



Merchant Considerations for U.S. Chip Migration

EMV Migration Forum/National Retail Federation
September 2014

About the EMV Migration Forum

The EMV Migration Forum is a cross-industry body focused on supporting the implementation steps required for global and regional payment networks, issuers, processors, merchants and consumers to help ensure a successful introduction of more secure EMV chip technology in the U.S. The focus of the Forum is to address topics that require some level of industry cooperation and/or coordination to migrate successfully to EMV chip technology in the U.S. For more information on the EMV Migration Forum, please visit <http://www.emv-connection.com/emv-migration-forum/>.



Purpose of this Webinar

This one-hour webinar will provide U.S. merchant organizations with background, considerations and tools to begin project planning for EMV chip migration.

The webinar will be recorded and made available on the EMV Connection website at <http://www.emv-connection.com>.



Presenters



Tom Litchford, Vice President of Retail Technology, National Retail Federation



Randy Vanderhoof, Director, EMV Migration Forum



Robin Trickle, Executive Director of Product Compliance, Heartland Payment Systems



John Drechny, Senior Director of Payment Services, Walmart

Merchant Considerations for U.S. Chip Migration

Agenda

Welcome from the NRF

Overview of U.S. Chip Migration

Impact of Fraud Liability Shifts

5 Steps to Chip Acceptance

Q&A

Merchant Considerations for U.S. Chip Migration

WELCOME FROM THE NATIONAL RETAIL FEDERATION

Tom Litchford
Vice President of Retail Technology
National Retail Federation



NRF's Technology Leadership Community



CIO Council

An invitation only committee made up of retailing's most prominent chief information officers.



IT Security Council

An invitation only committee made up of retailing's leading technology security experts.



Association for Retail Technology Standards

A worldwide community of retail business and information technology professionals organized to help retail enterprises and solution providers identify, adopt and integrate current and emerging technologies into their organizations, strategies and operations.

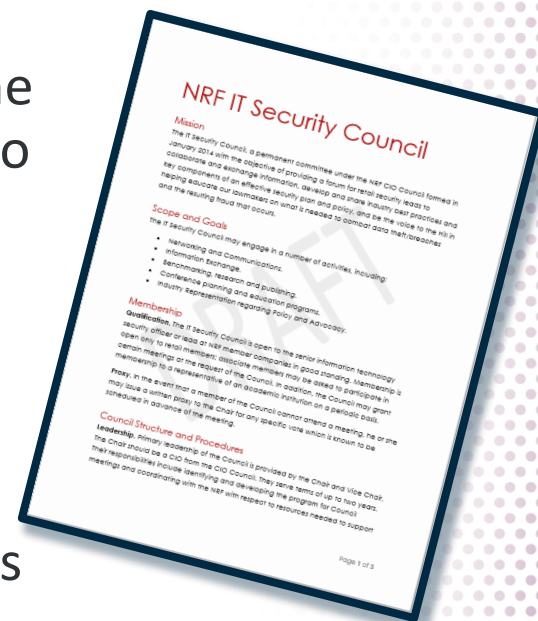


NRF's IT Security Council



Providing a forum for networking and collaboration and exchange of information, develop and share industry best practices and key components of an effective security and risk management framework, and be the voice to the Hill in educating lawmakers on what is needed to combat data theft and the resulting fraud that occurs.

- Networking and collaboration
- Cyber-threat information sharing
- Benchmarking, research and publishing
- Conference planning and education programs
- Industry representation regarding Policy and Advocacy



Merchant Considerations for U.S. Chip Migration

OVERVIEW OF U.S. CHIP MIGRATION

Randy Vanderhoof
Director
EMV Migration Forum



Worldwide EMV Deployment and Adoption

| Region | EMV Cards | Adoption Rate | EMV Terminals | Adoption Rate |
|---|-----------|---------------|---------------|---------------|
| Canada, Latin America, and the Carribbean | 471M | 54.2% | 7.1M | 84.7% |
| Asia Pacific | 942M | 17.4% | 15.6M | 71.7% |
| Africa & the Middle East | 77M | 38.9% | 699K | 86.3% |
| Europe Zone 1 | 794M | 81.6% | 12.2M | 99.9% |
| Europe Zone 2 | 84M | 24.4% | 1.4M | 91.2% |

*Figures reported in Q4 2013 and represent the latest statistics from American Express, Discover, JCB, MasterCard, UnionPay and Visa as reported by their member institutions globally.

Source: EMVCo

Why Chip and Why Now?

Security & Fraud

Future Innovation



Global Standard

Global Interoperability

How Does Chip Technology Protect Against In-person Counterfeit Card Fraud?



What Changes with Chip?

Merchant Changes

- Technology/business changes for accepting chip cards
- Customer experience changes with new chip cards and terminal types
- Enabling acceptance of all card types

Consumer Changes

- Paying in-store
- Multiple cardholder verification methods (CVMs)
- Contact and contactless chip cards

Issuer Changes

- Changes to issuing and authorization processes

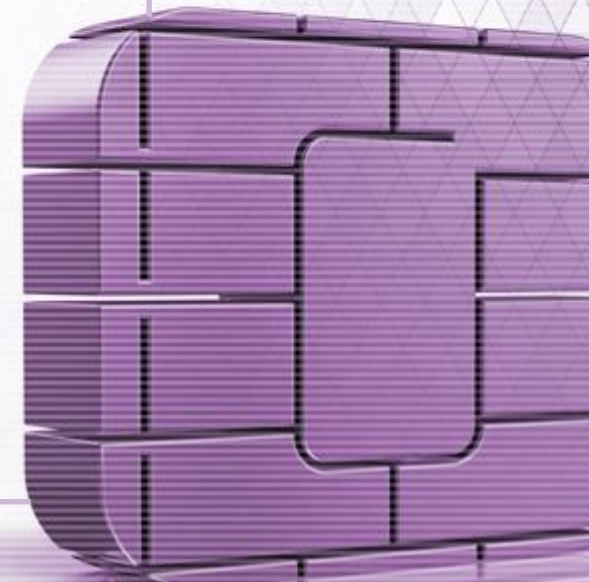
Acquirer Changes

- Testing, certifying and processing chip payments

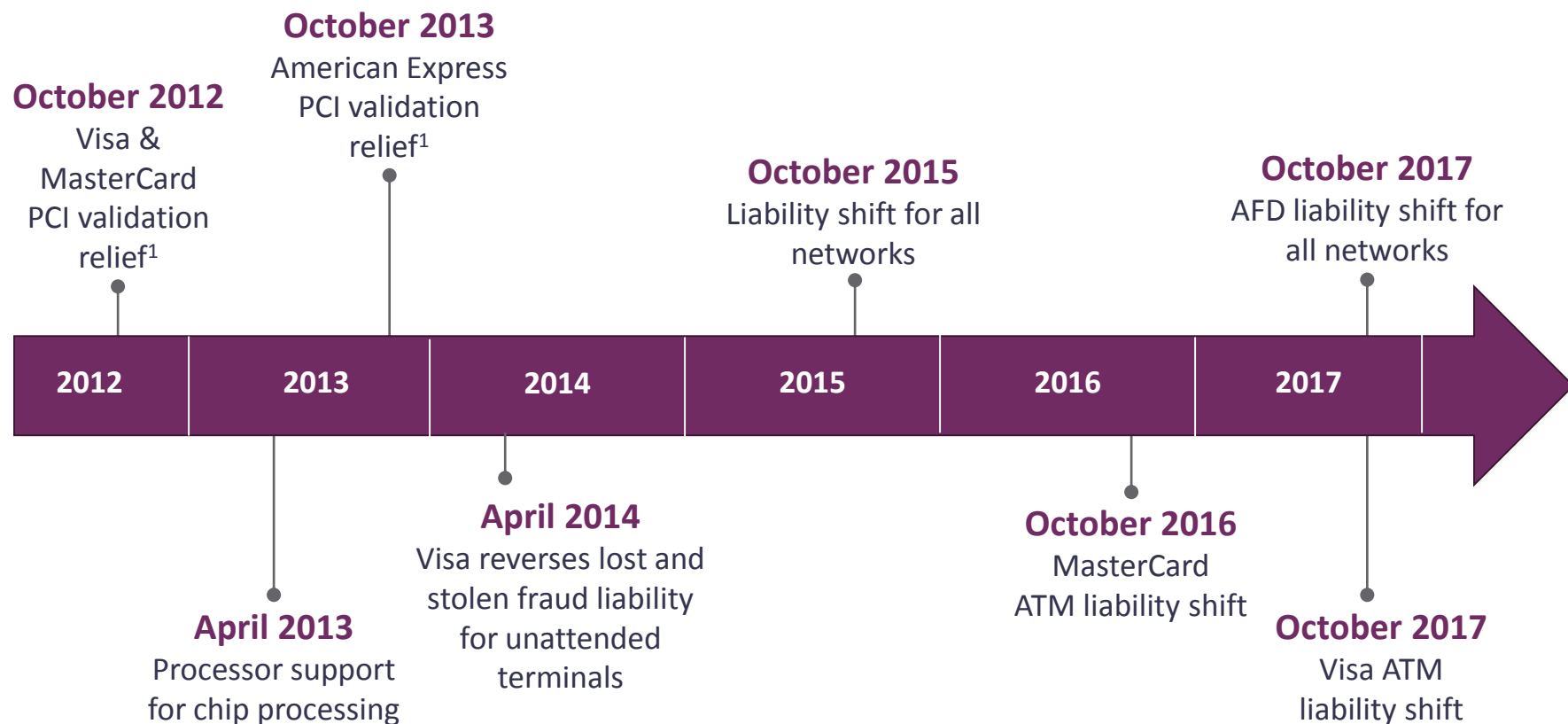
Complexities Surrounding U.S. Chip Migration

U.S. payments market is unique from other regions who have implemented chip technology

- Largest number of issuers, acquirers, merchants, ATM operators and cardholders
- Two international and 16 regional debit networks
- Every card will support a different set of features and CVMs
- “Durbin Amendment” governs transaction routing for debit cards requiring U.S. issuers to participate in at least two unaffiliated debit networks



U.S. Chip Migration Timeline

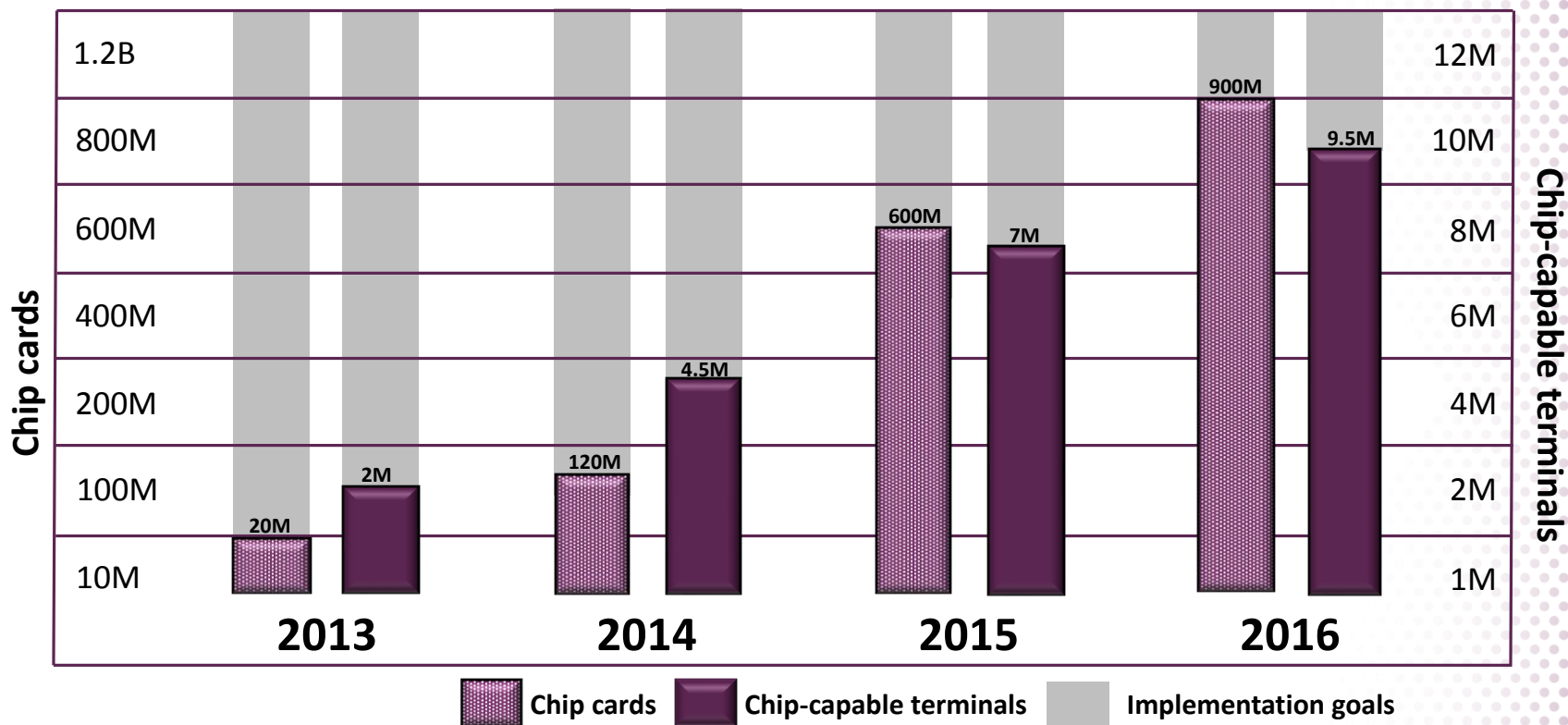


AFD: Automated Fuel Dispenser

¹ Applies to Level 1 & Level 2 merchants where 75% of transactions come from a dual interface, chip-enabled terminal

U.S. Chip Card Progress and Projections

EMV Migration Forum projects more than 120 million chip cards and 4.5 million EMV-capable terminals will exist in the market by the end of 2014



Other predictions

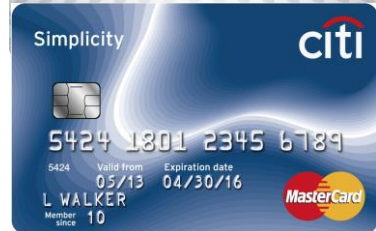
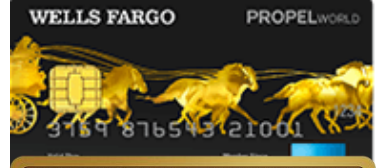
- *Aite Group* predicts that 70% of U.S. credit cards and 41% of debit cards will be EMV-enabled by the end of 2015
- *Javelin Strategy & Research* forecasts that 166 million EMV credit and 105 million EMV debit/prepaid cards will be in circulation in the U.S. by the end of 2015
- The *Payments Security Task Force* expects to see 575 million chip-enabled payment cards by the end of 2015

Many Issuer Portfolios are Offering Chip Cards

Corporate Charge



Consumer Credit



Consumer Rewards



Travel Rewards



How Layered Security Protects Transactions: EMV, Encryption and Tokenization

| Threats | Protection | | | | | |
|--------------------------|----------------|------------|--------------|------------------|------------|--------------|
| | Card Present | | | Card-Not-Present | | |
| | EMV | Encryption | Tokenization | EMV | Encryption | Tokenization |
| Counterfeit cards | ✓ | | | | | |
| Lost & stolen cards | ✓ ¹ | | | | | |
| Reusing stolen data | ✓ | ✓ | ✓ | | ✓ | ✓ |
| Stealing data in transit | | ✓ | ✓ | | ✓ | ✓ |
| Stealing data at rest | | ✓ | ✓ | | ✓ | ✓ |

*PCI DSS compliance still
required with EMV*

Techniques

EMV: Card authentication, cardholder verification, dynamic data

Encryption: Point-to-point or end-to-end

Tokenization: Replaces card data with limited-use tokens

Merchant Considerations for U.S. Chip Migration

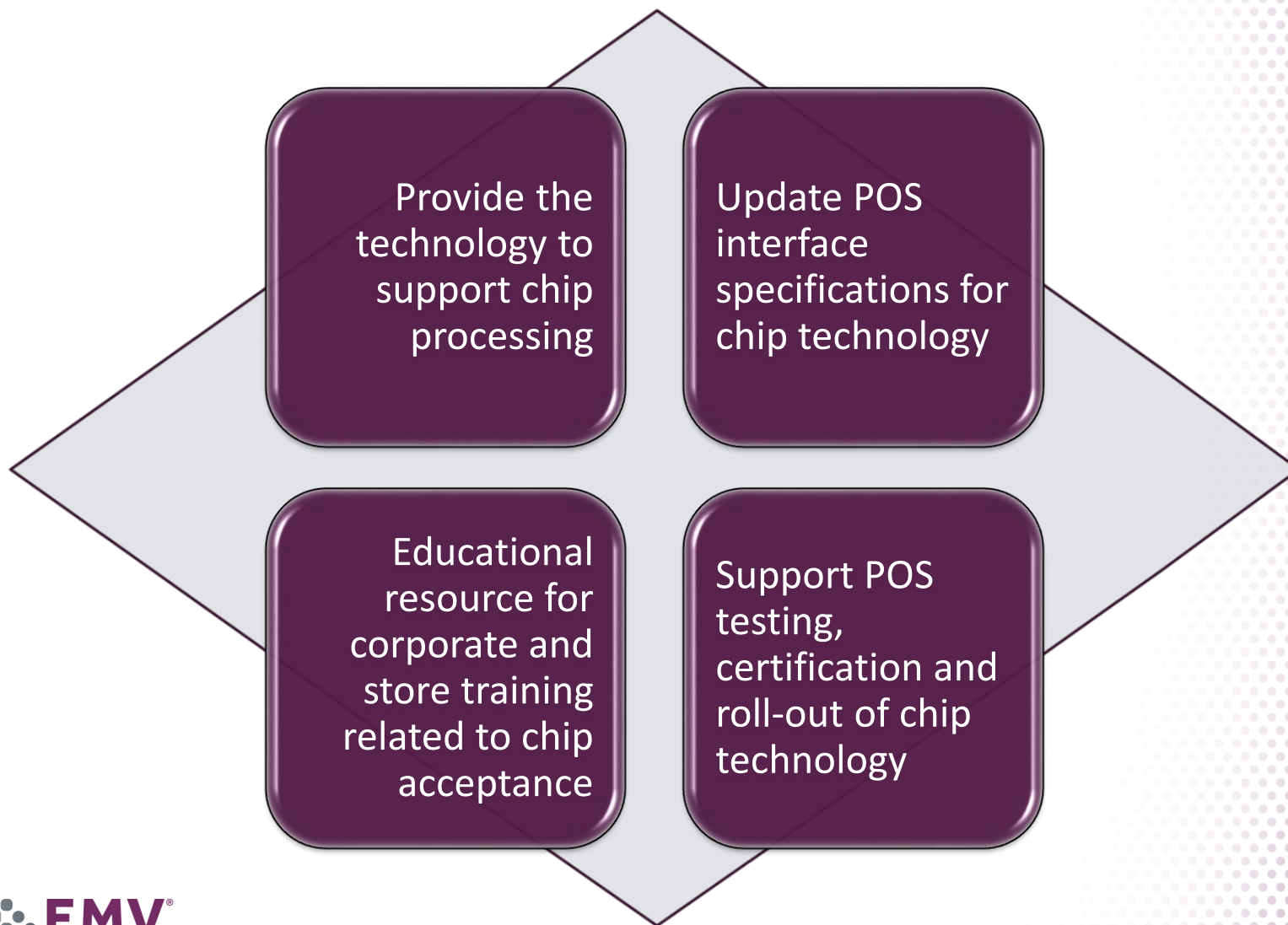
IMPACT OF FRAUD LIABILITY SHIFTS

Robin Trickel

Executive Director of Product Compliance
Heartland Payment Systems



Role of Acquirer, Processor and ISO



Investments and Benefits Associated with Upgrading



Investments

Software and hardware upgrades

Testing certification costs

Time, resources and staff training

Benefits

Fewer fraud-related chargebacks due to skimming and stolen cards

Devaluation of data in systems – less attractive to hackers

Ability to accept contactless and mobile payments, if desired

Image: Investments in security increase cardholder confidence

Defining the Liability Shifts

There is no mandate for merchants to implement chip technology

Liability Shift = Potential Chargebacks
















*In most cases, after the target chip migration dates in October 2015 and 2017, the payment brands will shift the responsibility for any fraud resulting from a payment transaction **to the party using the least secure technology**¹. This may be either the issuer of the card or the merchant accepting the payment card. If neither or both parties have implemented chip, the liability stays the same as it is today.*

Counterfeit Card Fraud: American Express, Discover, MasterCard & Visa

| Current | October 2015 |
|-----------------------------------|---|
| <u>Issuer</u> liable ¹ | For chip cards, <u>merchant</u> liable if non-chip terminal |

¹ A variety of factors play into liability, such as if the full track data was provided, but for simplicity purposes using the current general scenario

Counterfeit Card Fraud Liability Examples¹

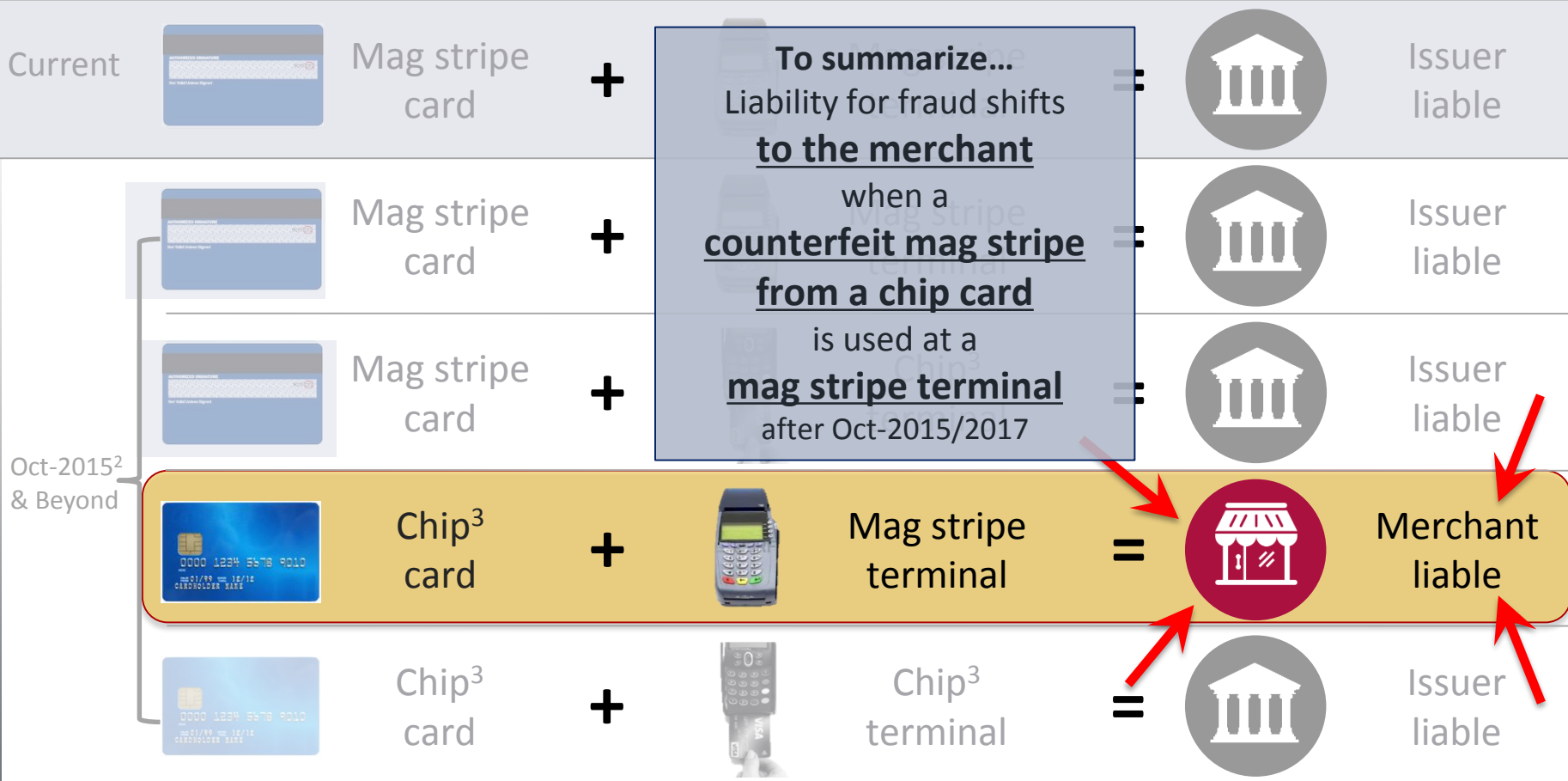
| | | | | | | | | |
|--------------------------------|---|------------------------|---|--|----------------------------|---|---|-----------------|
| Current |  | Mag stripe card | + |  | Mag stripe terminal | = |  | Issuer liable |
| Oct-2015 ² & Beyond |  | Mag stripe card | + |  | Mag stripe terminal | = |  | Issuer liable |
| |  | Mag stripe card | + |  | Chip ³ terminal | = |  | Issuer liable |
| |  | Chip ³ card | + |  | Mag stripe terminal | = |  | Merchant liable |
| |  | Chip ³ card | + |  | Chip ³ terminal | = |  | Issuer liable |



This slide is in relation to shifts for chip only and does not reflect any other changes to how disputes work today

¹Same applies for all brands
²Oct-2017 for AFD
³With or without PIN capabilities

Counterfeit Card Fraud Liability Examples¹



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¹Same applies for all brands
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³With or without PIN capabilities














Lost/Stolen Card Fraud: American Express, Discover & MasterCard¹

| Current | October 2015 |
|-----------------------------------|---|
| <u>Issuer</u> liable ² | For chip & PIN cards, <u>merchant</u> liable if terminal is less secure |

¹ Attended Environments

² A variety of factors play into liability, such as if the full track data was provided, but for simplicity purposes using the current general scenario

Lost/Stolen Card Fraud Liability Examples: American Express, Discover & MasterCard¹






















| | | | | | | | | |
|-------------------|---|-----------------|---|--|---------------------|---|---|-----------------|
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| Oct-2015 & Beyond |  | Chip & PIN card | + |  | Mag stripe terminal | = |  | Merchant liable |
| |  | Chip & Sig card | + |  | Mag stripe terminal | = |  | Issuer liable |
| |  | Chip & Sig card | + |  | Chip & PIN terminal | = |  | Issuer liable |
| |  | Chip & PIN card | + |  | Chip & Sig terminal | = |  | Merchant liable |
| |  | Chip & PIN card | + |  | Chip & PIN terminal | = |  | Issuer liable |



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¹ Attended Environments

Lost/Stolen Card Fraud Liability Examples: American Express, Discover & MasterCard¹

| | | | | |
|-------------------|---|--|---|---|
| Current |  | Mag stripe card +  | Mag stripe terminal | <p>To summarize... Liability shifts <u>to the merchant</u> when a <u>lost or stolen chip & PIN card</u> is used at a <u>less secure terminal</u> after Oct-2015</p> |
| |  | Mag stripe card +  | Mag stripe terminal | |
| |  | Mag stripe card +  | Chip terminal | |
| Oct-2015 & Beyond |  | Chip & PIN card +  | Mag stripe terminal =  | Merchant liable |
| |  | Chip & Sig card +  | Mag stripe terminal =  | Issuer liable |
| |  | Chip & Sig card +  | Chip & PIN terminal =  | Issuer liable |
| |  | Chip & PIN card +  | Chip & Sig terminal =  | Merchant liable |
| |  | Chip & PIN card +  | Chip & PIN terminal =  | Issuer liable |



To summarize...
Liability shifts **to the merchant** when a **lost or stolen chip & PIN card** is used at a **less secure terminal** after Oct-2015

This slide is in relation to shifts for chip only and does not reflect any other changes to how disputes work today

¹ Attended Environments

























Lost/Stolen Card Fraud: Visa¹

| Current | October 2015 |
|-----------------------------------|--------------|
| <u>Issuer</u> liable ² | No change |

¹ Attended Environments

² A variety of factors play into liability, such as if the full track data was provided, but for simplicity purposes using the current general scenario

Lost/Stolen Card Fraud Liability Examples: Visa¹










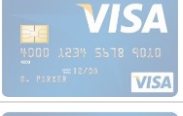
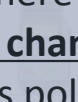

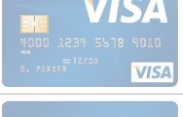
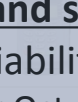

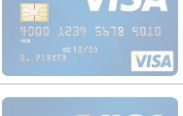


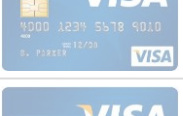





| | | | | | | | | |
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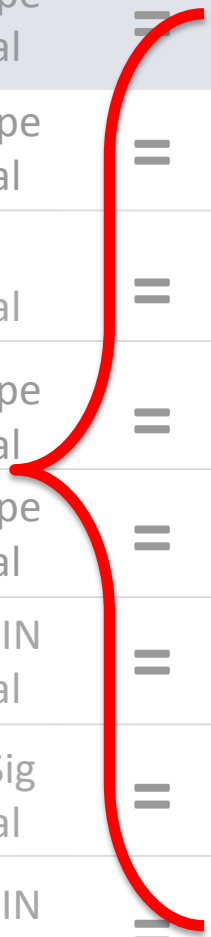
¹ Attended Environments

Lost/Stolen Card Fraud Liability Examples: Visa¹

| | | | | | | | | |
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| |  | Chip & PIN card | + |  | Chip & PIN terminal | = |  | Issuer liable |



To summarize...
 There is **no change** to Visa's policies for **lost and stolen** card fraud liability with EMV after Oct-2015



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¹ Attended Environments

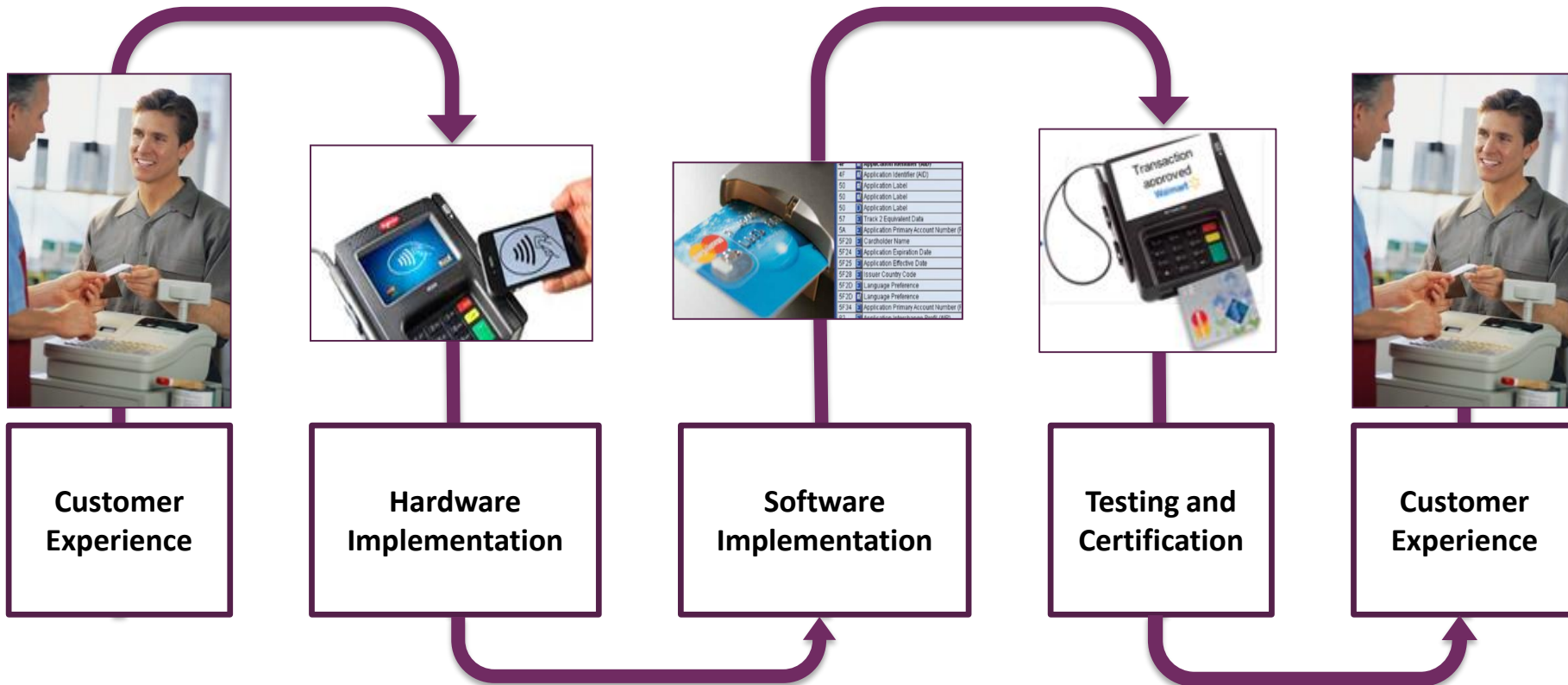
Merchant Considerations for U.S. Chip Migration

5 STEPS TO CHIP ACCEPTANCE

John Drechny
Senior Director of Payment Services
Walmart



Basic Steps to EMV Implementation



Key Considerations of EMV Implementation

Speed
Checkout configuration
Change in habits

Ease of use
Implementation cost
Functionality
Cost of acceptance

Merchant Considerations for U.S. Chip Migration

WRAP-UP AND Q&A

Randy Vanderhoof
Director
EMV Migration Forum



EMV Migration Forum Resources

- **Categorized for Issuers, Merchants, Acquirers and Consumers**

- www.emv-connection.com
- <http://www.emv-connection.com/press-room/>
- Knowledge Center
- EMV 101 Webinar
- EMV Frequently Asked Questions
- Glossary of Standardized Terminology
- EMV-related White Papers
 - *Card-Not-Present Fraud: A Primer on Trends and Transaction Authentication Processes*
 - *Card Payments Roadmap in the U.S.: How Will EMV Impact the Future Payments Infrastructure?*
 - *EMV and NFC: Complementary Technologies that Deliver Secure Payments and Value-Added Functionality*
 - *EMV Testing and Certification White Paper: Current U.S. Payment Brand Requirements for the Acquiring Community*
 - *U.S. Debit EMV Technical Proposal*

Randy Vanderhoof: rvanderhoof@us-emvforum.org

Tom Litchford: litchfordt@nrf.com

Robin Trickel: robin.trickel@e-hps.com

John Drechny: john.drechny@wal-mart.com



WWW.EMV-CONNECTION.COM

191 CLARKSVILLE ROAD PRINCETON JUNCTION, NJ 08550

