

DISPLAY SYSTEM

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Field of the Invention

- 5 The invention relates to public announcement or advertising systems use in the entertainment or hospitality industry. In particular the invention relates to advertising display systems for providing real time information to patrons.

Background of the Invention

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The hospitality industry and in particular that category relating to clubs, bars and other establishments catering to late night entertainment will often be located within “clusters” of similar, or related, businesses. To attract patrons, these businesses are often conveniently located to attract large numbers of potential customers who then  
15 select an establishment based on impulse.

Whilst design and décor are important factors in attracting customers, in a cluster environment, it is difficult for any one establishment to differentiate itself based on a renovated façade or improved interior design without adjacent businesses also  
20 upgrading as a result of a loss of business.

Further the standard offerings of such a business include music, either pre-recorded or live, food (which is often a secondary consideration to customers) and a limited range of branded beverages (both soft drinks and alcoholic beverages) which are commonly

offered by all said businesses within the cluster. Specific points of differentiation such as microbreweries offering a different product to adjacent businesses tend to appeal to niche markets. Also such points of differentiation often involve a high level of expertise and capital investment which may not be justified.

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It is therefore a difficult circumstance for such a business to create a point of differentiation to attract customers, at a reasonable cost.

### Summary of Invention

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In a first aspect the invention provides a public display system comprising a beverage dispenser having tubing positioned within a cooling medium; an outlet for dispensing the beverage from the cooling medium; an inlet for receiving the beverage into the cooling medium; a temperature sensor arranged on said tubing so as to measure the temperature of the beverage within the tubing, said sensor in communication with a display; said display for displaying the temperature of the beverage as measured by the temperature sensor; wherein said display is positionable so as to be displayed for public viewing.

20 The invention seeks to capitalize on the desire to consume cold beverages and where the environment is hot and humid to desire the coldest beverage possible.

Accordingly the invention provides a means of communicating the temperature of a selected beverage in real time. Further the invention may provide a continual

representation of this beverage temperature. The invention provides that the temperature is displayed to the public through prominent mounting and so be visible to potential customers who may be approaching and passing the establishment. In this case visibility up to 100 metres may be required. The display may be positioned a  
5 minimum pre-determined height, with this height being a function of any one or a combination of: display size, luminosity of the display and sight distance for target market, for instance for a visibility at 20 m, 50 m or 100 m.

In the case of a pre-determined height, the positioning may including mounting the display to a wall, frame, or permanent/temporary structure.

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In a further embodiment, the display may be position for public viewing as a road mounted sign for potential customers passing close to or directly in front of the establishment. For instance, the display may be a sandwich board

15 In a still further embodiment, the display may be seen from a considerable distance such that in the case of an establishment located centrally within an entertainment cluster, the display may be arranged to be visible at a considerable distance, for instance up to one kilometer.

20 The temperature sensor may be a thermocouple or thermister having a hard wire connection to the display. Alternatively the temperature sensor may transmit a wireless signal to be received by the display. In any case, the temperature so far must be capable of measuring the beverage in the tubing, and not merely the surrounding cooling medium.

The display may be any one or a combination of LED, LCD or surface upon which a projector projects the temperature. In the latter case, the projector may receive the temperature from the sensor, either directly or remotely, with the temperature then  
5 communicated to the surface through the light projection. The surface may be a purpose built screen, either permanent or temporary, or may be an existing structure, including a wall.

It will be appreciated that significantly more customers will be present at night.  
10 Therefore, the temperature subsequent measures and the display itself must be large enough to be seen at the designated distance and luminosity consistent with night time conditions, taking into account illumination from street lights and advertising lighting.

The display may provide the temperature of a particular dispenser. Alternatively the  
15 display may provide the temperature of a plurality of dispensers either simultaneously as multiple displays or in a further alternative by sequentially displaying the temperature of said dispensers.

The display may be mountable to an existing structure at a predetermined height.  
20 Alternatively the display may be mountable to a purpose built frame. Said frame may be foldable in order to provide portability. Alternatively the frame may be fixed.

Said display may further display messages according to the advertising purpose. In one embodiment, further messages displayed on the display may include the beverage price,

time limited promotions, the type and brand of beverage for which the temperature is being displayed and in the case of the display being in communication with several dispensing units, the number of other form of identification of the dispensing unit having the display temperature.

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In one embodiment the temperature sensor may be located at a convenient point along the coil within the cooling medium. In particular the temperature sensor may be located at a position on the coil closest to the dispensing tap. Thus in this specific arrangement, the temperature of the beverage is as close as possible to the dispensed temperature and  
10 further if the temperature sensor is located on the tubing intermediate an emergent point from the cooling medium and the dispensing tap and so avoiding any interference from the cooling medium.

#### Brief Description of Drawings

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Figure 1 is an elevation view of the display system according to one embodiment of the present invention;

Figures 2A and 2B are detailed views of the temperature sensor according to a further  
20 embodiment of the present invention;

Figure 3 is a display according to a further embodiment of the present invention.

#### Detailed Description

Figure 1 shows a display system 5 according to one embodiment of the present invention. Here a bar having a beverage dispensing tap 7 is located. A dispensing unit 10 located under the bar receives the beverage, such as beer, from a beer keg into a series of coils within a cooling medium. The cooling medium may be chilled water, brine or a glycol solution with the dispenser maintaining the temperature through electrical refrigeration.

As the beer enters the tubing loops, it is cooled by the cooling medium ready for dispensing from the tap 7. As seen in Figures 2A and 2B, a temperature sensor 40 is mounted into a tapping 45 located in line with the tubing 36. The flow of beer through the tapping 45 allows for the measurement of temperature of the beer prior to exiting 38 the tubing as it is dispensed by the dispensing tap 7.

The temperature is then communicated directly to a display 15 through a hard wired cable 55.

The display 15 is mounted to the side of the building 30 at a height that is appropriate for enticing passing trade along the footpath 35. For instance, for an esplanade mall or other pedestrian thoroughfare having a straight line of sight exceeding 50m, a height up to 5 meters may be required.

The intent of the invention is for the passing pedestrians to see the temperature of the beer as it is dispensed and so be assured that they will receive a cold drink. This is in

contrast to establishments adjacent to the bar which cannot guarantee the temperature at which the beer is being dispensed.

In addition to this surety, the potential customer may in fact be overwhelmed by the  
5 actual temperature irrespective of whether other establishments can provide the same  
temperature. Thus not only does the display system 5 provide a point of differentiation  
from adjacent establishment but also provides an opportunity for impulse buying from a  
potential customer who may not initially be seeking a cold beer but instead may merely  
be passing through a tourist area. If on a hot day the potential customer sees the  
10 temperature of the beer being dispensed, this may trigger his desire to impulse buy and  
so generate sales from previously uninterested customers.

Claims:

1. A public display system comprising  
a beverage dispenser having tubing positioned within a cooling medium;  
5 an outlet for dispensing the beverage from the cooling medium;  
an inlet for receiving the beverage into the cooling medium;  
a temperature sensor arranged on said tubing so as to measure the temperature of  
the beverage within the tubing, said sensor in communication with a display;  
said display for displaying the temperature of the beverage as measured by the  
10 temperature sensor;  
wherein said display is positionable so as to be displayed for public viewing.
2. The system according to claim 1 wherein the display is an electronic sign having  
an LCD or LED display.  
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3. The system according to claim 1 wherein the display comprises a surface onto  
which a projector projects the temperature.
4. The system according to any one of the preceding claims wherein the system  
20 comprises a plurality of dispensers with the temperature of each dispenser displayed on  
said display.
5. The system according to claim 4 wherein said temperatures corresponding to  
respective dispensers are displayed simultaneously on the display.

6. The system according to claim 4 wherein said temperatures corresponding to respective dispensers are displayed sequentially.
- 5 7. The system according to any one of the preceding claims wherein said display further shows public messages.
8. The system according to claim 7 wherein said messages include advertising and/or promotional information wherein said promotional information includes  
10 information relevant for a limited time.
9. The system according to any one of the preceding claims wherein the display is publicly displayed at a predetermined height, said predetermined height being a function of any one or a combination of: display size, luminosity of the display and sight distance  
15 from said display.
10. The display according to claim 9 wherein said predetermined height is in the range 3 to 5 metres for a sight distance in the range 20 to 50 metres.