EMV® Specification Bulletin No. 234
First Edition February 2020

Data Object Lists (DOLs) and Constructed Data Objects

This Specification Bulletin clarifies that Data Object Lists (DOLs) cannot be used to retrieve primitive data elements contained within terminal sourced constructed data objects.

Applicability

This Specification Bulletin applies to:

- *EMV Integrated Circuit Card Specifications for Payment Systems, Book 3 – Application Specification, Version 4.3, November 2011*

Related Documents

- *EMV Specification Bulletin No. 185 Biometric Terminal Specification, 2nd Edition, October 2018*

Description

EMV Specification Bulletin No. 185 Biometric Terminal Specification introduced a number of new terminal sourced constructed data objects. Prior to that specification bulletin, there were no terminal sourced constructed data objects.

This bulletin updates the *EMV Integrated Circuit Card Specifications for Payment Systems* (EMV ICC) to clarify that a Data Object List (DOL) cannot be used to retrieve primitive data objects contained within terminal sourced constructed data objects. Note that use of a DOL is already limited to retrieving primitive data objects in EMV and a DOL cannot be used to retrieve constructed data objects.

Specification Changes

In EMV ICC Book 3, Section 5.4, at the end of the following existing paragraph:

> A DOL is a concatenated list of entries, with each entry representing a single data element to be included in the constructed field. The format of each entry is a one- or two-byte tag identifying the desired data object, followed by a one-byte length which represents the number of bytes the field shall occupy in the command data. Only tags representing primitive data objects constructed according to Annex B shall be used in DOLs.

Add the following new sentence:

> Primitive data objects contained within terminal sourced constructed data objects cannot be requested using DOLs.

Legal Notice

The EMV® Specifications are provided "AS IS" without warranties of any kind, and EMVCo neither assumes nor accepts any liability for any errors or omissions contained in these Specifications. EMVCO DISCLAIMS ALL REPRESENTATIONS AND WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE AND NON-INFRINGEMENT, AS TO THESE SPECIFICATIONS.

EMVCo makes no representations or warranties with respect to intellectual property rights of any third parties in or in relation to the Specifications. EMVCo undertakes no responsibility to determine whether any implementation of the EMV® Specifications may violate, infringe, or otherwise exercise the patent, copyright, trademark, trade secret, know-how, or other intellectual property rights of third parties, and thus any person who implements any part of the EMV® Specifications should consult an intellectual property attorney before any such implementation.

Without limiting the foregoing, the Specifications may provide for the use of public key encryption and other technology, which may be the subject matter of patents in several countries. Any party seeking to implement these Specifications is solely responsible for determining whether its activities require a license to any such technology, including for patents on public key encryption technology. EMVCo shall not be liable under any theory for any party's infringement of any intellectual property rights in connection with the EMV® Specifications