Using Payment Innovation to Improve Urban Transportation Networks

Federal Reserve Bank of Chicago

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Today’s Outline…

• Market perspective
  • Payments
  • Transit

• Closed-loop systems
  • Overview
  • Focus on SmarTrip in Washington

• Open-loop systems
  • Overview
  • Focus on New York City Transit subway trial program

• Wrap up
  • Strategy and outlook
Core theme…

Goals
• Become a “retailer” for transportation services
• Become a “merchant” accepting payments in many forms
• Align core competencies for transit and payments industry
• Leverage contactless payment technology and infrastructure

Value for customer
• Convenience of multi-function card
• Alternative methods of payment accepted; flexibility
• Reduces perceived cost of transit trips; de-mystify fares

Value for agencies
• Increase ridership through convenience
• Cost savings merchant, not card issuer
• Process electronic transactions; cost savings over cash

Capitalize on commercial payment system infrastructure
Overview of US Public Transit Marketplace…

• **Transit ticketing systems**
  - Nationally, once in a generation re-investment
  - Over $1 billion in systems deployed or under contract
  - Replacing aging and obsolete systems
  - All include state-of-the-art contactless smart cards
  - Push toward all-electronic systems
    - Easier to use, manage, repair; effective and efficient
  - Provides *speed and convenience* for customer
  - Fare policy changes fostering shift away from cash
  - All are largely closed-loop systems; transit only

• **Ridership**
  - Nationally, over 10 billion transit trips in 2006
    - Over 2% growth on year-to-year basis
    - Congestion, land use and fuel costs contributing to growth
Evolution of transit fare payment in US...

Value proposition -

- Consumers
  - Speed and convenience
  - Payment alternatives
- Agencies
  - Operational efficiencies
Confluence of Events…

• Payment applications worldwide are using contactless technology
  • Consumer and merchant benefits
  • Convenience and speed of service are essential

  • Global Standards based technology
    – Manufacturability and choice of vendors
      • both cards and readers

  • Support from all major payment associations

  • Highly flexible
    – Ability to support multiple applications

…Transit Meets Payments Industry
Key Adoption Facts
- > 17 million contactless payments cards issued
- > 30,000 payment acceptance points in US

Leading issuers
- Citibank
- JP Morgan Chase
- Keybank
- Citizens Bank

Leading merchants by sector
- Fast Food – McDonalds, Jack in the Box
- Pharmacy – CVS, Duane Reed
- Convenience – 7 Eleven, Wawa
- Theatres – AMC, Regal
Overview of US Public Transport Fare Payment Projects…

- Seattle – ORCA, One Regional Card for All
  - Linking 7 Agencies – covers bus, rail and ferry

- Los Angeles – TAP, Transit Access Pass
  - System for bus, light rail and Metro

- Boston – CharlieCard
  - System for bus, light, heavy and commuter rail
  - New fare policy; discounts for CharlieCard transactions

- TransLink – San Francisco Bay Area
  - Regional transit ticketing scheme; 26 operators linked

- Chicago Card – Chicago
  - Only account-linked system in operation
  - Consideration for regional expansion

All multi-operator closed-loop payment systems…
Metrorail facts:
• 106 system miles
• 86 stations
• 1,000 car fleet
• 70 million miles traveled
• 588 escalators
• 237 elevators
• 750,000 transit trips daily
• 210 million trips annually

Second largest rail operator in United States
Washington, DC’s Metro

Metrobus facts:
• 1,500 buses
• 340 routes
• 13,000 stops, 1,700 bus shelters
• 10 garages, 2 shops
• 48.3 million miles annually
• 500,000 transit trips daily
• 132 million transit trips annually

Fifth largest bus system operator in United States
SmarTrip in Washington, DC...

- **Launched - May 1999**
  - Contactless smart card for transit
  - First fully integrated in nation; proprietary platform
  - Rail, parking and bus
  - Closed-loop payment system; transit only

- **Expansion to regional operators underway**
  - Washington operators nearly complete
  - Baltimore MTA underway

- **Back office support contract used for**
  - Customer service, fulfillment
  - Clearing and financial settlement between agencies

- **2,300,000 cards issued**
SmarTrip in Washington, DC...

- SmarTrip continues to prove popular with customer base
  - Market penetration
    - Rail – 65% overall; higher in peak periods
      - SmarTrip-only express lanes under field test
    - Bus – 22% overall; some >90%
    - Parking – 100%, exclusive method to pay

- Demonstration project with Citi and MasterCard
  - Single card for payment of transit fares and parking fees with credit capability for retail transactions
    - Up to 20,000 cards issued
    - Current and acquired accounts
    - Launched December 2004

Use the same card for ALL payments...hybrid open system
Overview of US Public Transport Fare Payment Projects…

- New York City Transit
  - Lexington Avenue Line trials, 2006
  - NYCT/Citi/MasterCard
    - www.mastercard.com/subwaytrial

- Port Authority of New York and New Jersey
  - Builds upon the New York City Transit Trial, 2007
  - Proposal evaluation phase

- Salt Lake City
  - Ski bus payment trial, 2006-2007
  - System-wide expansion under tender, 2007

- Nashville
  - Mag-stripe payment cards at farebox, 2007

All based upon open-loop payment systems…
Special profile…New York City Transit

• Special pilot announced January 2006
  • NYCTA, MasterCard, Citibank
  • Pay at the gate with PayPass
  • No more swipe, just tap and go
  • Started summer 2006
  • Lexington Line, 25 stations
  • Revolutionary for industry
  • Consumers can’t wait
  • Media has been “all over it”

A revolution in the transit marketplace…
Special profile…New York City Transit

• Guiding principles for demonstration program
  • Show marked improvement in customer service
    • Product performance at the gate
    • System and account experience
    • Overall cardholder impressions
  • Create open and interoperable solution compatible with surrounding traditional merchants
  • Meet or beat current operating and transaction costs
Consumers can either:

- Buy rides in advance and receive MTA discounts,

or…..

- pay-as-you-go

Website content

- Trial information
- Ride history
- Pre-fund (buy) rides in advance

Solution is elegant in its simplicity…
Strategy for Transit Fare Payment...

• Take a merchant-like approach to payments  
  – Manage product pricing, fare tariff

• Provide customers layered payment options

• Keep the solution elegant in its simplicity  
  – EZ Pass, IPass

• Evaluate traditional transit business models and ask…  
  – Is custom-built, one-off system really required?  
  – Does agency need to own the fare payment system?  
  – Will the system be flexible and open?  
  – Will the system evolve with evolving technologies and business requirements?
What’s Next for Transit Payments…

• Payments market continues to expand product line
  – Contactless cards, payment tags, and other form factors

• Agencies will continue roll-out of contactless programs

• New transit trials and rollouts for open-loop systems
  – Issuance, investment and marketing
  – Develop products for full spectrum of transit payments

• Explore additional opportunities for bank/transit integration
  – Provide consumers options on product and form
Thank you very much…

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