EMV Contact Kernel Output

This Specification Bulletin describes changes to the EMV Contact Specifications defining the data output by the kernel. Some of this data may then be used to build the messages to the Acquirer.

Applicability

This Specification Bulletin applies to:

- *EMV 4.3 Book 4 - Cardholder, Attendant, and Acquirer Interface Requirements, November 2011*

Related Documents

- *N/A*

Effective Date

- *Effective immediately*

Description

While Book 4 defines the Terminal Architecture, the Kernel and the Acquirer Interface, it does not provide a list of data that shall or may be output by the kernel.

The aim of this bulletin is to define the data that the kernel needs to make available, to maximise the possibility of a kernel that has passed Type Approval, fulfilling country or regional operational needs. Specifically, this list is intended to ensure that the kernel is able to provide the data necessary to build network messages.

It is recognised that:
- messages from the terminal to the Acquirer are proprietary,
- acquirers may enrich the data when building network messages at the Acquirer with data known implicitly, as indicated in Book 4 Section 12.1,
- data requirements over the networks are also defined by the Payment Systems.

This bulletin contains both a mandate and a recommendation. The recommendation goes further than the mandate and is the preferred option. If the recommendation cannot be fully satisfied, the mandate defines the minimum that shall be satisfied.

Book 4 Part IV: Changes

Add new section 8.4.5 as follows.

8.4.5 Kernel Output

Recommendation

In order to meet country or regional requirements the kernel should be capable of outputting the latest value for the following data:

1. Any card originated data used in a transaction,

2. Any kernel originated data used in a transaction, including kernel configuration data and data provided by the acceptance device (such as the amount),

3. Data that can be used to identify the terminal (such as Terminal Identifier, or proprietary data that may be used to that effect)

Mandate

For kernels that are unable to output all of the data outlined above, the kernel shall at a minimum be capable of outputting the latest value for the following data:

- Amount, Authorized (Numeric) ('9F02')

- Amount, Other (Numeric) ('9F03')

- Application Cryptogram ('9F26')

- Application Effective Date ('5F25')

- Application Expiration Date ('5F24')

- Application Interchange Profile ('82')

- Application Label ('50')

- Application PAN ('5A')

- Application PAN Sequence Number ('5F34')

- Application Preferred Name ('9F12')

- Application Transaction Counter ('9F36')

- Application Usage Control ('9F07')

- Application Version Number (Kernel) ('9F09')

- Cardholder Name ('5F20')

- Cardholder Name Extended ('9F0B')

- Cryptogram Information Data ('9F27')

- CVM List ('8E')

- CVM Results ('9F34')

- DF Name ('84')

- Interface Device Serial Number ('9F1E')

- Issuer Action Codes ('9F0D', '9F0E', '9F0F')

- Issuer Application Data ('9F10')

- Issuer Code Table Index ('9F11')

- Issuer Country Code ('5F28')

- Issuer Script Results (-)

- Language Preference ('5F2D')

- Merchant Category Code ('9F15')

- Merchant Identifier ('9F16')

- Payment Account Reference ('9F24')

- Terminal Capabilities ('9F33')

- Terminal Country Code ('9F1A')

- Terminal Identification ('9F1C')or

- Terminal Type ('9F35')

- Terminal Verification Results ('95')

- Track 2 Equivalent Data ('57')

- ~~Transaction Category Code~~

- Transaction Currency Code ('5F2A')

- Transaction Date ('9A')

- Transaction Status Information ('9B')

- Transaction Time ('9F21')

- Transaction Type ('9C')

- Unpredictable Number ('9F37')

Card originated data objects that are not mandatory are only required to be made available by the kernel when they are provided by the card.

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