Customer Information System (CIS) Update

Administration, Operations, & Customer Service Committee (AOCSC)

May 18, 2023

Overview

- CIS Project Objectives

- CIS System Elements

- Implemented Features

- Improving Predictions Quality

- Signs

- MuniMobile

- Upcoming Features

Key Objectives

Ensure a positive customer experience

Increase equitable access to information

Reduce waiting and total travel time

Shift people towards more sustainable transportation options

Help customers make better travel decisions

Rebuild and Grow Transit Ridership

CIS System Elements

System Software
- Predictions Engine
- Crowding Level Alerts
- Alternative Route Suggestions
- Real-Time Temporary Service Changes
- Connections with Other Transit Systems

Stationary Digital Signage
- Shelters
- Surface rail platforms
- Underground rail platforms

On-Board Digital Signage (Back-End)
- Connection Times
- Service Delay & Reroute Alerts

Mobile Platform and Website
- Ticketing
- Trip Planning
- Customer Feedback

Analytics Platform
- Usage Trends and Analytics

New and Enhanced Features

The SFMTA launched the CIS in November in conjunction with Central Subway opening

Implemented features include:

- Central Subway Chinatown Station Dwell Override (real-time departure adjustments by operations management)
- Support pre-prepared reroutes and special services (e.g., Chase shuttles) with service plan determined at least one day in advance
- Integration of predictions with overhead subway signs
- Integration with SFMTA.com
- Offline Customer Information
- Vehicle Occupancy Availability
- Clearer push-to-talk audio announcements
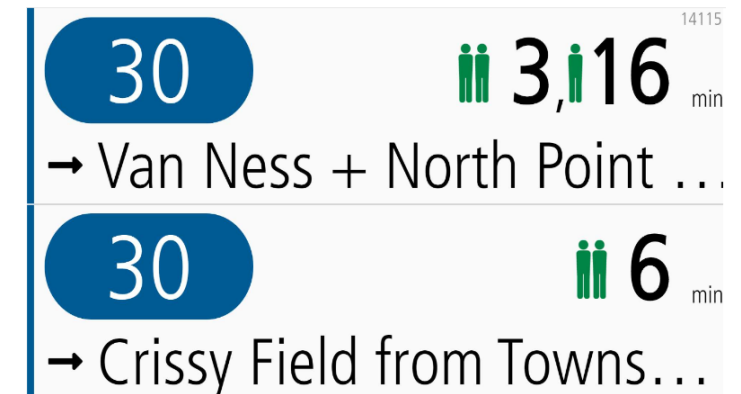
New and Enhanced Features

Implemented features include:

- Ability to push out reroute information to all signs with accompanying push-to-talk verbal messages (reduces need to manually post signs at many locations)

Operational improvements include:

- New interface for SFMTA internal users
- Tighter integration between internal systems that lays the foundation for real-time operational management decisions to be reflected in predictions
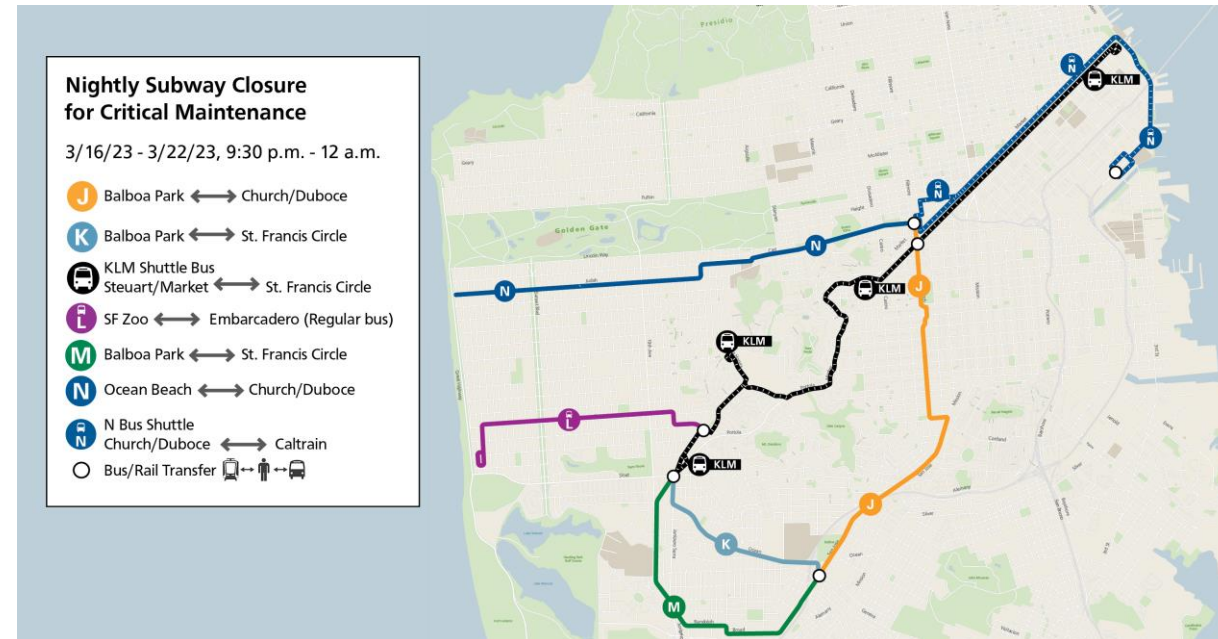
How are we improving predictions quality?

Terminal Departures

This year, we are working on improvements to improve terminal departure predictions. The CIS will:

- Track vehicles if they leave ahead of schedule and adjust predictions for subsequent stops
- No longer clear predictions if a vehicle does not immediately leave after the scheduled departure time, which will minimize "ghost buses"
- Automatically adjust terminal departure predictions for late-arriving vehicles in the previous direction
- Track deadheading vehicles from a division or another route and adjust predictions for the terminal and subsequent stops

How are we improving predictions quality?

Operations

- At Chinatown station, predictions automatically adjust when Transit Operations modifies train departures using the Automatic Train Control System (ATCS)

General

- By this summer, we are developing analytics to identify hot spots where there are a high percentage of inaccurate predictions. This will help identify ways to improve the predictions algorithm.
- Later this summer, CIS signs will also show digital maps with real-time vehicle locations to supplement predictions

Signs

- Installed 438 single-sided signs to date (over 55%)
- Installation of next batch of signs starting in late summer
  - Double-sided signs at shelters (for high ridership stops)
  - Outdoor rail platforms, including the T Third line
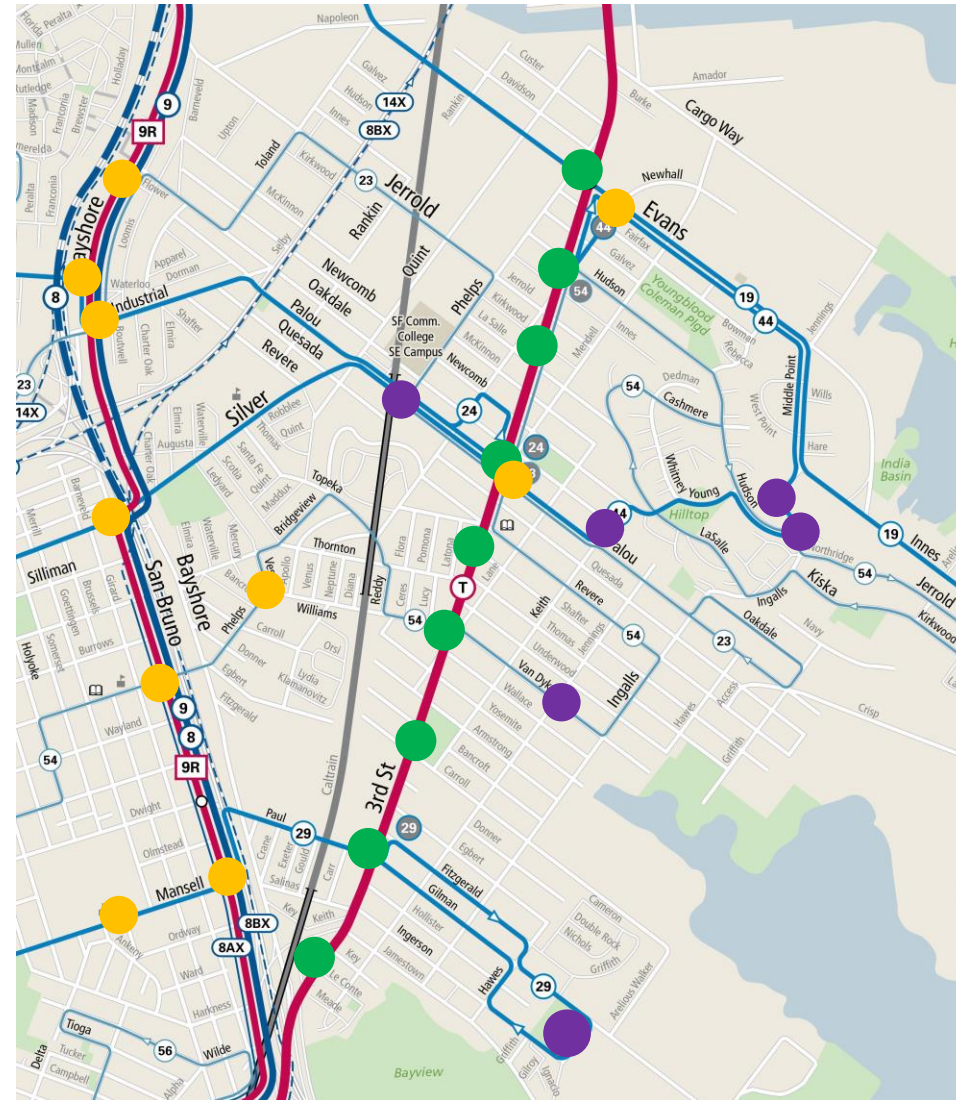 - Central Subway signs

Sign Expansion

The CIS provides an opportunity to increase equitable access to information by expanding the sign network


🟡 Sign upgrades at existing shelters

🟣 New signs for tentative shelter locations (Bayview Community Based Transportation Plan Priority Projects)

🟢 Double-sided sign upgrades at T Third stations

MuniMobile

- All-in-one trip planner and mobile ticketing app
- Enables the purchase of single-ride, day passes, visitor passports, institutional passes and other fare products
- Configurable to enable the SFMTA to add fare products rather than hard code changes
- Provides itineraries of sustainable modes as a future enhancement
- Enables users to provide feedback (including supporting images) on MuniMobile and general Muni issues
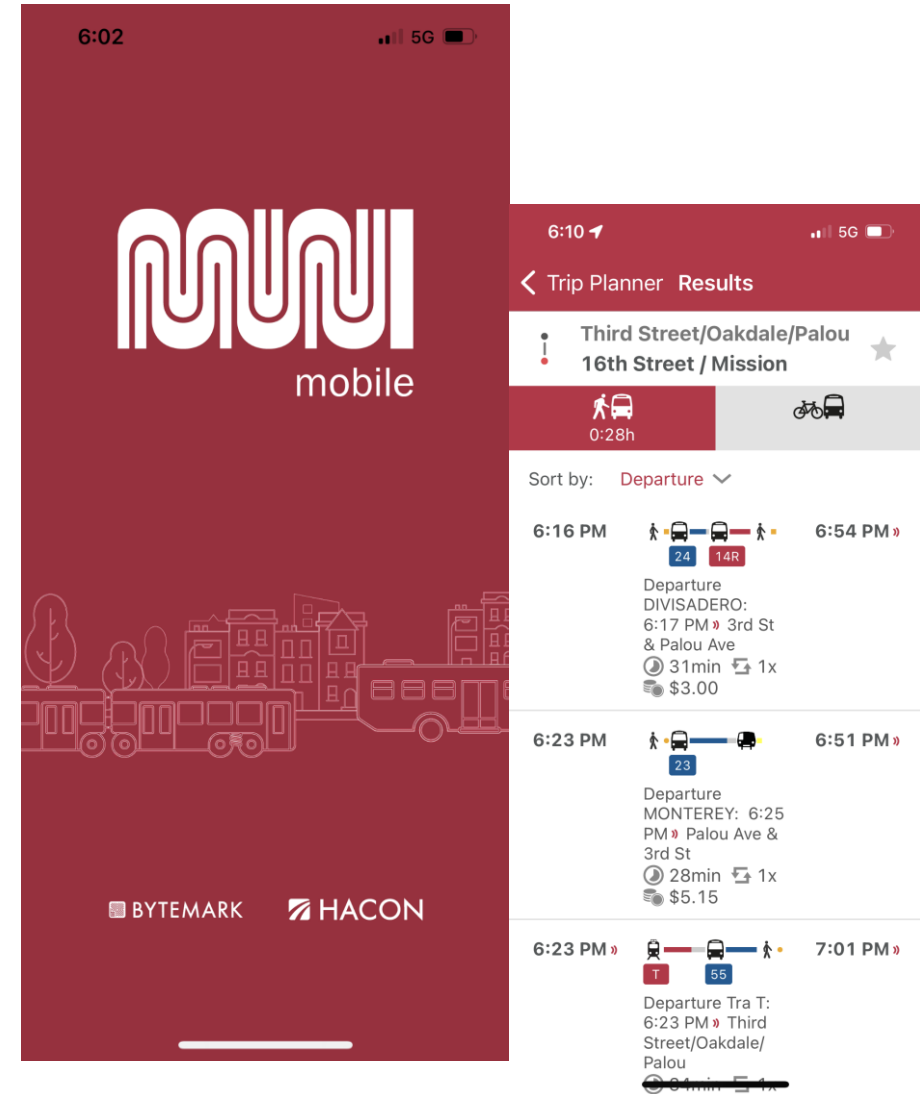
Upcoming Features

Summer 2023
- New MuniMobile app
- Digital maps with real-time vehicle positions on signs

Fall 2023-Winter 2024
- Sign installations: double-sided signs at shelters, outdoor rail platforms, underground rail stations
- Improved terminal departure predictions
- Address "ghost buses"
- Accessible options in trip planning

Mid-2024
- Transfer connection predictions
- Alternative routes – Nearby parallel routes that might get customers to their destinations faster
- Regional transit information about connecting transit systems like BART and Golden Gate Transit