EMV: Implementation Considerations

EMV for Merchants
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Agenda

• Implementing EMV
• Contact and Contactless
• PIN on Credit
• Device Integration
• Industry-Specific Transactions
• Terminal Screen Prompting
• U.S. Common Debit AID
• Offline versus Online
Implementing EMV
How Hard Can It Be?

• It’s not a card, it’s a computer
  › The ICC (Integrated Chip Card)

• Behind the message spec
  › Data element 55 and then some

• Certification on steroids
  › Level 1
  › Level 2
  › Brand

• Don’t touch that POS
Implementation Planning

• Implementing EMV requires many changes
  › Hardware
  › Application software
  › Host message specifications
  › Processes

• A successful implementation requires:
  › Project management skills
  › EMV subject matter expertise
  › Associate and cardholder education
Implementation Planning

• EMV involves many stakeholders
  › Terminal suppliers
  › POS vendors
  › Payment application developers
  › Internal resources

• Assess current state and identify gaps
  › Existing transaction processing flows
  › Decision points and exception processes
  › Reporting and back office
Implementation Considerations
DE 55 is not a highway in Delaware

- TLV (Tag, Length, Value) format
- Tag Examples
  - Cryptogram (9F26)
  - TVR (95)
  - Unpredictable Number (9F37)
  - Application Transaction Counter (9F36)
- Request/Response
- DE 22 (POS Entry Mode)
  - Fallback to magnetic stripe (value “80”)
Contact and Contactless

• Support for payment type will be driven by:
  › Type of business
  › Customer expectations

• Mobile may drive greater contactless adoption (or not)

• Impacts hardware selection

• Impacts certification
PIN on Debit…and Credit

- PIN no longer means debit only
- Credit and Debit buttons on terminals now mean…Credit and Debit!
- Liability shift for Lost and Stolen
- PIN Bypass
Card Acceptance Device Integration

• Integration Models
  › Fully Integrated
  › Semi-Integrated
  › Stand-Alone

• Abstracting the payment process

• Impacts Certification…and Recertification
Card Present Deployments

- **Standalone**
- **Semi-Integrated**
- **Fully-Integrated**
Scope of Certification Range

Fully Integrated Scope

Cardholder Data Environment (CDE)

Store Systems
Central Data Center

Stand-Alone Scope

Store Systems
Cardholder Data Environment (CDE)

Central Data Center
Industry-Specific Transactions

• Pre-Authorization
  › Hotel Check-In, Fuel
  › Normal EMV, submit pre-auth chip data in completion

• Incremental Authorization
  › May be “CNP”, do not store chip or full track 2

• Cash Back
  › May require different CVM

• Reversals
  › Card removed, card declines
Industry-Specific Transactions

• Refunds
  › Read track 2 (or PAN/expiry) and request AAC

• Pay in Your Own Currency
  › DE 4 versus Tag 9F02

• Tips
  › Pay at the table
Terminal Screen Prompting

• Credit/Debit Selection
  › Different funding sources
  › Cardholder selection, Application Preferred Name
  › Different than global debit/U.S. common debit selection

• PIN Entry…or not
  › Prompt for PIN
  › PIN Bypass, merchant process
  › Under “No CVM” amount

• Merchant Prompts versus Cardholder Prompts
  › “Waiting for Cardholder Action”, training consideration
U.S. Common Debit AID

- Debit/Debit Selection
  - Automate selection between global debit AID and U.S. common debit AID
  - U.S. Common preserves choice in routing (Durbin)
  - Presence of Common AID implies intent to use

- PIN Entry…or not
  - Prompt for PIN
  - PIN Bypass, merchant process

- Host Determines Signature or No CVM
  - Host response indicates prompt for signature
Offline versus Online

• Interchange Qualification
  › Offline qualifies at standard

• Routing Choice
  › Offline routes to the brand on the front of the card

• Liability Shift
  › Transaction must be approved online
Questions