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(54) Title: DIGITAL ADVERTISING SYSTEM

(57) Abstract: The present invention provides a system for digital advertising comprising at least one access point (2) positioned at a location (6). The access point (2) may wirelessly detect the presence of suitable wireless enabled digital devices (4) within a predefined area. When an access point (2) detects such a digital device (4) it transmits targeted digital content that is tailored to the specific digital device on the basis of the location (6) of the access point and a stored profile of the digital device.

TITLE

Digital Advertising System

DESCRIPTION

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Field of Invention

The present invention relates to digital advertising. In particular, the present invention provides a system for targeted digital advertising in specific locations.

10 Background

Digital advertising comprises the provision of digital content to potential customers of any advertised product or service. As will be understood, this may be done in a large number of ways for example via websites, text messages or on display screens.

15 In a first example of digital advertising many products, companies and brands now have their own websites. Customers can register at these websites in order to access exclusive content or receive special offers. When registering at the website the customer may indicate his or her preferences with regards to one or more products or services. Targeted digital content may then be sent to the customer in the form of
20 emails or text messages or any other suitable format. The advantage of digital advertising in this manner is that the digital advertising may be tailored to the specific preferences indicated by the customer when signing up to the website. However, this method of digital advertising is not location specific. There is no method or system for determining when the customer is in a preferred location for digital advertising
25 and sending the digital content at that time.

In a second example of digital advertising there are often digital display screens and possibly audio systems located in commercial areas. For example, many shops and shopping centres have screens that display adverts. The content of this digital
30 advertising on these screens can be location specific. For example, in a shopping centre the screen may show adverts specific to the shops and outlets within the centre. However, this method of advertising is generally generic and aimed at mass

audiences. It cannot be individually tailored to customers walking by. No customer specific advertising may be displayed on the screens. Furthermore, such screens are not interactive. There is no manner in which the data regarding the number of people viewing the advertisement and its effectiveness can be collated.

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Occasionally, the digital display screens discussed above may have limited interactivity. In order to access any interactive content customers need to stand near the screen and select advertising that may be of interest to them. A major disadvantage of these screens is that the customer must approach and interact with the screen on their own initiative.

10

All of the above digital advertising methods require human intervention to monitor their success. This is normally done by collecting sales data at regular intervals. That data will relate to the sales of products or services that have been advertised and may be restricted to specific locations if the advertising is location based. This data must be collected and analysed separately from the advertising. As a result, there is often a significant time delay before the effectiveness of the advertising can be gauged.

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Therefore, there is a need for a system of digital advertising that allows location and customer specific advertising to be relayed to customers. Preferably any such system should include the capability of assessing the effectiveness of the relayed advertising content.

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Summary of Invention

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The present invention provides a system for digital advertising comprising at least one access point positioned at a location;

wherein, the or each access point may detect the presence of suitably enabled digital devices within a predefined area; and

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when such digital devices are detected the or each access point may transmit targeted digital content based upon the location of the or each access point and a stored profile of the digital device.

Suitably enabled digital devices that may be detected by an access point of the system of the present invention may be any device capable of wireless detection. It is particularly envisaged that the digital devices will include mobile phones, personal digital assistants, portable computers and other portable personal digital devices.

An access point of the present invention may detect digital devices using any suitable wireless communication means. Many commonly used digital devices utilise Bluetooth® or WiFi for wireless communication. When activated, the Bluetooth® or WiFi connections of digital devices may allow the devices to both be detected by other digital devices and to be wirelessly communicated with. It is particularly envisaged that digital devices that are Bluetooth® or WiFi enabled will be detected by a corresponding means within an access point when they are within a predefined area around the access point. The predefined area may only be limited by the range of the wireless detection means of the access point or may be intentionally limited to a specific location. Targeted digital content may then be transmitted by an access point if the access point has a stored profile for the detected digital device.

An access point may be located in any position where targeted digital advertising may be effective. As an example, an access point may be located within a shop and configured to only detect and transmit digital content within the shop. In such cases the digital content transmitted by an access point may comprise information regarding goods or services supplied by the shop and any special offers thereon.

As will be understood by a person skilled in the art, a stored profile may be created in any suitable manner. For example, the owner of a digital device may sign up for a service on an associated website and input his preferences and the details of his digital device. Alternatively or additionally, the stored profile may be created interactively. For example, the first time a specific digital device is detected by an access point the access point may communicate with the digital device to ask if the user would like to receive transmissions from the system of the present invention. If the user agrees the stored profile of the digital device may then be built up from the locations in which

the digital device is detected and possibly from interactive feedback supplied by the device to the system of the present invention.

5 The system of the present invention provides a fully location and customer specific system for targeted digital advertising. The advantage of only transmitting digital content when suitable digital devices with stored profiles are detected is that the digital content may be tailored to the owner of a digital device in order to increase its effectiveness. In particular, the digital content may be tailored to the location of the access point and the preferences of the owner of the digital device. This is a particular
10 improvement over the prior art wherein the digital content could only be tailored to the location or to the user but not both.

An access point of the present invention may be an interactive multimedia device. For example, the access point may comprise an associated display device and/or
15 multimedia system. In this manner the targeted digital content may be transmitted through the display device and/or multimedia system of an access point. For example, a specifically selected video advert may be displayed on a display screen.

Alternatively or additionally, the targeted digital content may be wirelessly
20 transmitted directly to a digital device. The access point may transmit digital content to digital devices using any suitable wireless communication means. For example, targeted digital content may be transmitted to a digital device by the same means by which the device is detected. For example, targeted digital content may be wirelessly transmitted to a digital device using Bluetooth® or WiFi communication. If the
25 targeted digital content is wirelessly transmitted to a digital device it may be preferable that the transmitted digital content is in a format that allows it to be stored by the digital device and accessed at a later time. For example, the targeted digital content may be stored in a memory of a digital device and may be called up by pushing predetermined function keys of the digital apparatus.

30

It may be preferable that the targeted digital content is wirelessly transmitted to a digital device as this will enable different targeted digital content to be transmitted to

a plurality of digital devices substantially simultaneously. For example, if two or more digital devices with stored profiles are detected by a single access point at substantially the same time it may be possible to wirelessly transmit different targeted digital content to each of the digital devices based upon their stored profiles simultaneously. This may not be possible if the targeted digital content is transmitted by an associated display device and/or multimedia system of an access point.

As will be immediately understood, the targeted digital content may contain any digital media or information that may be transmitted by a display and/or multimedia point of an access point or that may be utilised by a digital device to which it is transmitted. The targeted digital content may comprise visual content that may be displayed on a display screen of a digital device or an access point. The targeted digital content may contain audio content that may be broadcast by speakers associated with the digital device or access point. For example, small multimedia clips may be displayed by an access point or transmitted to a digital device for display on a display screen of the digital device. The targeted digital content may comprise commands to make the digital device perform a function. For example, the targeted digital content may request that the digital device rings an advertiser's telephone number or may connect the digital device with a website.

The system of the present invention may have a plurality of access points. These access points may be situated to provide coverage of one or more specific geographical locations. For example, a plurality of access points may be located to provide substantially full coverage within a single location such as a retail outlet. Additionally or alternatively, access points of a single system may be located in a plurality of different locations and may transmit different digital content depending upon their specific location. For example, access points may be located in or near a plurality of different retail outlets within a shopping centre.

Advantageously, the system of the present invention further comprises a content server that is in communication with the or each access point. The content server may be at a remote location where it can be easily accessed by a system administrator. As

will be understood, the content server may be in communication with the or each access point in any manner that permits the transfer of data between the server and an access point. The communication may be wireless and/or wired. For example, the or each access point may communicate with the content server over a WiFi enabled
5 network.

A content server may be used to transfer data to and from an individual access point. In particular, data regarding the time, location and content of each transmission of targeted digital content may be sent from an access point and recorded by the content
10 server. Furthermore, when a digital device is detected the access point may communicate a unique identifier of the device to the content server to search for any stored profile for the device. The content server may comprise a database of digital content and may then communicate suitable targeted digital content for transmission by the access point from a database. In this manner an access point may be a
15 relatively simple device and may not be required to store a large amount of information.

A system according to the present invention may further comprise at least one electronic point of sale (EPOS) device provided at a location and linked to the content
20 server to provide data regarding sales of specific items that are actioned by the EPOS device. EPOS devices will be immediately understood by the person skilled in the art, they record data regarding the specific details of each sale that is actioned by the device. By transmitting this data to a content server and combining it with data provided by an access point associated with the, or each, EPOS it may be possible to
25 assess the effectiveness of the system.

For example, an individual retail outlet may operate a system according to the present invention that comprises one or more access points, one or more EPOS devices and a content server. Data recorded by the content server may include details of the digital
30 content transmitted by the or each access point to the content server and the amount and types of sales actioned by the or each EPOS. By comparing the data from the or

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each access point and EPOS device the effectiveness of the targeted digital content transmitted by the, or each access point, may be assessed.

Advantageously, data may be received by the content server in real time to provide an
5 immediate indication of the effectiveness of the digital content transmitted to the
digital devices. Preferably the system of the present invention may be able to alter the
content of the targeted digital content transmitted to users as a result of the monitored
effectiveness of the system. This may be done manually by an administrator
monitoring the data received by a content server from one or more EPOS devices and
10 one or more access points. Alternatively, this may be done automatically by the
content server.

Further aspects and advantages of the present invention will be understood from the
following specific description of a preferred embodiment of the present invention.

15

Drawings

Figure 1 is a schematic drawing of an embodiment of a system according to the
present invention.

20 A schematic drawing of an embodiment of a system according to the present
invention is shown in Figure 1. The system includes a content server 1 at a remote
location. The content server is connected by wires 5 to two access points 2 and an
electronic point of sale (EPOS) device 3. The access points 2 and the EPOS device 3
are located within a specific area 6, which may, for example, be a retail outlet.

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The system operates in the following manner. When a suitably enabled digital device,
in this case a Bluetooth® enabled mobile phone 4, enters the specific area 6 it will be
wirelessly detected by one of the access points 2. The access point 2 that detects the
mobile phone 4 will transmit a unique identifier of the mobile phone 4 to the content
30 server 1. The content server 1 will search for a stored profile specific to the unique
identifier of the mobile phone 4. If no stored profile is found the access point 2 may
communicate with the mobile phone 4 to ask if the user of the digital device would

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like to receive transmissions from the system of the present invention and create a stored profile for the digital device. If the user agrees location specific digital content will be wirelessly transmitted to the mobile phone 4 and a stored profile for the mobile phone 4 will be created. The stored profile may then be interactively updated
5 based upon the locations in which the mobile phone 4 is detected. Data regarding the time and location of the detection of the mobile phone 4 and the targeted digital content transmitted to the mobile phone 4 will be communicated to and stored in the content server 1.

10 Alternatively, if a stored profile is found then the content server 1 will create targeted digital content tailored for the specific location 6 and the preferences of the user of the mobile phone 4, as defined in the stored profile. The targeted digital content will then be communicated to one of the access points 2 within the specific location 6. The access point 2 will then wirelessly transmit the targeted digital to the mobile phone 4
15 using Bluetooth®. The targeted digital content may then be accessed by the user of the mobile phone 4. Data regarding the time and location of the detection of the mobile phone 4 and the targeted digital content transmitted to the mobile phone 4 will be communicated to and stored in the content server 1.

20 Simultaneously to the above, the EPOS device 3 within the specific location 6 will be monitoring details of all sales it actions. Data regarding the time of each sale and the items or services sold at the EPOS device 3 will be communicated to and stored by the content server 1.

25 In this manner, an administrator of the system may access the content server 1 to obtain data regarding the details of targeted digital content sent to digital devices within the specific location 6 and details of all sales made within the specific location. In this manner the administrator can monitor the effect of the targeted digital content on sales within the specific location 6 in real-time. The administrator may then adjust
30 the content of the targeted digital content in response to the monitored effects if desired.

CLAIMS

1. A system for digital advertising comprising at least one access point positioned at a location;
- 5 wherein, the or each access point may detect the presence of suitably enabled digital devices within a predefined area; and
when such digital devices are detected the or each access point may transmit targeted digital content based upon the location of the or each access point and a stored profile of the digital device.
- 10
2. A system according to claim 1 or claim 2, wherein the or each access point further comprises a display unit and transmits the targeted digital content on the display device.
- 15
3. A system according to any preceding claim, wherein suitable digital devices include any device capable of receiving wireless transmissions.
4. A system according to any preceding claim, wherein the digital device is detected by either Bluetooth® or WiFi.
- 20
5. A system according to any preceding claim, wherein the targeted digital content is transmitted wirelessly to the digital device.
6. A system according to claim 5, wherein the digital content is transmitted to
- 25 digital devices by either Bluetooth® or WiFi.
7. A system according to claim 5 or claim 6, wherein the transmitted digital content comprises visual content that may be displayed on a display of a digital device.

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8. A system according to any of claims 5 to 7, wherein the transmitted digital content comprises audio content that may be broadcast by speakers associated with the digital device.
- 5 9. A system according to any of claims 5 to 8, wherein the transmitted digital content comprises commands to make the digital device perform a function.
10. A system according to any of claims 5 to 9, wherein the transmitted digital content is in a format that allows it to be stored by the digital device and accessed at a
10 later time.
11. A system according to any preceding claim, wherein further comprising a content server that is in communication with each access point.
- 15 12. A system according to claim 11, wherein the content server is in wireless communication with at least one access point
13. A system according to claim 11 or claim 12, wherein data regarding the time, location and content of each transmission of targeted digital content is recorded by the
20 content server.
14. A system according to any of claims 11 or claim 13, further comprising at least one electronic point of sale device provided at a location and in communication with the content server to provide data regarding sales of specific items that are
25 actioned by the device.
15. A system substantially as described herein and as illustrated in the Figure.

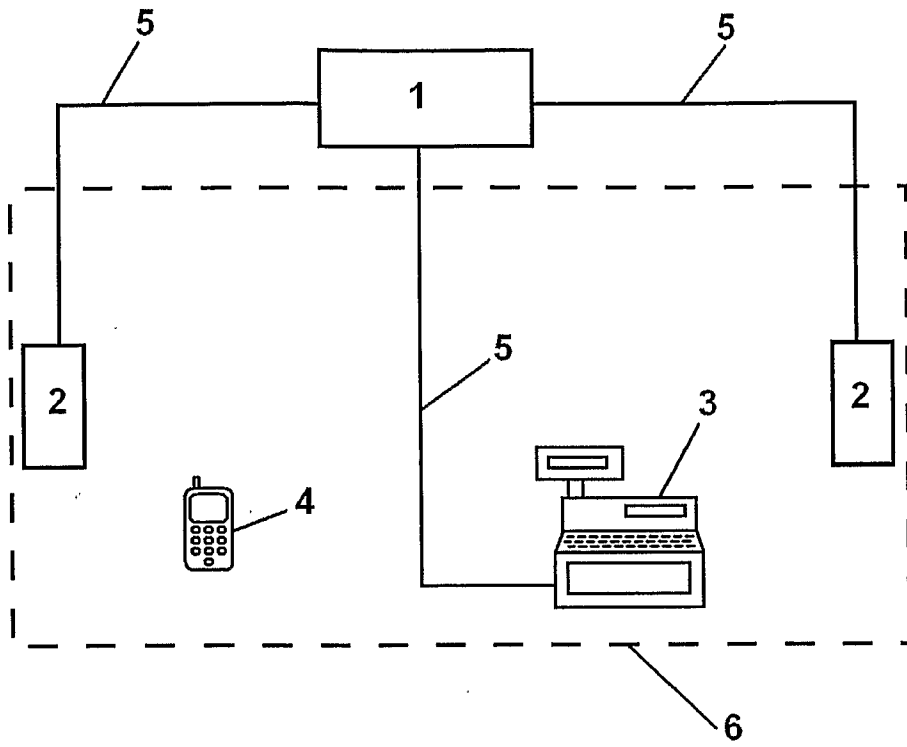


Figure 1

INTERNATIONAL SEARCH REPORT

International application No
PCT/GB2008/001559

A. CLASSIFICATION OF SUBJECT MATTER
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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)
G06Q

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)

EPO-Internal, WPI Data, INSPEC, IBM-TDB

C. DOCUMENTS CONSIDERED TO BE RELEVANT

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| | -/-- | |

Further documents are listed in the continuation of Box C.

See patent family annex.

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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

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Information on patent family members

International application No

PCT/GB2008/001559

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