



**EMV® Specification Bulletin No. 229**  
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## **EMV QR Code Merchant-Presented Mode RFU Processing and New Data Objects**

**This Specification Bulletin:**

- Clarifies the expected mobile application behaviour when encountering data objects and data values that are Reserved for Future Use (RFU).
  - Adds the optional data object Merchant Tax ID.
  - Adds the optional data object Merchant Channel.
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**This Specification Bulletin describes proposed changes to EMV QR Code Specification for Payment Systems, Merchant-Presented Mode, version 1.0 [MPM].**

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### **Applicability**

This Specification Bulletin applies to:

- *EMV QR Code Specification for Payment Systems, Merchant-Presented Mode, version 1.0 [MPM]*

### **Related Documents**

- None

### **Effective Date**

- *Immediately*
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### **Description**

This bulletin:

- Clarifies that mobile applications must ignore the presence of a data object or data value that is Reserved for Future Use (RFU) by EMVCo. It has been noted that some mobile applications terminate the transaction on reading data objects or data values that are defined as RFU in the specification. However, to allow for migration and support of new functionality, the mobile application must not verify the data or data value indicated as RFU.
- Adds the optional data object Merchant Tax ID to the merchant presented QR Code. The Merchant Tax ID contains the tax identification number of the merchant.
- Adds the optional data object Merchant Channel. The Merchant Channel indicates the environment a QR Code is presented to the consumer.

### **Specification Changes**

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In *Section 1.4 Data Objects*, add the following new sub-section:

#### **1.4.4 Reserved for Future Use (RFU)**

While the QR Code is required to not contain data objects that are RFU, the mobile application must ignore RFU data object IDs and data object values if present in the QR Code.

In *Section 3.1 QR Code Payload, Table 3.5: Additional Data Objects*, add the following entries to the end of the table:

|                  |  |
|------------------|--|
| Merchant Tax ID  | The tax identification number of the merchant, assigned by the governmental body of the country in which the EMV merchant-presented QR code is being used/displayed.<br><br>For example, the Merchant Tax ID may be used by the consumer mobile application for receipt display. |
| Merchant Channel | A merchant channel establishes the environment a QR Code is presented to the consumer. Covering use cases such as retail outlet, Ecommerce, bill payment with the purpose of improving transaction reporting.  |

In *Section 3.2 Data Organization, Table 3.7: Data Objects for Additional Data Field Template (ID "62")*:

- Add the following entries after the entry for "Additional Consumer Data Request":

|                  |      |     |                 |   |
|------------------|------|-----|-----------------|---|
| Merchant Tax ID  | "10" | ans | var. up to "20" | O |
| Merchant Channel | "11" | ans | "03"            | O |

- In the entry for "RFU for EMVCo", change the ID from "'10' – '49'" to "'12' – '49'".

In *Section 4.5 Data Object Values*, add the following new sub-section:

#### **4.5.4 Reserved for Future Use (RFU)**

4.5.4.1 Data object IDs and data object values that are defined as RFU shall not be included in the QR Code.

In *Section 4.8 Data Objects – Additional Data Field Template (ID "62")*, add the following new sub-section:

**4.8.1.6** If present, each of the three positions in the Merchant Channel (ID "11") identifies a characteristic of the channel used for a particular transaction. The values defined and meaning of the values are listed below. All other values not explicitly listed in the tables shall be RFU.

### **First Character – Media**

| <b>Value</b> | <b>Meaning</b>                       |
|--------------|--------------------------------------|
| “0”          | Print - Merchant sticker             |
| “1”          | Print - Bill/Invoice                 |
| “2”          | Print - Magazine/Poster              |
| “3”          | Print - Other                        |
| “4”          | Screen/Electronic - Merchant POS/POI |
| “5”          | Screen/Electronic - Website          |
| “6”          | Screen/Electronic - App              |
| “7”          | Screen/Electronic - Other            |

#### Second Character – Transaction Location

| <b>Value</b> | <b>Meaning</b>                              |
|--------------|---|
| “0”          | At Merchant premises/registered address     |
| “1”          | Not at Merchant premises/registered address |
| “2”          | Remote Commerce                             |
| “3”          | Other                                       |

#### Third Character – Merchant Presence

| <b>Value</b> | <b>Meaning</b>                |
|--------------|-------------------------------|
| “0”          | Attended POI                  |
| “1”          | Unattended                    |
| “2”          | Semi-attended (self-checkout) |
| “3”          | Other                         |

In Section 4.8 Data Objects – Additional Data Field Template (ID “62”), Table 4.3: Data Object ID Allocation in Additional Data Field Template with ID “62”, change the ID ““10”-“49”” to ““12”-“49””.

#### **Annex A – Data Objects Dictionary**

*Table A.1: QR Code Data Objects Dictionary*

|   |      |   |                      |
|---|------|---|----------------------|
| Merchant Tax ID<br>F: ans<br>ID: "10"<br>L: var. up to "20" | "62" | The tax identification number of the merchant.  | Please refer to 4.8. |
| Merchant Channel<br>F: ans<br>ID: "11"<br>L: "03"           | "62" | A three character value that corresponds to the method used to present the QR code by the merchant including: display method, transaction location and merchant presence. | Please refer to 4.8. |

#### **Annex B – Merchant Channel Use Cases**

*Table B.8: Examples of Merchant Channel Use Cases*

| Use Cases                       | Media                    | Transaction Location | Merchant Presence | Value |
|---------------------------------|--------------------------|----------------------|-------------------|-------|
| Retail outlet                   | Screen (Merchant POS)    | At Merchant          | Attended          | "400" |
|                                 | Print (Merchant sticker) |                      |                   | "000" |
| Retail outlet self-checkout     | Screen (Merchant POS)    | At Merchant          | Semi-attended     | "402" |
|                                 | Print (Merchant sticker) |                      |                   | "002" |
| Vending machine, petrol station | Screen (Merchant POS)    | At Merchant          | Unattended        | "401" |
|                                 | Print (Merchant sticker) |                      |                   | "001" |
| Street vendors, Markets         | Screen (App)             | Not at Merchant      | Attended          | "610" |
|                                 | Print (Merchant sticker) |                      |                   | "010" |
| Ecommerce / Website             | Screen (Website)         | Remote               | Unattended        | "521" |
| Bill payment                    | Print (Bill/Invoice)     | Not at Merchant      | Unattended        | "111" |
| Magazine / Poster               | Print (Magazine/Poster)  | Not at Merchant      | Unattended        | "211" |

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