Technology Innovations at New York City Transit
Customer Communication

• 20th Century – Static signage, paper schedules

• 21st century – Interactivity, two way communication, personal customization, REAL TIME!

• People want to know what they need to know and don’t care about things that are irrelevant TO THEM
Past
Some new NYCT initiatives
“SAID” Signs

• “Snapshot” status on all Subway services
• Displays agency messaging
• Deployed at key station entrances
• Advises riders before paying!
PA/CIS

- Installed on the A Division
- Implemented with CBTC on L line
- Clear announcements
- Countdown clocks - CIS
- Released real time data on apps
- Ongoing R&D and program development for the B Division
On The Go!

An interactive, touch screen, digital information center

- Trip Planning
- Bus Time
- Real-time service and E&E status
- Neighborhood maps
- Service diversions
- Shopping and dining options (3rd party apps)
- News and weather

MTA

New York City Transit
On The Go! – Project Goals

• Improve customer communication via better access to relevant data
• Replace paper signage
• Create a touch screen device
• Revenue generation (advertising)
• Positive image of MTA network
Design Features

- Award winning sleek, stainless steel design
- 46 inch 1080p touch screen
- Video camera and microphone – future option
- Ease of maintenance
Design Features

• Each kiosk can be programmed individually from a central computer
  • Content can be changed according to usage, time of day, weather, or any other variable
  • Gives NYCT and advertisers flexibility
Integration with TrackWork

- FasTrack – new program to shut down whole lines for multiple nights
- Instant delivery of rapidly changing information
Revenue Generation Potential

- Public/Private Partnership

- Kiosks expected to pay for themselves over time via advertising

- Potential for highly-customized national, local, and hyperlocal advertising opportunities

- Interactive advertising including clickability on ads
Future of OTG

- MTA system wide rollout – across all its agencies
- Multiple units per location
- New features to be considered
  - Virtual Station Agent (part of extended pilot – currently under testing)
  - Real time bus arrival information (BusTime)
- Software is highly customizable for future updates
- Station navigation
- Near field communications – Interactivity with mobile devices
We will have them all over soon!
MTA Bus Time

Delivering Real Time Bus Location Information to NYC Customers
Bus Time Project Goals

• Enhance the bus-riding experience for customers
• Improve scheduling, service management, and emergency response based on real time data
• Use open source technology
  – Cost-effective, quick to deploy, simple to maintain and operate, and supports expansion as needed in the future
  – Other developers can use the data
• Leverage hardware investments
  – GPS and wireless communications being used for Fare Payment System and Bus Time
Bus Time Project Overview

• Provides the location of the next several buses that will arrive at a particular stop
• Uses GPS hardware and wireless communications technology to track the real-time location of buses
• It is available using:
  – Desktop website
  – Mobile website (smartphones)
  – SMS text messaging (any mobile phone)
  – DIY signs
Desktop Website [http://mta.info/bustime](http://mta.info/bustime)

- Interactive map
- View current locations of buses and the next stops each bus will make
- Find bus arrivals by:
  - Using the map
  - Searching for an Intersection
  - Searching for a bus route
  - Searching for a bus stop
Mobile Website [http://bustime.mta.info/m](http://bustime.mta.info/m)

- Visit mobile website or scan QR code at bus stop
- Accessibility-friendly text-only version of Bus Time
- Find bus arrivals by:
  - Using smartphone’s GPS
  - Bus stop code
  - Route
  - Intersection
  - Zip code
SMS / Text Messaging

• Send a text message to 511123

• Find bus arrivals by:
  – Sending a bus stop code and route
  – Sending an intersection and route
How does it work?
BusTime

- Real time bus location information – coming to all boroughs
  - Visit mobile website or scan QR code at bus stop
  - Accessibility-friendly text-only version
  - Find bus arrivals by:
    - Using smartphone’s GPS
    - Bus stop code
    - Route
    - Intersection
    - Zip code

New York City Transit
MTA info on Mobile devices

• MTA.info mobile website

• Weekender App

• Coordination between MTA and developer community for open data access
Apps and Feeds

• MTA develops its own apps as well as supports 3rd party developers

• MTA provides real-time data feeds to the public

• SubwayTime went live with feeds on the 1,2,3,4,5 and 6 lines
New Fare Payment System

Building Blocks:

• **Contactless Payments Technology**
  – Next generation payment/access design (Tap & Go)
  – Multiple forms of payment media

• **Open Architecture**
  – Maintain control over system interfaces/interconnections
  – Equipment supplier-agnostic

• **Account-Based**
  – Value stored in back-office account, not on card; media an identifier

• **Payment Industry Standards**
  – Electronic payments are secure, proven, widely used in retail environment
New Fare Payment System

• **Customer Service**
  o Call center and website for customer information, account management, and sales

• **Multiple Payment Options**
  o Customers can pay using a contactless credit or debit card (bank-issued or pre-paid)
  o Mobile payments, including NFC wallets and mobile application, will be incorporated.
  o A “transit-only” smart card will complement other options and be available to all customers.

• **Fare Rules**
  o Existing fare polices and products at minimum
  o Simplified application of fare policies at back-end.
New Fare Payment System

• Reduce Reliance on Vending Machines
  o Vending machines are relatively costly to procure, operate, and maintain.
  o Nature of unattended terminal doesn’t permit optimal customer feedback or experience.

• Focus on Self-Directed Sales and Account Management
  o Anytime, Anywhere
  o Call center and website to handle all customer needs

• Focus on Retail Distribution Strategy
  o Leverage existing MetroCard retail sales network
  o Shift media distribution to convenient channel
Bike Share

Washington, DC

Hangzhou, China

New York City, launched May 2013
Bikes in Transit

- Integration of BikeShare program with fare payment programs
- Challenge for transit to accommodate
Automated Metros Worldwide
Demands of the next generation
Concluding Thoughts

• The auto is here to stay but there is increasing recognition that it is an outdated model for the dense urban environment – needs realization and reinvention

• Urban transit is being rediscovered but needs technology and convenience enrichment for better acceptance

• Automated travel mode is best and only safe with a dedicated right or way – that was invented and is well used by transit

• Technology applications are successful only with ease of use features for the masses
Feel free to contact me

andrew.bata@nyct.com
646 252 4599