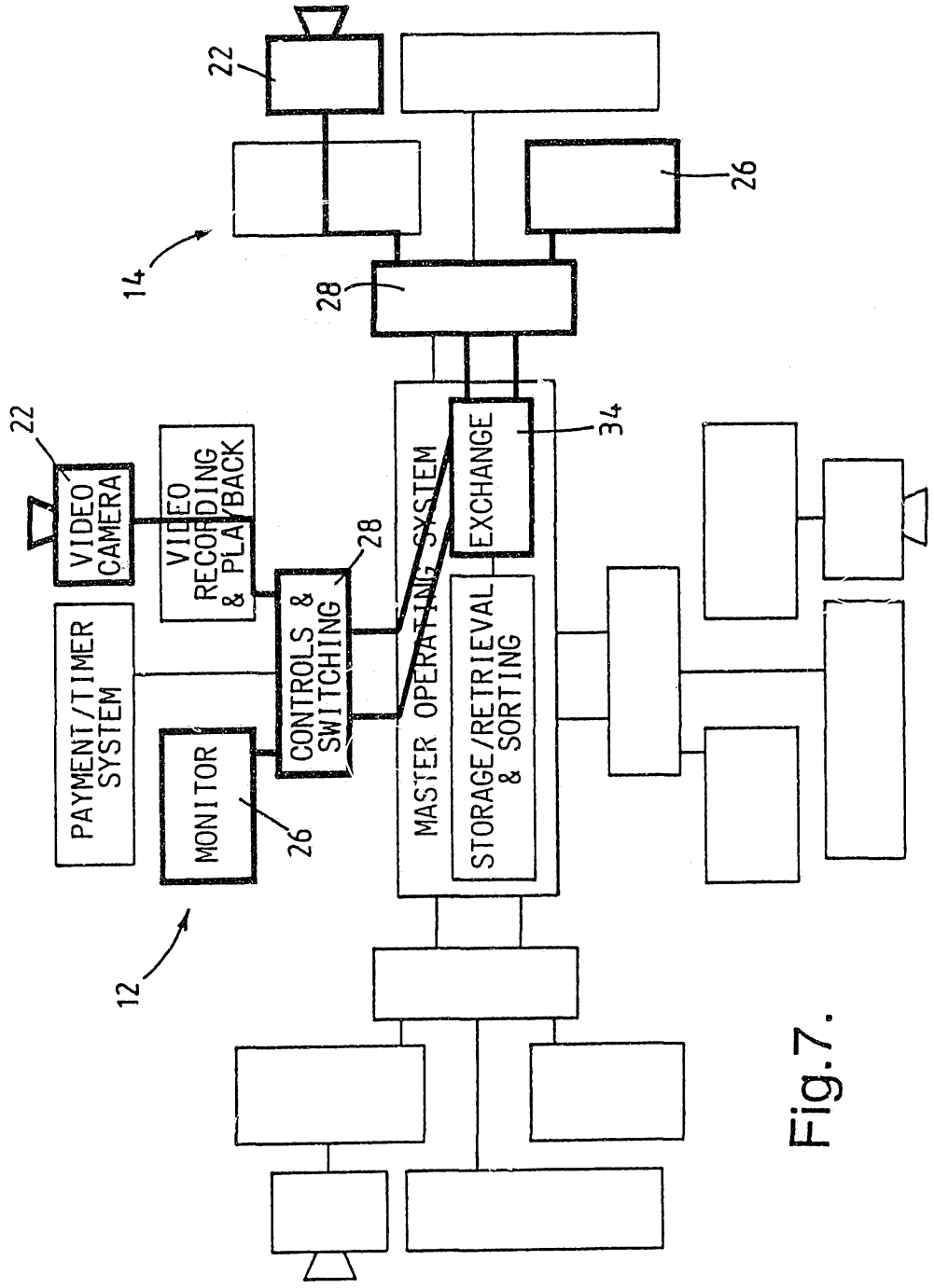

22
26
14
28
22
VIDEO CAMERA
VIDEO RECORDING & PLAYBACK
28
34
MASTER OPERATING SYSTEM
EXCHANGE
CONTROLS & SWITCHING
STORAGE/RETRIEVAL & SORTING
PAYMENT/TIMER SYSTEM
MONITOR
26
12

Fig.7.

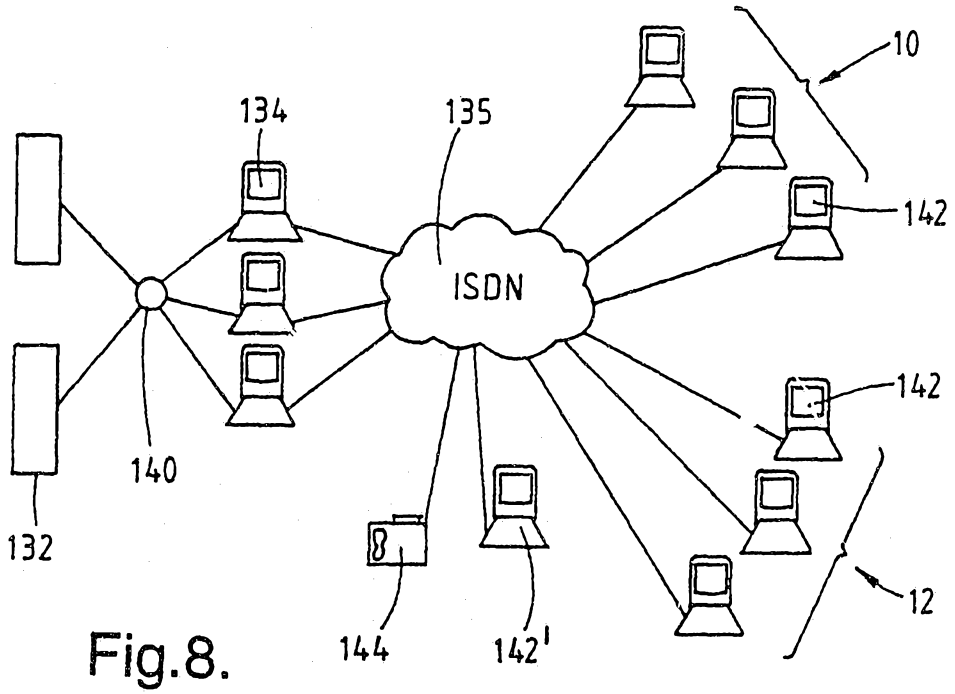

10
134
135
142
ISDN
142
140
132
144
142'
12

Fig.8.

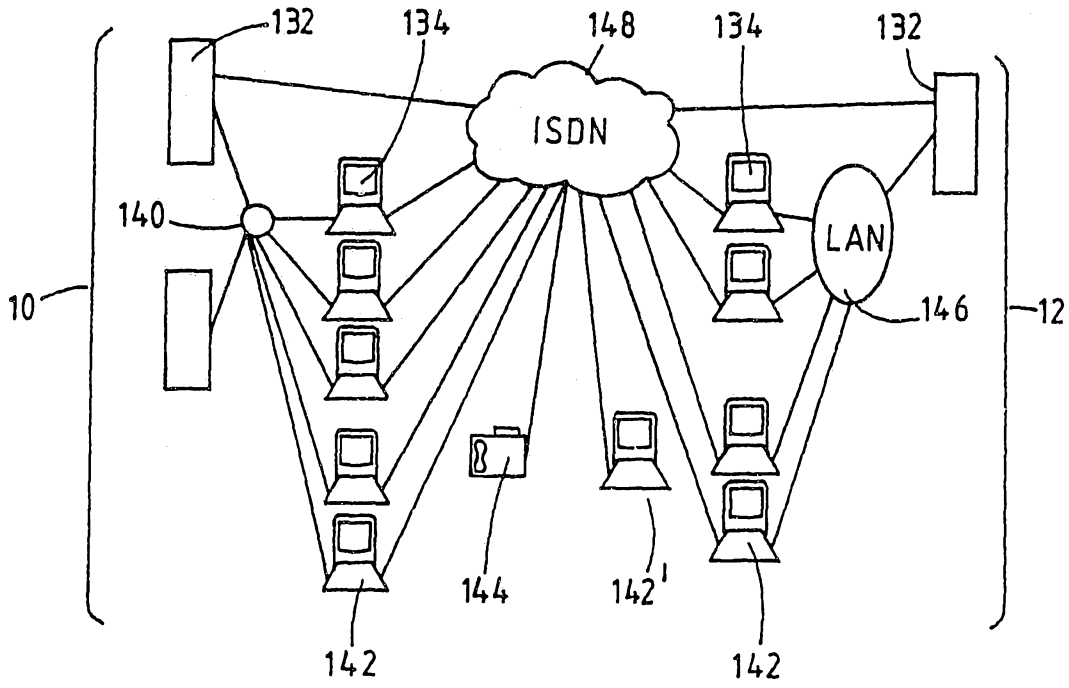

132
134
148
134
132
ISDN
140
LAN
10
146
12
144
142'
142
142

Fig.9.

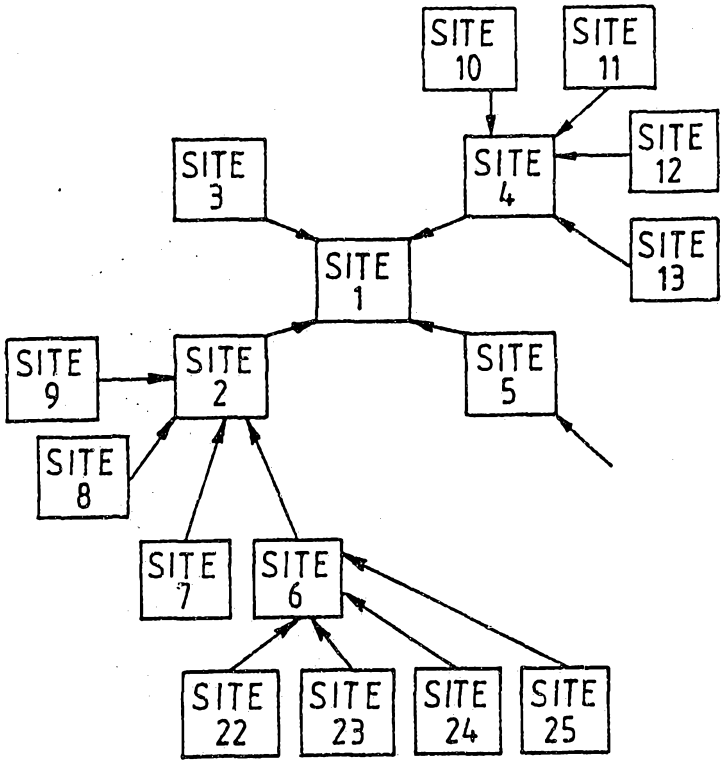

SITE 10
SITE 11
SITE 12
SITE 3
SITE 4
SITE 13
SITE 1
SITE 9
SITE 2
SITE 5
SITE 8
SITE 7
SITE 6
SITE 22
SITE 23
SITE 24
SITE 25

Fig.10.

INTERNATIONAL SEARCH REPORT

International application No.
PCT/GB 94/00377

A. CLASSIFICATION OF SUBJECT MATTER
IPC 5 H04N7/14

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)
IPC 5 H04N

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

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	TECHNISCHE MITTEILUNGEN PTT vol. 69, no. 3 , 1991 , SCHWEITZ pages 95 - 109 U. HALLER 'BASCOM - EIN PILOTNETZ DER PTT FÜR BREITBANDKOMMUNIKATION' see the whole document ---	1-19
A	6TH WORLD TELECOMMUNICATION FORUM PART 2 TECHNICAL SYMPOSIUM vol. 1 , 1991 , GENEVA SWITZERLAND pages 55 - 59 M. HASE 'ADVANCED VIDEOPHONE SERVICE USING SYNCHRONIZED VIDEO FILING TERMINALS - TELEWINDOW SHOPPING SYSTEM' see the whole document --- -/--	1-19

[X] Further documents are listed in the continuation of box C.

[X] Patent family members are listed in 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 document 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 another 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
26 May 1994	10. 06. 94

Name and mailing address of the ISA	Authorized officer
European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax (+31-70) 340-3016	Machwirth, C

Form PCT/ISA/210 (second sheet) (July 1992)

INTERNATIONAL SEARCH REPORT

International application No.
PCT/GB 94/00377

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US,A,5 018 186 (KIMURA ET AL) 21 May 1991 see abstract; figure 1 see column 3, line 3 - column 4, line 44	1,3-8, 11-14, 18,19
A	DE,A,40 06 172 (GOLDSTAR CO.) 30 August 1990 see abstract; figures 1,3 see column 1, line 11 - column 2, line 29 see column 3, line 56 - column 4, line 16	1,3-8, 11-14, 18,19
A	GB,A,2 223 911 (HASHIMOTO CORPORATION) 18 April 1990 see abstract; figures 1,3 see page 2, line 14 - page 6, line 13	1,3-8, 11-14, 18,19
A	GB,A,2 206 465 (SONY CORPORATION) 5 January 1989 see abstract; figure 6 see page 7, line 29 - page 14, line 18	1,3-8, 11-14, 18,19
A	EP,A,0 320 828 (MITSUBISHI DENKI KABUSHIKI KAISHA) 21 June 1989 see abstract; figures 1,7,10,11 see column 10, line 1 - column 14, line 49	1
A	EP,A,0 303 322 (HOUTMAN) 15 February 1989 see abstract; figures 1-4 see column 2, line 30 - column 6, line 32	1

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.
PCT/GB 94/00377

Patent document cited in search report	Publication date	Patent family member(s)		Publication date
US-A-5018186	21-05-91	JP-A-	1269382	26-10-89
		JP-A-	1270472	27-10-89
		JP-A-	1276893	07-11-89
DE-A-4006172	30-08-90	NONE		
GB-A-2223911	18-04-90	JP-A-	2105753	18-04-90
		US-A-	5046079	03-09-91
GB-A-2206465	05-01-89	JP-A-	1004185	09-01-89
		DE-A-	3821645	05-01-89
		FR-A-	2617356	30-12-88
		GB-A-	2211048	21-06-89
		US-A-	5136628	04-08-92
EP-A-0320828	21-06-89	JP-A-	1270473	27-10-89
		JP-A-	1270474	27-10-89
		JP-A-	1270475	27-10-89
		JP-A-	1160285	23-06-89
		US-A-	4962521	09-10-90
EP-A-0303322	15-02-89	NL-A-	8701838	01-03-89
		US-A-	4969042	06-11-90