

# Are you ready for Oct 1, 2020?

## Part 1: EMV fundamentals and the Risk of Not Upgrading

December 5, 2019

# Agenda

- Housekeeping
- Presenters
- About Connexus
- Presentation
- Q & A

# Housekeeping

This webinar is being recorded and will be made available in approximately 15 days.

- YouTube ([youtube.com/conexxusonline](https://youtube.com/conexxusonline))
- Website Link ([conexxus.org](https://conexxus.org))

## Slide Deck

- Survey Link – Presentation provided at end

## Participants

- Ask questions via webinar interface
- Please, no vendor specific questions
- Our webinars may be used toward PCI continuing education credits. Please contact [arussell@conexxus.org](mailto:arussell@conexxus.org) for questions regarding a certificate of webinar attendance.

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Email: [info@conexxus.org](mailto:info@conexxus.org)

# Presenters

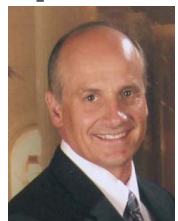
## Conexxus Host & Moderator



Linda Toth, Director of Standards, Conexxus

[ltoth@conexxus.org](mailto:ltoth@conexxus.org)

## Speakers



Robert Alandt, Senior Director, Merchant Solutions, Visa Inc.

[ralandt@visa.com](mailto:ralandt@visa.com)



Brian Russell, Lead EMV Business Analyst, Verifone

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# About Conexxus

- We are an independent, non-profit, member driven technology organization
- We set standards...
  - Data exchange
  - Security
  - Mobile commerce
- We provide vision
  - Identify emerging tech/trends
- We advocate for our industry
  - Technology is policy



# 2019-2020 Conexus Webinar Schedule

Month/Date	Webinar Title	Speaker	Company
August 29, 2019	Don't Get Phished!! Train Your Employees To Avoid Ransomware	Geoffrey Vaughan Ed Adams	Security Innovation
September 26, 2019	Using Data Science to Proactively Manage the Connected C-Store	Ashwin Swamy Thomas Duncan	Omega ATC Omega ATC
October 24, 2019	Easy PCI—How to Make PCI & Attestation Easier	Ajith Edakandi	Hughes
November 14, 2019	Impending Consumer Privacy Laws	Alan Thiemann Paige Anderson	Conexus NACS
November 21, 2019	Applicability of PCI DSS requirements for Merchants and MNPS's	Sam Pfanstiel	ControlScan
December 5, 2019	EMV: Part 1	Brian Russell Linda Toth Robert Alandt	Verifone Conexus Visa
December 12, 2019	EMV: Part 2	Gray Taylor Dispenser Manufacturers	Conexus TBD

# 2020 Conexxus Annual Conference

April 26 – April 30, 2020  
Loews Ventana Canyon  
Tucson, AZ



More about Sponsorship Opportunities & Registration: [www.Conexxus.org](http://www.Conexxus.org)

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**CONEXXUS**   
solve forward

# EMV

**E**uropay  
**M**asterCard  
**V**isa





# Liability Shift\* Dates

Oct 1  
2015

Oct 1  
2020

(3 yr. deferment)

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Payment  
Terminals  
(except AFDs)

Outdoor  
AFDs

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*\*Not a card brand mandate, but may be required by oil brands & is a **common-sense mandate***

# Liability Shift

*Liability shifts to the party in the  
payment chain with the  
**least secure**  
payment technology*



Retailers are covered by  
implementing EMV

# EMV Preparedness

Conexus EMV Preparedness Survey

June 10 – July 8, 2019

1100+ Merchants Invited

88 Responses representing **26,284** Sites

Outdoor (Contact) EMV

# EMV Preparedness - Outdoor

70% have ZERO sites deployed

80% Plan to deploy

17% Undecided

42% expect to have EMV outdoor by Oct 1, 2020

Cost of Upgrades (43%)\*

Risk vs. the expense (43%)\*

# Card Fraud

- Lost/Stolen: 10%
- Counterfeit: 90%



# Counterfeit AFD Fraud

3 Major Card Brands Reporting as of 9/19

\$299 MM (actual) in 2018

23 % average YOY increase

Projected \$367 MM in 2019

Projected \$451 MM in 2020

# Counterfeit AFD Fraud Pool

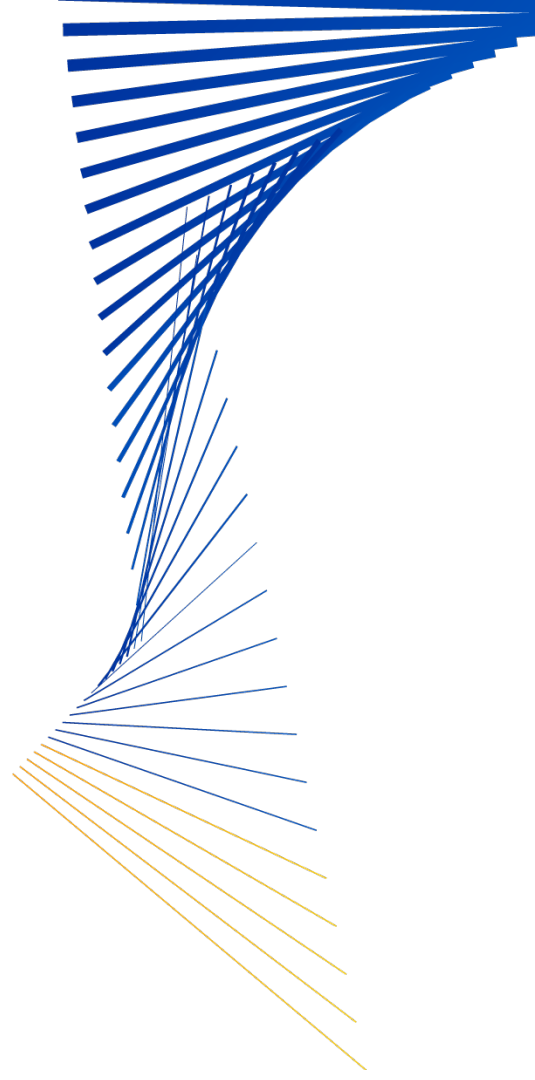
Projected \$451 MM in 2020

Fraud will seek non EMV  
enabled sites!

# Visa AFD EMV Review

November 2019

Robert Alandt  
Senior Business Leader  
Merchant Sales and Solutions, Visa Inc.

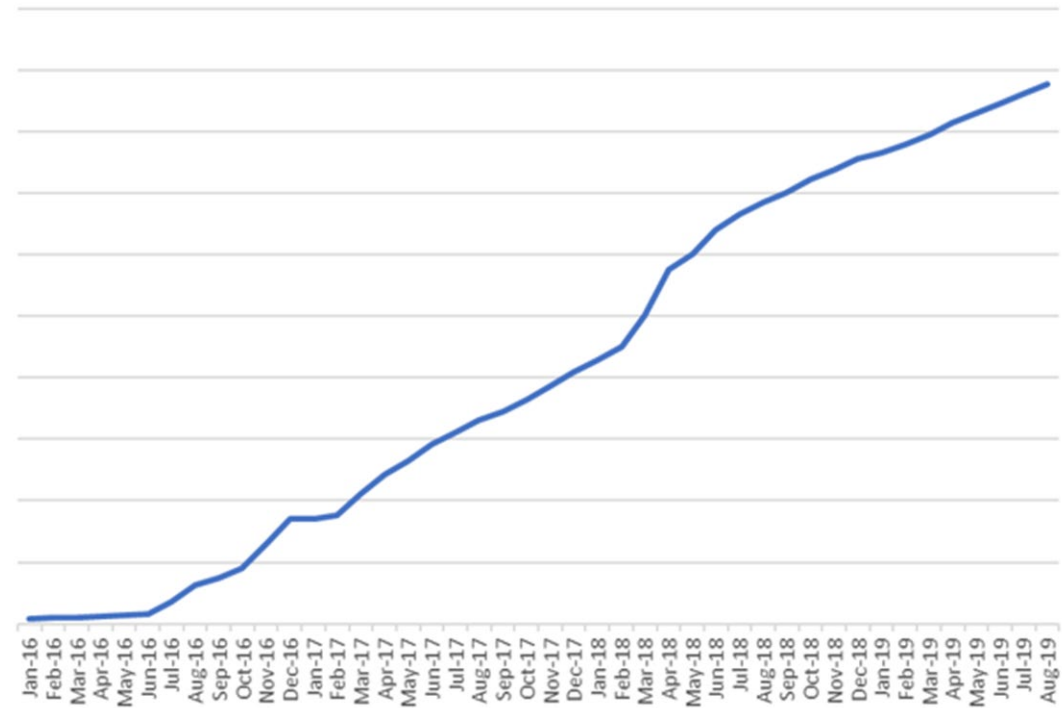




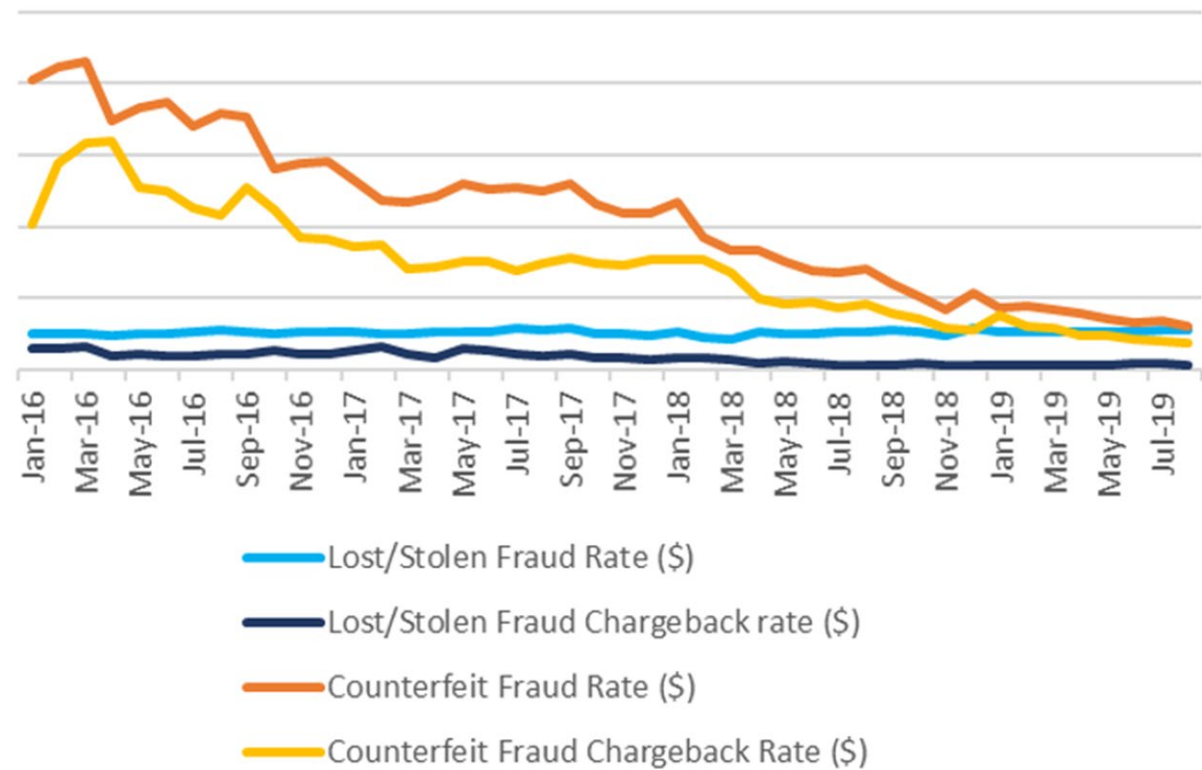
# Fuel Segment Fraud and Chargeback Trends

# Service Station 5541 EMV Terminal Enablement Trends

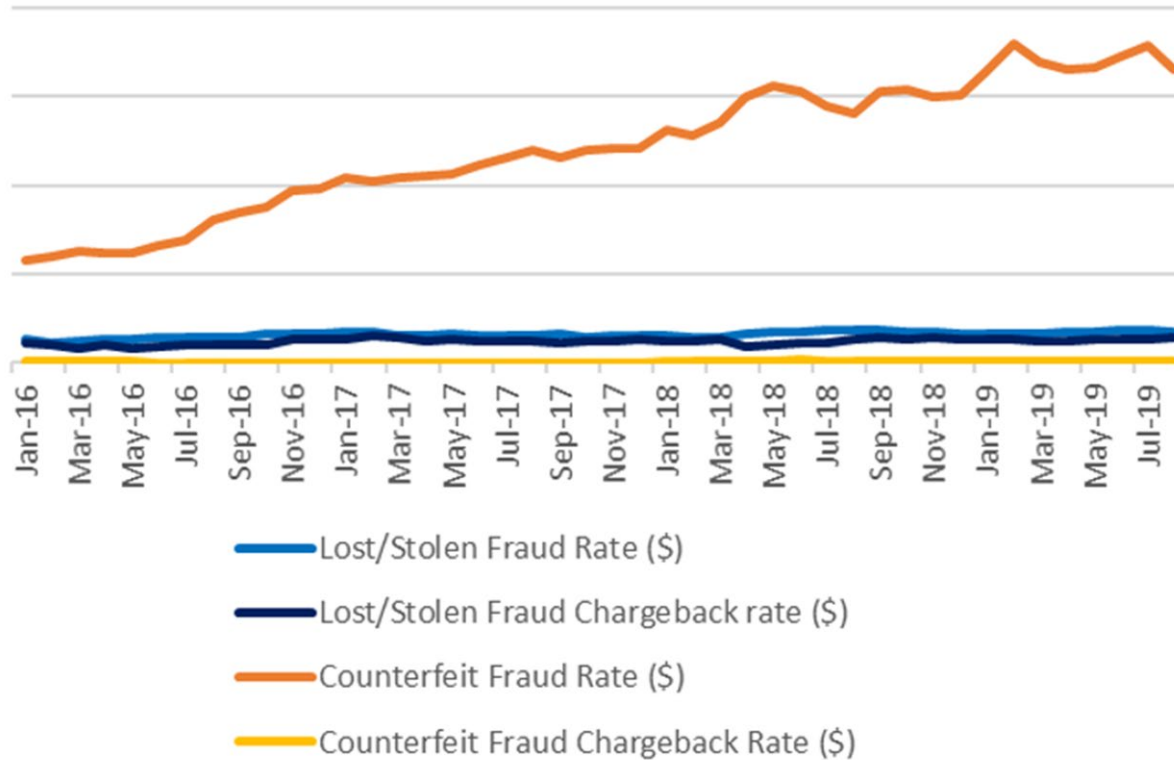
% of Total Chip Terminal Authorizations (Count)



# Service Station 5541 Reported Fraud & Fraud Chargeback Trends



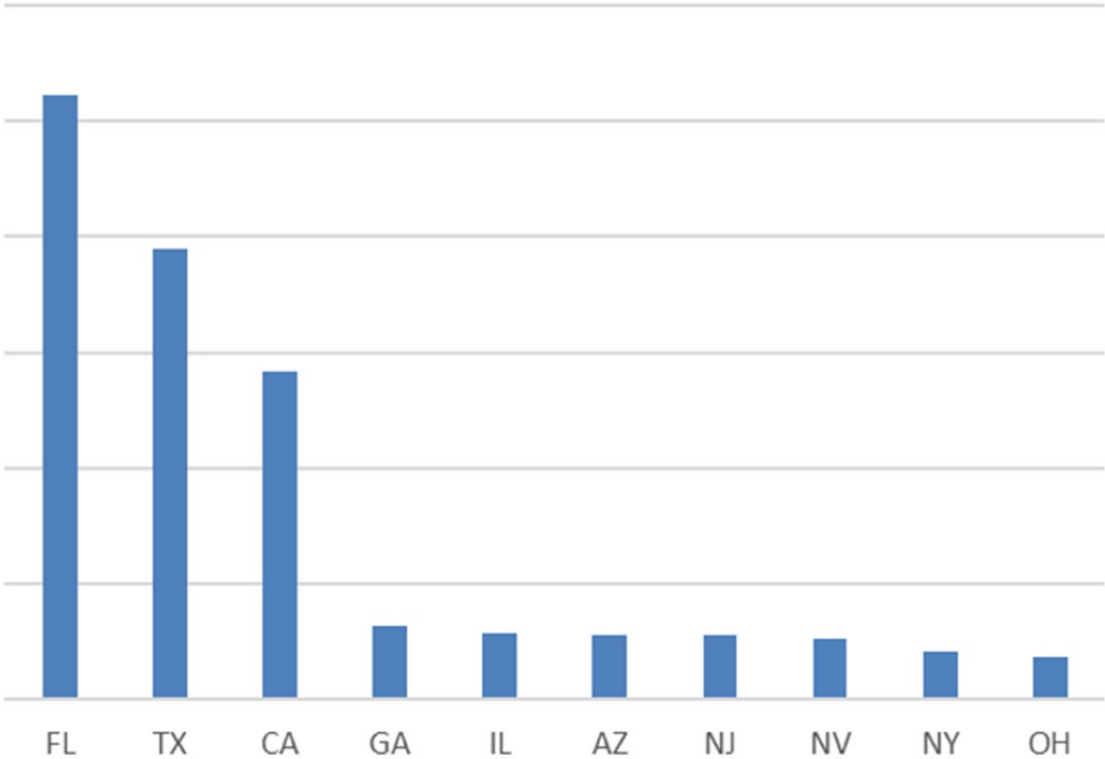
# AFD 5542 Reported Fraud & Fraud Chargeback Trends



Source: VisaNet for the period Jan 2016 through Aug 2019

# AFD 5542 Counterfeit Fraud By State

## Top 10 States for AFD Counterfeit Fraud (\$)



# EMV Update

# U.S. EMV chip migration status as of September 2019

 **99%** of overall US payment volume was on EMV cards

## Adoption

 **99.8%** of US credit payment volume on EMV cards

 **98%** of US debit payment volume on EMV cards

## Usage

 **66%** of US credit transactions were chip-on-chip

 **62%** of US debit transactions were chip-on-chip

 **3.7 M** merchant locations accepted chip cards

*Sources: GBI data for the month of September 2019*

*\*Card counts are estimates based on the number of active cards during the reporting month*

*<sup>1</sup>Visa branded transactions processed as chip transactions*

*<sup>2</sup>Magstripe transactions using a Visa branded chip card in a chip terminal*

# EMV liability shift for counterfeit fraud

U.S.	Card	Terminal	Liability
After October 1, 2015 for POS In-Store 5541	Mag stripe only	Mag stripe only	Issuer
After October 1, 2017 for AFD 5542 XBorder	Mag stripe only	EMV chip	Issuer
After October 1, 2020 for AFD 5542 US Domestic	EMV chip	Mag stripe only	Acquirer
	EMV chip	EMV chip	Issuer



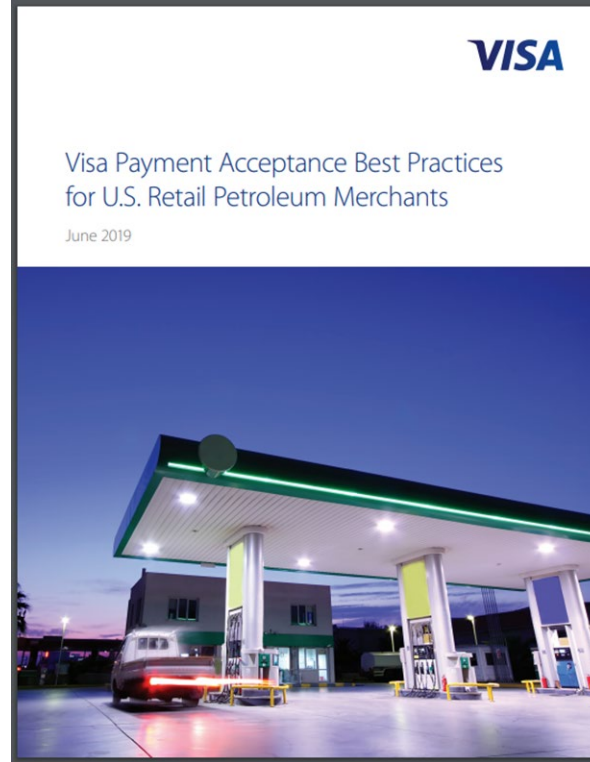
# Liability shift for lost/stolen fraud at AFDs

Global	Card	Terminal	Card Read	Liability
As of April 15, 2014	Mag stripe only	Mag stripe only	Mag stripe	Acquirer
	Mag stripe only	EMV chip	Mag stripe	Acquirer
	EMV chip	EMV chip	EMV chip or qVSDC Contactless	Issuer
	EMV chip	EMV chip	Mag stripe "fallback" transaction or MSD Contactless	Acquirer

**Consider not allowing fallback at the AFD to avoid lost/stolen fraud liability**

# Additional Information

## Visa Payment Acceptance Best Practices for U.S. Retail Petroleum Merchants



**Visa.com location**

<https://usa.visa.com/dam/VCOM/regional/na/us/support-legal/documents/visa-petroleum-best-practices.pdf>

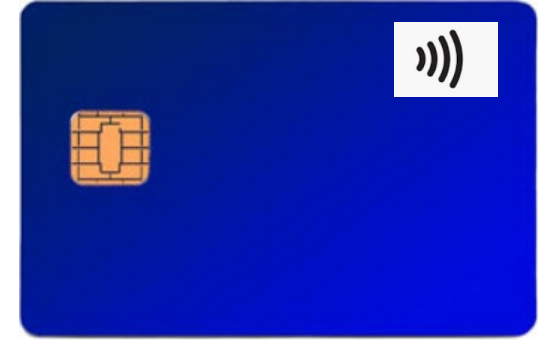
# Thank You

[ralandt@visa.com](mailto:ralandt@visa.com)

# Brian Russell, Verifone

# EMV – What is it?

- EMV – is a set of standards for payment cards designed to reduce counterfeit fraud
- EMV cards contain a “chip” that performs cryptographic functions making counterfeit fraud almost impossible.
- EMV transactions work as Contactless too - either from a card or a mobile device



# EMV is NOT...

- Very important for a merchant to understand what EMV is not!
- EMV is not a data encryption standard!
  - Data read from an EMV chip is in the clear just like a mag-stripe would be.
  - **Card data must still be protected.**
  - Point 2 Point Encryption or End 2 End encryption is still required to secure a transaction.



# Card Fraud – Where Does EMV Help?

- Counterfeit – largest category
  - EMV's biggest impact for merchants
  - Contact & Contactless
  - All EMV transactions
- Lost and Stolen
  - Depends on Cardholder Verification Method(CVM)



# Counterfeit Fraud – How EMV Helps

- Offline Data Authentication (ODA)
  - Cryptographic data exchange between card (chip) and terminal
  - Not always performed, but may be done even when “online”
- Online Cryptogram (ARQC)
  - Digital signature created by the card and validated by the issuer
- Both help assure a genuine card!



# EMV Sounds Terrific!

## It's working great for retail and indoors

Let do it outside at the AFDs!



Err, not so fast ☹️

- Why is this taking so long?
- More importantly, what are we doing about it?

# Petro AFD EMV Challenges

- Diversity
  - Mom & Pop's to Mega centers
- Scale
  - 124,000+ fueling locations, 1M+ EMV terminals
- Hardware
  - Multiple EMV devices/kernels
- New capabilities, i.e. Contactless

# Petro AFD EMV Challenges

- Card readers interact differently
- Multiple MSR Fallback strategies
  - Integrated chip/MSR terminals
- Loyalty/AVS prompting
- Fleet Processing
- Additional AIDs



# Petro AFD EMV Challenges

- Resources
  - Financial – significant investment, especially for smaller sites/chains
  - Shortage of qualified Technicians
  - Software availability
- Large number of EMV certifications

# Petro AFD EMV Solutions

- Industry collaboration
  - Conexus
  - U.S. Payment Forum
  - Card Brand Support
  - Vendors



# One Example: EMV Certifications

- Types
  - L1 – Hardware
  - L2 – Kernel
  - L3 – Payment application
- When are certifications required?
  - Expirations
  - Changes in payment applications

# EMV Software (L3) Certifications

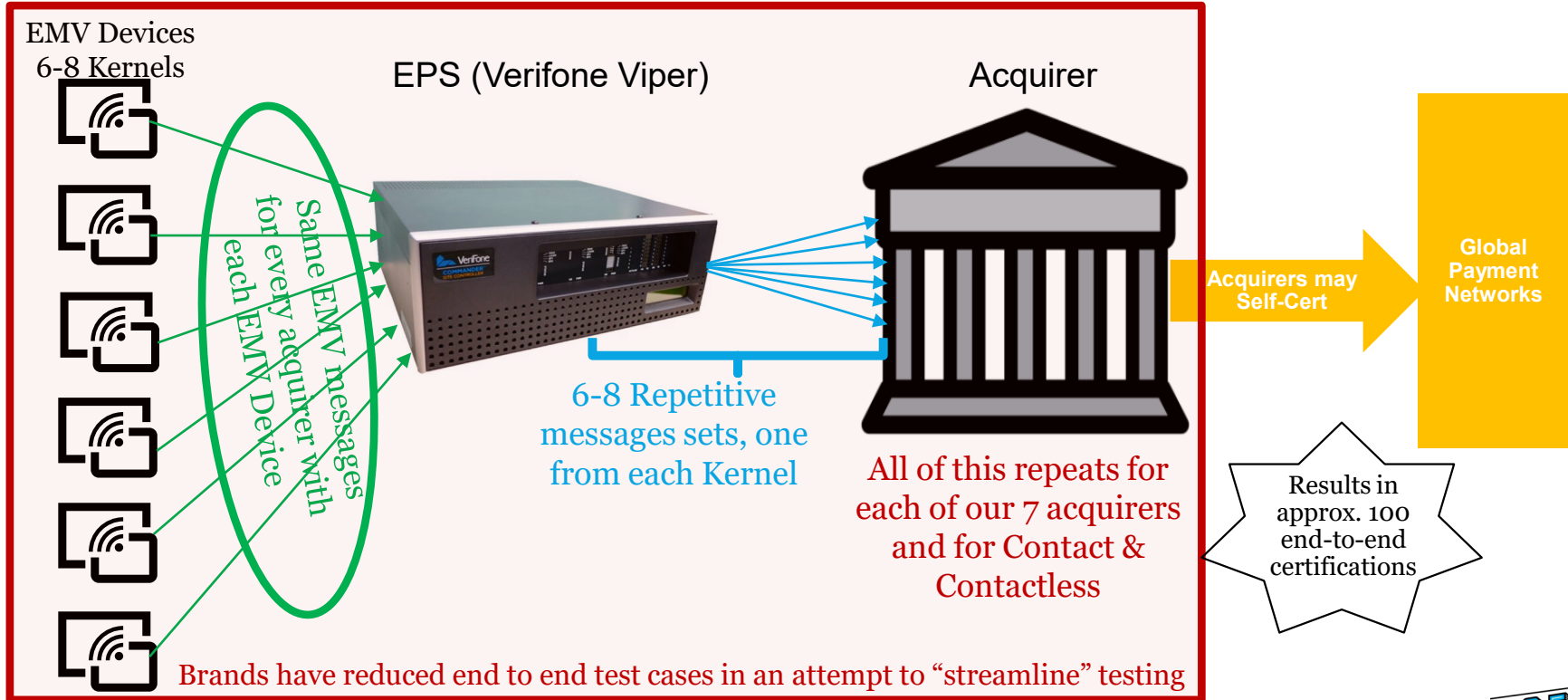
- EMV software solutions must be certified
  - Vendor, Acquirer, Brand/Issuer involvement
  - Currently required for every EMV kernel
  - Currently required with each Acquirer
- Reducing certification time has been a priority
  - Acquirer self certifications
  - Past efforts focused on reducing test cases
- Still – it is typically weeks for each device

The background is a dark, blurred city street at night. In the center foreground, there is a reflective sphere, possibly a traffic mirror or a decorative object, which reflects the surrounding city lights and buildings. The sphere is positioned on a road with yellow lane markings. The overall atmosphere is dark and urban.

**Why Focus on Certifications?**  
**What do all These Certs Look Like?**

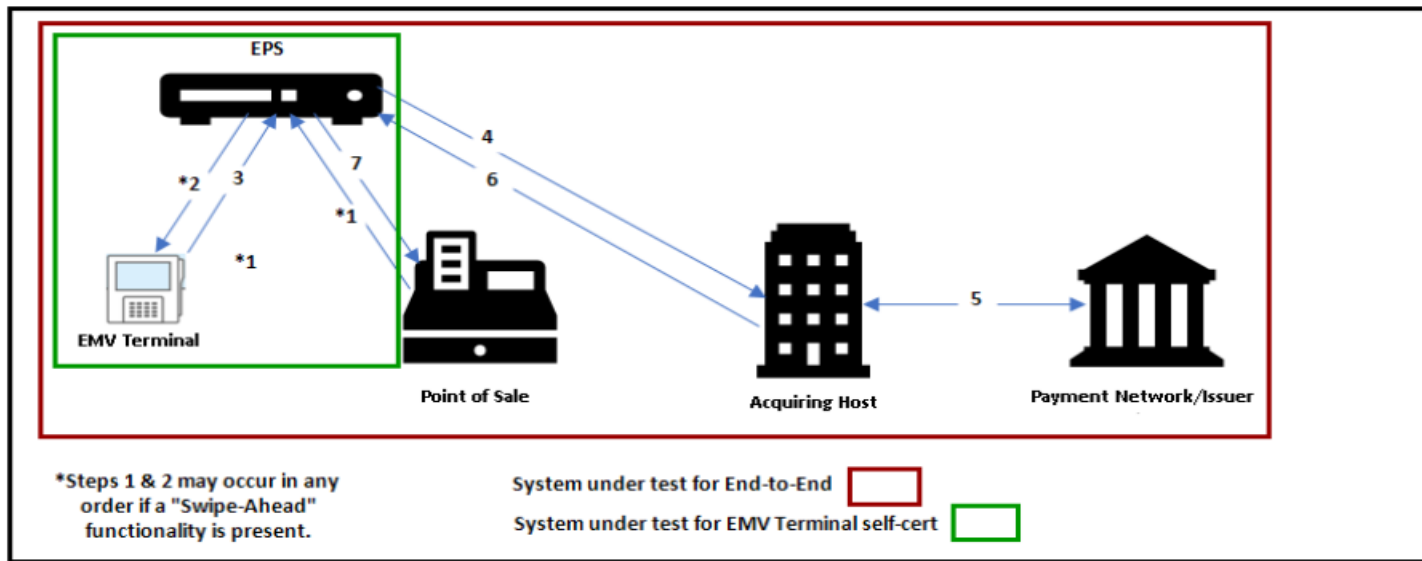


# EMV Certifications – The Old Way



# Innovation - an Industry Solution

Leverage an Architecture Where the EMV Device is Just a Data Source  
EMV Processing Logic is independent

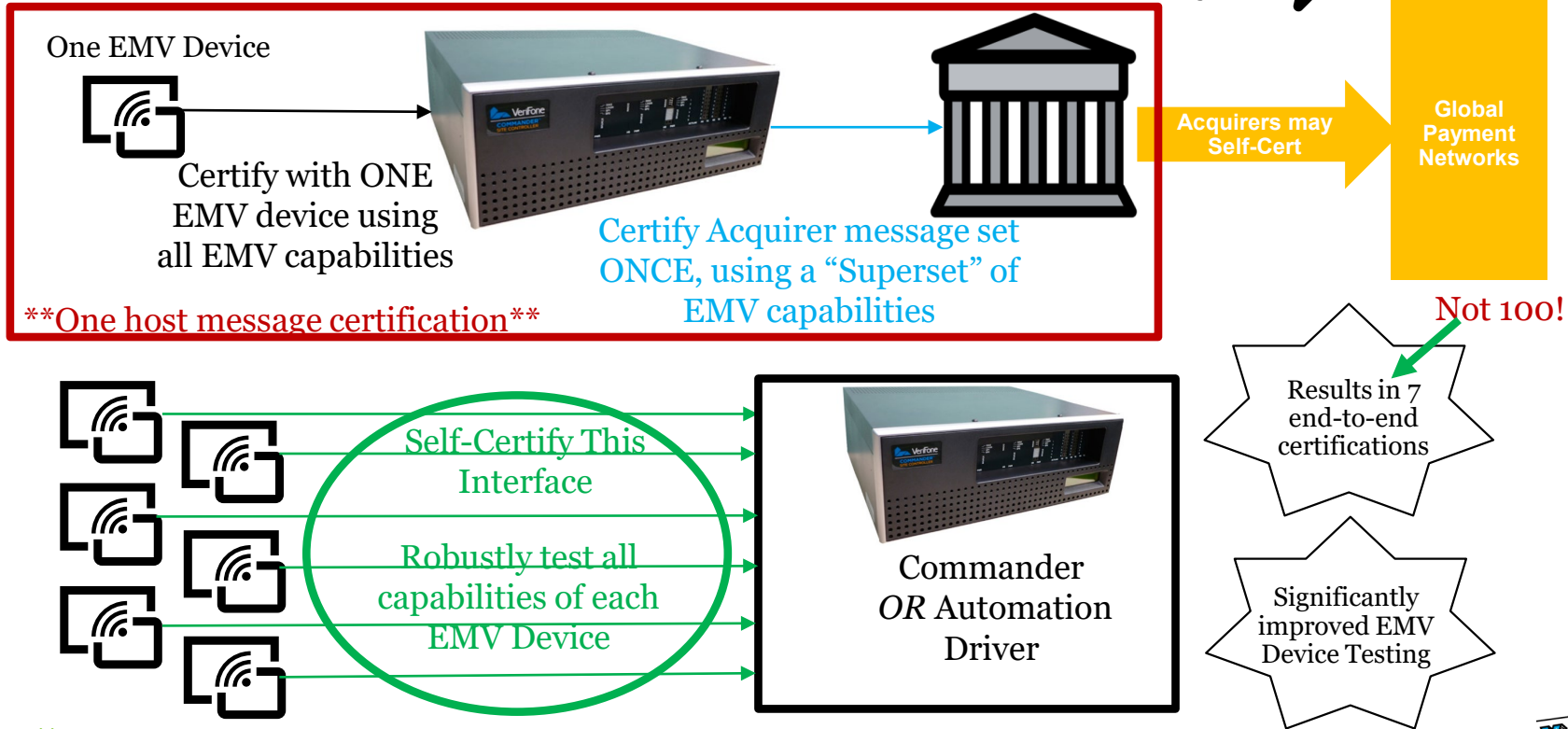


# Innovation - an Industry Solution

- Vendor, Merchant, Acquirer, Card Brand participation
- Result: U.S. Payment Forum Testing and Certification Committee White Paper
  - Available Now! *Options for Reducing Level 3 EMV Certification Time for Retailer Systems using an EPS.*

White paper: <https://www.uspaymentsforum.org/options-for-reducing-level-3-emv-certification-time-for-retailer-systems-using-electronic-payment-servers/>

# EMV Certifications – A New, Better Way



# Moving to EMV

- Liability Shift October 2020
- Fraud will migrate to non-EMV enabled sites
- Chargebacks are wasted money
- Hardware and Technician availability favor early adopters
- Take advantage of industry resources
- Work with your Vendors

# Resources

## Conexus.org

- Resources/EMV Resources (Resource Guide, Survey Results)

Coming soon: Risk vs Reward Tool

- Webinars ([webinars@conexus.org](mailto:webinars@conexus.org))

## Secure Technology Alliance/US Payments Forum

<https://www.emv-connection.com/emv-resources/>

## Visa.com

- Visa Payment Acceptance Best Practices for US Retail Petroleum Merchants  
[usa.visa.com/dam/VCOM/regional/na/us/support-legal/documents/visa-petroleum-best-practices.pdf](https://usa.visa.com/dam/VCOM/regional/na/us/support-legal/documents/visa-petroleum-best-practices.pdf)



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