

Select Bus Service Vending Machine Graphics and Interface Redesign

The 34th Street Partnership (34SP), a Business Improvement District covering 31 blocks in midtown Manhattan, created a graphics system that makes the process of buying tickets for a new bus rapid transit system simpler and more efficient. The work was performed with MTA New York City Transit (MTA NYCT) as a client and with NYC Department of Transportation (NYC DOT) playing an advisory role.

After a successful pilot program, MTA NYCT launched city-wide a new bus rapid transit (BRT) program named Select Bus Service (SBS). One of the factors contributing to the SBS' increased speed was that fare collection had been moved from the bus itself to the bus stops, at which were placed two fare-collection machines that accepted pre-paid MetroCards and one that accepted coins. During the pilot program, members of the design team at 34SP made observations of users on the buses and at fare collection machines and found much confusion arising from the machines' graphics and printed directions.

Riders seemed unsure about how to begin the process of procuring tickets, and how to proceed afterward. 34SP's Design team discerned that the printed messages and instructions on the machines were confusing, needlessly lengthy, and inconsistent, and that the overall design was cluttered and did not relate to other SBS branding. Adding to the confusion was the fact that the machines were re-fitted versions of other machines that users should be expected to be familiar with (specifically, the MetroCard Fare Collection Machines were the same machines from which subway users purchased MetroCards; the Coin Fare Collection Machines were re-fitted "Muni-Meters" used for parking fee collection). The original design did not take into consideration that users would expect the machines to work exactly as they had in their previous incarnations and might become frustrated when they did not.

34SP's Design Team, working closely with MTA NYCT and NYC DOT, set out to improve SBS users' experience by clarifying the machines' message, improving the user interface, and creating graphics that would relate the machines with other SBS elements. The client mandated that any new design be simple to implement, cost the same as the existing design, and have the same maintenance requirements. 34SP could thus propose no changes to the machines themselves: its charge was limited to the "wraps" on the sides and back and the interface decals on the front of the machines.

34SP's designers judged that the existing "wraps", which communicated the machines' purpose on their backs and sides, were wordy and cluttered, and that the central message ("PAY BEFORE YOU BOARD") was off-point. Furthermore, the accompanying message "Keep Your Receipt" created ambiguity for users as to just what they were purchasing. 34SP made the central message clear and unambiguous: "Get Ticket Here", underscored with "Before You Board Bus." The team also eliminated superfluous text that was not central to the purpose of buying tickets, and employed easily understood icons to convey information more efficiently. For example, "MetroCard Fare Collector" was replaced with an icon of a hand inserting a MetroCard into a slot.

The new design for the machines incorporated the horizontal, graded graphic "swoosh" used to brand SBS buses, as well as the vertical "swoosh" used on SBS bus shelters. This created a visual unity for the SBS system that it had lacked.

The 34SP design team also significantly improved the user interfaces at the front of the machines. On both machines, 34SP found that the messaging on the SBS machines was redundant, and that rules and exceptions were not laid out clearly or hierarchically. Each of the machines also presented its own set of challenges.

The MetroCard Fare Collection machines are nearly identical to machines selling MetroCards in the NYC subways, yet function differently. A major problem with the original design was that the "Push to Start" button was not easy to locate. Though 34SP's preferred solution would have entailed changes outside the scope of its responsibilities, the team did succeed in making the "Push to Start" button much more noticeable by placing a bright white "bull's eye" around it.

The Coin Fare Collection Machines presented another set of problems. Originally designed as Muni-Meters for collecting parking fees on city streets, the machines, when refashioned for SBS fare collection, included poorly labeled buttons and defunct functions. The instruction decal did not clearly state options for starting different processes (i.e., for Regular Fare, Reduced Fare, or for instructions in Spanish.) Also, instructions were not color-coded with actions. For example, "Insert Coins" was printed on a yellow background, but the yellow button below was to start the process for purchasing Reduced Fare tickets. Much of the text was printed in fonts too small for visually-impaired users, and included redundant, unnecessary, or inconsistent messages.

34SP's graphic designs for both machines' interfaces simplified messages, arranged information hierarchically, and used color-coding to relate instructions for each step to its corresponding action. Printed with easily readable fonts, the instruction decals make the purchasing process more efficient by clearly stating the user's choices for beginning the process. The decals require less maintenance than previous ones, and are printed with water-based, solvent-free ink. Throughout the design process, 34SP worked with advocates for the visually-impaired to ensure all type and color was easy to read and understand.

The resulting products were enthusiastically received by MTA NYCT and implemented on the 34th Street SBS line in November 2011. MTA NYCT will also use the design as the SBS program expands, and as existing machines' decals need replacing.

Though created for a specific organization, the theory behind the design is easily applicable to other ticket machines: simple language; hierarchical arrangement of information; no redundant, unnecessary, or inconsistent information; color-coordination of instructions with corresponding processes. This was a collaborative effort between 34SP, MTA NYCT, and NYC DOT and another important constituency: SBS riders. 34SP's designers bought tickets, rode buses, and spoke to users of the pilot program to better understand their needs. An exhaustive list of collaborators must include these respondents.

The new design for fare collection machines makes life just a little better for SBS users: they reduce anxiety, save time, increase understanding of the system and even speed the buses along by answering questions often reserved for bus drivers. SBS was introduced by MTA NYCT to address the problem of snail-slow buses in a busy city. With the redesigned graphics and messaging, 34SP's designers hope to contribute to the efficiency of the system, increase ridership, and reduce energy costs.