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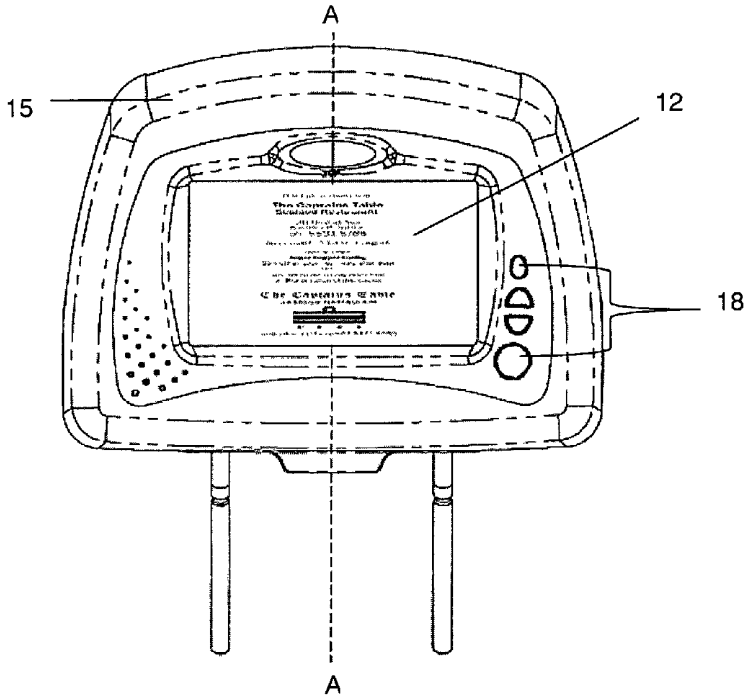
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(54) Title: ADVERTISING SYSTEM AND METHOD



(57) Abstract: An interactive display system (10) for providing information including a data storage, a display (12) and at least one selector (18), wherein the display (2) sequentially displays summary information from said data storage, and wherein the at least one selector (18) is capable of causing the display (12) to display further information relating to selected summary information; wherein said further information is obtained from said data storage.

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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.

ADVERTISING SYSTEM AND METHOD

FIELD OF INVENTION

This invention relates to the provision of information, such as advertising material. In particular this invention relates to a system for providing information and to a method of providing information, including an advertising system and to a method of advertising.

BACKGROUND

From billboards through to bus stands, a variety of media have been used to provide information, such as advertisements. Digital billboards scrolling through a number of advertisements have been used. These advertisements are presented in a predetermined sequence and in a manner which is independent of the viewer, who is unable to select from the sequence or control its progress. As there is no viewer interaction these types of advertising can be easily ignored.

There are also a number of on-line advertising systems, which impose on the user whilst they are attempting to obtain other services, such as information from the Internet or on-line databases. For example, advertisements may be displayed on a workstation when it is not being utilised by the user for other purposes or during intervals when a patron is waiting for some service to be provided at a workstation or terminal. These systems are also independent of the viewer and suffer from the absence of any interaction with the viewer other then passively viewing the advertisement.

We have found that providing information from a display with which the viewer actively interacts results in the viewer taking more interest in the information provided and therefore renders the provision of information more effectively. We have found a system whereby the viewer may actively interact with the displayed information and obtain further information in relation to the displayed information.

BRIEF DESCRIPTION OF INVENTION

In one aspect, this invention resides in an interactive display system for providing information including a data storage, a display and at least one

selector, wherein the display sequentially displays summary information from said data storage, and wherein the at least one selector is capable of causing the display to display further information relating to selected summary information, wherein said further information is obtained from said data storage.

The interactive system may be readily transported and, in a preferred embodiment, may be mobile, so that the system can opportunely be employed in environments that traditionally are not utilized to provide information and advertising.

The display may be any suitable display, such as screen using a cathode ray tube (CRT), liquid crystal display (LCD), light-emitting diode or any other image projection technology.

The at least one selector may include a switch, key, button, sound-activated switch, touch-sensitive pad, touch-sensitive screen or the like to enable a viewer to select desired summary information about which to obtain further information. The further information may be viewed on the display, printed or a combination thereof. In a preferred embodiment, the system includes a printer for provision of printed further information.

The data for the summary information and further information may be stored on any suitable storage medium, such as a hard drive, CD-ROM, floppy disks, other disks, taper and the like. Suitably, the system incorporates a computerised hard disk drive including software and data that may be needed to control and manage the hardware and data flow of the summary and further information to the display and/or printer. The content of the summary information and the further information may be changed, updated and varied from time to time. For example, the content of the data storage may be updated by any suitable means such as by diskette, CD, infrared, Ethernet connection, General Packet Radio Service (GPRS), wireless LAN, or any other wireless systems.

The system may capture statistics, such as the number of occurrences of a viewer selecting to obtain desired further information and to which summary information the selection relates. Such statistics may enable the summary information to be optimised for effectiveness. Where the summary information

is advertising material, the statistical information returned from the system provides a valuable measure of the effectiveness of the system. The captured statistics may include hits per summary information (the number of occurrences that further information is requested in relation to any particular summary information), number of printed documents, number of language requests, etc. For example, the statistics may be captured by a software program stored on the hard disk. Statistical information may be uploaded to other systems for analysis by any convenient means, such as manual transfer to a storage medium or remote transfer, such as via infrared or satellite.

The summary information and further information may include any multimedia, such as text, graphics, video, animation, sound or any combination thereof. The further information may additionally include printed matter. In an advertising application, the summary information may include an advertising message, such as a graphical image or short video advertisement for a business and the further information may include graphical images, video or sound augmenting the summary information, contact details, product and price lists, vouchers, coupons, or any other promotional material. Obviously, the subject matter of the summary information and further information is endless and dependent on location. Further, the programmed arrangement of summary information and further information is variable, and dependent on the needs of the information provider.

Suitably, the display continuously displays the summary information from the data storage in sequence. If a viewer is interested in the summary information they can press the at least one selector, which is capable of interrupting the continuous display and causes the display to display further information relating to selected summary information. After the further information has been displayed the display reverts to continuously displaying the summary information.

In one embodiment, the summary information is a graphical image advertisement of a business and the further information includes a short promotional video and/or a printed docket. The docket may include the contact details of advertised business and/or a promotional offer. For example, the

system may display a screen show of still image advertisements. If a viewer requires more information about an advertised business, they press the "further information" button and a multimedia video about the selected advertised is displayed. Alternatively, if the viewer presses the "further information" button, a docket may be printed. In as still further embodiment, if the viewer presses the "further information" button, a docket may be printed at the same time as the multimedia video is displayed.

The interactive display system of this invention may be employed in any suitable environment, such as in hotels, shopping centers and malls, train stations, bus depots, buildings, airports etc. In a preferred embodiment, the interactive display system of invention may be used in transportation applications, particularly public transport vehicles, such as buses, trains, ferries and taxicabs. Traditionally public transport vehicles employ static advertising such as posters and signs placed internally and externally of the vehicle. Advertising systems which scroll through a series or sequence of advertisements have also been employed in transportation applications. However, such applications are passive in that they do not enable active interaction with the individual viewers.

Accordingly, in a preferred embodiment of this invention there is provided an advertising display system for use in transportation including an interactive display system as described above. For example, the interactive display system may be mounted in a vehicle, such as a taxicab.

In another aspect this invention resides in an interactive display system for providing information including a data storage, a display and at least one selector, wherein the display continuously displays summary information from said data storage sequentially, and wherein the at least one selector is capable of interrupting the continuous display and causing the display to display further information relating to selected summary information.

After the further information has been displayed the display may revert to continuously displaying the summary information.

In a further aspect, this invention resides in method of providing information in an interactive display system, including the steps of:

displaying a sequence of summary information to a viewer, and

providing at least one selector whereby said viewer selects summary information and further information relating to the selected summary information is provided, wherein the summary information and further information are stored in the interactive system.

In a still further aspect, this invention resides in an interactive display system mounted in a vehicle for providing information including a data storage, a display and at least one selector, wherein the display sequentially displays summary multimedia information from said data storage, and wherein the at least one selector is capable of causing the display to display further multimedia information relating to selected summary information, wherein said further information is obtained from said data storage.

In a still further aspect, this invention resides in an interactive display system for providing information including a data storage, a display, a printer and at least one selector, wherein the display sequentially displays summary information from said data storage, and wherein the at least one selector is capable of causing the printer to print further information relating to selected summary information, wherein said further information is obtained from said data storage.

BRIEF DESCRIPTION OF DRAWINGS

In order that this invention may be more readily understood and put into practical effect, reference will now be made to the accompanying drawings which illustrate a preferred embodiment of the invention and wherein:

FIG. 1 depicts an interactive advertising system mounted in a vehicle;

FIG. 2 is a front view of the display screen of an interactive advertising system displaying an advertisement;

FIG. 3 is a side view of the display screen illustrated in Fig. 2;

FIG. 4 is the A-A cross-sectional view of the display screen illustrated in Fig. 2;

FIG. 5 is a bottom view of the display screen illustrated in Fig. 2;

FIG. 6 is a perspective view of the components of the display screen illustrated in Fig. 2;

FIG. 7 is perspective view of the printer of the interactive advertising system of this invention;

FIG. 8 is a front view of the printer illustrated in Fig. 6;

FIG. 9 is the A-A cross-sectional view of the printer illustrated in Fig. 6, and

FIG. 10 is an example of printed matter from the interactive advertising system of this invention.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS

Referring to Figs. 1 to 9, there is illustrated an interactive advertising system 10 mounted in a vehicle 11, such as a taxicab. The interactive advertising system 10 includes a display screen 12, a printer 13 and a storage-medium 14 (not shown), such as central processing unit (CPU). It is to be understood that in all components of the interactive advertising system 10 can be self-contained. For example, the display screen 12, printer 13 and a storage-medium 14 could be enclosed within the same housing.

The display screen 12 is fitted into a custom designed headrest 15 of the front seat 15 of the vehicle 11. Suitably, display screens 12 are installed in both the driver and passenger seat. One or more selectors or buttons 18 are located on the display screen 12 to enable a viewer to select the various functions of the interactive advertising system 10. In one embodiment, the passenger and driver screens 12 display the same image, however only one of the screens 12 may include navigation buttons 18. The screen 12 without navigation buttons 18 may simply be a slave screen 12.

The CPU 14, which contains the data storage and associated logic to control the flow of information from the data storage and administer the system, is mounted under the passenger's seat and wired to the vehicle's power supply. The printer 13 is a preferably a thermal printer and can be mounted in various positions in the vehicle. In Fig. 1, the printer 13 is mounted on the centre console for ease of accessibility to the passengers in the back seat 20 of the vehicle 11. The display screens 12 and the printer 13 are linked to the CPU 14 via an armoured cable 17 threaded through the seat cavity.

When there is no viewer interaction, a sequence of summary information, such as advertising messages, is displayed continuously on the screen 12. For example, the summary information may be a screen show of advertisements or scroll images displayed in sequence. Suitably, the scroll image is a still image that is displayed for a brief period of time, say 3 seconds.

The buttons 18 enable a viewer to interact with the interactive advertising system 10 to obtain further information relating to a desired summary information, i.e. an advertising message of interest to the viewer. When a viewer is attracted to a particular advertising message, they may press the "more information" button 18, which displays further information, such as a multimedia file. For example, the multimedia file may be a short video such as TV like commercial for the advertised business relating to selected scroll image. The multimedia file can also include sound, such as an imbedded MPEG.

The viewer may also press a "print" button 18, which prints a docket relating to the relevant scroll image, such as illustrated in Fig. 10. The docket 19 may included the advertiser's contact details and/or a promotional offer, such as a free bottle of wine with dinner or 10% off a ticket price. In a preferred embodiment, the "more information" button 18 will print the docket at the same time as displaying the multimedia video file.

Multiple language formats are available and the user can press a desired language button 18. When pressed, a viewer can toggle though a number of different languages that may be available. In addition, there may be a button for selectively displaying a desired summary information. For example, there may be a skip button to enable a viewer to scroll backwards and forwards between the advertising messages. If the viewer does not press any of the available buttons 18, the next still image in the summary information screen show is displayed.

The summary information and further information can include any multimedia format including text, graphics, video, animation, sound or any combination thereof. The amount and type of information provided by the interactive advertising system 10 is potentially unlimited, and can be updated and changed periodically. In one embodiment, the interactive advertising

system 10 has an infrared device that enables information to be downloaded in a matter of seconds from up to three metres away. Alternatively, the advertising data content of the CPU may be updated by an Ethernet connection, GPRS, wireless LAN or other suitable wireless technologies.

The interactive adverting system 10 is able capture statistics to which summary information can be provided to the advertiser to measure the effectiveness of their advertising. For example, the statistics may include the number hours per day the system is in operation, the number of times a language is selected, statistics on total number of site impressions, site hits and the number of dockets printed from each site. Statistical information can be uploaded via an infrared device or other like wireless device to a central location for analysis.

An advertiser, utilising the preferred embodiment of the invention, may in fact have three advertising opportunities, being:

- an advertising space for their scroll image,
- an advertising space for their interactive multimedia content, and
- an advertising space for the docket printer image.

In one embodiment, the first space is the scroll image. This image will be displayed in a sequence of advertising message. This image may be any suitable file format, such as bit map, JPEG, Tiff, GIF, or the like. Compressed file formats may be preferred if memory is a concern.

The second space is the "interactive level" space. A viewer will access this level via the "more information" button 18 when viewing the scroll images. This space is used to store the multimedia content the advertiser wishes to show, such as a short video.

The third space is the docket image. The printer 13 will print the docket image when a passenger presses the "print" button from the "interactive level". Alternatively, the "more information" button may print the docket image at the same time as the multimedia video content. Suitably, the image includes contact details of the advertiser, as well as the offer they wish to promote.

Similar to the first level, the image may be any suitable file format, such as bit map, JPEG, Tiff, GIF, or the like.

In the preferred embodiment, the interactive advertising system 10 is located in taxicabs 11 as seen in Fig. 1. A passenger or viewer is able to access the system 10 by interacting with the buttons 18 from the back seat 20 of the taxicab 11. Suitably, the interactive advertising system 10 is designed to boot-up when the vehicle is started, shutdown when the vehicle is stopped and operate continuously when a vehicle is running, so that interference is not required by the driver of the vehicle.

The use of the interactive advertising system 10 inside taxicabs allows advertisers to promote their business to passengers in a new environment. In such an environment, the interactive advertising system 10 entices passenger interaction and the advertising is provided with valuable marketing feedback and learnings.

It will of course be realised that while the foregoing has been given by way of illustrative example of this invention, all such and other modifications and variations thereto as would be apparent to persons skilled in the art are deemed to fall within the broad scope and ambit of this invention as is herein set forth.

THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

1. An interactive display system for providing information including a data storage, a display and at least one selector, wherein the display sequentially displays summary information from said data storage, and wherein the at least one selector is capable of causing the display to display further information relating to selected summary information; wherein said further information is obtained from said data storage.

2. An interactive system according to claim 1, wherein the system is mobile.

3. An interactive system according to claim 1 or claim 2, wherein the data storage is a computer hard drive.

4 An interactive system according to any one of claims 1 to 3, wherein the summary information and further information is advertising material.

5. An interactive system according to any one of claims 1 to 4, wherein the summary information and further information is multimedia.

6. An interactive system according to any one of claims 1 to 5, wherein the summary information is displays as a screen show of still images.

7. An interactive system according to any one of claims 1 to 6, wherein the system includes a printer.

8. An interactive system according to claim 7, wherein the printer prints further information relating to selected summary information.

9. An interactive system according to any one of claims 1 to 8, wherein the further information is displayed as a video.

10. An interactive system according to any one of claims 1 to 9, wherein the system includes a selector for choosing the language of the summary and further information.

11. An interactive system according to any one of claims 1 to 10, wherein the system includes a selector for selectively displaying a desired summary information.

12. An interactive system according to any of claims 1 to 11, wherein the system captures statistics relating to the summary and further information.

13. An interactive system according to any one of claims 1 to 12, wherein the system is installed in a vehicle.

14. An interactive system according to claim 13, wherein the vehicle is a taxicab.

15. An interactive system according to claim 5, wherein the multimedia is selected from text, graphics, video, animation, sound or a combination thereof.

16. An interactive display system for providing information including a data storage, a display and at least one selector, wherein the display continuously displays summary information from said data storage sequentially, and wherein the at least one selector is capable of interrupting the continuous display and causing the display to display further information relating to selected summary information.

17. An interactive display system according to claim 16, wherein after the further information has been displayed the display reverts to continuously displaying the summary information.

18. A method of providing information in an interactive display system, including the steps of:

displaying a sequence of summary information to a viewer, and

providing at least one selector whereby said viewer selects summary information and further information relating to the selected summary information is provided, wherein the summary information and further information are stored in the interactive system.

19. A method of providing information in an interactive display system according to any one of claims 1 to 17.

20. An interactive display system mounted in a vehicle including a data storage, a display and at least one selector, wherein the display sequentially displays summary multimedia information from said data storage, and wherein the at least one selector is capable of causing the display to display further multimedia information relating to selected summary information, wherein said further information is obtained from said data storage.

21. An interactive advertising system according to claim 20, wherein the system includes a printer for printing the further advertising information.

22. An interactive advertising system according to claim 20 or claim 21, wherein the further advertising information is displayed as a video.

23. An interactive display system for providing information including a data storage, a display, a printer and at least one selector, wherein the display sequentially displays summary information from said data storage, and wherein the at least one selector is capable of causing the printer to print further information relating to selected summary information, wherein said further information is obtained from said data storage.

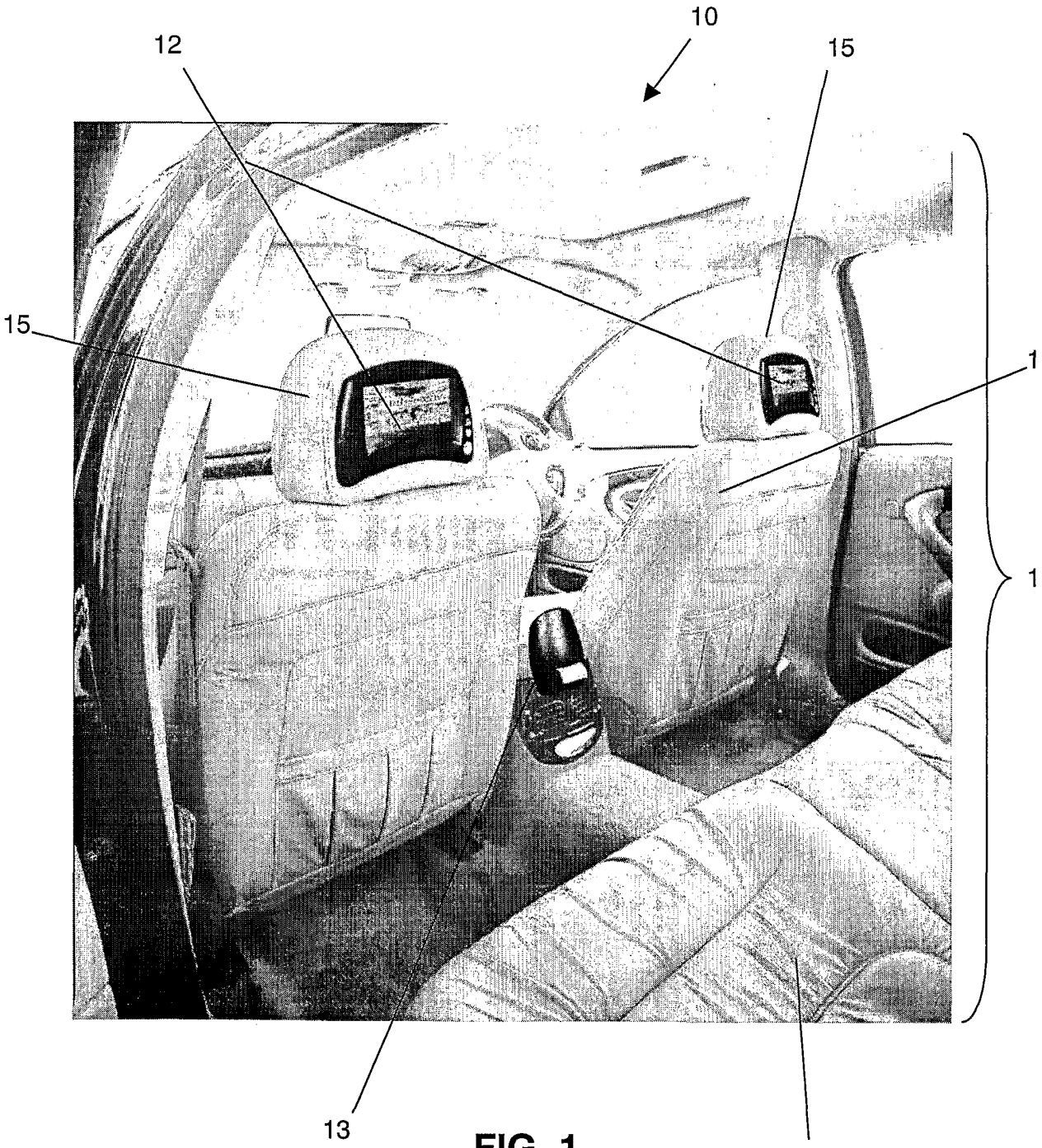


FIG. 1

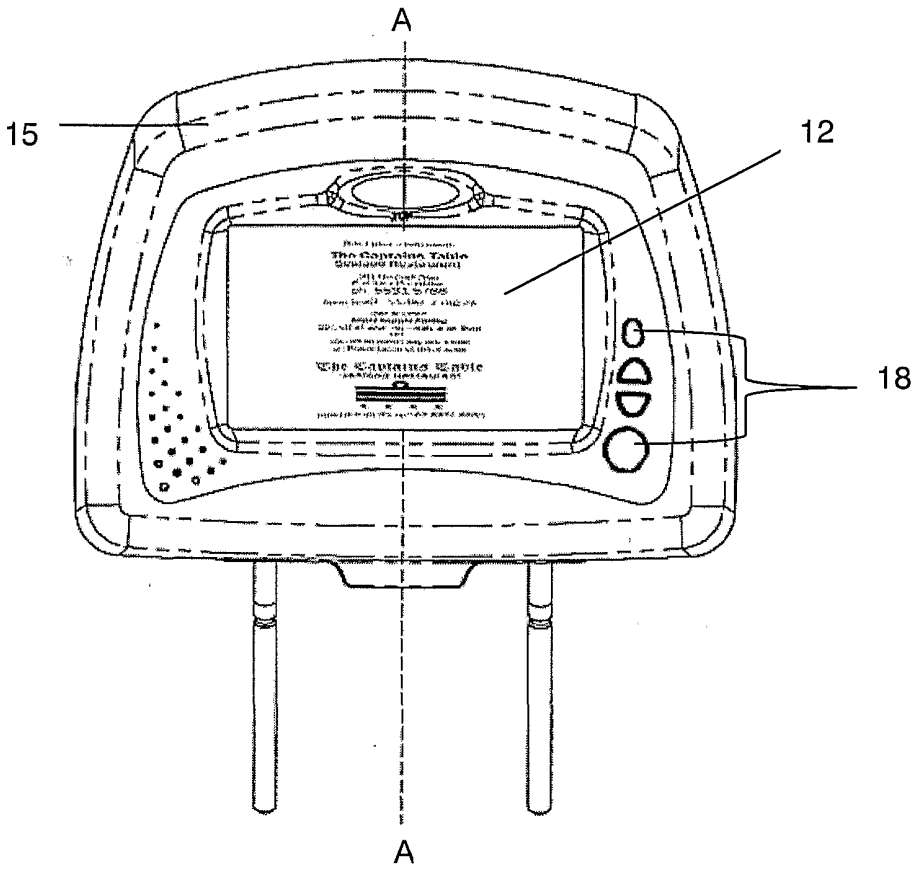


FIG. 2

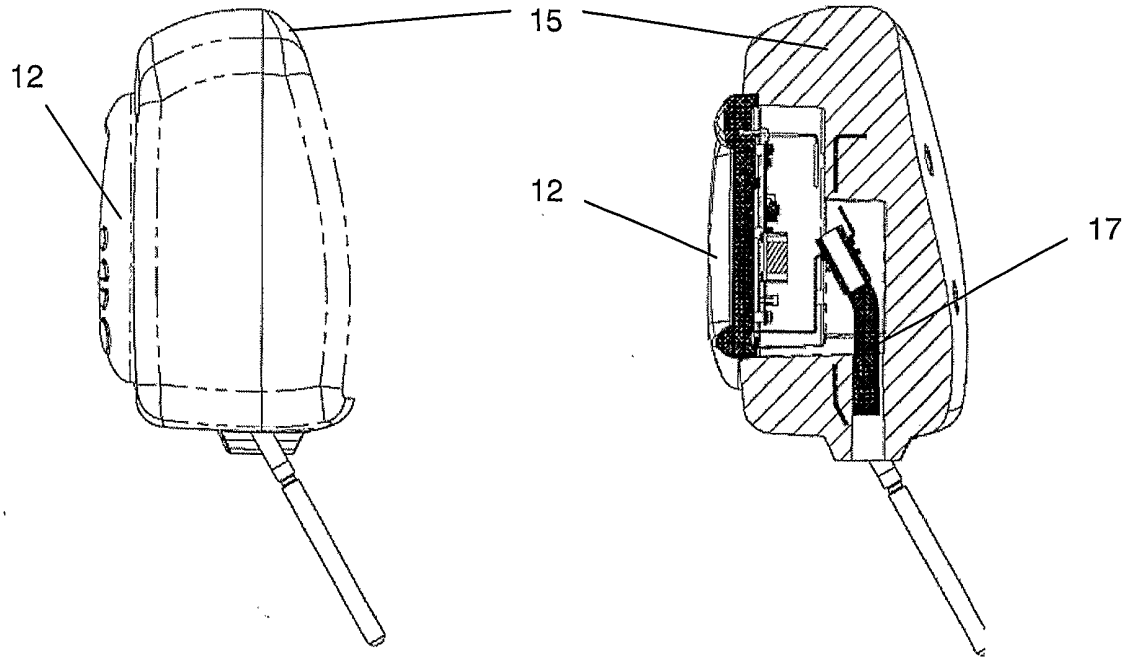


FIG. 3

FIG. 4

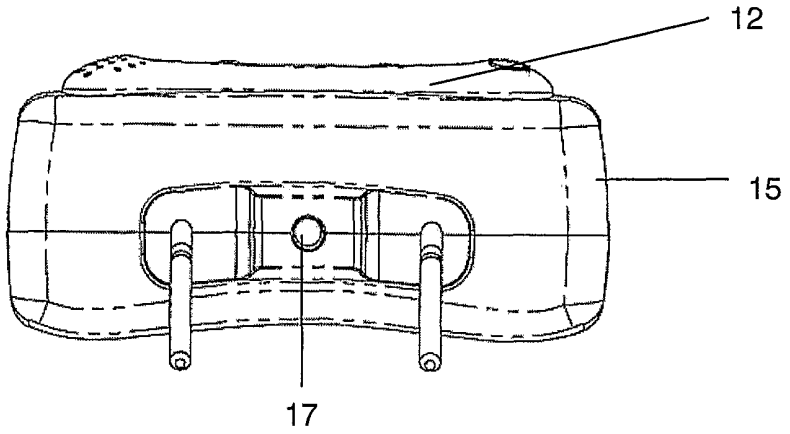


FIG. 5

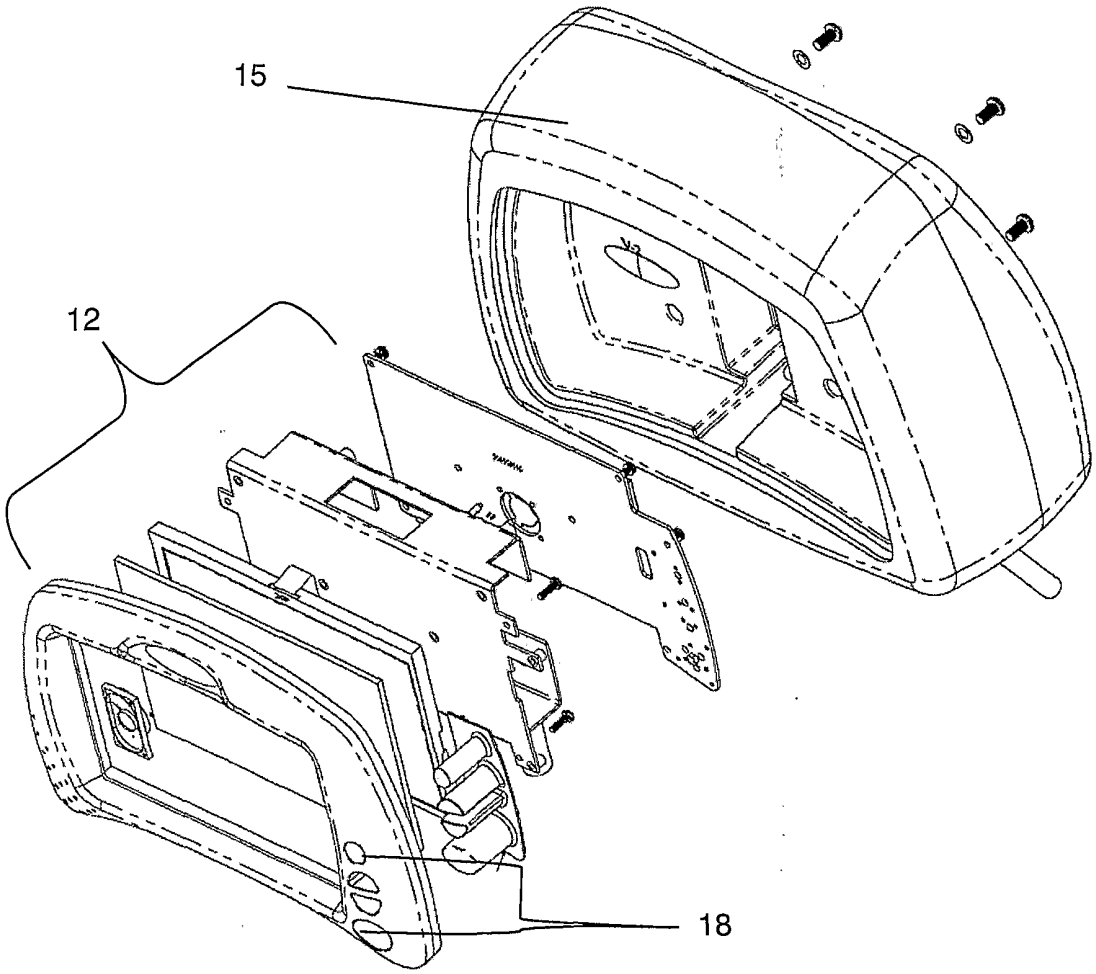


FIG. 6

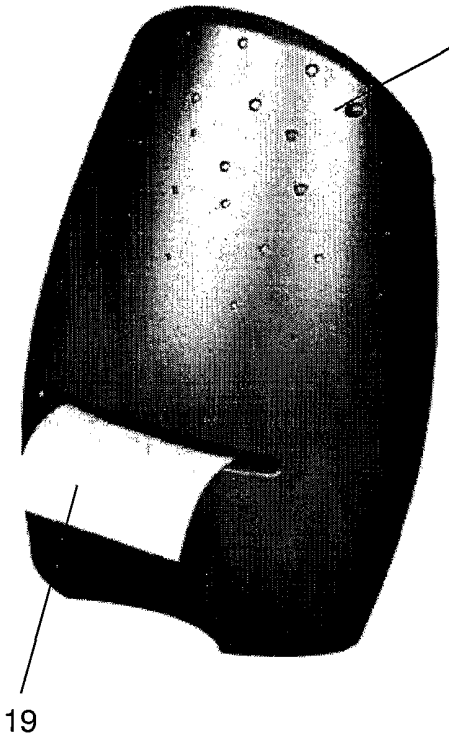


FIG. 7

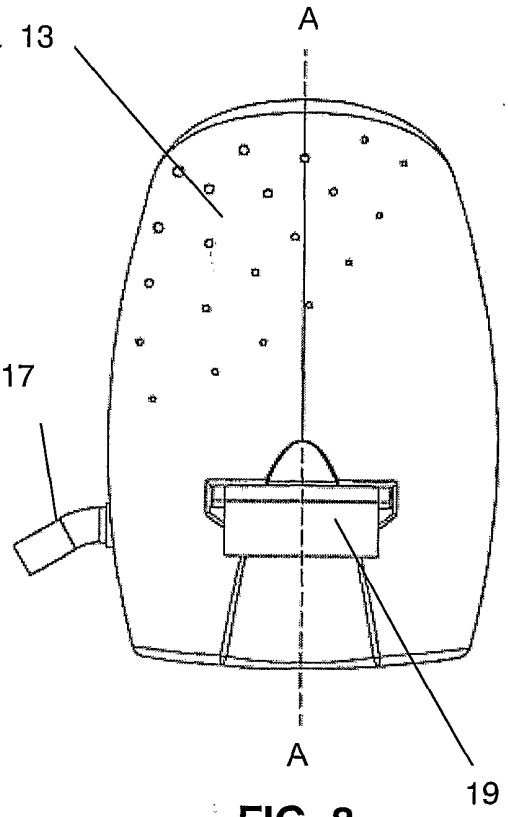


FIG. 8

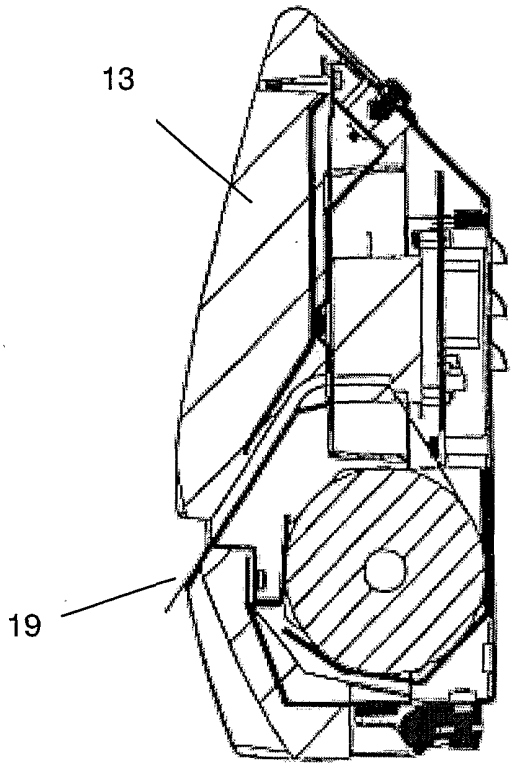


FIG. 9


Driver -
Please take me to:
Restaurant Q
Cnr Beach Road & Hill Street
Phone 5574 6953
Open
7 days for lunch & Dinner.
Most major credit cards accepted.
Special Offer
Present this docket and receive 1 free
beer or wine per person dining.
19

FIG. 10

INTERNATIONAL SEARCH REPORT

International application No.
PCT/AU01/00572

A. CLASSIFICATION OF SUBJECT MATTER

Int. Cl. [7]: G06F 17/60, 17/30

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 G06F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
AU:IPC AS ABOVE

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

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6009410A, LeMOLE et al, 28 December 1999	1-23
X	US 5754172A, KUBOTA et al, 19 May 1998	1-23
X	US 5491785A, ROBSON et al, 13 February 1996	1-23

[X] Further documents are listed in the continuation of Box C [X] See patent family annex

* Special categories of cited documents:

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"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
6 July 2001

Date of mailing of the international search report
11 July 2001

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/AU01/00572

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 5949411A, DOERR et al, 7 September 1999	
A	US 5946646A, SCHENA et al, 31 August 1999	

INTERNATIONAL SEARCH REPORT
Information on patent family members

International application No.
PCT/AU01/00572

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	6009410	CA	2250450				
US	5754172	EP	721283	JP	8191281	JP	8191282
US	5491785	EP	646856	JP	7168853		
US	5949411	WO	9730397				
US	5946646	WO	9630864	AU	22738/95		

END OF ANNEX