Product: Information Pod
These concept sketches explore design ideas involving form, interface modes, and the presentation of critical information. Integrating the system’s functional capabilities into one accessible scenario meant creating an interface that could work across components, for both the information and pass purchase stations. Individually, each component’s design needed to reflect the function-specific needs of its respective stage within the entrance process. Shown here are early interface sketches, forms that intuitively lead the user through the entrance process and station space, and accessible interface possibilities. These sketches made clear the importance of considering the system as whole during design work, rather than working on only one component at a time.
The concept of a handheld navigator was developed to actively provide information and guide the user through the Metrorail system during their travels. Instead of only having access to information at the beginning and end of their trip, riders can take it with them. This idea was inspired by an article in Scientific American (pic 23) about augmented reality and the future of signage technology. Augmented reality works by adding computerized virtual information to the sensory perceptions of users who are wearing a special see-through viewing device. When the user looks at something the computer has been programmed to respond to, a graphic or text image is overlaid on the user’s field of view.

In this scenario, riders wearing special “glasses” plot their course on the navigator, which signals sensors throughout the Metrorail system to overlay directional information tailored to that user’s unique needs, on the user’s field of view. Some navigator concepts include credit card-based fare payment functions in the handheld device itself, while others rely on an interface at a larger docking station to take care of money transactions.
The concepts on these pages explore the navigator concept further. The body surface of the unit in figure 102 is covered in a low-durometer santoprene in order to make the unit more tactile, and to protect it if it is dropped. The navigators in figures 100 and 103 is also covered in santoprene but incorporates a flexible hook for attaching it to a bag strap or belt, or holding it as a handle. Buttons and controls are tactile and visual, an assortment of shapes coded with colors or symbols, and large enough to be used by an individual with limited dexterity. It is also important that the screen use a font large enough to be seen by persons with visual impairments, and that audio output is incorporated for hearing impaired users.

Ultimately, the navigator concept was deemed too “blue sky” to work with the final design goal: a modular entrance system able to be retro-fitted into existing stations. However, the idea of making wireless data transfer a part of the information module’s capabilities came out of this iterative design process. With wireless data transfer riders can download information (schedules, trip maps, street maps, walking directions) they would like to take with them from the information station itself to a mobile phone, palm device, or handheld computer, and have it to reference during or after their trip.

These concepts try to make the “kiosk” less bulky and box-like, as well as more approachable and modern looking. A refined materials palette of brushed steel and glass gives it elegance, but are also sturdy enough for public use. Existing metestation designs provided inspiration, such as the one in picture 24. Designed by IDEO for use in a public setting, it offers users a familiar interface without encumbering the environment it is placed in with a large, heavy object. It does not, however, provide universal access, something which Metrorail’s components must do.
The idea for configuring a cluster of information stations offers the user some privacy, while still making it possible for persons traveling in a group to simultaneously view the screen. In these designs an audio output option increases accessibility for the visually impaired, and making one unit in each cluster a computerized tactile interface further increases the system’s accessibility for the blind. This design, however, does not provide users with the sense of security that the research had determined to be necessary, demanding further explorations of possible cluster designs.

These design ideas play more with the cluster concept; different configurations of 4 modules, and an integrated pod of 3 modules. Joint concepts for clustering the modules were explored, as well as connections between the interface and the module. Low barriers for privacy and security come to play in the 4-module grouping, while the 3-module pod’s geometry does away with the need for additional partitions. Ultimately, the 3-arm “pod” formation was chosen to be the final design concept.
The final information pod design uses a front-to-back module configuration, giving users privacy in their planning activities, while the reaching arm of each module’s work area offers security to the user’s personal articles, companions and children. The work area offers users a place to set down and access their possessions while completing the orientation tasks. The screen design incorporates a strong bracket design for rotation, with rubber edging intended to function as a handle for intuitive screen adjustments. The screen position is intuitive and easy for the user. Rubber was chosen for the handle’s material because it offers grip tactility and provides a bumper for the screen’s edges, making the screen safe to mount at a height of 37”. Materials used are concrete, metal, glass, and rubber. A light is incorporated in the pod’s central axis which provides direct lighting at the work surface level as well as for the foot area, and casts general area light with the up-light incorporated into the top of the central axis. All measurements in inches.
Lighting follows the length of the
central axis fully illuminating each
module’s work area

A cut-out below the work surface
allows seated users to pull in close
to the screen, also provides extra
space for users on scooters or with
strollers

Curved corners edges and surfaces
keep passengers safe while creating
a sense of flow within the station

Molded Santoprene screen frame
provides a tactile handle for users to
adjust screen angle with while pro-
tecting the screen itself from bumps
and collisions

A “touch surface” provides flexible
space for users

Touchscreens display universally
accessible graphics and offer multi-
lingual interfaces; one tactile screen
interface will be available with a tex-
tured floor path to direct blind users

Recessed “secure zone” provides
a semi-sheltered space for personal
belongings

Lighting close to ground level makes
it easier for seated users to maneu-
ver into and out of the Pod. Also
improves visibility of children, strol-
ers, and personal belongings.

An up-light at the top of the Pod’s
central area provides area lighting for
the station interior

Fig 123 – photoshop rendering of Pods in use inside the Ballston stations