

Moving Towards Outdoor EMV

August 23, 2018

Agenda

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

Housekeeping

This webinar is being recorded and will be made available in approximately 30 days.

- YouTube (youtube.com/conexxusonline)
- Website Link (conexxus.org)

Slide Deck

- Survey Link – Presentation provided at end

Participants

- Ask questions via webinar interface
- Please, no vendor specific questions

Email: info@conexxus.org or webinars@conexxus.org

Presenters



Conexus Host & Moderator

Linda Toth, Director of Standards, Conexus

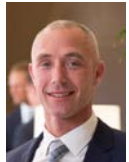
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Speakers

Simon Siew, Director of Payment Solutions, Dover Fueling Systems

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Willie Nelson, Payment Marketing Manager, Gilbarco Veeder-Root

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Dan Harrell, Chief Innovation Officer, Invenco Group Limited

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About Conexus

- 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



2018 Conexus Webinar Schedule*

Month/Date	Webinar Title	Speaker	Company
May 24, 2018	QIR in the World of Retail Petroleum	Chris Bucolo Todd Rosen	ControlScan
June 21, 2018	How can we leverage data science to more effectively detect security threats?	Thomas Duncan Ashwin Swamy	Omega ATC Omega ATC
July 26, 2018	Roadmap to a Vulnerability Disclosure Program	Joe Basirico	Security Innovation
August 23, 2018	Moving Toward Outdoor EMV	Linda Toth Willie Nelson Simon Siew Dan Harrell	Conexus Gilbarco Dover Invenco
September 20, 2018	Your Systems Are Talking to You!	George Sconyers	Omega ATC
November 2018	Building a Scalable Security Engineering Team	Joe Basirico	Security Innovation

NACS Show

October 7-10, 2018

Las Vegas, NV

TECHEDGE

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Booth 6147

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What is EMV?

EMV is a set of international standards that defines **interoperability** of **secure** transactions across the international payments landscape.

- EMV transactions introduce dynamic data specific to the card and the transaction, with the goal of devaluing transaction data in flight and reducing the **risk of counterfeit fraud**.

EMV has become the world-wide standard and both **U.S.** neighbors, **Canada** and **Mexico**, have EMV mandates effecting U.S. multi-national retailers.

EMV is the stepping stone to the future of payments due to its dynamic data authentication (Contactless, Mobile, QR Code).

In the context of EMV, **encryption** is only used to protect the PIN.

- Does ***not*** encrypt all of the transaction data



Payment Regulatory Standards – EMV and PCI



Contact



Contactless



Mobile



QR Payment Mark



A primary goal of EMVCo and the EMV Specifications is to help facilitate global interoperability and compatibility of chip-based payment cards and acceptance devices. This objective extends to new types of payment devices as well, including [contactless payment](#), [mobile payment](#) and [QR Payment Code](#).



PCI PTS Regulatory Roadmap

Requirements Version Used During Evaluation At Laboratory	Expiration of Requirements	Approval Expiration Of Device Models
Version 5.x of PCI PTS POI Security Requirements	April 2020	April 2026
Version 4.x of PCI PTS POI Security Requirements	Sept 2017	April 2023
Version 3.x of PCI PTS POI Security Requirements	April 2014	April 2020
Version 2.x of PCI PED or EPP Security Requirements	April 2011	April 2017
Version 1.x of PCI UPT Security Requirements	April 2011	April 2017
Version 1.x PCI PED or EPP Security Requirements	April 2008	April 2014

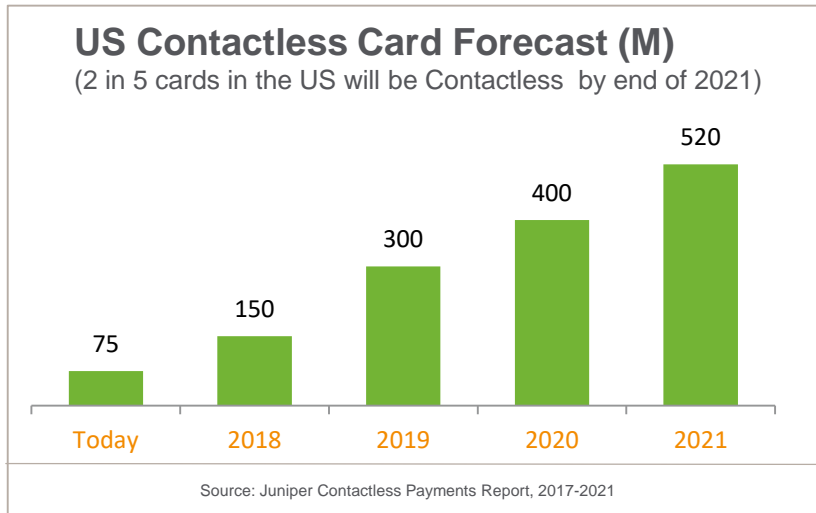
EMV Liability Shift Dates

U.S.	Card	Terminal	Liability
Prior to October 1: - 2015 POS - 2017 AFD XBorder - 2020 AFD US Dom	Mag stripe only	Mag stripe only	Issuer
After October 1, 2015 For POS In-store	Mag stripe only	Mag stripe only	Issuer
	EMV chip	Mag stripe only	Acquirer/Retailer
	Mag stripe only	EMV chip	Issuer
	EMV chip	EMV chip	Issuer
After October 1, 2017 For AFD XBorder	EMV chip	Mag stripe only	Acquirer/Retailer
After October 1, 2020 For AFD US Domestic	EMV chip	EMV chip	Issuer

There is no EMV liability shift on contactless or lost/stolen fraud transactions

Contactless

- Foundation for innovation and enabler for next generation payment experiences including wearables and connected devices
- Card brands heavy promotion as a secure, fast transactions and seamless implementation process (certification)



Chargebacks from Visa - VFMP

Starting July 2017 to October 2020, retailers with domestic AFD fraud may be put into 2 categories:

Standard Program

monthly basis thresholds met or exceeded:

- \$10K in domestic counterfeit fraud, and
- 0.2% domestic counterfeit fraud amount to domestic sales ratio

Merchant Actions:

- Month 1 – notification to acquirer
- Month 2 – 4: acquirer works with merchant to reduce fraud below threshold
- Month 5: if fraud not reduced, chargebacks enforced

Excessive Program – Starting November 17

monthly basis thresholds met or exceeded:

- \$10K in domestic counterfeit, and
- 2.0% domestic counterfeit fraud amount to domestic sales ratio

Merchant Actions:

- Month 1 – immediate chargebacks enforced
- Must remediate: keep fraud below these levels for 3 consecutive months

If the merchant is unable to reduce its counterfeit fraud levels below program thresholds 12 months after it has entered the program, it may lose Visa acceptance privileges.

New Pump and Retrofit Options



- New pump and OPT warranty

- Must be UL certified for safety
- Fits most existing fuel pumps
- Less expensive EMV option
- New warranty on pay at pump terminal

AFD – PCI and EMV Readiness

EMV L1

Hybrid CHIP Reader



Contactless Reader



Device manufacturer

EMV L2 & PCI

EMV L2 kernel for
Contact and Contactless



PCI PTS Devices



EMV L3

POS or EPS SW



Complete Terminal



Device manufacturer + EPS provider

IP Connect

AFD OPT to POS/EPS on TCP/IP



AFD – EMV hardware and software

- Secure Hybrid Card Readers – EMV L1
 - Contactless Reader – EMV L1
- EMV Contact & Contactless kernel – EMV L2
 - PCI PTS Certified Devices

AFD OPT to POS/EPS on TCP/IP

- Run new CAT 5 cables
- Using existing wires - need TCP/IP converter
- TCP/IP Converter – Wired or Wireless

PCI and EMV Approval Life Cycle

EMV L1



EMV L1: 4 years

EMV L2 & PCI



PCI PTS: 10 years



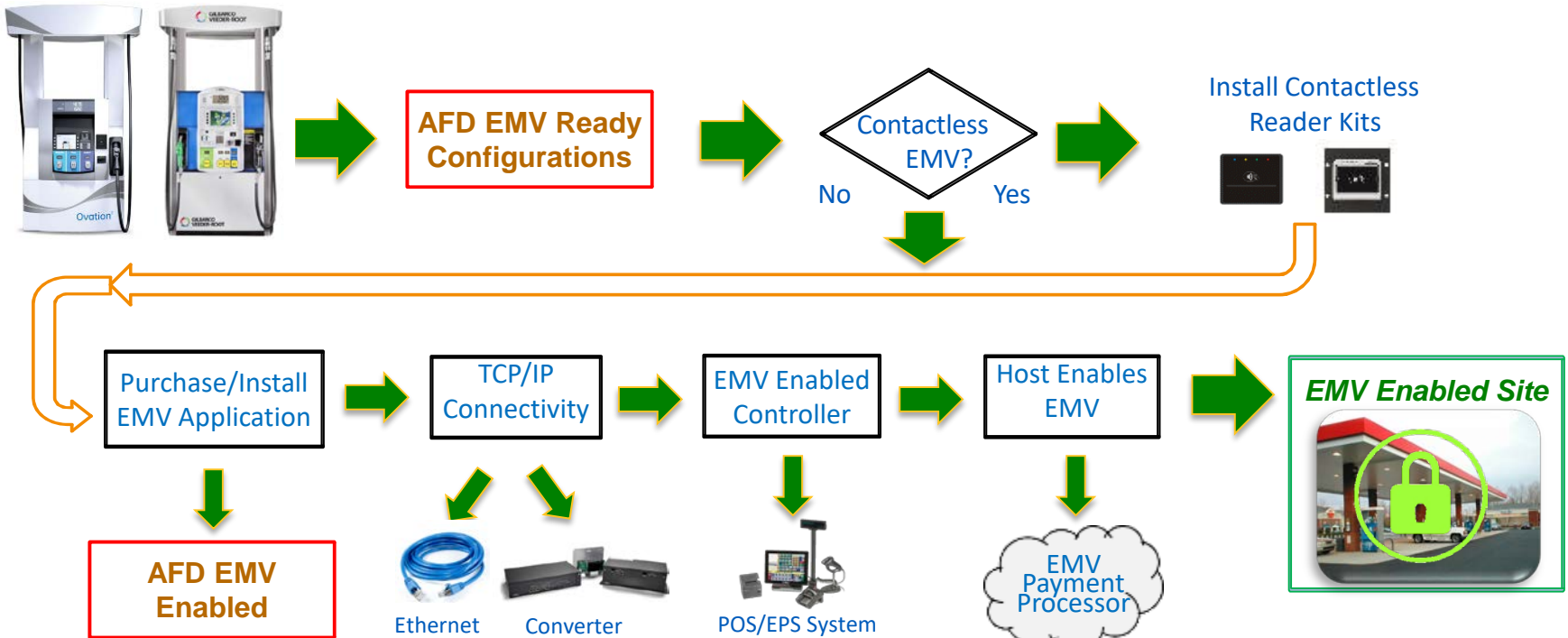
EMV L2: 3 years

EMV L3



PCI PA DSS: 3 years

Steps to Enable EMV – A long process and in phases



Deployment Models - Experiences

Dual Trip: Hands On

Hardware Deployed –
only Mag Enabled



2nd Trip – EMV
Software Installation



EMV Enabled Site



- Two service trips
- Hands on monitoring
- Increases logistical issues

Single Trip: Cloud Activated

Hardware Deployed –
only Mag Enabled



Cloud distributed EMV
Software Installation



EMV Enabled Site



- Single installation trip
- Remote monitoring
- Synchronization challenge

Single Trip: Big Bang

Hardware Deployed –
EMV software
installed and turned
on



EMV Enabled Site

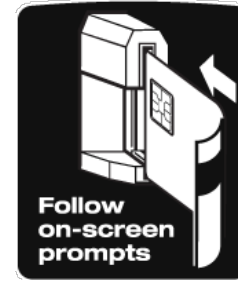


- Single installation trip
- Hands on monitoring
- Logistical and synchronization challenge

Lessons learned

Customer User Experience

- Card insertion experience
- Authorization speed
- Combinations with loyalty and Chip Card



Network Infrastructure

- IP configuration
- Connectivity integrity – old wires problem



TCP/IP Converter

Training

- Employee – Managers and Cashiers
- Customers- Start advertising early



Additional Opportunities with EMV upgrade

Point to Point Encryption



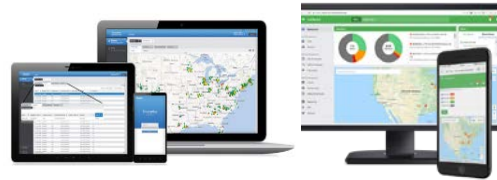
- Connexus standard protocol
- Reduce PCI scope for store systems

Media



- Drive in-store sales
- Ad revenue models
- Drive brand awareness

Assets Tracking / Diagnostics



- Connexus Asset Standard
- Manage uptime
- Better customer experiences

Dispenser Security



- Enhance security



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- LinkedIn Profile: [Conexxus.org](https://www.linkedin.com/company/conexxus.org)
- Follow us on Twitter: [@Conexxusonline](https://twitter.com/Conexxusonline)