MBTA Automated Fare Collection

Electronic Payment Systems in Transit

University of Massachusetts – ITPS Workshop

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MBTA Profile

- 5th largest transit property
- 175 communities served
- 1.3 million passengers per day
- Bus, rapid transit, streetcars, trackless trolleys, commuter rail, ferry service and paratransit (THE RIDE)
- 2,400 revenue vehicles, 275 stations
- Over 6,000 employees
- 2.7 million CharlieCards issued
AFC – Equipment

1640 Fareboxes & Garage Vaulting Equipment

520 Fare Vending Machines

200 Retail Sales Terminals

660 Fare Gates

Validators & Handhelds

* Includes Central Computers, Communication Network, and Back Office equipment
AFC – Fare Media

- **Magnetic tickets**
  - Issued as monthly passes for Commuter Rail, Boat, and Student riders
  - Dispensed at all Fare Vending Machines and Bus Fareboxes

- **Smart cards**
  - Over 1.6 million CharlieCards used since initial handout Dec 2006
  - 68% of all fare transactions are made using CharlieCards
  - 75% of all Corporate Program participants reuse their CharlieCard with the monthly pass autoload feature
AFC Technology Has Enabled:

- More Accurate Ridership Numbers
  - More Accurate Ridership Counts
  - Real-time Maintenance Dispatching
- Better Revenue Accounting
  - Debit/Credit on all vending devices
  - Reduced Cash & Coin Handling
- More Effective Fare Collection & Flexible Fares
  - Electronic Transfers & Value Pricing
  - Reduced Fare Evasion
- Better Customer Service
  - Monthly Pass Auto-load
  - CharlieCard Account Services
Vision for the Transportation Environment

- **Executive**
  - Commonwealth Mobility Compact

- **Financial**
  - Optimal use of resources

- **Regional**
  - Statewide, Inter-Agency

- **Multimodal**
  - Transit, Tolls, Parking
  - Inter-operability
The Mobility Compact and Financial Aspects

The Boston Globe – November 13, 2008 Boston.com/Opinion

“First we will consolidate agencies....

Second, we must plan and finance transportation needs on a system-wide basis. We all have a stake in the viability of a multi-modal transportation system. People should be able to move easily from car to commuter rail to subway to regional bus to water taxi. These components must be structured and paid for in a manner that recognizes the common purpose; to bring ease of movement safely and economically to Massachusetts citizens.”

By Deval L. Patrick
The Regional and Multimodal Aspects
Technical and Business Rules Planning

MBTA
Operational Needs

Subway  Bus  Rail  Boat
Parking

Technical /Operational Requirements

Customer Service

Mobility Compact

Inter Agency Accounting

Regional Business Needs

Technical /Operational Requirements

Pilot Test with RTAs
CharlieCard & MTA Fast Lane
RMV CharlieCard Sales

Transit Interoperability
Options Going Forward … Determining the Optimal Balance

ITPS Technology Inter-operability

- Transit Branded Smart Cards
- Contactless Bank Cards
- NFC Devices & Mobile Phones
- Pay-As-You-Go Prepaid Products
- Transaction Aggregation
- Multi-Tariff Applications

Security Economics Privacy Concerns

- PCI Compliance
- Account Info Requirements
- Data Sharing and Encryption
- Wireless Networks
- Internet Security
- Customer Access and Opt-Out
- Customer Safety & Security