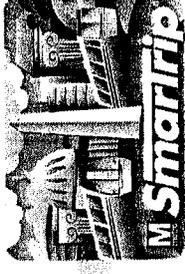


Commuter Connections High-Tech Ad-Hoc Group

HANDOUTS

From previous meeting

April 15, 2003



Regional SmarTrip[®] System

Project Update

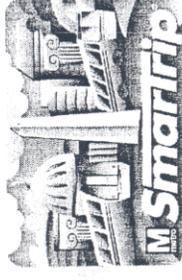
Presented to:

Metropolitan Washington Council of Governments

Commuter Connections High Tech Ad-Hoc Group

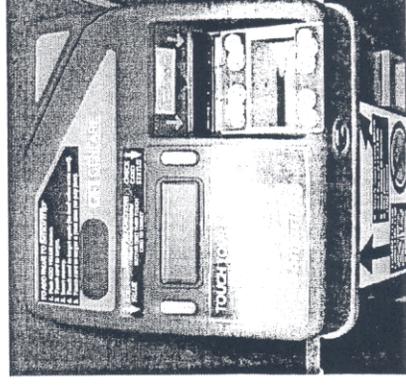
April 15, 2003

Regional SmarTrip® System

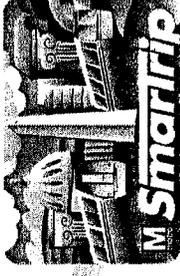


Project elements and current status of the Regional SmarTrip® System

- WMATA Bus Farebox Project
- Customer Features and Business Issues
- Regional Agreements
- Regional Customer Service Center contracts
- Regional Coordination
- Implementation Sequence

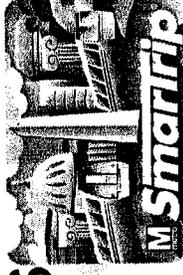


WMATA Bus Farebox



- In Service Qualification Test Nov 2002 - Feb 2003
 - Over 1.3 million bus trips during test period
 - 97,000 customer trips (about 7%) involved use of SmartTrip® card to pay fare
 - 85% of control group respondents found farebox “easy to use”
 - 12 complaints over test period – three of which involved pennies
 - Reported customer/operator interface problems where generally minor – “SmartTrip® did not register with first touch”
 - No problems reported with loading on-board, although number of transactions was low – 86 customers loaded value to their SmartTrip® card for a total added fare value of \$716

Customer Features and Business Issues



- Loading On-Board
 - Continue allowing loading on-board in fleet-wide roll-out
 - ISQT showed no dwell time problems with loading on-board, but sample was too small
 - Will monitor throughout fleet-wide roll-out installation, and eliminate if necessary
- Acceptance of Pennies
 - ISQT demonstrated that not accepting pennies was not a significant customer issue
 - Not accepting pennies provides consistency across Metrorail and Metrobus and with most current vending systems, while supporting flexibility for customers using SmartTrip® on bus

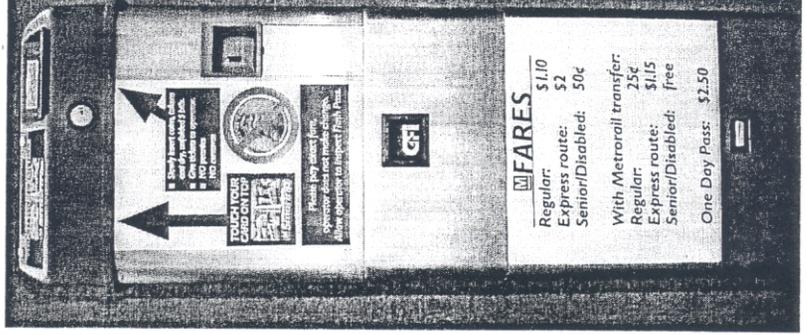
Customer Features and Business Issues, cont.



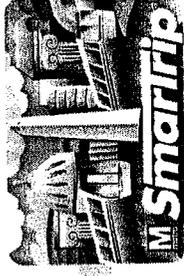
- Negative Balance
 - Propose to extend existing policy to bus - allow SmartTrip® card to go negative once on each mode: Rail, Bus and Parking

All issues would require WMATA

Board of Directors concurrence



Regional Agreements



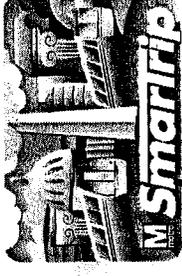
Agreements have been forwarded to regional staff

- **Capital Funding Agreement**
 - Maryland Transit Administration to share capital costs
- **Operations Letter of Intent and Operations Funding Agreement**
 - Final version to Participating Agencies April 15

Agreements remaining to be prepared

- **Agreement for the Use of Debit/Credit Capability**
- **SmarTrip® Licensing Agreement**

RCSC Contracts

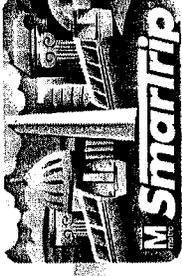


Three contracts will be required to establish the Regional Customer Service Center (RCSC)

- **Regional Customer Service Center**
 - To be awarded to ERG Transit Systems, pending completion of final agreements
 - Customer Service
 - Financial Clearing and Reconciliation
 - Card Management and fulfillment
 - Point-of-Sale System management

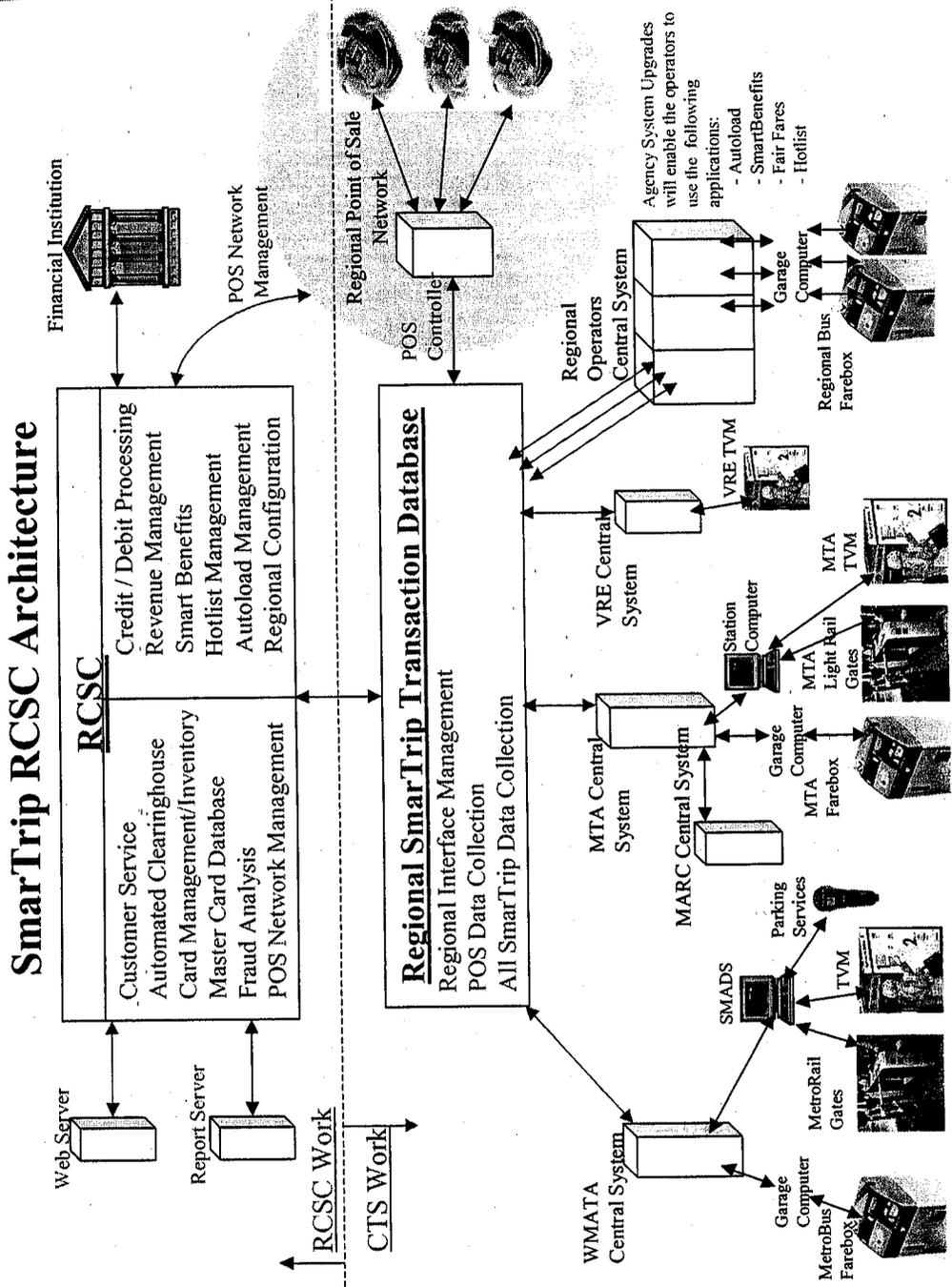
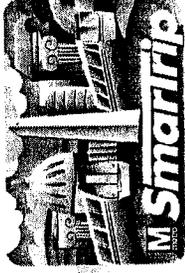
- **Central Data Processing**
 - To be awarded to Cubic Transportation Systems, pending completion of final agreements
 - Transaction Database - interface point between agency computers and RCSC
 - Point-of-Sale Network and devices

RCSC Contracts, continued

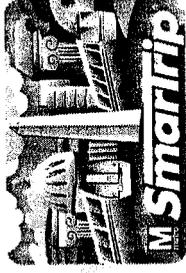


- **Computer Hardware Purchase Order**
 - To be awarded to IBM through GSA, pending completion of final agreements
 - Computer Hardware to support Central Database

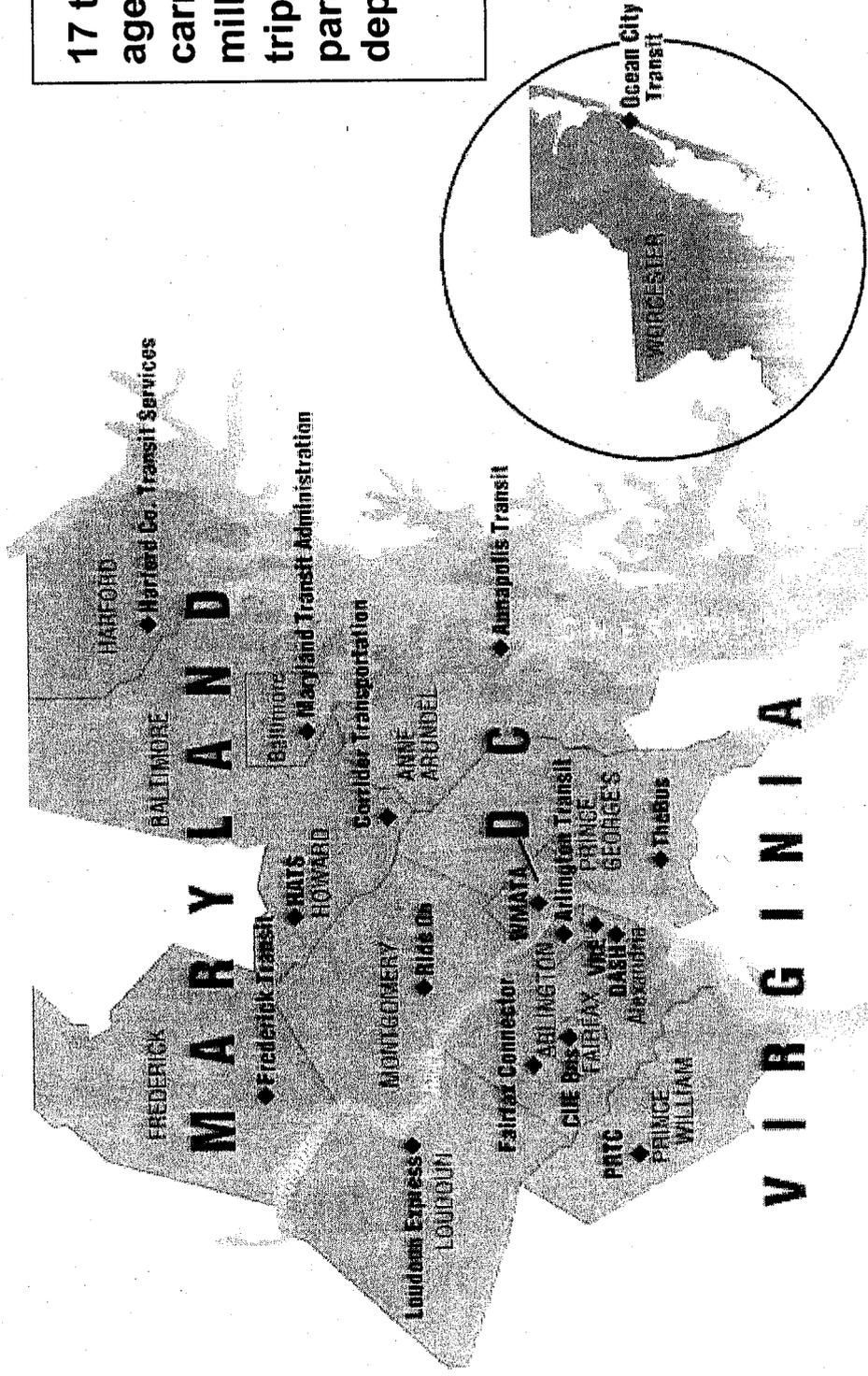
RCSC Contracts Architecture



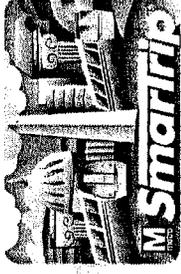
Regional Coordination



17 transit agencies carrying over 500 million annual trips are participating in deployment

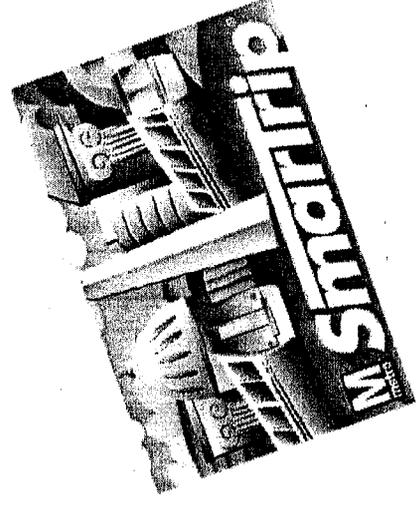


Regional Coordination, continued

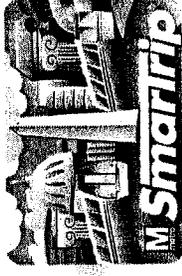


Regional Coordination is required in many areas

- Operating Procedures
- Design, testing and installation
- Schedules for ten separate contracts
- Configuration of fare tables
- Data for monthly financial reconciliation



Implementation Sequence



2003

- Award of RCSC, Consolidated Database and Computer Equipment contracts
- WMATA Bus Fleetwide Installation
- RCSC and Consolidated Database Design
- RCSC and Consolidated Database Installation Complete
- Montgomery Co., Prince George's Co., Northern Virginia Bus Farebox and Garage Computers Installation
- Autoload, Transit Benefits, SmartTrip Reformat, Rail Upgrade Complete
- MTA Bus Farebox and Computer Installation
- Maryland LOTS Bus and Computer Installation
- MTA Rail Fare Collection System Complete

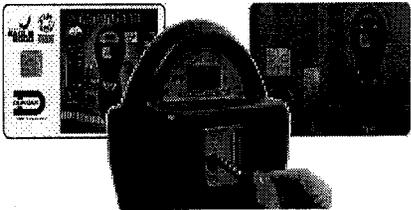
..... 2005

Parking Meter CashKeys

Metropolitan Washington Council Of Governments
Commuter Connections Subcommittee
High Tech Ad-Hoc Group

Peggy Schwartz
Executive Director
North Bethesda Transportation Center

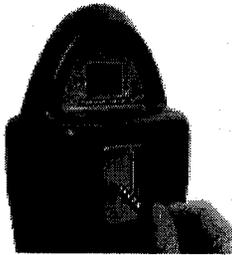
CashKey and Cards



January 2000 – Implemented in Montgomery County

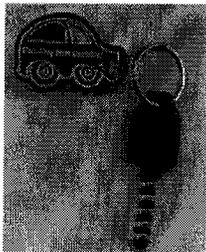


- There are over 5,000 electronic meters in the County that accept the CashKey



- There are 4 locations in the County where customers can go to get or reload a key.

- Keys require a \$15 deposit.
- Any \$ amount can be loaded onto key.
- When key is inserted in meter, value is added to meter and debited from key
 - 1 hour of parking for short-term meters
 - 3 hours of parking for long-term meters



System Requirements/Setup

General Description

- o The reloading station consists of an IBM compatible personal computer, the reloading software, an interface, and the HASP key.

Required PC Configuration

- o Operating Systems: Windows 95, Windows NT, Windows 98
- o Disk Drives: CD-ROM drive w/5MB free space for system. Additional hard drive space will be required as database grows.
- o Serial Ports: One port dedicated to the reloading system only.
- o Parallel Port: One required for attachment of hardware key and/or printer

System Requirements/Setup – cont.

PC Software
The card software provides for specifying what operations are to be performed, manage the value, and maintain a historical record of transactions.

Card Interface

HASP Key
The HASP key is a small plug that attaches to a parallel port of the PC. This device stores various security data items needed for the operation of the reloading station. This is a 'pass through' device that allows a printer connected to the key to operate as it normally would if the key were not present.

Receipt Printer

Interfaces

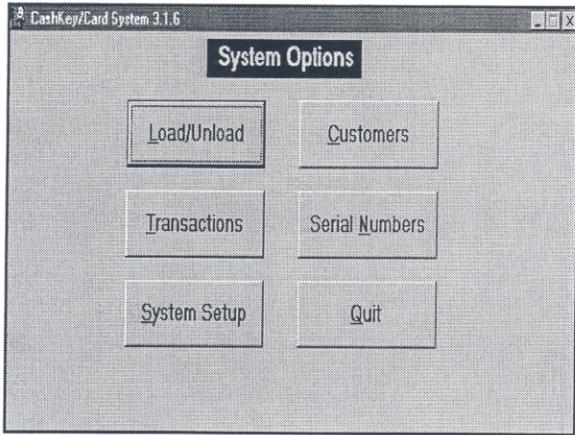
There are three interfaces

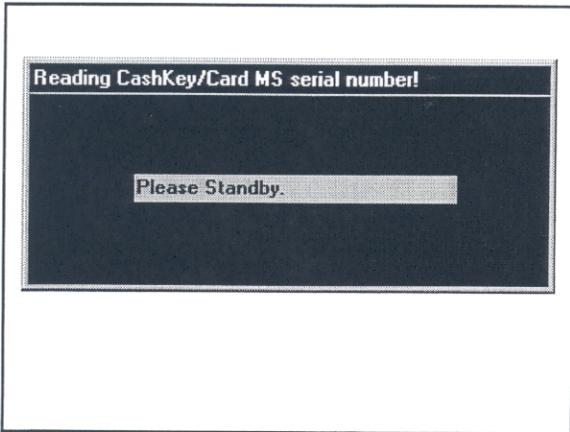
- o A Duncan Eagle 2000 programmed with custom software along with a special cable for either MeterCash or Gemplus GPM416 cards.
- o A MeterCash interface for MeterCash cards only.
- o A CashKey interface for the Duncan CashKey only.

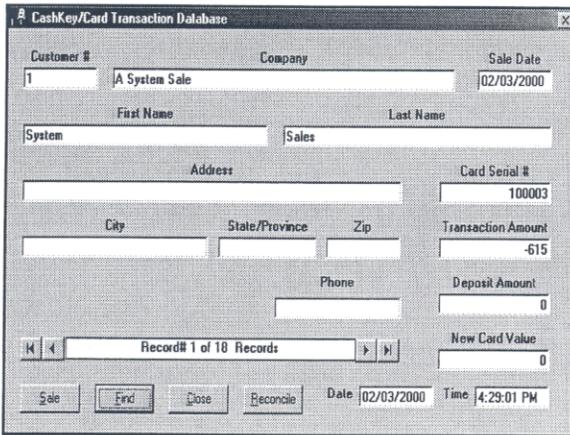
Value Flow and Security

Three components within the system maintain value:

- o The first is the debit device itself.
- o The second is the reloading station HASP key.
- o The third is the MasterKey/Funds card used to reload the reloading station.
- o Each hardware component also protected by security systems internal to the device itself. This provides for secure storage of the value in each device.









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