

Status of Standards to Support Coordinated Mobility Services

PRESENTED BY

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Human Service Coordination Program Initiated by Executive Order (#13330)

Executive Order on Human Service Transportation Coordination (#13330) issued by President George W. Bush in February 2004.

- “Transportation plays a critical role in providing access to employment, medical and health care, education, and other community services and amenities.”
- “Federally assisted community transportation services should be seamless, comprehensive, and accessible to those who rely on them for their lives and livelihoods.”
 - Promote interagency cooperation and minimize duplication;
 - Facilitate access to support customer needs;
 - Enhance customer access to mobility options;
 - Implement policies to enhance transportation services; and
 - Monitor progress.

Requires Interoperability Among Traditional and Emerging Transportation Models

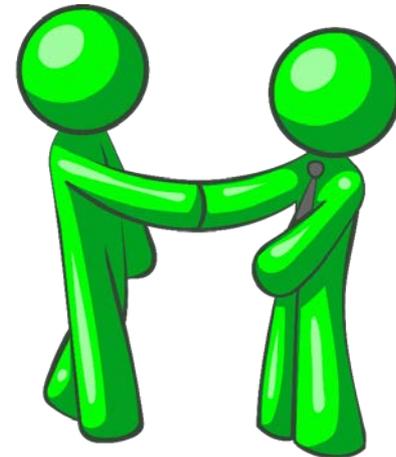
Traditional fixed route (bus, subway, light rail, rail, ferry)

Traditional paratransit and human services

Travel Management Coordination Center (TMCC)

Mobility on Demand Services

Interoperability is the ability for two or more systems to work together, communicate and exchange meaningful information.



So many standards, how do you choose?



European Standards Gap Analysis Project

European initiative (P1701) to identify gaps in current European Union (EU) standards to support “Urban ITS”

Standard areas covered include demand responsive and collaborative transportation services

Approach --

“...identifying *use cases*, and each use case [was] analyzed to identify requirements, standards available, and therefore standardization gaps.... Then recommendations were made...”

“Recommendations are for new standards, revisions/ updates/ extensions to existing standards and other support actions.”

[from P1701 Workshop on Urban ITS Standards Gap presentation 2/11-12]

Results from EU Standards Gap Analysis

Model infrastructure data including defining stop place codes

- Modelled in Transmodel and added to NeTEx and SIRI

Harmonization of location referencing methods

- Across all EU standards (DATEX II, GDF, Transmodel, NeTEx, SIRI)

Method to fix characteristics of trip options and modal choices

- Modelled in Transmodel and added to NeTEx and SIRI

Data Quality Standards

- Best practices to apply to Transmodel and NeTEx

NYSDOT Recommendations— Data Types

Accessible Components -- Supply

- Model transit facilities and stops, including inventory information about passenger access components (elevators/escalators/moving walkways), restrooms, and obstacles
- Model transit vehicles (rail, subway and bus), including inventory information about Lift/Ramp and obstacles

Accessible Components -- Consumed [real time information]

- Usage of ramps, lifts, passenger access components
- Complaints, etc.

Level of Service

- Reliability of information of passenger access components

As defined by NYSDOT Transit Service Information Portal (TSIP) project, 2010

Needs – Common Definitions

Clear, concise definitions for categories of accessibility

Example:

Common Wheelchair: Those that do not exceed 30 inches in width by 48 inches in length measured 2 inches above the ground and not weighing more than 600 pounds when occupied. [(ADA 49 C.F.R. § 37.3). Common wheelchairs can include scooters

vs. Oversized Wheelchair

Accessible vehicles: differentiate between ramps and lifts

As defined by NYSDOT Transit Service Information Portal (TSIP) project, 2010

Needs – Common Criteria and Compliance

How is “Accessibility” Measured (e.g., for a trip on a bus)?

- Mobility aid accessibility (Vehicle lift or ramp, securement devices)
- Doors, steps and thresholds (slip resistant, contrast, door height)
- Priority seating signs
- Interior circulation, handrails and stanchions
- Payment Reader / Farebox (height, signage/announcement, etc.)
- Public information signs
- Stop request
- Destination and route signs / announcements

As defined by NYSDOT Transit Service Information Portal (TSIP) project, 2010 based on ADA 49 C.F.R. § 38

Reference Architectures for Account Based Systems

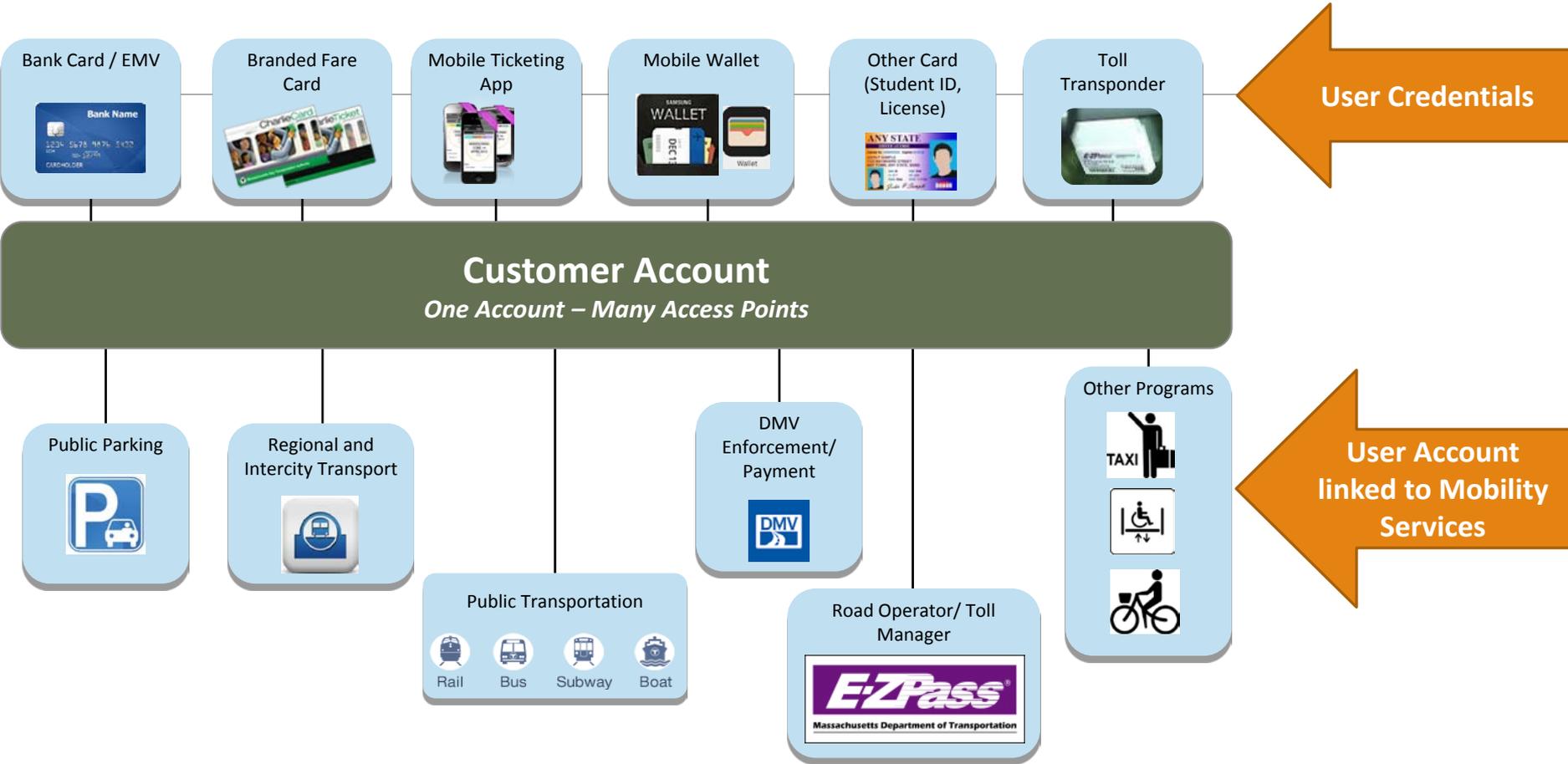
Smart Card Alliance (SCA) Transit Reference Enterprise Architecture

- Effort by SCA to develop account based fare/tariff payment system for multimodal, multiagency (public / private), account based mobility services

International Standards Organization Technical Committee 204

- Ad Hoc Working Group (WG): Mobility on Demand White Paper
- WG 5/8: Technical Report on Common Transport Account Services Role based architecture with use cases for
 - Customer services: registration, trip planning / reservations, sales, service access
 - Aggregator services: business to business account exchanges

Convergence Payment Overview



Gaps for account to account interchanges and convergent payment systems

Access concept definitions for “places” and vehicles

Accessibility compliant criteria

Transfers and wayfinding

- For example, modeling inside and “small spaces” to support wayfinding of accessible routes

Account based system data exchanges (between accounts and accounts/patrons)

- Account profile
- Personal information security policies (for exchanging information)
- Products and payment methods (discovery, authentication, validation, authorization)
- Services and accessibility provision (definition, availability, reliability)

Thank you

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Acronyms and References

Acronym	Description
DATEX II	DATA Exchange, Version 2 supports traveler and traffic management information. ISO Technical Committee 204 Working Group 9 is responsible for promulgating the family of standards
EU	European Union
GTFS	General Transit Feed Specification
ISO	International Standards Organization
NeTex	Network Timetable Exchange. NeTeX is a CEN Technical Standard for exchanging Public Transport schedules and related data
NYSDOT	New York State Department of Transportation
SCA	Smart Card Alliance
SIRI	Service Interface for Real Time Information. SIRI is a CEN Standard based on XML for real time public transport service information exchange
TCIP	Transit Communication Interface Profile. TCIP is an APTA standard for exchanging Transit information.
TCRP	Transit Cooperative Research Program