(12) INNOVATION PATENT (11) Application No. **AU 2018100860 A4**
(19) AUSTRALIAN PATENT OFFICE

(54) Title
SIGNAGE SYSTEM

(51) International Patent Classification(s)
G06Q 30/02 (2012.01) ***G09F 27/00*** (2006.01)

(21) Application No: **2018100860** (22) Date of Filing: **2018.06.22**

(45) Publication Date: **2018.08.02**
(45) Publication Journal Date: **2018.08.02**
(45) Granted Journal Date: **2018.08.02**

(71) Applicant(s)
Point of Purchase Media Pty Ltd

(72) Inventor(s)
De Camillo, Marino;Kelson, Anthony;Fakira, Russell

(74) Agent / Attorney
Macpherson + Kelley Lawyers, Level 22 114 William St, Melbourne, VIC, 3000, AU

2018100860 22 Jun 2018

Abstract

The invention relates to a display system for a shop aisle, the aisle stocking a plurality of items, the system comprising an electronic screen, a data repository storing information regarding the items stocked in the aisle, and a controller in communication with the screen, configured to display advertisements for a plurality of the items stocked in the aisle. Sign boards may be positioned within or adjacent to the screen. The system may comprise hardware to scan purchased items linked to the advertised products. The system may also comprise a camera to obtain eye tracking data, facial analysis data or other customer information.

2018100860 22 Jun 2018

SIGNAGE SYSTEM

Field

[0001] The invention relates to a signage system for use in shops, in particular retail outlets such as supermarkets.

Background

[0002] In a conventional supermarket, aisle boards are generally mounted to the ceiling, and aligned within aisles to indicate the items that are stocked within that particular aisle. In most supermarkets, these are simply boards with space for printed matter to be positioned, listing the number of that aisle and the relevant goods categories for that aisle.

[0003] Supermarkets may promote different products they are selling, for example using stickers or tags with printed advertisements on shelves, or dedicated stands or displays for particular items being promoted.

[0004] Unfortunately, many retail environments (especially supermarkets) are cluttered and burdened with promotional material which has become nothing but background noise for shoppers.

[0005] The retail environment is very competitive. In retail, the drivers are convenience (location), availability (range), value (price) and customer experience (in-store experience). Retailers cannot easily address convenience, and have large teams dedicated to choosing and expanding their range, but there is a need to improve in the other drivers as well.

[0006] Brands, at a strategic level, are looking to grow the category that they compete in through increased traffic and then compete for share through brand positioning and communication. However, there are serious limitations to existing ways of obtaining relevant and measurable data, and difficulties in obtaining in-store penetration and effectiveness.

[0007] The present invention aims to address or ameliorate some or all of the above disadvantages in the shopping experience for brands and create a new revenue stream for retailers.

Summary

[0008] In an aspect of the present invention, there is provided a signage system for a shop aisle, the aisle stocking a plurality of items, the system comprising:

2018100860 22 Jun 2018

an electronic screen;
a data repository storing information regarding the items stocked in the aisle; and
a controller in communication with the screen, configured to display advertisements for a plurality of the items stocked in the aisle.

[0009] The signage system may further comprise one or more sign boards adjacent the screen, indicating at least some of the items stocked in the aisle. A pair of sign boards may be provided on either side of the screen.

[0010] The signage system may further comprise a camera, wherein the controller analyses camera images to obtain information regarding customers exposed to the signage system. The information may comprises eye tracking data to determine the time spent by a customer viewing the screen, and/or facial analysis data of a customer, whereby the controller can select advertisements to display on the screen, based on the facial analysis data (e.g. based on a determined demographic for the customer). The advertisements may be displayed in a sequence – in one example, they may be displayed in a set rotation of advertisement time slots, although different advertisement display sequences may be used.

[0011] The signage system may further comprise a data scanning unit, wherein the controller analyses the stocked items purchased to obtain information regarding the items that a customer has purchased and determining the effectiveness of the advertising. The information may comprise dollar sales, number of transactions and basket size for items that have been displayed on the signage system.

[0011] The present invention provides an integrated digital advertising and data platform that displays targeted brand communication and content to shoppers directly where it matters most. The platform is located in aisle incorporating the directional aisle boards, therefore using clear and uncluttered space that is clearly visible to shoppers.

[0012] The platform of the present invention is aimed at delivering increased product and category sales and an increased shopper experience. It allows brands to communicate and affect shopper purchasing behaviour when in buying mode and track campaign and communication performance in real time as it relates to in-store sales activity.

2018100860 22 Jun 2018

[0013] The present invention enables not only real-time advertising of products at relevant aisle locations to highly relevant customers, but it also allows the collation of measurable data. Measurable real time media channels are few and far between which leaves brands little option but to advertise based on assumed audience reach, minimal visibility on customer cut through, recall and ultimate purchasing behaviour. Most recently, brands have raised concerns with online advertising, its effectiveness, its reach and the uncontrollable nature of brand associations. However, with the present invention, the advertisement frequency can be monitored and compared to sales data for a particular product, enabling the effectiveness of in-store advertising to be measured, as well as various other analytical comparisons.

[0014] Further aspects of the present invention will also be described in the detailed description of the invention below

[0015] For the purposes of this specification, the term signage system is used broadly to describe a system that can be used to display information (such as advertising material or general signboard information) associated with an aisle or region of a shop. The signage system may in some stores be used to display information associated with a region of the store.

[0016] A detailed description of one or more embodiments of the invention is provided below, along with accompanying figures that illustrate by way of example the principles of the invention. While the invention is described in connection with such embodiments, it should be understood that the invention is not limited to any embodiment. On the contrary, the scope of the invention is limited only by the appended claims and the invention encompasses numerous alternatives, modifications and equivalents.

[0017] For the purpose of example, numerous specific details are set forth in the following description in order to provide a thorough understanding of the present invention. The present invention may be practiced according to the claims without some or all of these specific details. For the purposes of clarity, technical material that is known in the technical fields related to the invention has not been described in detail so that the present invention is not unnecessarily obscured.

Brief Description of the Drawings

[0018] Preferred embodiments of the invention will now be described with reference to the accompanying drawings wherein:

2018100860 22 Jun 2018

[0019] **Figure 1** is a perspective view of a signage system according to an embodiment of the present invention.

[0020] **Figure 2** depicts technical specifications for a signage system according to an embodiment of the invention, from front, back, top bottom and sides.

[0021] **Figure 3** is a representative image showing a signage system according to an embodiment of the invention, in use in a supermarket.

[0022] **Figure 4** is a side and perspective view of a tiltable embodiment of the present invention.

Detailed Description

[0023] Figure 1 depicts a signage system 100 in accordance with an embodiment of the invention. The system 100 includes an electronic screen 110, and integrated menu boards 120 adjacent either side of the screen 110 which is achieved through the digital media player. A mounting arrangement 130 is used to mount the screen to a ceiling, so that the system is displayed within or near the head and tail of a shopping aisle.

[0024] The screen 110 may be a custom built, integrated, ultra-wide, digital LCD HD screens, such as a 480mm or 580mm high ultra-wide LCD HD panel of up to 1510mm wide incorporating an equivalent 32" or 42" screen with integrated aisle side-boards. The panels are preferably of a commercial quality with anti-reflective glass and a 50,000 hour life cycle (or 7.6 years).

[0025] Each screen 110 is preferably fitted with a microprocessor and network connection enabling it to communicate with a controller. The controller (also a microprocessor having a CPU in communication with a memory) is configured to control the information displayed on the screen. The controller is provided with access to a data repository listing the items stocked in the relevant aisle (of course, a single data repository may be used for all aisles, and items may be categorized by aisle in accordance with typical database field protocols).In one embodiment, the controller will deliver (to the screen 110) ten 6 second, rotating product advertisements per minute, for products stocked within that aisle. Of course, many other advertisement rotations or selection algorithms may be used. In some embodiments, the controller may also display product menus within supermarket aisles that replace existing product menu markers, on the screen 110 – ie the screen itself may act as the menu boards.

2018100860 22 Jun 2018

[0026] The controller may be a local or a remote server. An individual controller may control systems in multiple aisles and/or multiple stores.

[0027] In addition, a camera is installed within the system 100, near the screen 110, directed to observe customers who can view the screen 110. There may be a discreet/covert camera. The camera may monitor consumers who enter the aisle related to the screen 110, and its images may be analysed to obtain information regarding those consumers, including:

- eye tracking data, showing how long a particular consumer looked at the screen;
- facial analysis data, which can be used to estimate the age or other demographic information of the consumer.

[0028] The data can then be analysed, for example by the controller, to monitor shoppers' patterns and advertising success. Those analytics can then, for example, be fed back into the selection process for determining which advertisements to display – brand owners may decide to target particular demographics for their advertisements, for instance. And eye tracking data can be used to determine which ads draw the most consumer attention.

[0029] In addition, the data repository may include details such as sales details and prices, and the controller may also be integrated with an inventory management system for the shop. This enables automated price specials, price changes, surge pricing and connectivity between the aisle boards and the shelf. It also enables the success of individual ads to be quantified, including by correlation with the facial analysis and eye tracking data.

[0030] In some embodiments, the invention may include beacon technology to enable two way communication with shoppers, connection to the retailer rewards program, integration with the on-line shopping app and also future digital innovation, and

[0031] In some embodiments, hardware may be installed at the point of sale, to measure sales items at the scanners to determine advertisement and campaign effectiveness, drive conditional play and optimize the system utilizing artificial intelligence.

[0032] These combine to provide not only automation in the 'back end' but also start-of-the-art functionality in rules-based media play. It also enables analytic reports to be generated for both retailers and brands, giving them real-time shopper insights from their customers/consumer such as;

- Product and category data – analysis of store scan data

2018100860 22 Jun 2018

- Transaction and store traffic
- Average basket size
- From facial recognition technology
    - Approximate Age
    - Gender
- Shopper Disposition
- Screen views per store, by aisle and by product rotation
- Dwell time on screen views

[0033] The present invention enables a brand to obtain analytics regarding the performance of their strategy, and to develop and refine their communication strategy to advertise products specifically stocked within that respective aisle and or co-promote a dual product offering across aisles where appropriate. Factors such as the in-aisle positioning, height and width of the units may be optimised, to ensure they deliver maximum results for shopper interaction and engagement (based on the analytics gathered). Rules-based play enables the integration with the scanning of products to not only determine the reach of brand communication, but also its effectiveness. Based on the average store operating hours of 18 hours, the program will rotate 1080 advertisements per screen, per day, per brand, providing an advertising channel with extensive targeted exposure.

[0034] Ceiling-hung screens 110 may be positioned back-to-back (2 screens per unit), and located inside the aisle at both the entry and exit of each aisle, and the positioning may be optimised for viewability for shoppers entering and exiting aisles.

[0035] The length of each ad may also be adjusted to suit particular requirements. However, the preferred ad length is approximately 6 seconds, and this may be set as a standard. If 10 advertisements are shown for 6 seconds each, this means that each ad is shown twice in two minutes. This corresponds to the average aisle shop by consumers, of 2 minutes. Of course, although a 10 advertisements x 6 second rotation is described above, more specific advertisement targeting may be used to target advertisements at particular consumer demographics, based on data from the camera. The rotation or sequence of advertisements displayed may be chosen to maximise ads but minimise shopper distraction complaints. A

2018100860 22 Jun 2018

preferred approach is to have four screens in an aisle, and to have all 4 screens in an aisle rotate at the same time with the same content. All screens across all aisles in a shop may also rotate at the same time, although it will be understood that each screen will display different advertisement content to reflect the items stocked in the corresponding aisle.

[0036] The facial recognition cameras may be positioned at approximately a 2.4m height to maximise the number of views and utilise both long and short throw covert cameras.

[0037] The screens may be connected to the Internet via wired and/or wireless connections (e.g. Etherenet, wifi etc). This enables data to be directly uploaded from the cameras, and also enables advertisement and/or aisle item information to be updated in real-time, if desired.

[0038] Although the present invention has been described with particular reference to supermarket shopping, it could be used in other retail environments. It is particularly suited to large format retail environments, including grocery and liquor, pharmacy, department stores, sports retail, and/or convenience stores, petrol stations and pet stores.

[0039] Throughout this specification and the claims which follow, unless the context requires otherwise, the word "comprise", and variations such as "comprises" and "comprising", will be understood to imply the inclusion of a stated integer or step or group of integers or steps, but not the exclusion of any other integer or step or group of integers or steps.

[0040] The reference in this specification to any prior publication (or information derived from it), or to any matter which is known is not, and should not be taken as an acknowledgment or admission or any form of suggestion that that prior publication (or information derived from it) or known matter forms part of the common general knowledge in the field of endeavour to which this specification relates.

2018100860 22 Jun 2018

Claims

1. A display system for a shop aisle, the aisle stocking a plurality of items, the system comprising:

an electronic screen;

a data repository storing information regarding the items stocked in the aisle; and

a controller in communication with the screen, configured to display advertisements for a plurality of the items stocked in the aisle.

2. The display system of claim 1, further comprising one or more sign boards integrated as part of the screen or adjacent to the screen, indicating at least some of the items stocked in the aisle.

3. The display system of claim 1 or 2, further comprising a camera, and wherein the controller analyses camera images to obtain information regarding customers exposed to the signage system.

4. The display system of claim 3, wherein the controller is further configured to obtain purchase tracking data to determine the effectiveness of advertising by time of day, day of week and month of year.

5. The display system of claim 3 or 4, wherein the information comprises at least one of:

facial analysis data of a customer, and the controller selects advertisements to display on the screen, based on the facial analysis data; or

the time spent by a customer viewing the screen.

2018100860 22 Jun 2018

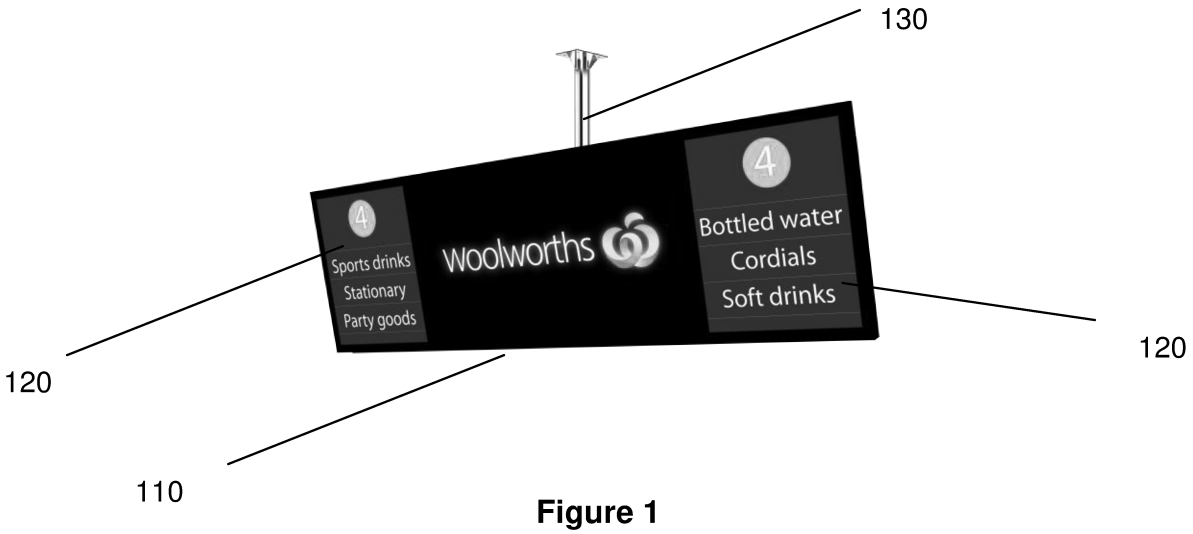

Figure 1

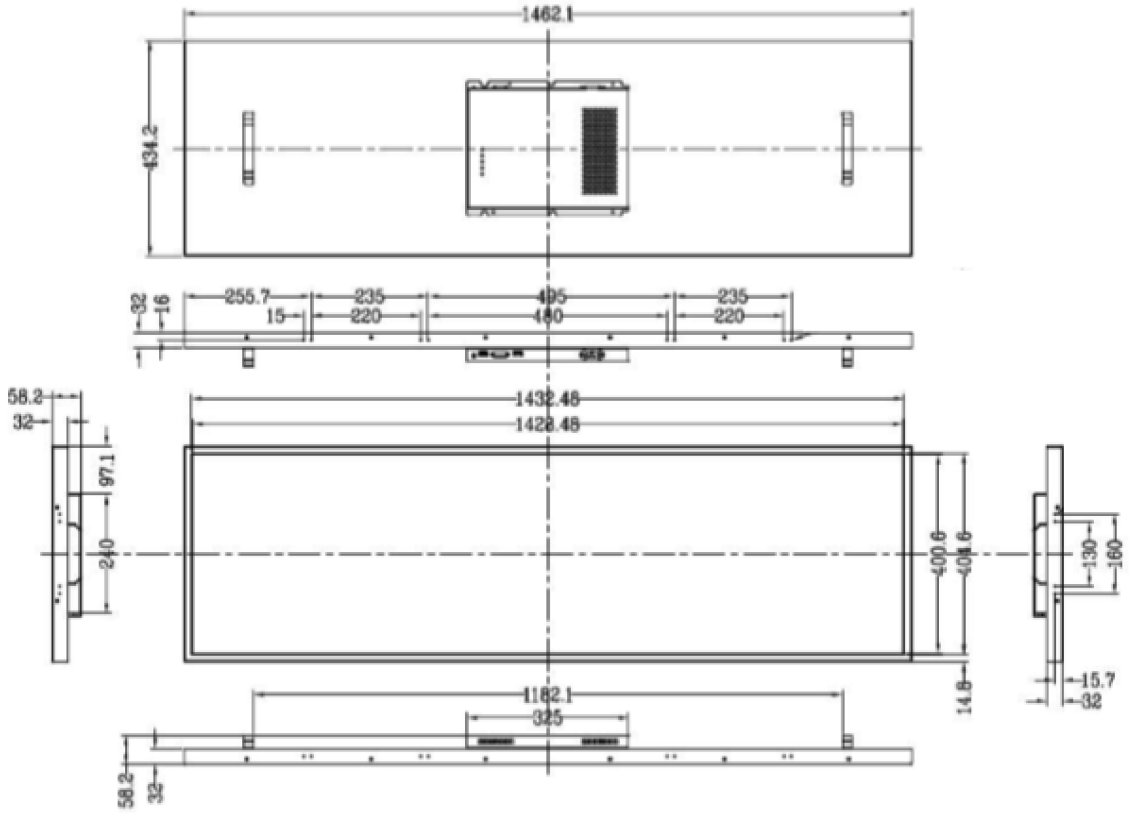

Figure 2

2018100860 22 Jun 2018

Figure 3

2018100860 22 Jun 2018

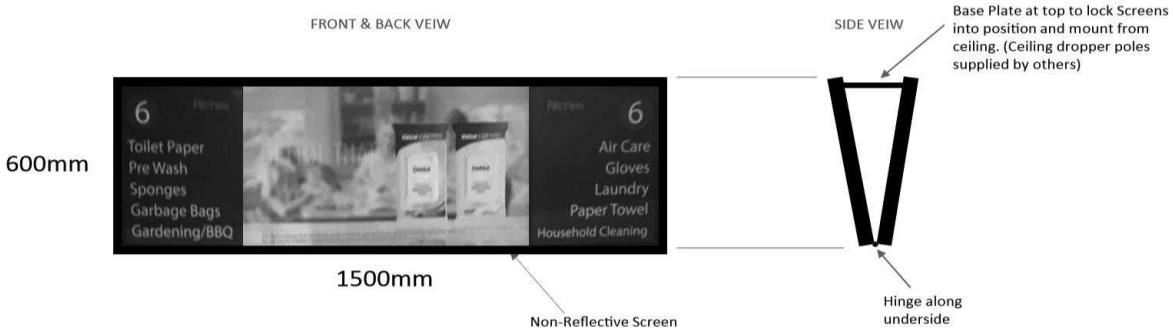

Figure 4