



Automated Bus Announcement Update

Transportation Accessibility Advisory Committee
January 6, 2016

Jason Podany
Metro Transit

Implementation Summary

2012 - Announcements Implemented on Routes 10, 17, 18

June 2014 – Announcements Implemented on Red Line BRT Service

January 2015 – Announcements Implemented on Hi-Frequency Routes (10-12 busiest bus routes)

October 2016 – Announcements Implemented on All Metro Transit and MTS Bus Routes

- Over 70% of these buses have announcement hardware
- Will be implemented on all buses as new bus procurement occurs

Why Automated Announcements?



People Struggle to Navigate



Help Individuals with Disabilities



Inconsistent Operator Announcements



Difficult to See at Night

Why Automated Announcements?

- **123 Customers Surveyed**
 - 76% Very Helpful
 - 18% Somewhat Helpful
 - 6% Not Helpful
- **132 Bus Operators Surveyed**
 - 58% Very Helpful
 - 33% Somewhat Helpful
 - 9% Not Helpful

Two Types of Automated Announcements

1. Internal Announcements

- Are made on the interior of bus and include approaching bus stop information

2. External Announcements

- Are made outside the front door of a bus and identify the bus route number and destination information

Announcement program development and content guided by ADA requirements (49 CFR 37.167)

- The entity shall announce at least at **transfer points** with other fixed routes, other **major intersections** and **destination points**, and **intervals** along a route sufficient to permit individuals with visual impairments or other disabilities to be oriented to their location.
 - i.e. Internal Announcements
- When buses share the same route or stop, the agency is required to provide a means by which an individual with a visual impairment or other disability can identify his/her proper bus
 - i.e. External Announcements

External Automated Announcements

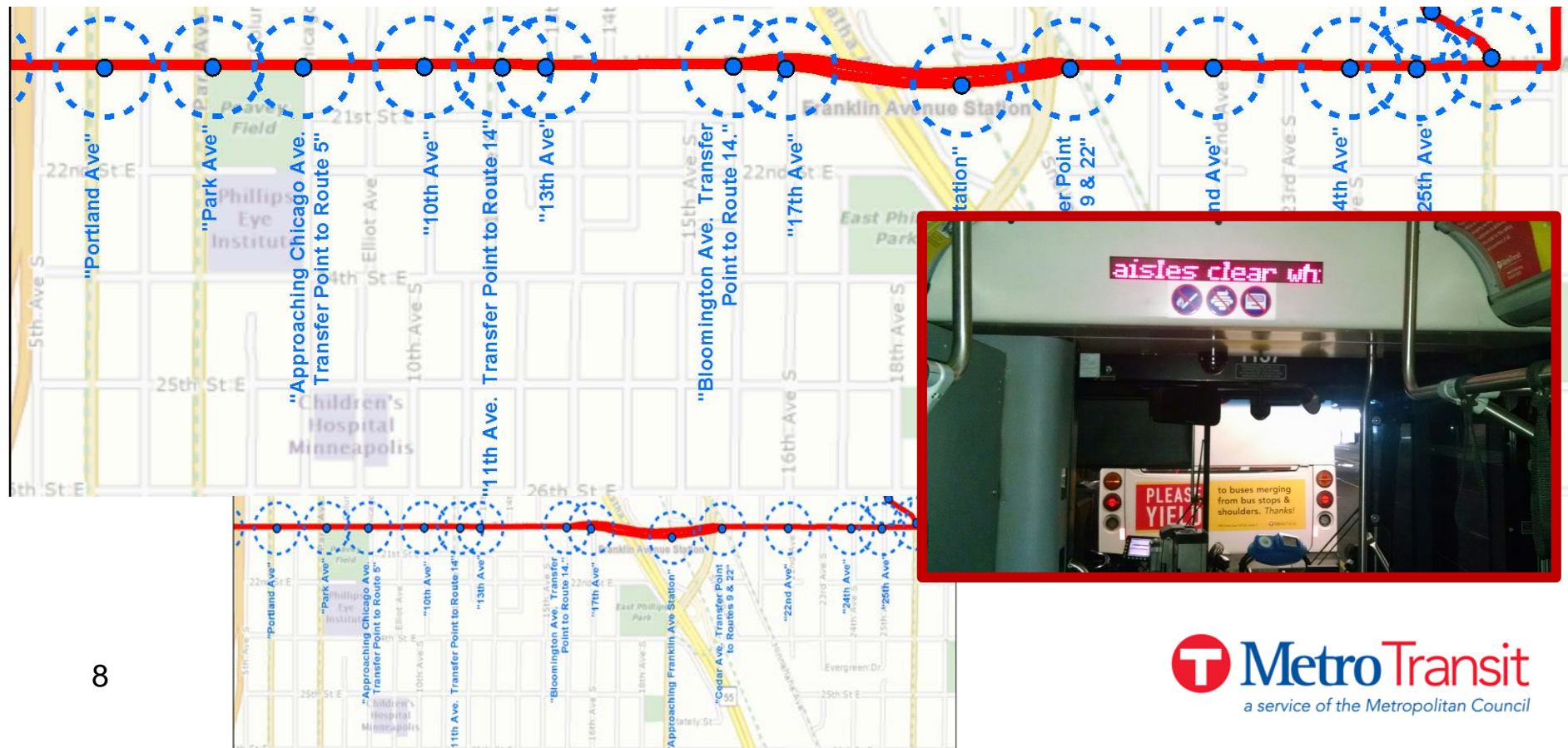
- Made every time Operator opens the front door at a bus stop
- Announce information matching overhead sign
 - Route
 - Branch Letter
 - Direction
 - Destination(s)
- External volumes reduced 8:00 PM – 7:00 AM
- Have ability to make volumes louder at noisy bus stops (Previous TAAC feedback)
- Removed “Welcome aboard...” and only announce relevant information (Previous TAAC feedback)

*“Route 5. M. Southbound.
To Mall of America via
Chicago Avenue.”*



Internal Automated Announcements

- Made on bus when bus enters designated bus stop zones – GPS Activated
- Default 800' ahead of stops; 2,000' for high speed stops
- Announcement scrolls on LED Stop Requested sign



Consideration for Announcing All Stops vs. ADA Requirements

- Ease of program communication to Operators and Customers
- Could be exasperating to customers and Operators
- Could be distraction to Operators
- Maintenance Efforts
 - Wireless file size interface challenges to buses
 - Manage weekly bus stop and bus route changes
- Customer, Operator and Peer Agency Survey Results
- Helps avoid customers pulling stop requested cord at wrong stop
- Volume of announcements in ADA scenario versus all stops
- **FTA asks Bus Operators to emulate automated announcement content when hardware doesn't work or exist

ADA Requirements

Transfer points, destination points, major intersections, and intervals

- Transfer database includes about 7,000 transfers
- Managed by Customer Information Department
- Announce “..This is a major transfer point.” when transfer is more than 4 transfer opportunities exist
- Improved downtown transfer content being planned

ADA Requirement

Transfer points, **destination points**, major intersections, and intervals

- Otherwise known as “Landmarks”
- Locations managed by Customer Information Department
- Includes ### Landmarks
 - Hospitals
 - Universities
 - High Schools
 - Libraries
 - Shopping Centers
 - Major Establishments
 - Government Centers

ADA Requirements

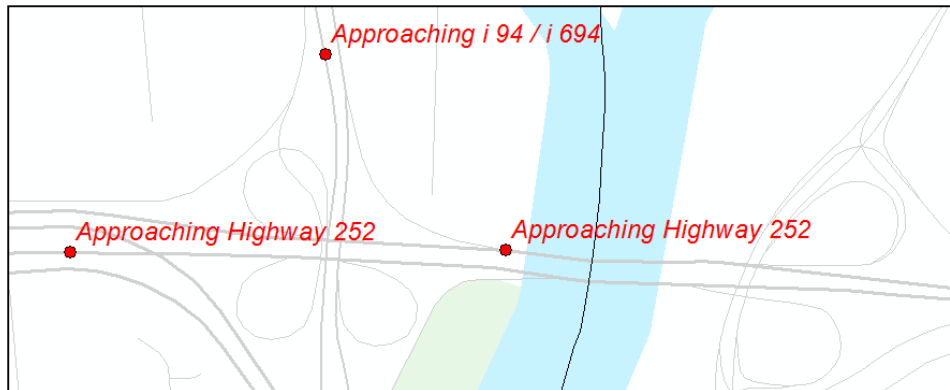
Transfer points, destination points, **major intersections**, and intervals

- FTA states definition can be locally defined
- Options identified include traffic signals, stop signs, roundabouts, arterial road intersections, etc.
- Decision made to announce bus stops located at traffic signals
 - Data can be systematically maintained
 - Easy to identify by Bus Operators and customers

ADA Requirements

Transfer points, destination points, major intersections, and **intervals**

- Intervals are announcements intended to “fill in the gaps” of announcements and provide orientation to customers
 1. Local Orientation Intervals
 - Places where significant gaps exist because bus stops do not meet ADA requirements
 2. Freeway Intervals
 - Commonly occurs on express routes on freeways and will give orientation information
 - Will be implemented with new schedule software (February 2016)



ADA Requirements

Transfer points, destination points, major intersections, and intervals

- Also announce
 - All Timepoints
 - When buses turn onto new streets
 - Additional stops can be announced upon request
- Working towards ADA compliance (may be one of the first transit agencies to be ADA compliant)

Looking Ahead

- A-Line announcement content being developed
- Improved downtown transfer content (TAAC Feedback)
- Add Freeway Intervals
- Refine pronunciations
- Refine quality control efforts

Project Contributions

- Bus Stop Coordinator
- DBA
- Application Developer
- Diversity
- GIS Application Developer
- Customer Information
- Bus Maintenance
- Bus Hardware and Software Specialists
- TAAC

Automated Bus Announcement Update

Transportation Accessibility Advisory Committee

January 6, 2016

Questions?

Jason Podany

www.metrotransit.org

Transit Technology Systems

Business Systems Analyst II

Jason.podany@metrotransit.org

612-349-7714