Attachment D:
Interactive and Web Best Practices

Universal Symbols in Health Care

Over the last five years there has been an explosion in technologies that support dynamic wayfinding and information retrieval in the environment. These technologies are in a constant state of flux so developing a set of best practices and recommendations for integrating symbols into computer and Web-based systems require an ability to see not only what technology exists now, but where they will be one year, five years or ten years from today.

Understanding the Trends

Information systems in health care is undergoing a number of changes that are important to understand when developing wayfinding and publication strategy involving symbols. These include:

Mobile Web and Augmented Reality

Portable media consisting mainly of software application driven hand held devices have made enormous leaps in the last five years to the point where many institutions are focusing on using them as the key tool to build wayfinding programs. With the addition of tags like RISD chips and GPS location technology, these devices can locate a specific location in the environment and provide information on that location. The next step in this process is a methodology called augmented reality, where fixed signs and objects in the real world are augmented with additional information from hand held devices.

WalkBrighton is a free software application developed by the Applied Application group for the iPhone that was design in coordination with the graphics and symbology of the fixed wayfinding system in the environment.

Web Driven Kiosk Technology

Until recently most kiosk based information systems utilized proprietary software to develop systems in multiple locations. This has changed significantly over the last few years as designers have focused on using web based information systems that can used on any computer system that uses the Web. At the same time specific Web standards have been in development for accessible type and language translation on the Web making these software systems more adaptable to changes like new screen technologies or improvements in Web-based software like Flash.

Multiple Device Oriented Information Networks

Tweeter as an early software that showed that information on the web can also be utilized on multiple devices including cell phones and public information audio systems. Apple and other software providers have been at the forefront of expanding these systems to many devices in the environment including land-line phones and audio/visual systems.

Impact on Integration of Health Care Symbols

These new technologies and trends greatly impact the symbols are integrated in wayfinding and sign programs. The two biggest changes include:

This kiosk developed for an office building in Minneapolis, Minnesota and developed by Larsen Design is typical of software applications used in building information systems. It is a web based program using flash to build the program and run it off a central server.

The software applications that links the iPad and iPhone are also being linked to kiosk, lighting and visual systems in the environment. The American Eagle Store in New York developed by the Barnycz Group uses an iPhone and iPad based application to update and change the content of the media wrapped building, putting the power of an entire control room inside a hand held device.

Interactive and Web Best Practices

1. Symbols as part of a flexible information system instead of landmarks on maps and signs.

Instead of symbols being used as a freestanding element on signs and maps that delineate a location, they will also be integrated into directions, rolling maps and information systems. This will require symbol sizes to change in size, location and resolution often inside the same program.

2. Universal Symbols closely aligned with numbers colors and addresses.

it will be important, because symbols will become tags which various pieces of information will be attached.

Case Studies of New Wayfinding Technologies

Centrally oriented proprietary software based technology

MD Anderson Cancer Center

An integrated sign, Web site, kiosk and print map developed by Fd2s pioneers many of the design ideas associated with linking symbols to digital formats including kiosks that can deliver unique directional maps and Web-based directional maps and systems. A key innovation is tying together unique landmark based symbols with universal symbols in different formats that can be used for both narrative based and map based wayfinding on the same web and kiosk based system.

RFID Based Wayfinding Sign System

Identity Group Passive Dynamic Wayfinding System

The wayfinding system developed by the Identity Group has dynamic sign information that integrates with static signage. A visitor wearing an ID badge coded to a specific destination is provided the simple arrow-based directions as that person approaches the digital sign. During the intervals between the times that one visitor passes the digital sign and the next visitor approaches the digital sign, that sign automatically reverts to a "default" mode where it provides directions to common destinations such as admissions, cafeteria, and restrooms. Since directional information can be adapted to the specific user symbols can be larger and linked to multilingual information.

Mobile Web

TriMet Portland Oregon Mobile Web System

This transit system developed an open source code to deliver wayfinding as well as departure times for the system. Dozens of applications have been developed for this system which provides a palette of maps, symbols and type to use on multiple applications.