

Burt A. Wilhelm, Vice President
Integrated Solutions - US Emerging Payments
June 29, 2011



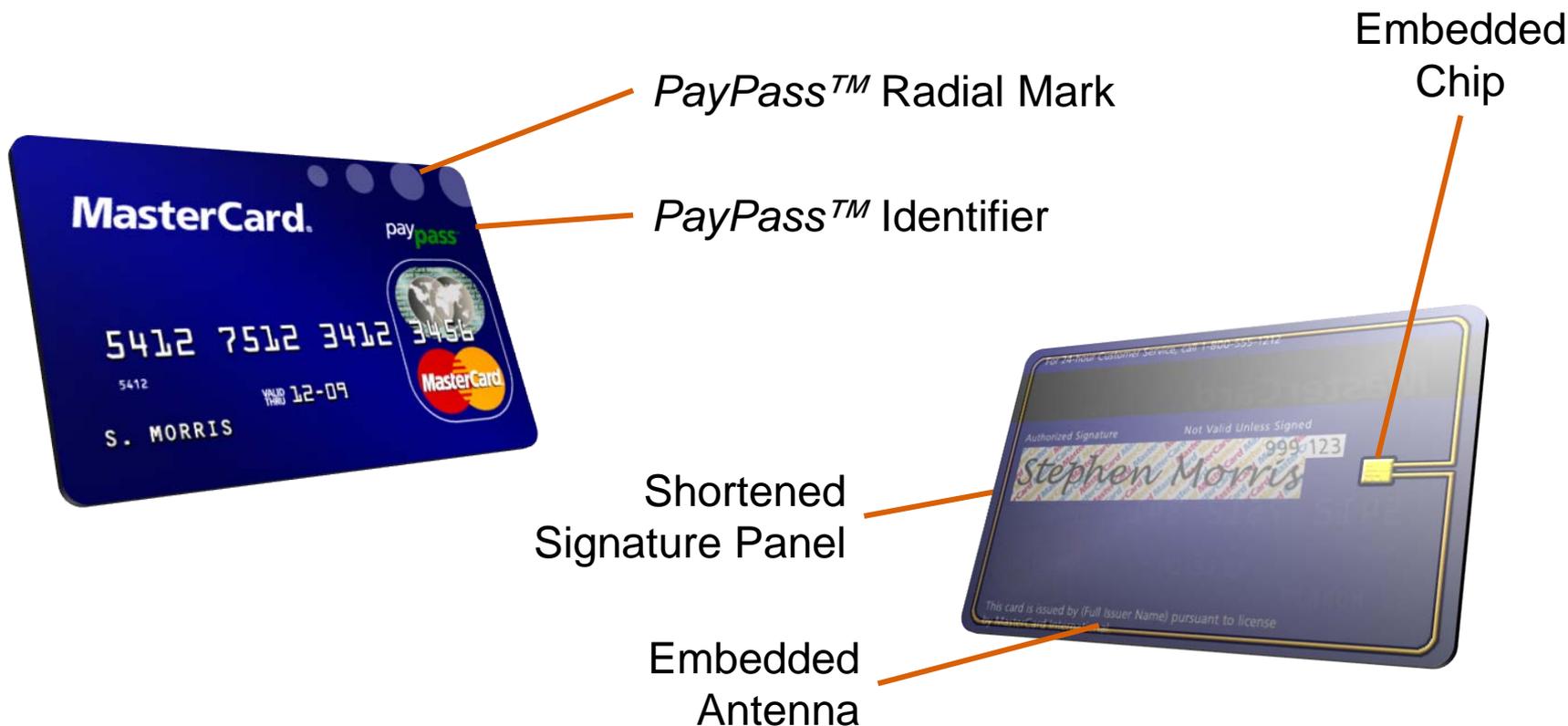
Talking Technology and Transportation (T3)

Open Payment Systems in Public Transit

Sponsored by the ITS Professional Capacity Building Program, ITS Joint Program Office, Research and Innovative Technology Administration, U.S. Department of Transportation

Payment Card Products

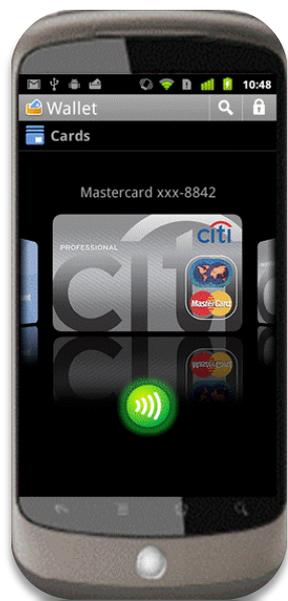
Contactless - Similar to a standard payment card with some differences...



Sample MasterCard® PayPass™ card, other branded products may be similar

Payment Card Products

The Financial Industry is migrating to contactless... in many forms



Sample MasterCard® PayPass™ enabled products, other branded products may be similar

Contactless Bankcards Used In Transit

Lots of ways to say it...

- ✓ *Open System*
- ✓ *Open Standards System*
- ✓ *Open Bankcard System*
- ✓ *Open Payments System*
- ✓ *Open Standards Payments System*
- ✓ *Open Contactless Payments System*
- ✓ *Open Banking Standards Payment System*



Open Payments *(continued)*

So what does MasterCard[®] mean “Open Payments?”

Open Standard*

- A standard that is publicly available and has various rights to use associated with it
- May also have various properties of how it was designed (e.g. open process)

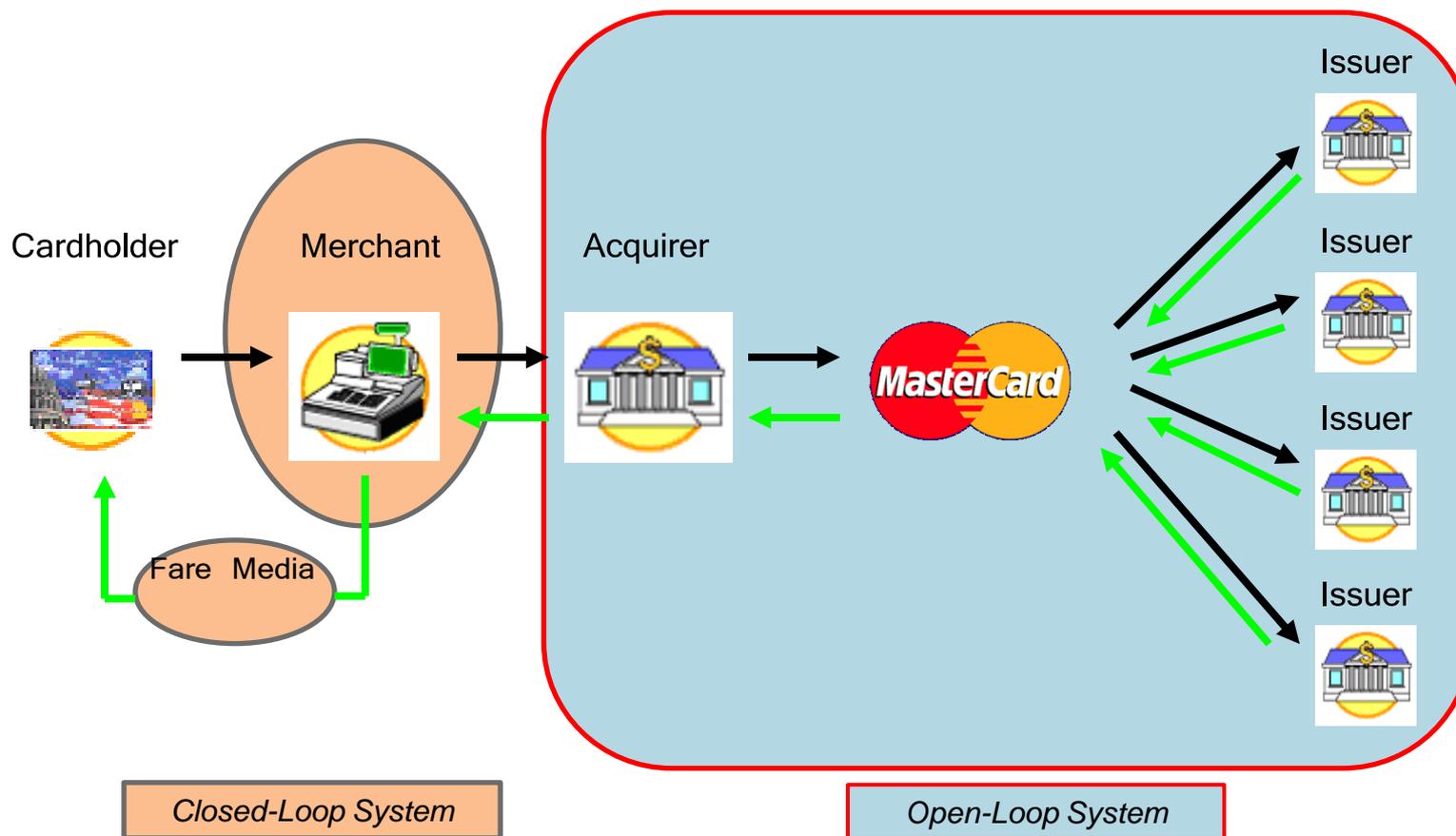
Global Open Payments System:

- A global payment system, specifically related to bankcard payment processing
- Capable of accepting and processing payment transactions originated by cardholders/consumers using payment cards or devices issued by any bank globally

*Source: Wikipedia: http://en.wikipedia.org/wiki/Open_standard

Traditional Transit Payment System

Transaction Process Flow*



* Illustration denotes traditional AFC system and is only one (1) of several potential payment processing schemes

Open Payments *(continued)*

How do “Open Payments” in transit differ from Proprietary “Closed Loop” Payments

- With Open Payments there is no need for consumer to first buy proprietary transit fare media or load proprietary transit fare media with value before they can access transit
- Open Payments allows consumers to simply tap with a contactless banking card/device at entry points **without** any prior interaction



Separate Fare Purchase/Reload



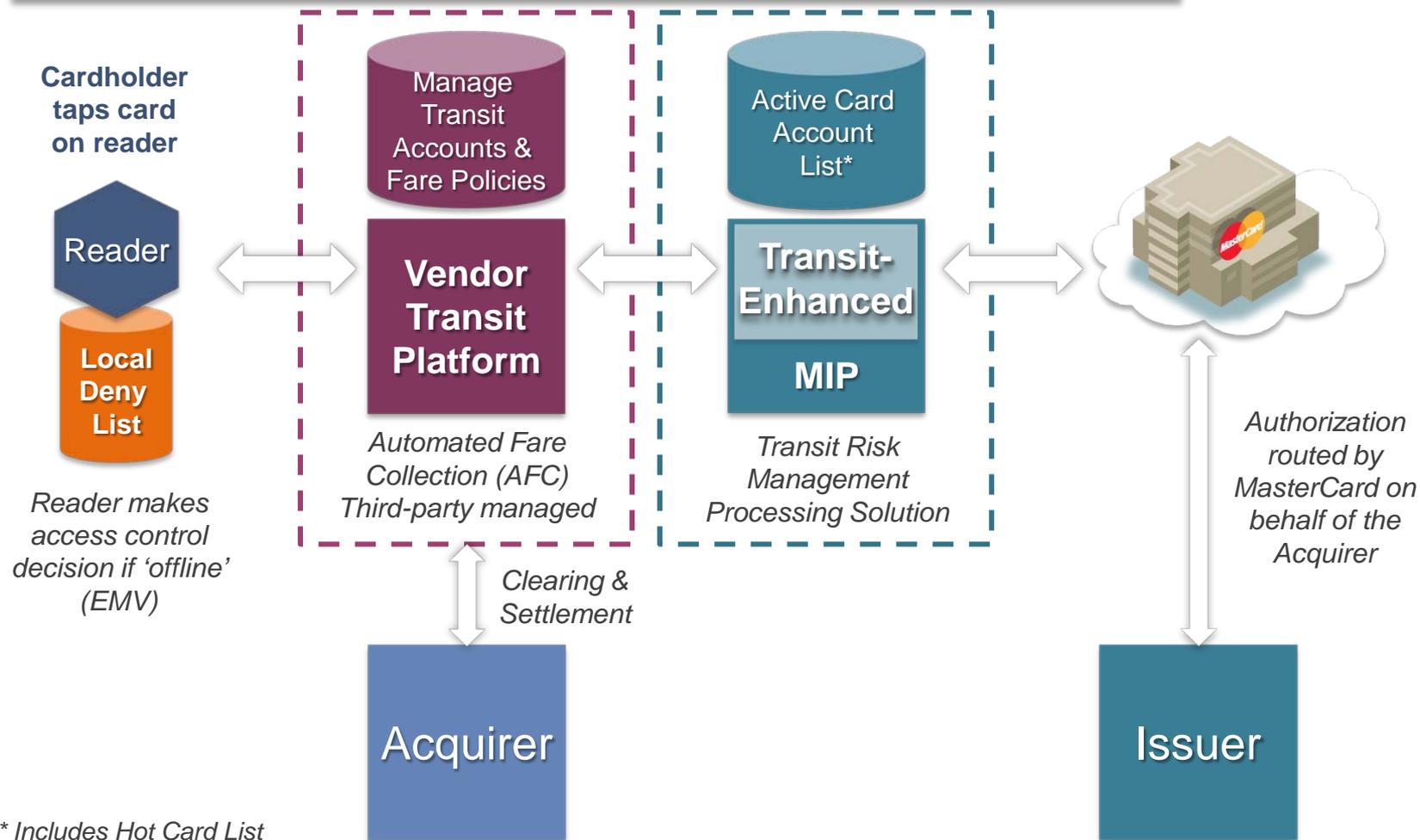
Access to Transit Services



Use of Transit Services

Open Payments Solution

MASTERCARD TRANSIT RISK MANAGEMENT PROCESSING FLOWS



* Includes Hot Card List

Open Payments *(continued)*

Benefits of Open Payments in Transit

- Can displace cash, proprietary paper tickets/contactless cards:
 - *reduced ticket vending lines and bus boarding times*
 - *increased passenger flow in stations & on buses*
- Can reduce need for:
 - *paper ticket and/or proprietary card procurement and card security*
 - *ticket vending equipment and maintenance*
 - *issuance and vending operations staff*
 - *cash handling and reconciliation*
 - *large customer service call centre operations*

Open Payments *(continued)*

Benefits of Open Payments in Transit

- Standard Cardholder Devices:
 - *MasterCard PayPass™ cards/devices and contactless products from other payment brands that are already in market can work in the system*
 - *No special application required*
 - *solution based on industry standards (EMV, ISO14443)*
 - *multiple form factors (fobs, mobile devices, stickers, etc.)*
- Standard Terminals and Readers:
 - *compliant PayPass readers available via multiple vendors*
 - *inexpensive payment terminals available via multiple vendors*
 - *compliant with industry security standards (PCI DSS)*
 - *certified to international standards (EMV / MChip etc.)*

Open Payments *(continued)*

- Leveraging open standards could enable rapid deployment in a transit agency or even in a region
- Leveraging open standards can provide for increased competition:
 - *more vendors competing*
 - *new sources for equipment*



Open Payments *(continued)*

Open Standards and Business Rules

- **Open Standards** can be leveraged to develop technologies to support your business needs
- **Business Rules** play an important role:
 - Merchant Rules (transit specific, parameter driven)
 - Industry Rules:
 - *Payments Processing*
 - *Data and Security Requirements and Best Practices*

Open Standards and Business Rules
Used together could yield the desired solution

Contact Information

Burt A. Wilhelm

Vice President

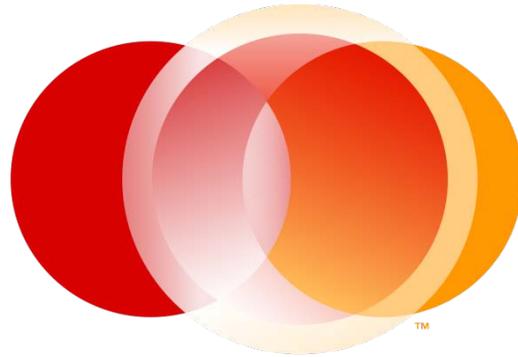
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Integrated Payments Solutions

US Emerging Payments

E-Mail: Burt_Wilhelm@mastercard.com

Office: 914-249-3218



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