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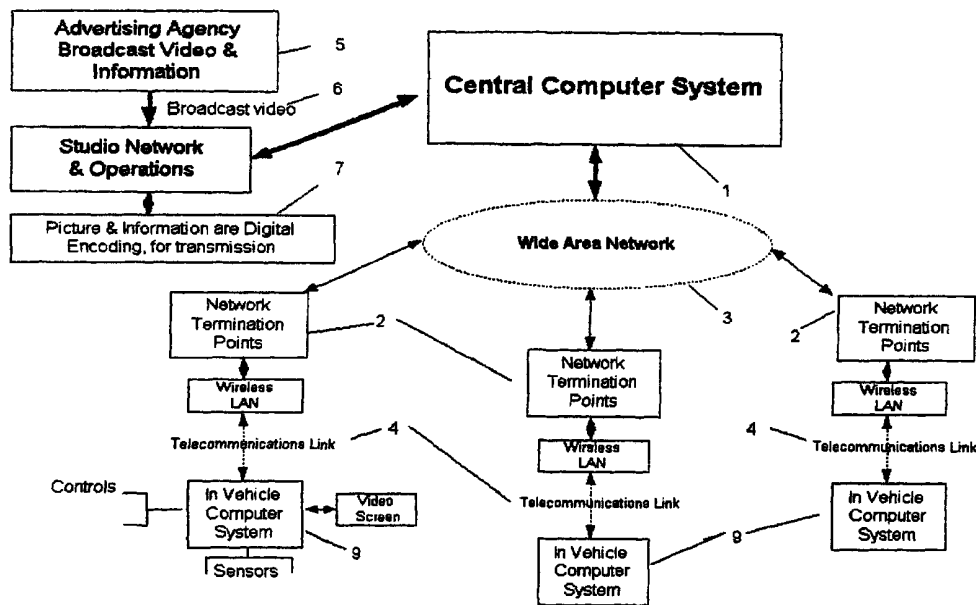
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For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: METHOD OF ADVERTISING



(57) Abstract: A method is disclosed which can compress, transmit and download data such as full motion video and CD quality audio in an automated method of advertising and purchasing over television or the Internet, where the data is transmitted from a first static remote location to one or more mobile locations such as a vehicle. The transmittal and/or receipt of such data can be initiated from the operational status of the vehicle. The content of the data transmitted can be automatically varied dependent on the physical location of the vehicle.



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TITLE: METHOD OF ADVERTISING

THIS INVENTION relates to the transmission of data between two or more distanced stations. In particular, the invention is directed to a method for compressing, transmitting and downloading data such as full motion video and CD quality audio and finds especial use as an automated method of advertising and purchasing over a telecommunication medium, especially a visual medium such as television or other visual display medium or the Internet, where the data is transmitted from a first, usually static, remote location to one or more, usually mobile, locations such as a vehicle. However, the invention is not to be regarded as limited to such applications and includes within its scope the transfer of any data between two or more distanced stations.

The advertising of goods and services over a medium such as television is now commonplace. Similarly, with the Internet now well known as an electronic medium and powerful communications tool the seamless system (World Wide Web) linking information on different computers, the general public can readily access the Internet for a wide variety of purposes, including to order numerous consumer goods and/or services online.

There are a number of disadvantages with these forms of telecommunication advertising and sales.

The first disadvantage is that, with television advertising, all advertising is programmed for a particular timeslot. Unless the public happen to be viewing the television at that particular time, they will not view the advertisement. This problem is somewhat reduced on the Internet as advertisements can be displayed continuously but, nevertheless, there is little control as to when any particular person views a particular advertisement.

A further disadvantage, applicable to either form of advertising, is that there is virtually no ready means by which such advertising can be viewed while traveling in a train, bus, taxi, plane, etc. In this regard, although vehicles can be equipped with television receivers, the above-mentioned disadvantages remain of only receiving a particular advertisement in a particular timeslot.

5 This problem may be partially resolved by placing the advertisements on an audio or video tape for playback on a device positioned in the vehicle. However, there remain limitations - for example, the advertisements are limited to those recorded on the tape and thus cannot be changed quickly; even if a number of pre-recorded tapes are present, it is not always convenient for the
10 operator of the vehicle to change a tape, especially while the vehicle is in motion.

Similarly, accessing the Internet while actually traveling is not usually convenient.

15 The prior techniques overall are thus inadequate and/or cumbersome for advertising and subsequent purchases over a telecommunication medium should the person be traveling in a vehicle at the time he/she desires to purchase.

It is a general object of the present invention to overcome, or at least ameliorate, one or more of the above problems and/or disadvantages.

20 In a first aspect of the present invention, there is provided a method of transmitting data over a telecommunication medium for a person to receive said data at a distanced station, said method including:

providing a source of said data remote from said distanced station;

transmitting said data over a telecommunication medium;

providing a receiver at said distanced station;

providing a broadcast means at said distanced station to broadcast said data; and

providing a controlling means to control sequencing and/or broadcast of said data.

5

Preferably, said distanced station is a mobile station.

Preferably, said mobile station is a vehicle such as a train, bus, taxi, boat, plane or other form of transport.

Preferably said telecommunication medium is selected from a cellular or "wireless" telephone network.

10

Preferably, said data is compressed and transmitted as digital data.

Preferably, said receiver is a computer located at said distanced station which stores received said data on a mini disc drive and then replayed on said broadcast means.

15

Preferably, said broadcast means is a visual display means.

Preferably said visual display means is a video display unit.

Preferably, transmittal of said data and receipt by said receiver can be controlled by said controlling means to be received by a single recipient, or to

a targeted select group of recipients, or to any number of parties who have access to a said receiver.

Preferably, said controlling means determines said sequencing and/or broadcast of said data dependent on location of said distanced station.

5 When said distanced station is a mobile station, preferably, activation of said controlling means is by the electrical system of said mobile station.

Preferably, said activation of said controlling means is undertaken without direct intervention by a driver of said mobile station.

When said distanced station is a mobile station, preferably, global positioning satellite technology is used to determine said location of said mobile station.

10 Preferably, said source of data is a dedicated source of data.

Preferably, said data is advertising material.

Optionally, when the method of the present invention is used as an advertising medium, said method includes a secure facility for said person to purchase goods or services displayed on said display means.

15 Preferably, said facility is a transaction device as described in the International Patent Application entitled SECURE TRANSACTION AND TERMINAL THEREFOR lodged in the name of SECURECOM LTD, the entire contents of which are incorporated herein by reference.

20 More preferably, said facility includes a validation means whereby positive identification of said person can be made.

Preferably, said validation means includes biometric data of said person.

More preferably, said validation means includes only a part of said biometric data together with a date and time stamp.

Most preferably, said validation means is a code transmitted to the vendor which is not calculated in any conventional manner; any unauthorized user who intercepts that information only receives a coded version of the biometric data which cannot be used for a later, fraudulent, transaction.

A further option of the present invention is the transmission of an onscreen overlay of real time data such as stock market information, news and weather reports.

An overview of a preferred embodiment of the present invention will now be described with reference to the accompanying FIGS. 1 to 4, wherein:

FIG.1 is a diagrammatic representation of how advertising material is obtained and transmitted according to the present invention for viewing in a vehicle such as a taxi;

FIG. 2 is a diagrammatic representation of how the advertising material transmitted according to FIG. 1 is received and viewed in a taxi; and

FIGS. 3 and 4 are diagrammatic representations of a procedure whereby the operational status of a vehicle such as a taxi is monitored to determine whether advertising material should be displayed, or changed, or the display unit shut down until a predetermined operational status of the vehicle is reached.

FIG. 1 illustrates the overall configuration of the present invention whereby a central computer system (CCS) (1) is connected to a multitude of Network Termination Points (NTP) (2) via a Wide Area Network (3). Each NTP (2) is then connected to a respective in-vehicle computer system (9) via a telecommunications link (4). The telecommunications link (4) may be a cellular telephone system, a wireless radio communications system or a hard wired connection. The CCS (1) stores in a database all of the in-vehicle system status, for each in-vehicle system (9) which is configured to be in the network. In addition, the CCS (1) stores the usage data from each in-vehicle system (9) for later retrieval, reporting and for financial transactions such as invoicing for advertising time.

Video files, containing advertisements and/or other information to be broadcasted to a vehicle(s), are supplied from an advertising agency (5) on any appropriate form of electronic media (6), including tape, cassette or digital video, which may be transmitted to the CCS (1) as a computer file, or stored on a disk, compact disk or other storage device. A facility of the CCS (1) converts the received advertisements and/or other information to a compressed digital file (7) using means such as MPEG, Wavelet or other known in the art digital compression and conversion techniques. This compressed digital file (7) is given a unique identifier and then stored by the CCS (1), for later forwarding to the in-vehicle computer (9). CCS (1) also includes a database which is programmed with the identification of each compressed video file (7), details of each NTP (2) and of each in-vehicle computer system (9).

Instructions on which advertisement is to be displayed, the identity of the vehicle(s) to receive the advertisement and the time(s) and date(s) for transmission of the advertisement are provided by the advertising agency (5). The CCS (1) then transmits the compressed video file (7) to the NTP (2) in

accordance with this preset time/date schedule. The NTP (2) then stores the compressed video file (7), in preparation for downloading to the in-vehicle computer system (9).

5 With reference to FIGS. 2 and 3, each vehicle to receive the advertisements is equipped with a computer system (9), data storage device (12), video screen (13), vehicle management system (14), power supply (15), global positioning system (GPS) (10), telecommunications system (16), an electronic funds point of sale terminal (19) and door-sensing switches (31).

10 The storage device (12), which is either a disk drive or an electronic storage device, contains the start-up sequence for the in-vehicle computer (9) which includes loading the operating program to begin transmission of the advertisements.

The GPS (10) provides a continual output of geographical location data of the vehicle to the computer (9).

15 The video screen (13) includes touch screen inputs, so that a system user or vehicle passenger can enter commands in response to prompts or display buttons on the video screen (13). Optionally, the display of the screen (13) can be split into various segments, which can include moving display banners across the top, bottom, or any part of the video screen, such options being readily known in the art.

20 The electronic funds transfer point of sale terminal (19) enables a passenger in the vehicle to make purchases or order goods and services, in response to the display of advertising on the video screen (13). Payment can be made by any combination of credit cards or debit cards of a magnetic stripe type, or by

using electronic smart cards which store the user's account and identification details.

5 The door-sensing switches (31) detect the open or closed position of the vehicle doors. When a door is opened, if the audio has been previously muted, or the video has been previously stopped, by the operation of buttons (17) and/or (18), the vehicle management system (14) sends a signal (37) to the computer (9). This signal (37) initiates resumption of the programmed sequence of advertisements to the video display screen (13) and the audio is be returned to its preset volume level.

10 Each vehicle also includes control buttons (17) and (18) to control the audio and video inputs respectively. These controls (17) and (18) can be located in either the driver's compartment, the passenger compartment, or both of the vehicle. When button (17) is pressed, the audio is muted. When button (18) is pressed, the video display is stopped and a static screen display remains on the video screen (13). If button (17) is pressed after the audio has been
15 previously muted, then the audio returns to its preset volume level. If button (18) is pressed after the video screen (13) has previously been stopped, then the display of advertising material re-commences from the next / last advertisement held in the stored data matrix of CCS (1).

20 In use (FIGS. 3 and 4), the vehicle management system (14) detects the starting (21) of the vehicle's engine and applies a delay (22) of about 60 seconds to the initial start up sequence of the computer system (9). On expiration of the delay (22), if the vehicle's engine is still running, the vehicle management system (14) initiates the start-up sequence of the computer system (9) by providing a signal (24) to an input port (26).

The communications link is established and a series of handshake messages are sent between the NTP (2) and the in-vehicle computer system (9).

5 The in-vehicle computer system (9) then begins a sequence of data transmissions with the NTP (2) which includes transmitting its identity to the NTP (2) and the NTP (2) confirming the identity of the in-vehicle computer system (9) from the matrix obtained from CCS (1). In addition, the initial communications sequence includes the transmission of status information about the in-vehicle equipment. The in-vehicle computer system (9) will up-
load data from its stored tables, which can include the status of the systems in the vehicle, together with usage data on the operation of the in vehicle
10 system, details of the vehicle and advertising run times and dates. The NTP (2) then checks its status table for this particular vehicle's schedule of advertising and other data tables, which includes any control sequences. If there is no additional data to be downloaded to the in-vehicle equipment, then an acknowledgment message is sent to the in-vehicle equipment to confirm
15 that the next sequence of up-loading can commence.

By cross referencing the GPS data with the identity matrix for the compressed video files (7), the schedule of advertisements can be altered, depending on the vehicle's current location and direction of travel. For example, if the vehicle is in a location popular for the provision of certain wares, the sequence of
20 advertising material transmitted is automatically adjusted to advertise such wares when the vehicle nears, and/or, enters that location. If an advertisement is displayed in direct response to the GPS location data, on completion of that advertisement, the stored sequence of advertising continues from the next advertisement in the stored matrix.

25 With particular reference to FIG. 4, if the vehicle ignition (41) is switched from the on position (42) to the off position (43), the vehicle management system

(14) sends a signal (44) to the computer (9) to indicate that the shut down sequence is to commence. The vehicle management system (14) waits for a preset delay period (45), then, if the vehicle's ignition switch is still in the off position (43), as signaled by the vehicle management system (14), the computer shutdown sequence commences. On completion of both the data up-load and the data down load sequences, the NTP (2) sends a message to the in-vehicle computer system (9) to shut down the communications link. On completion of the shut down sequence, the computer (9) is de-powered.

It will be appreciated that the above described embodiments are only exemplification of the various aspects of the present invention and that modifications and alterations can be made thereto without departing from the inventive concept as defined in the following claims. For example:

- (a) the telecommunication medium can be any combination of mobile, satellite, microwave, wireless or hard wire network;
- (b) the display means can be a traditional broad band receiver, or a visual display unit of a palmtop, laptop or desktop computer; and
- (c) the optional facility for the person to provide the validation and other information to the vendor can include multiple card slot assemblies, each of said assemblies being specific for an individual vendor.

CLAIMS

1. A method of transmitting data over a telecommunication medium for a person to receive said data at a distanced station, said method including:

5 providing a source of said data remote from said distanced station;

transmitting said data over a telecommunication medium;

providing a receiver at said distanced station;

providing a broadcast means at said distanced station to broadcast said data; and

10 providing a controlling means to control sequencing and/or broadcast of said data.

2. A method as defined in Claim 1, wherein said distanced station is a mobile station.

3. A method as defined in Claim 2, wherein said mobile station is a vehicle
15 such as a train, bus, taxi, boat, plane or other form of transport.

4. A method as defined in any one of Clams 1 to 3, wherein said telecommunication medium is selected from a cellular or "wireless" telephone network.

5. A method as defined in any one of Claims 1 to 4, wherein said data is compressed and transmitted as digital data.
6. A method as defined in any one of Claims 1 to 5, wherein said receiver is a computer located at said distanced station which stores received said data on a mini disc drive and then replayed on said broadcast means.
7. A method as defined in any one of Claims 1 to 6, wherein said broadcast means is a visual display means.
8. A method as defined in Claim 7, wherein said visual display means is a video display unit.
9. A method as defined in any one of Claims 1 to 8, wherein transmittal of said data and receipt by said receiver can be controlled by said controlling means to be received by a single recipient, or to a targeted select group of recipients, or to any number of parties who have access to a said receiver.
10. A method as defined in any one of Claims 1 to 9, wherein said controlling means determines said sequencing and/or broadcast of said data dependent on location of said distanced station.
11. A method as defined in any one of Claims 2 to 10, wherein activation of said controlling means is by the electrical system of said mobile station.
12. A method as defined in Claim 11, wherein said activation of said controlling means is undertaken without direct intervention by a driver of said mobile station.

13. A method as defined in Claim 11 or Claim 12, wherein global positioning satellite technology is used to determine said location of said mobile station.
14. A method as defined in any one of Claims 1 to 13, wherein said source of data is a dedicated source of data.
- 5 15. A method as defined in any one of Claims 1 to 14, wherein said data is advertising material.
16. A method as defined in any one of Claims 1 to 15 which further includes a secure facility for said person to purchase goods or services displayed on said display means.
- 10 17. A method as defined in Claim 16, wherein said facility includes a validation means whereby positive identification of said person can be made.
18. A method as defined in Claim 17, wherein said validation means includes biometric data of said person.
- 15 19. A method as defined Claim 18, wherein said validation means includes only a part of said biometric data together with a date and time stamp.
20. A method as defined in Claim 18, wherein said validation means includes:
 - 20 providing a unique description for said person, said unique description including biometric data and financial data of said person;

encrypting said unique description with an encryption key, said encryption key determined from said biometric data;

providing identification means adapted for carriage with said person, said identification means containing said unique description;

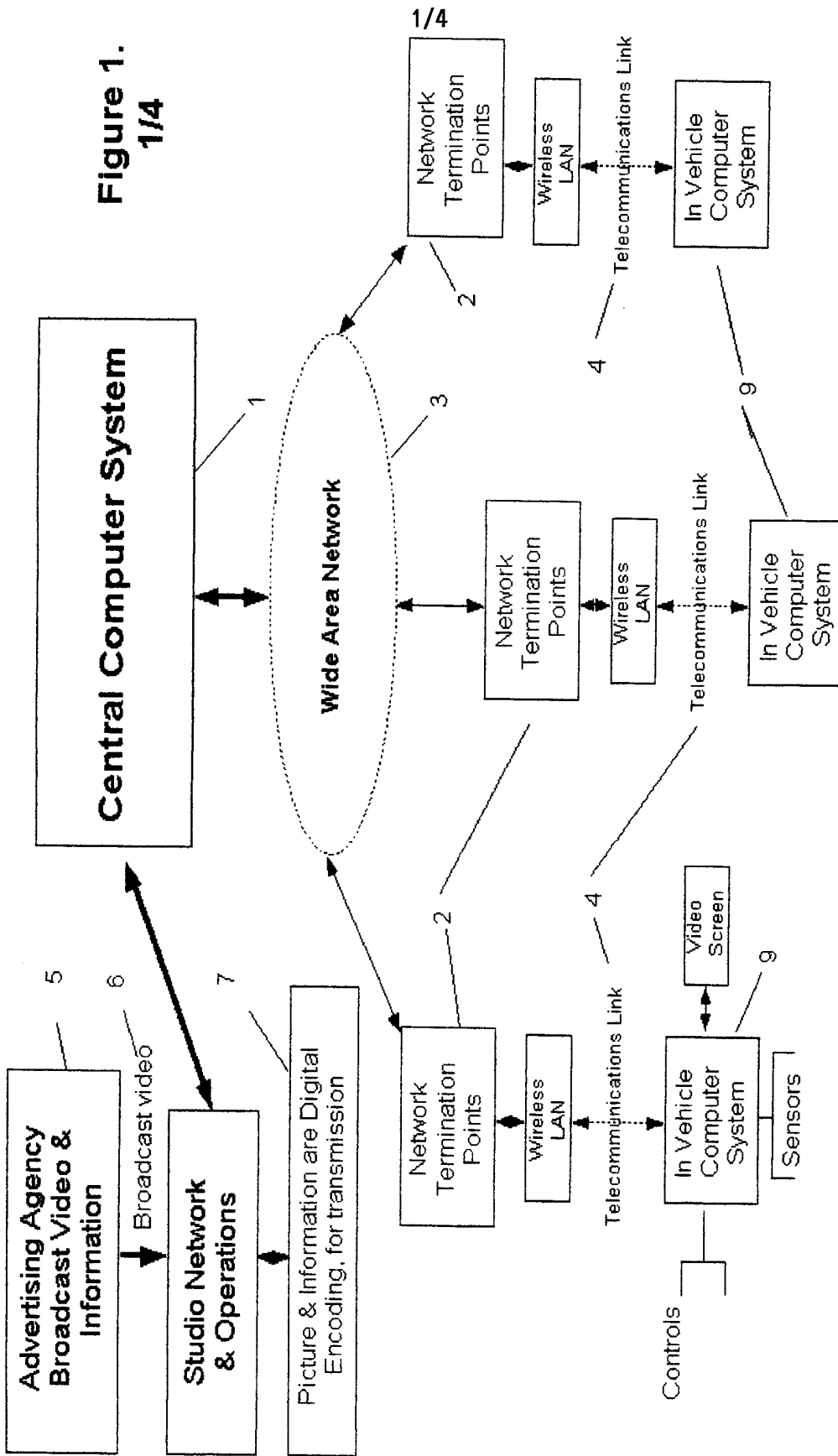
5 providing a reading means to obtain verification biometric data from an individual offering said identification means;

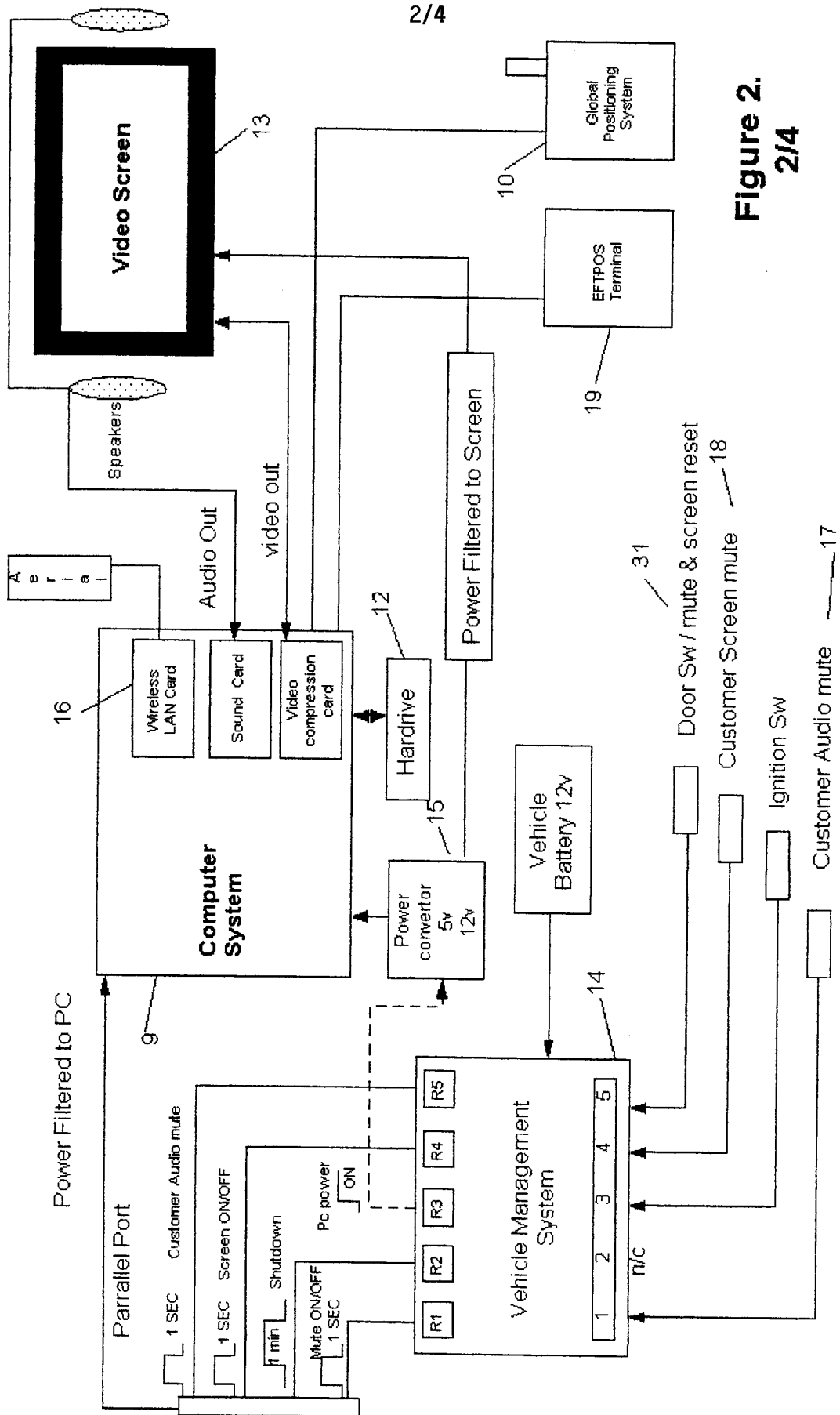
comparing said verification biometric data with said biometric data included in said unique description; and

10 authenticating said transfer of data if said verification biometric data from said individual is identical with said biometric data of said person included in said unique description.

21. A method as defined in any one of Claims 7 to 20 which further includes transmission of an onscreen overlay of real time data to said visual display means.

Figure 1.
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Figure 2.
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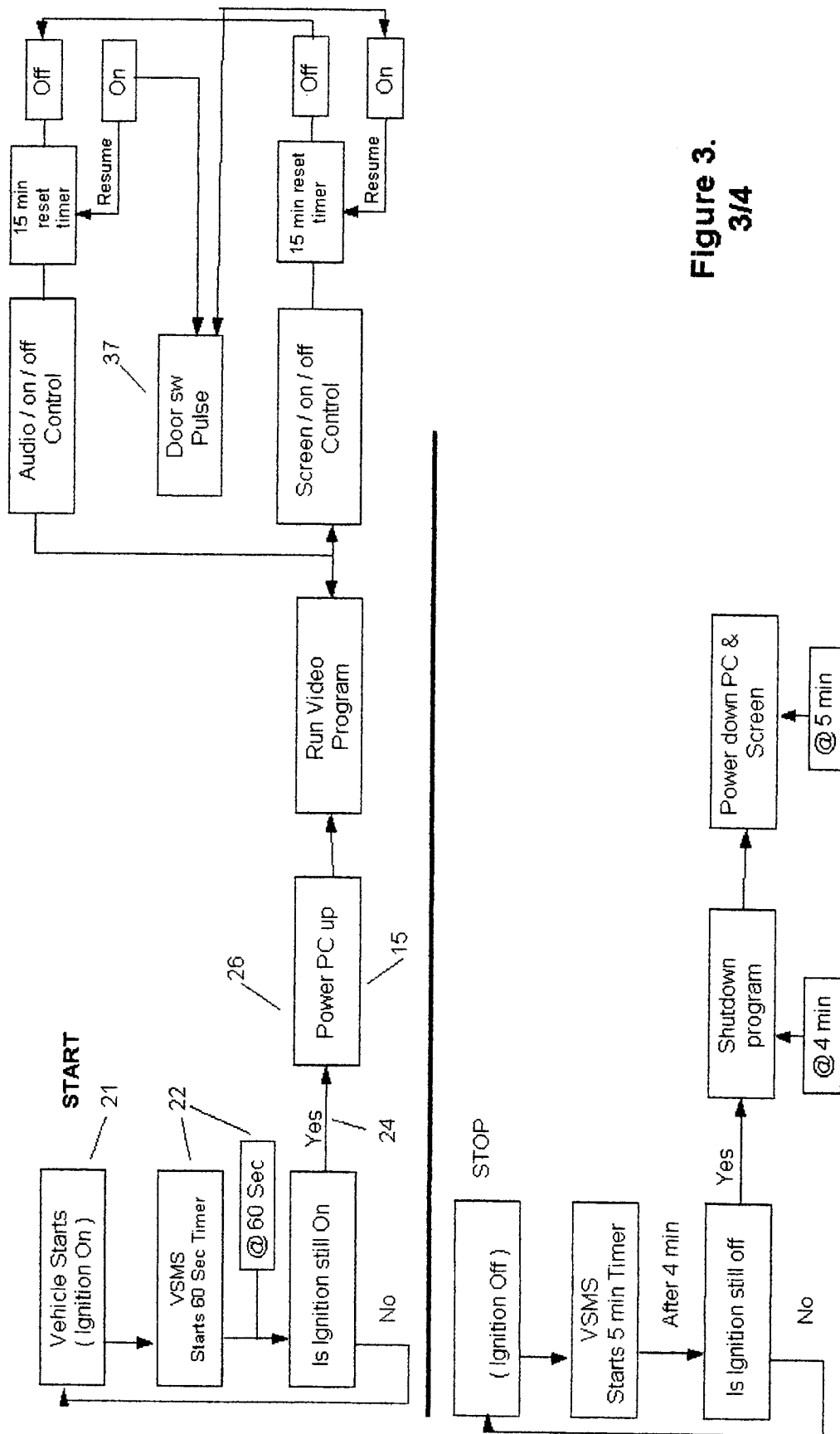
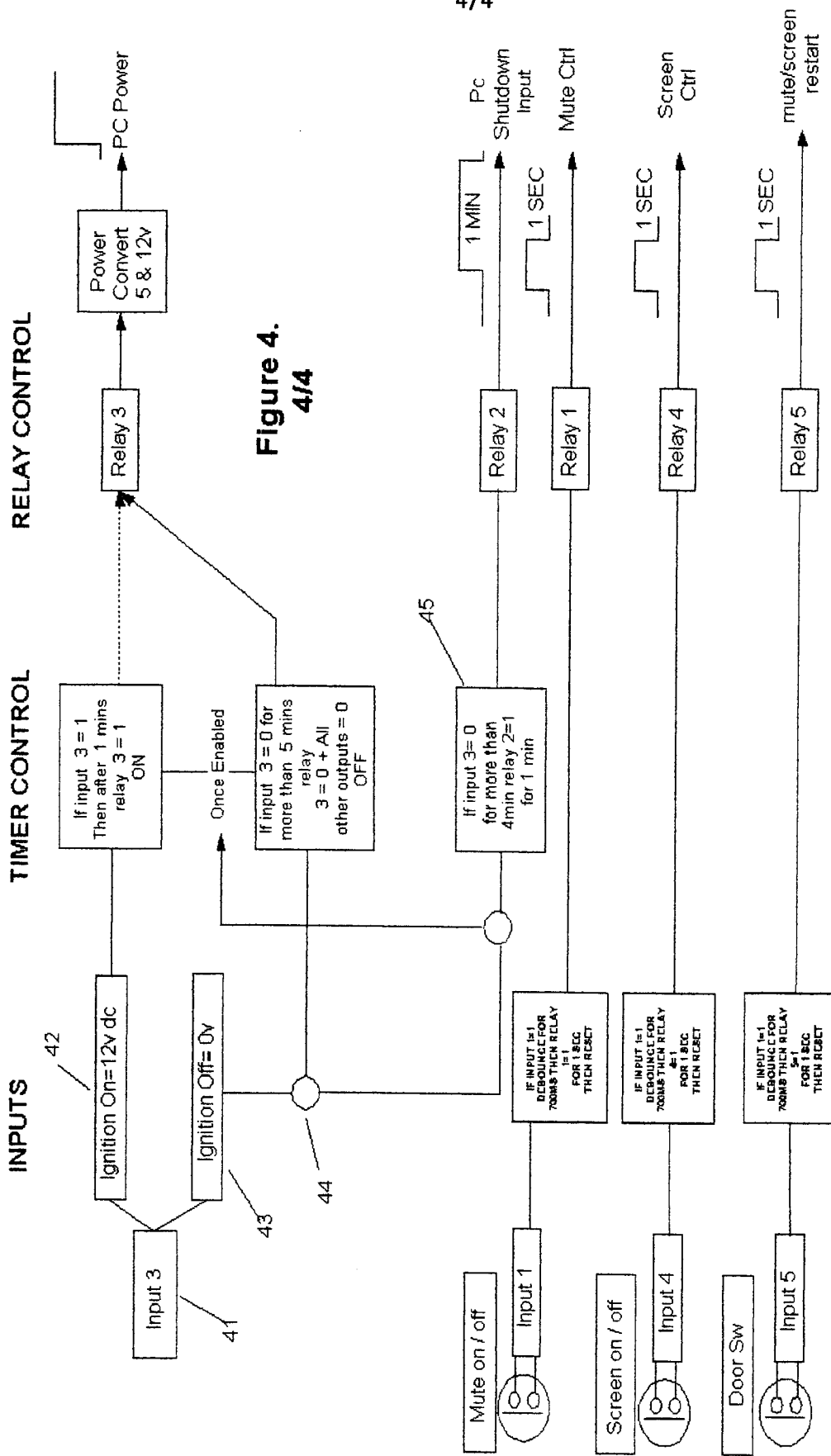


Figure 3.
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INTERNATIONAL SEARCH REPORT

International application No.
PCT/AU00/00879

A. CLASSIFICATION OF SUBJECT MATTER		
Int. Cl. ⁷ : H04N 7/173, 7/20, 7/025; H04B 7/26; H04Q 7/20		
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: H04N /IC; H04L /IC; H04B 7/IC; H04Q 7/IC		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched IPC: AU AS ABOVE		
Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) WPAT: Advertis+ or buy+ or shop+ or Goods or sell+ and wireless or radio or satellite		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	US 6,002,394 A (SCHEIN et al.) 14 December 1999 See Column 2, line 20 - column 3, line 20 and figs 1,2.	1, 4-10, 15
X	WO 99/04568 A1 (RADIOSCAPE LIMITED et al.) 28 January 1999 See page 3, line 10 - page 9, line 17 and fig 3	1, 4-10, 15
X	WO 96/34491 A1 (TV GUIDE ON SCREEN) 31 October 1996 See page 6, line 18 - page 8, line 35	1, 7, 15
<input checked="" type="checkbox"/> Further documents are listed in the continuation of Box C <input checked="" type="checkbox"/> See patent family annex		
* Special categories of cited documents:		
"A"	document defining the general state of the art which is not considered to be of particular relevance	"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
"E"	earlier application or patent but published on or after the international filing date	"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
"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)	"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
"O"	document referring to an oral disclosure, use, exhibition or other means	"&" document member of the same patent family
"P"	document published prior to the international filing date but later than the priority date claimed	
Date of the actual completion of the international search 13 September 2000		Date of mailing of the international search report 15 SEP 2000
Name and mailing address of the ISA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaustralia.gov.au Facsimile No. (02) 6285 3929		Authorized officer <i>V. J. Samuel</i> SERINEL SAMUEL Telephone No : (02) 6283 2382

INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU00/00879

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 96/26611 A1 (MOTOROLA, INC. et al.) 29 August 1996 See page 6, line 1 - page 9, line 37 and fig. 2	1, 4-9
X	EP 0 649 102 A2 (INTERACTIVE NETWORK LIMITED) 19 April 1995 See column 1, line 1 - column 3, line 16 and fig. 1	1, 4-9, 14, 15
X	WO 93/19427 A1 (SINGER et al.) 30 September 1993 See the whole document with particular reference to page 3, lines 4-7	1, 4-9, 14, 15
X	FR 2669131 A1 (WIDMER MICHEL) 15 May 1992 See the whole document with particular reference to fig. 1, and claims.	1 - 16

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/AU00/00879

This Annex lists the known "A" publication level patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

Patent Document Cited in Search Report		Patent Family Member					
US	6002394	AU	73871/96	BR	9611064	CA	2232003
		CN	1200221	EP	880856		
WO	99/04568	EP	995313	GB	9715228		
WO	96/34491	JP	11501481	PL	323047	US	5589892
WO	96/26611	AU	51316/96	US	5646677		
EP	649102	DE	69424493	GB	9321312	US	5905523
WO	93/19427	EP	638186	US	5305195	AU	39372/93
FR	2669131						

END OF ANNEX