

Fare Collection 102

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2011 Fare Collection Workshop

Why UTA Electronic Fare Collection?

- Customer convenience
- Collection efficiency and effectiveness
- Data, data, data



Electronic Fare Collection System Launch – January 1, 2009

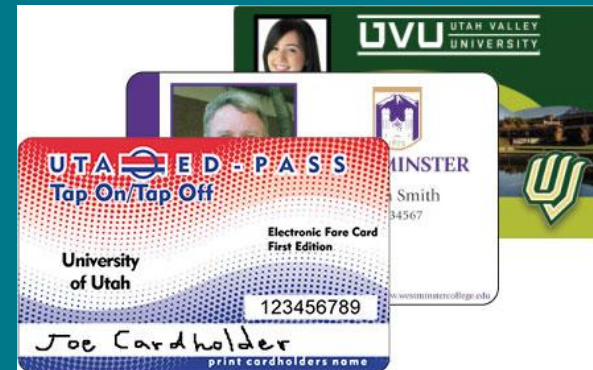


- Infrastructure Deployment
 - Readers at all doors of 520 fixed route buses
 - 170 validators installed on 35 TRAX and FrontRunner platforms
 - Communications
 - Wireless gateways on buses that support WIFI in four depots and 3G continuous mobile throughout service area
 - Fiber communication to all platforms
 - Link to hosted back office operated by ERG in Concord California via internet



Initial Products

- Third party paid passes – ECO, Ed, Ski



- Contactless credit acceptance for full single adult fares



The Appeal of Contactless Credit and Debit

- Others issue payment media
- Integration with payment mainstream: payment at the fare box, gate or platform as a merchant POS transaction
- Automatic interagency interoperability
- Customer service with issuers
- Security standard
- Architecture provides flexibility in product development
- Robustness of open payments ecosystem
- Commoditization of devices
- Potential for pathway to elimination of cash
- Speed of deployment
- Cost
- Co-promotion





Other Third Party Issued Media

- Third party paid passes
 - ECO, Ed, Ski
 - Cards as tokens using unique identification number (UID)
 - Track usage to inform negotiations with third party payers
 - Preference for partner issued ID cards
- Security handshake needed as used for decrementing stored value accounts and as NFC is deployed
 - OPACITY
 - Mifare Ultralight C
 - Bank card spec
 - Contactless EMV



UTA EFC Development and Deployment Going Forward

Launch new fare products within the account based architecture

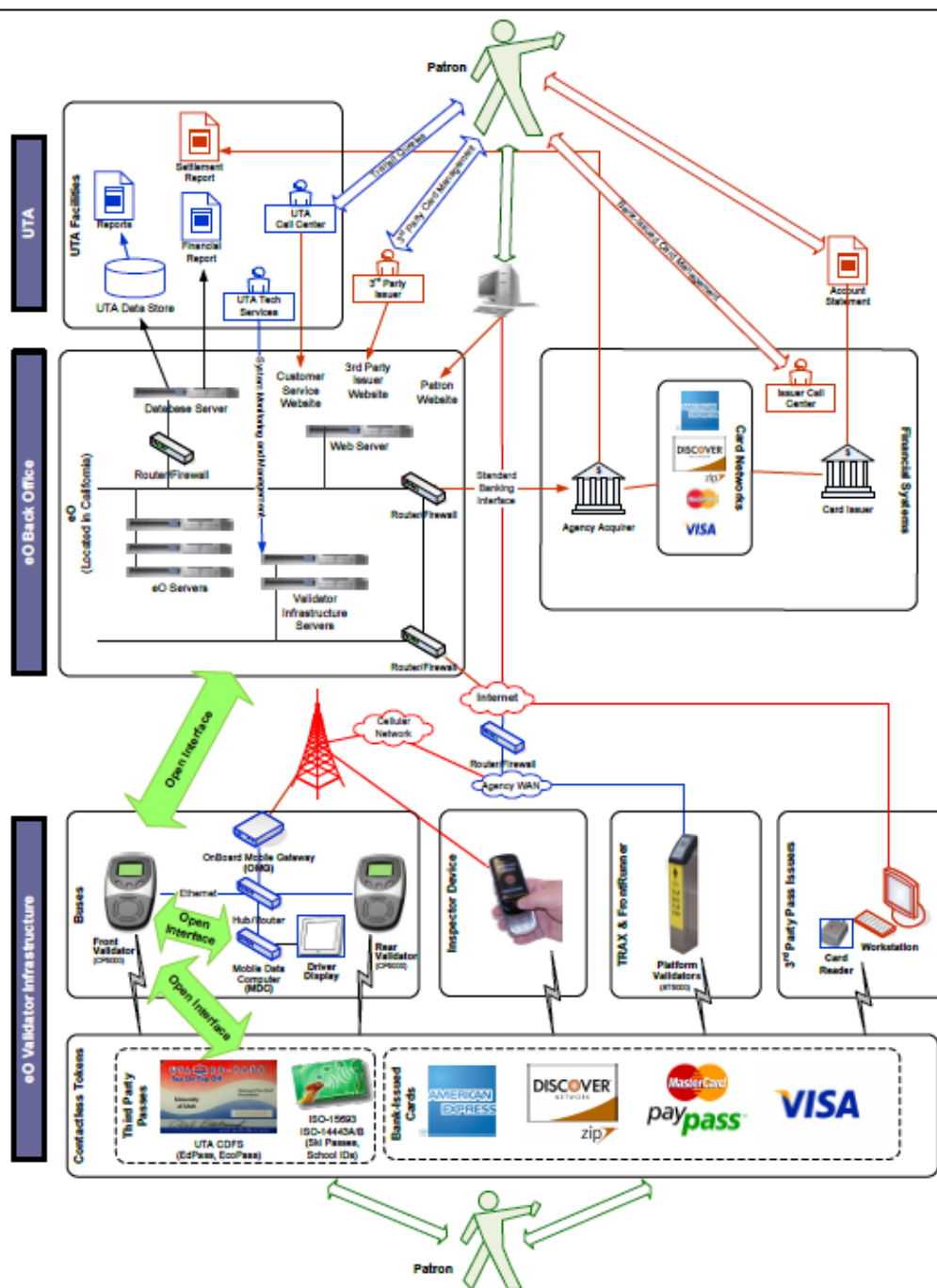
- Prepaid accounts with all fare products to be accessed via contactless credit or debit cards
 - Stored value
 - Period passes
 - Guaranteed best fare
- Special fares for seniors and disabled
- Gift card issuance programs
- Contactless co-branded card
- Government benefits distribution card
- Federal PIV use for administering employee transportation benefit; PIV-I, PIV-C
- Access and identity media for stored value trip payment



Characteristics of Account Based Systems

- Card as token
- Creation of record at tap
 - Authenticated card ID
 - Bus number, block number, operator number
 - Service type – local, express, BRT, etc.
 - Time stamp
 - Location – GPS coordinates and/or stop location designator
 - Encrypted track II and hash (if bank card)
- Application of business rules in back office
 - Analogous to toll collection systems
 - Taps to trips if check-in/check-out
 - Linked trips for transfers
 - Application of appropriate fares
- Fare changes made in by changing a configuration table in back office
- New product programming and application development takes place in back office; does not require changes to cards and validators





A photograph of a train station platform. In the foreground, there are several fare collection machines (validators) and black bollards. A double-decker train with a white, blue, and red livery is stopped at the platform. The train has "FRONT RUNNER" and "UTAH TRANSIT AUTHORITY" written on it. There are benches and a green trash can on the platform. In the background, there are signs for "TRAIL" and "PERFORMANCE", and some snow on the ground.

Thank you.

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