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A High-Tech Solution To Wayfinding

By Mark VanderKlipp

One of today's hottest trends in wayfinding is interactive digital signage — the use of electronic kiosks and flat-panel screens that display instantly updated information of a user's choice. In a hospital setting, where patients and visitors are searching for information and staff and department locations change frequently, this high-tech solution to provide multiple levels of easily updated information may be just what the doctor ordered. However, digital signage is not the right prescription for every healthcare facility with ailing wayfinding. Factors such as the capability of the facility's information technology (IT) department to support the kiosk and the technological comfort level of its patient population must be carefully considered before plugging in an interactive wayfinding solution.

Designing the Right Tool

It is important to note at the outset that electronic kiosks should be considered and designed as part of a larger wayfinding solution rather than used as a Band-Aid to replace dysfunctional signage. The range of possibilities needs to be narrowed down by engaging a wayfinding consultant in a detailed analysis of the factors discussed in this article. As a key component of your wayfinding strategy, an interactive kiosk can be a tremendous asset or a difficult burden. The key to success is designing the right tool for your staff, your audience and your budget.

When designed and deployed appropriately, digital signage can provide a broad range of wayfinding information to patients and visitors — from simple maps and directories to complex information that draws from a variety of sources, such as physician databases, scheduling software, patient registration and billing, and even the Web. A range of such interactive solutions can be considered.

For example, Clarian North Medical Center in Carmel, Ind., recently installed in three hospital lobbies a system of touch-screen kiosks that works in concert with the more traditional sign-based interior and exterior wayfinding system. Electronic evolutions inc. in Carmel,



Ind., provided the hardware and programming for the kiosks and partnered with Corbin Design of Traverse City, Mich., to develop visual and written content that reflects the rest of the wayfinding system, including the terminology used for destinations.

Kiosk screens display a graphic map of the facility along with a directory of major destinations, the floors they are on and the recommended elevators to use to conveniently reach them. One button allows users to convert the map listings and directory information to Spanish, while another button displays a list of physicians at the facility, along with their office locations.

An interactive main directory also can be incorporated as part of a larger exterior and interior wayfinding system. For example, the directory could consist of two screens located on opposite sides of a four-sided column in the facility's main lobby, showing a map of the entire facility along with the recommended elevators to use to reach major destinations. Backlit display panels on the other two sides could mimic the look of the screens — at a much lower cost — and display static marketing and informational material.

Which Way to Go?

When deciding whether to include a digital signage component in a wayfinding system, the following factors should be considered:

- *The audience.* Patient satisfaction is the primary goal in every hospital interaction. In order to determine whether an interactive kiosk will improve patient satisfaction, facility managers need to understand their audience and the audience's comfort level with the technology.

While demographics are changing and individuals of all ages are becoming more literate with technology, in general, older patients and visitors will be more comfortable addressing a person at an information desk rather than interacting with a touch screen. This population may also have difficulty understanding some interface designs. Furthermore, if users are allowed to print from a kiosk, the resulting map may be potentially disorienting to an individual not adept at reading maps.

- *The scope of interactivity.* A Ferrari is not necessary to pick up groceries. Likewise, if a static map directory will serve the purpose just as well for a given facility's audience, then an electronic kiosk may be overkill. However, if the goal is to provide guests with more complete, searchable information, those needs should be analyzed and detailed functional expectations discussed with a wayfinding consultant.

Current resources should be taken into account as the scope is considered. Can existing databases merge with a proprietary software package? Are there internal capabilities to manage and maintain the information to be presented? If an outside resource is being considered for programming and development, a detailed scope must be finalized before interviewing these firms to provide an apples-to-apples comparison. References should be carefully checked and primary contacts determined, as the relationship with these individuals will help determine the success of the project.

- *Cost.* Once the scope has been determined and a developer has been retained, preliminary cost estimates should be developed.

that closure. In the event of an emergency, the kiosks can incorporate an “override” feature that provides instant instructions for evacuation or other safety-related information.

Conclusion

As an integral part of an integrated wayfinding system, all these benefits can contribute to a long-term return on investment. As with any new technology, there will be a period of ramping up, both internally and on the part of patients and visitors. Partnering with the right consultants to properly analyze a facility's needs and the needs of its audiences in order to implement a functional, flexible solution is the key to success. FC

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Technical Considerations For Digital Signage

Once the decision has been made to make electronic kiosks part of a wayfinding program, several questions must be answered concerning the hospital's technical capabilities and the types of information that the kiosks should convey. The answers to these questions will help determine what people see when they use the kiosks:

- Will the application running the kiosks be supported and maintained on the hospital's own servers or via a stand-alone remote server?
- Are internal databases able to connect with the proposed software?
- Do other sources of Web-based information need to be fed into the kiosks?
- Should guests be able to access this information from their personal digital assistants (PDAs) or from home computers via a public Web site? If so, how should the information be formatted to address these media and their different screen sizes and resolutions?
- Should staff be able to access the information from the hospital's intranet or physician extranets?
- Will the kiosks be hardwired to the hospital network or will they be connected wirelessly? If wirelessly, is the system robust enough to update these kiosks at regular intervals?

While not technical, the answer to this last question is crucial to ensuring that the kiosks are used effectively on an ongoing basis:

- How will existing staff be trained to use and maintain these tools? Front-line desk staff and volunteers will likely be tasked with showing guests how the kiosks work, so they need to be well-versed in their capabilities. FC



When designed and deployed appropriately, digital signage can provide a broad range of wayfinding information to patients and visitors.
Photography by Jim Harper

Remember that the up-front costs of programming and hardware, software licenses, staff training, maintenance and support are just a portion of the total cost. A wayfinding consultant will work closely with the programmer to ensure consistency with the larger program, and in-house staff will be called on to provide technical and content support in an ongoing effort to keep the content up to date.

There is one other cost to consider: the cost of negative guest perceptions if the kiosks contain old information or if they malfunction. A comprehensive plan should be developed and budgeted accordingly to support the kiosks for the long term.

• **Location.** Kiosks are often incorporated with other communications media, such as brochure racks and tele-health information, to serve as a single location for a variety of information sources. They should always be located in high-traffic areas, such as building entrances, near information desk locations and pedestrian exits from parking structures.

Is there physical space to accommodate a freestanding kiosk? If not, kiosks come in a variety of shapes, sizes and orientations. They can be surface-mounted; incorporated into an existing hardware platform, such as an Internet workstation; or even projected onto a specialized translucent surface for a sleek, high-tech approach.

Just as with static map kiosks, the map elements of an electronic kiosk must be properly oriented to the environment from the viewer's perspective. For example, the top of the map should correspond to the direction that the

viewer is facing. Also, the kiosk should be facing the entrance so that a user does not have to turn before viewing it, which can cause visitors to lose their bearings.

Empowering Guests

If the decision is made to incorporate digital signage, the potential rewards in terms of increased patient satisfaction are great. A kiosk that is a well-integrated part of a larger wayfinding system displaying consistent terminology and visual design will help visitors feel supported by a seamless flow of information at all points in their journey. Familiarity with a facility brings confidence and creates a more empowered guest — and when patients arrive at their destination under less stress, the entire experience will be worth noting to friends and family. The ability to “dive deep” for many types of information can help those audiences predisposed to using a kiosk. The ability to access detailed physician information; change the language of the kiosk content “on the fly”; and view marketing, patient registration and billing information will show visitors that their needs have been anticipated and that up-to-date information is available. This in turn leads to greater confidence and trust in the hospital as a whole.

Support for this information can be more easily accomplished if properly anticipated. A custom “back-end” interface should be simple to update and user-friendly for internal staff. Should a specific corridor be closed for any reason, information should be easily updated at a moment's notice to route other guests around