



Intelligent Transportation System (ITS) Project Update

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Fairfax Connector ITS

Key goals:

- Improve passenger & employee safety
- Increase ridership
- Improve communications & information
- Enhance the rider experience
- Improve service reliability & on-time performance



Fairfax Connector ITS

- Two-phase implementation:



Phase 1: Computer-aided dispatch & Automatic Vehicle Location and real-time

Phase 2: (Future) Options for interior cameras and remote fleet component monitoring



Fairfax Connector ITS *(cont.)*

Phase 1 Technology:

- Computer-aided Dispatch & Automatic Vehicle Location (CAD-AVL)
- Automatic Passenger Counters (APC)
- Digital Message Signs (DMS)
- Interactive Voice Response (IVR)
- Real-time bus information for passengers
- Data warehousing/reporting systems



Fairfax Connector ITS *(cont.)*

Phase 2 Technology:

- Vehicle Component monitoring
- Video system technology
- Yard management software



Bus Monitoring & Management

- Establish Bus Operations Control Center (BOCC)
- Control center staff actively manage service
- Vehicle location and status is continuously monitored
- Communication is better managed between controllers and operators

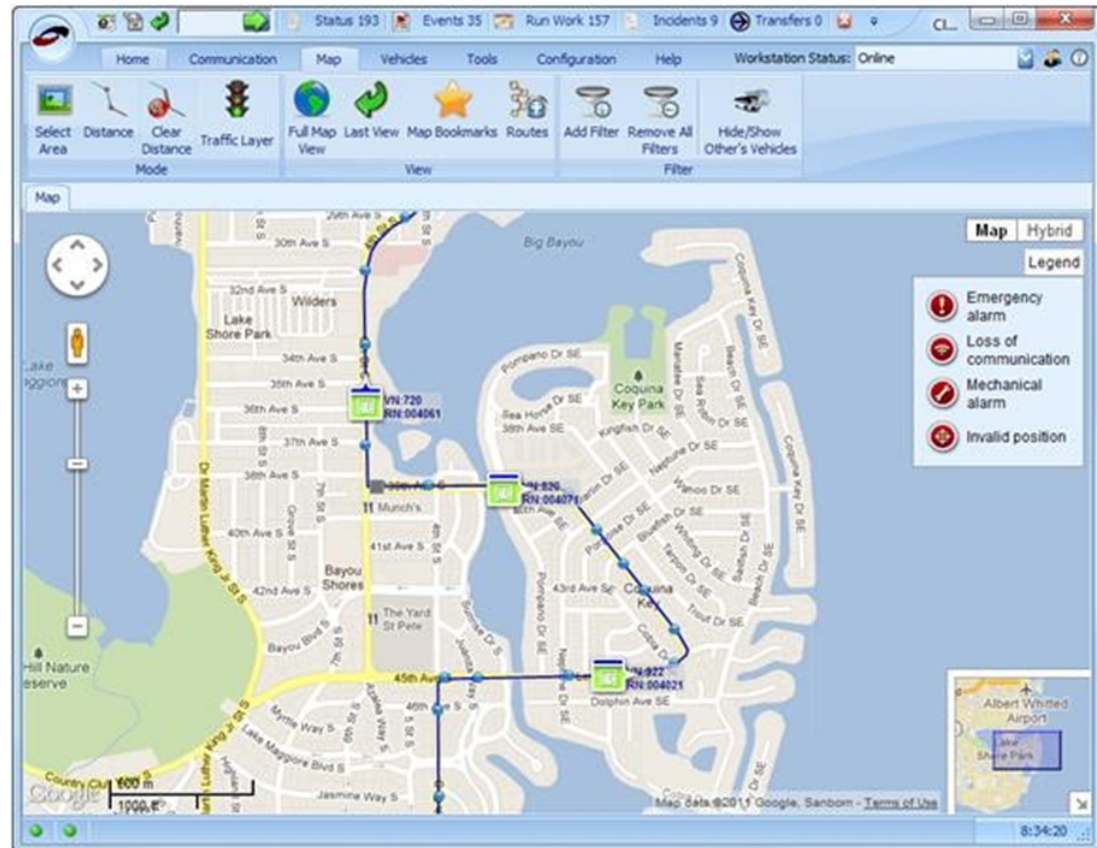




Bus Monitoring & Management *(cont.)*

CAD/AVL:

- Bus location
- Schedule adherence
- Interior/exterior announcements
- Next stop display
- Destination sign display
- Passenger counts
- Farebox settings



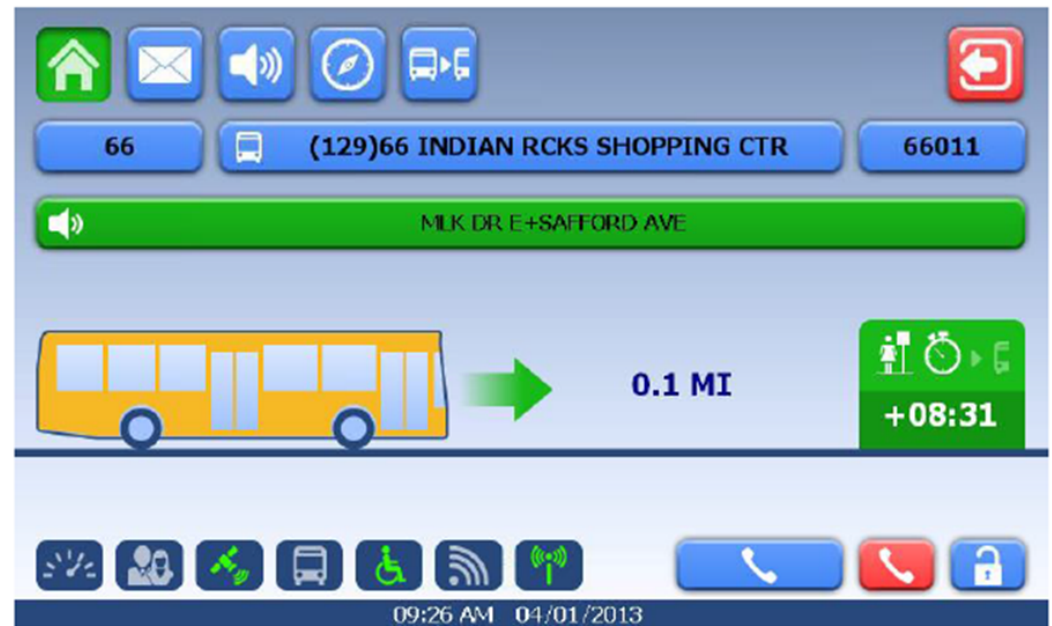


Bus Monitoring & Management *(cont.)*

Operations support:

- Timepoint and schedule adherence indications
- Control center communication
- Incident reporting
- Security/emergency response

Operator information display

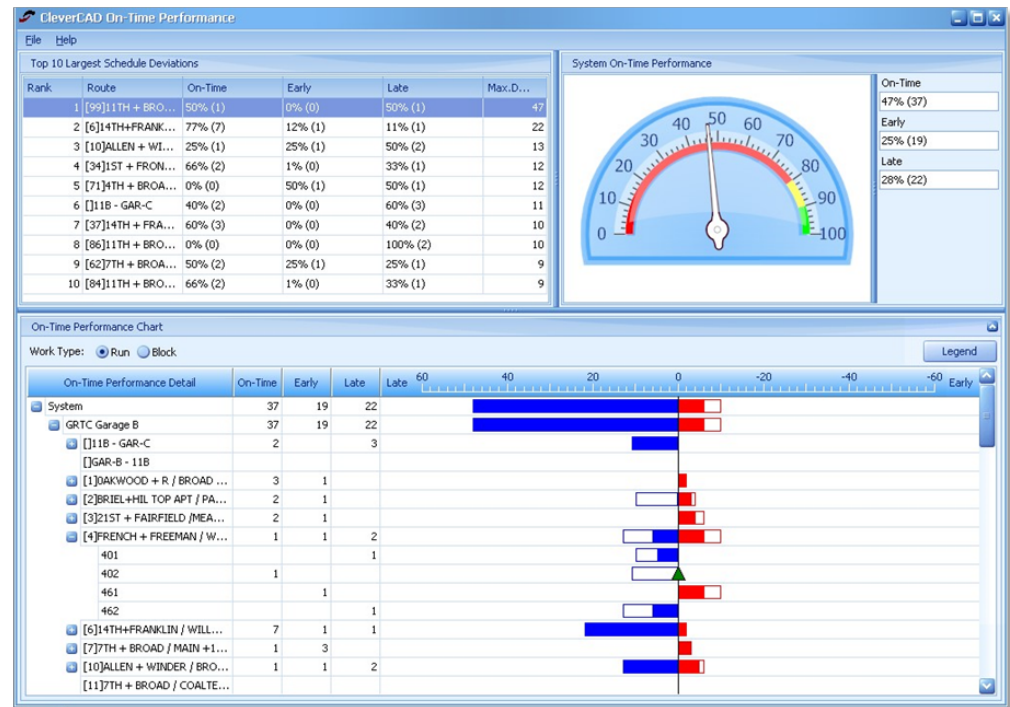




Bus Monitoring & Management *(cont.)*

Planning support:

- Improved schedules & service planning
- Historical travel time data at the trip level
- Will track bus stop utilization, allowing for better allocation of resources to stops with higher rider usage





Real-Time Bus Information

- Bus arrival predictions for every stop
- Offers riders an opportunity to reduce time waiting for buses
- Accessed online (mobile device or computer) or through the Fairfax Connector call center
- Provides onboard travel information, including bus stop announcements
- Helps increase ridership and convenience of using the Fairfax Connector system



Real-Time Bus Information *(cont.)*

cta ctabustracker.com

Travel Information Riding CTA News & Initiatives Buy Fares & Gifts About CTA Doing Business

CTA Bus Tracker
Your official source for up-to-the-minute arrival info.
Looking for the text-only/mobile version? [Find it here.](#)

bus times
see estimated arrivals

bus map
see where buses are

track by text
send a text message, get arrivals

subscribe
receive arrivals and alerts
by e-mail or text message

What is this?
CTA Bus Tracker uses GPS devices to report bus location data (and more) back to our servers. We can then, in real time, show you where buses are on a map and estimate when they will arrive at your stop.

- Public-facing information will be formatted similar to the Chicago Transit Authority system (also a Clever Devices' system)



Real-Time Bus Information *(cont.)*

- Riders will have access to bus arrival predictions by stop and will be able to view bus locations on a map

The screenshot displays the ctabustracker.com interface. At the top, it shows the CTA logo and the text 'ctabustracker.com'. Below this, there's a search bar with '5966' entered and a 'Find' button. The interface is divided into three sections: '1. SELECT ROUTE' (8 - Halsted), '2. SELECT DIRECTION' (Northbound), and '3. SELECT STOP' (Halsted & Belmont). A 'Map' button is also present. A checkbox for 'SHOW ALL BUSES FOR THIS STOP' is checked. A text box indicates 'TEXT "CTABUS 5966" TO 41411 FOR ARRIVAL TIMES'. The main display shows 'Halsted & Belmont (Northbound)' with a time of '8:05 AM' and a temperature of '60°F'. Below this, there are links for 'Reroute near Dearborn/Adams', 'Bus Stop Relocations', and 'Temporary B'. A table lists the estimated arrival times for route 8 buses:

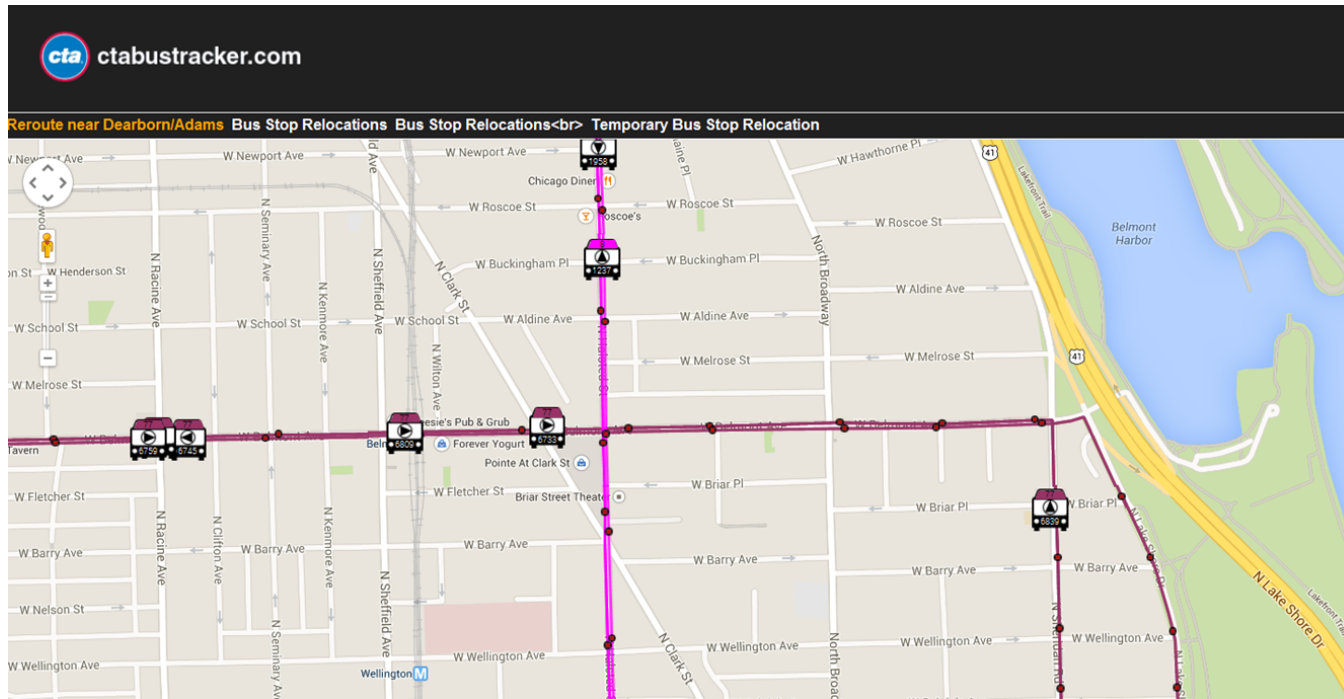
ROUTE / DESTINATION	ESTIMATED ARRIVAL / BUS #
8 To Waveland/Broadway	APPROACHING 1237
8 To Waveland/Broadway	8 MINUTES 1088
8 To Waveland/Broadway	9 MINUTES 1086
8 To Waveland/Broadway	24 MINUTES 1157

At the bottom, it says 'powered by Clever Devices' and includes copyright information for the Chicago Transit Authority.



Real-Time Bus Information *(cont.)*

Bus location map (CTA Bus Routes 8 - Halsted and 77 - Belmont)





Project History

- Began exploring ITS solutions in 2004
- Included ITS in the FY-2013 budget
- Procurement initiated: FY-2013
- Contract award to Clever Devices: February 2014
- Project design initiated: July 2014



Project Milestones & Schedule

- February 2015: Three project design phases complete
- June 2015: Database testing (Factory Acceptance Testing)
- Late summer 2015: Pilot testing (Mini-fleet)
- Fall 2015: System-wide testing
- Spring 2016: System-wide deployment



ITS Project Update

Questions ?