

Introduction

Thinvent's Queue Management System enables banks, transport operators, retailers, and other high-footfall establishments, to service their customers better. Our queue management systems improves customer satisfaction and reduces waiting time. It also increases the utilisation of your staff and resources.

Thinvent's QMS is a modern, digital signage based solution. The customers interact with an aesthetic, touch-screen based graphical kiosk. The token information is displayed on a large LCD screen. The operators interact with the system through a captive website.

Method of Operation

On entering the establishment, the customer approaches a wall mounted, touch screen kiosk. Here, the customer chooses the particular service that they wish to avail, such as cash transaction or account opening. A token is printed out of a thermal printer located inside the kiosk. The customer takes this token, and waits for their turn in the waiting area.

The waiting area is serviced by one or more large LCD display screens. These screens flash the next token numbers for each queue from time to time. When a counter becomes available, the next waiting customer for that queue is summoned. It also provides the token numbers of the customers who are next in line to be serviced, so those customers can prepare to move.

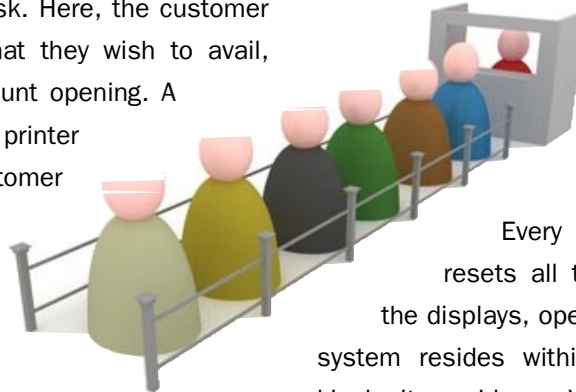


Illustration 1: Wall mount kiosk

At each counter, the customer service agents or operators are provided with a web based console. When they begin their day's work, they must log in to this web console. Thereafter, every time the operator finishes servicing the current customer, she clicks on the "Next" button in the web console. The system immediately requests the next customer in the queue, to approach this counter.

System Architecture

The entire system is controlled by an embedded system. Our advanced, 32-bit microprocessor based product, is fully configurable through a built-in web interface. When the product is installed, the number and names of queues, number of counters in each queue, maximum number of waiting customers for each queue, and other

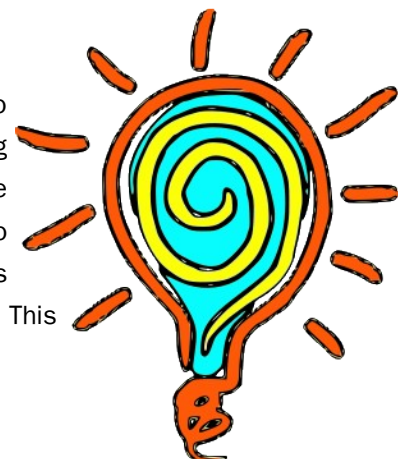
such parameters, are programmed into the system by the administrator. Thereafter, the administrator can use the web interface to change any of these parameters, at any time.

Every morning, the system automatically resets all the token numbers. It also resets the displays, operator consoles, etc. The embedded system resides within the wall mounted touchscreen kiosk. It provides a VGA or DVI port for hooking up of external large displays. It also provides an Ethernet port for hooking into the LAN network at the premises. Once an IP address is assigned to the system, all operators can access their web consoles at this IP address.

The system can be managed remotely through the WAN infrastructure of the organisation. A central management system can be used to monitor, control and configure all the queue management systems across the organisation, centrally.

Salient Features

- The system can be used to monitor the queue waiting times. If enabled, the time taken by each counter to service each customer is recorded in a database file. This



database can be mined by the organisation's business intelligence tool to create useful information and reports.

- If required, the system can print the estimated waiting time of each customer on their token. Customers can use this information to step out and carry out some other chores, returning in time for their turn at the establishment.
- Administration of the printer, customer displays, etc., can be done remotely from a central location.
- The system can automatically send alerts to the office staff when the thermal printer is low on paper, or if there is any malfunction.

- The system provides both visual and audio feedback to the waiting customers. An audio output port is provided for this purpose. The administrator can record voice prompts through the web based administration panel.
- The touchscreen kiosk can also provide voice prompts to users, when they are selecting a queue.

Conclusion

Thinvent's Queue Management System is the most advanced, robust and user friendly system available today in the market. This is a future-proof product that incorporates digital signage, touchscreen, and other latest technologies. It is also very easy to use and administer.

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