

Dynamic Displays: *Might They Transform NYC Subway UX?*

Mockups: <http://nycsubway.hasinahmed.org>

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Introduction

New York City is home to one of the most elaborate subway systems in this world. The [subway](#) system has a total of [469](#) stations that are being served by 24 lines. According to the [MTA](#), The annual subway ridership for the year 2015 was around the 1.7 billion mark. In terms of length, it is the fourth largest subway system in the world at [233 miles](#); falling behind Shanghai, Beijing, and London. This project will provide a brief historical overview of the system and map out key events that led to the system's current formation. Having such a huge system and ridership also means that commuters(users) are facing a myriad of problems. Some of the problems stem from the age of the system and some can find its root in the original design. In my opinion, one of the key problem is the signage system. The directional signages are not always clear and the display real estate space is often cluttered, which often leads to information overload on the user's side. In this project, I am laying out possible signage solutions that might enhance the user experience, in term of providing them with a better directional sense. Furthermore, I am proposing a possible idea of having multiple languages being used for the the signage system. Please, continue reading to learn more about the concepts and you may also view the visual mock-ups [here](#).

Brief History of New York City Subway

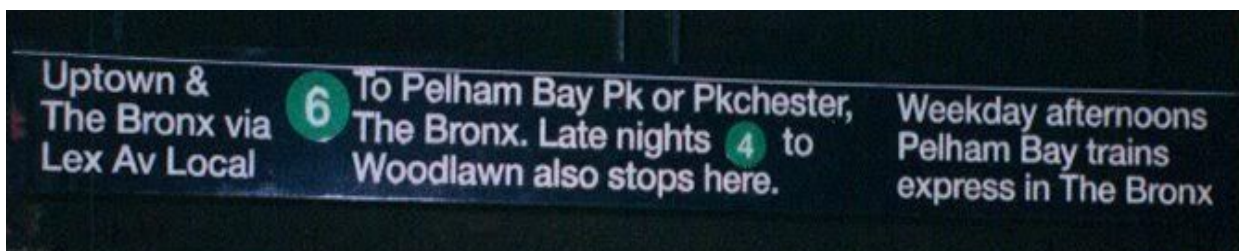
It is imperative give a little bit of [historical](#) context before delving deeper into the issue. New York City's subway system began its journey on October 27th, 1904, which makes it well over 100 years old. However, it is not the oldest; London Underground holds the record for the oldest subway system in the world. The current subway system is also a consolidation of multiple different privately and publicly owned systems. For example, the first subway line was constructed by the Interborough Rapid Transit Company (IRT). The rest of the subway system was constructed by the Brooklyn-Manhattan transit Corporation (BMT) between the years of 1913 and 1931. Furthermore, in the second half of the 1930s, the Independent Subway System

(IND) added additional lines to the system, which also marks the last major construction phase for the system's initial launch. Both IRT and BMT were privately owned and therefore, the city government in 1940 unified all three systems under one unified public system. The metropolitan Transportation Authority (MTA), as we know it now was created in 1968, which is responsible for the NYC subway system and along with other forms of public transportation systems.

Evolution of Subway Signage System

Since the the subway system was originally constructed by different entities, similarly there were presence of irregularities in term of the directional signages. Paul Shaw's [The \(Mostly\) True Story of Helvetica and the New York City Subway](#) highlights clearly outlines the evolution with the signage system of NYC's subway system. After the formation of the MTA, in the late 1960s there was a push towards standardizing the signage, as the MTA essentially inherited three different systems with different signage graphics, typography, and styles. Therefore, under the leadership and direction of the Italian designer Massimo Vignelli, a *Graphic Standard Manual* was conceived to begin the standardization process, which included both signage and the color of the different lines. However, the implementation process was a challenge, as the 1970s were a period of rampant graffiti culture and artists essentially treated the subway cars and the underground ecosystem as their blank canvas. The signage also used to have a clear white background but that was changed to black as a measure to tackle the graffiti artists; making a little harder for them to express themselves. The black background signage still remains to be active and there hasn't been any major changes to the design in the last 30 odd years or so.

Problems with the Current Signages

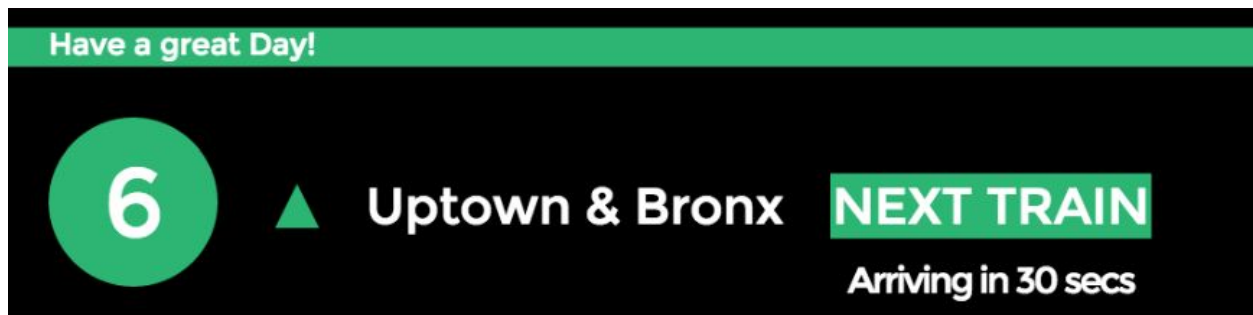


Any user of the New York City's subway system suffer from a major information overload; the above image serves as an example. Furthermore, [this article](#) manages to summarize what an user might go through to navigate themselves in Penn Station, which can be unpleasant and confusing. New York is also arguably is the most international city of the United States.

According to [WNYC](#), 25% of the city's population speak spanish in addition to English and it is the most spoken foreign language. A dynamic digital display might allow for the integration of multiple language option for the signage system. Tourism is a key part of the city's economy and better navigability might encourage more tourist to ride the subway. From a numbers perspective it does seem logical, as close to 60 million tourists visited the city in the year 2015 and forecasts show that around [67 million](#) tourists will be visiting the city by the year 2021.

Revised & Redesign Signage System Concept

Below are the few suggested concepts for enhancing the user experience of the NYC's subway users. The image below illustrates a static example of the redesigned version of the current sign. A series of live example shows the visual mock-ups as well, which can be viewed [here](#).



- Use digital display panels instead of static panels, which can be expensive since any minor changes to the content means that the entire panel needs to be reprinted.
- Animated signage that displays different information based on a logically mapped sequence. For example, train arrival time and upcoming stoppage information.
- An updates ticker on the top of the panel to keep the passenger up-to-date on any major delays and emergencies.
- Clearly aligned marked paths for location of the Subway car doors. For example, illuminated directional guides for the subway riders, which designated standing location for the passengers that are waiting to board, ensuring that there is smooth outflow of passenger from each subway car
- Illuminated and animated exit signs to assist the outflow of the passengers from the stations

Final Thoughts on User Experience (UX)

This changes can possibly make some valuable contribution to the enhancement of New York City's subway system. From a directional perspective, users will be able to better align themselves, in term of whether they are going downtown or uptown. Furthermore, the display panels will be displaying the next stop in addition to the train arrival time, which can serve as a visual aid as well. The success of this project depends on our ability to understand the users. At the moment, these redesigned ideas stems from assumptions and observations. All these might be interesting concepts but user testing needs to conducted to to ensure that these changes are indeed helpful for the end users, which will validate the true need for these changes. User testing will also provide us with key data and metrics that might allow us to pivot from the original idea, if needed. Ultimately, such massive redesign of one of the most prominent subway systems of the world cannot be carried out without feedback from the users. However, from an efficiency and cost-effectiveness perspective, digital display will curb the need to reprint signs as services changes do take place often.

About Me

I am Hasin. I have been living in NYC for just over a decade and the city's thriving underground ecosystem has become an essential part of my daily life. I am also an avid traveller and I always look forward to riding mass commuter trains in different cities around the globe. I have had the great pleasure of riding subway/metro systems in cities such as, Mexico City, Paris, Barcelona, Boston, Shanghai, Singapore, Seoul, Istanbul, Rome, Bangkok, Kuala Lumpur and many more places.

This project was created for my Aesthetics/Interactive Design course, which I took during my graduate studies at [The New School](#) during the summer of 2016 semester.