**Annex F**(normative) **Message and transaction matching**

**General**

Where matching is required, it is achieved by reference to a set of fixed unchanged data elements. Two types of matching are defined:

a) Message matching, i.e. a two-message exchange, such as request, request repeat and response.

b) Transaction matching, i.e. matching subsequent life cycle transactions, such as a financial presentment and a chargeback.

**Message matching**

The System trace audit number data element shall be used to match messages within a two-message exchange, such as:

a) request, request repeat and request response;

b) advice, advice repeat and advice response;

c) notification and notification acknowledgement;

d) instruction and instruction acknowledgement.

**Transaction matching**

The Transaction life cycle identification data data element shall be used to match subsequent life cycle transactions, e.g. a financial presentment to an earlier authorization or a chargeback to an earlier financial presentment. Once assigned, the Transaction life cycle identification data data element shall remain the same for all subsequent messages in the transaction life cycle (i.e. reversal, retrieval, chargeback). See Table F.1 for an example of how to complete the indicated data elements. In this example, it is assumed that the card issuer charges back the financial presentment message.

**Table F.1 — Matching using the same values in the Life cycle transaction sequence number**

|  |  |  |  |
| --- | --- | --- | --- |
| **Transaction sequence** | **MTI** | **Message matching** | **Transaction matching** |
| **Systems trace audit number** | **Transaction life cycle identification data** |
| Authorization | 100 | 000000000001 | 120000623000000100 |
| Authorization repeat | 101 | 000000000001 | 120000623000000100 |
| Authorization response | 110 | 000000000001 | 120000623000000100 |
| Financial presentment | 240 | 000000000002 | 120000623000000100 |
| Partial reversal | 440 | 000000000003 | 120000623000000100 |
| Chargeback | 442 | 000000000004 | 120000623000000100 |
| Chargeback acknowledgement | 452 | 000000000004 | 120000623000000100 |

Where the acquirer has obtained one authorization and then submits more than one financial presentment (e.g. one authorization for two airline tickets followed by two financial presentments, one for each ticket), Table F.2 gives an example of the usage of Systems trace audit number and Transaction life cycle identification data. In this example, it is assumed that the card issuer charges back the second financial presentment message. When this occurs:

a) transaction matching between the authorization and the financial presentment messages would then occur based on only the first two parts of Transaction life cycle identification data, i.e. matching would exclude Life cycle transaction sequence number;

b) all subsequent transaction matching (retrieval to financial presentment, chargeback to financial presentment) would occur based on all parts of Transaction life cycle identification data, including the Life cycle transaction sequence number.

**Table F.2 — Matching using different values in the Life cycle transaction sequence number**

|  |  |  |  |
| --- | --- | --- | --- |
| **Transaction sequence** | **MTI** | **Message matching** | **Transaction matching** |
| **Systems trace audit number** | **Transaction life cycle identification data** |
| Authorization | 100 | 000000000001 | 120000623000000100 |
| Authorization repeat | 101 | 000000000001 | 120000623000000100 |
| Authorization response | 110 | 000000000001 | 120000623000000100 |
| Financial presentment No. 1 | 240 | 000000000002 | 120000623000000101 |
| Financial presentment No. 2 | 240 | 000000000003 | 120000623000000102 |
| Chargeback of financial presentment No. 2 | 442 | 000000000004 | 120000623000000102 |
| Chargeback acknowledgement for financial presentment No. 2 | 452 | 000000000004 | 120000623000000102 |

Where multiple authorizations are obtained covering a single financial presentment (e.g. in the hotel industry where an acquirer obtains several authorizations when a cardholder chooses to extend his stay), the acquirer may do one of the following:

— Assign the same non-zero value to Transaction life cycle identification data for each authorization and submit the same value in the financial presentment, in which case it will be up to bilateral agreement to determine how the authorizations and financial presentment will be specifically matched.

— Assign different values to the Transaction life cycle identification data for each authorization and then submit a single financial presentment where the Transaction life cycle identification data of the final authorization obtained shall be used. Matching between the final authorization and any subsequent transaction will use all parts of the Transaction life cycle identification data, in which case it will be up to bilateral agreement to determine how the authorizations and financial presentment will be specifically matched.