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SPECIFICATIONS OF SIGNALLING SYSTEM No. 7

GENERAL FUNCTION OF TELEPHONE MESSAGES AND SIGNALS

ITU-T Recommendation Q.722

(Extract from the *Blue Book*)

NOTES

1 ITU-T Recommendation Q.722 was published in Fascicle VI.8 of the *Blue Book*. This file is an extract from the *Blue Book*. While the presentation and layout of the text might be slightly different from the *Blue Book* version, the contents of the file are identical to the *Blue Book* version and copyright conditions remain unchanged (see below).

2 In this Recommendation, the expression “Administration” is used for conciseness to indicate both a telecommunication administration and a recognized operating agency.

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GENERAL FUNCTION OF TELEPHONE MESSAGES AND SIGNALS

This Recommendation describes the general function of telephone signalling messages and the telephone signals and other information components contained in those messages. The requirements relating to the use of the signalling messages and their signal content are specified in Recommendations Q.723 and Q.724.

1 Telephone signalling messages

The definition of formats and codes for telephone messages is based on a functional grouping as indicated in the following. It is expected that national application of the signalling system typically will require further message types in addition to the internationally defined message types indicated in the following. As a result of the criteria on which the grouping of message types are based some groups as yet only contain one message type.

1.1 Forward address message group

This message group includes messages sent in the forward direction containing address information. Signals from § 3.3 may be included. Messages so far specified are as follows.

1.1.1 Initial address message

A type of message sent first in the forward direction at call set-up. It contains address information and other information relating to the routing and handling of the call.

1.1.2 Initial address message with additional information

A type of message sent first in the forward direction at call set-up. It contains address, routing and handling information such as charging and supplementary services information to be used in the call set-up procedures.

1.1.3 Subsequent address message

A type of message sent in the forward direction subsequent to the initial address message and containing further address information.

1.1.4 Subsequent address message with one signal

A type of message sent in the forward direction subsequent to the initial address message or to the subsequent address message and containing only one address signal.

1.2 Forward set-up message group

This message group includes messages sent in the forward direction, subsequent to address messages containing further information for call set-up. Signals from § 3.3 may be included. Messages so far specified are as follows.

1.2.1 General forward set-up information message

A type of message containing information relating to the calling line or possibly other information required for call set-up. This message is sent in response to a general request message.

1.2.2 Continuity check message

A type of message containing a continuity signal or a continuity-failure signal.

1.3 *Backward set-up request message group*

This message group includes messages sent in the backward direction requesting further information for call set-up. Signals from § 3.4 may be included. Messages so far specified are as follows.

1.3.1 *General request message*

A type of message containing a signal requesting transfer of information relating to a call, e.g., the identity or the category of the calling party.

1.4 *Successful backward set-up information message group*

This message group includes messages sent in the backward direction containing information relating to a successful call set-up. Signals from § 3.4 may be included. Messages so far specified are as follows.

1.4.1 *Address-complete message*

A type of message containing a signal indicating that all address signals required for routing the call to the called party have been received and giving additional information relating to this.

1.4.2 *Charging message*

A type of message containing charging information.

1.5 *Unsuccessful backward set-up information message group*

This message group includes messages sent in the backward direction containing information relating to an unsuccessful call set-up. Signals from § 3.4 may be included. Messages so far specified are as follows.

1.5.1 *Simple unsuccessful backward set-up information message*

A message containing a signal from § 3.4, relating to an unsuccessful call set up.

1.5.2 *Extended unsuccessful backward set-up information message*

A message containing a signal from § 3.4, relating to an unsuccessful call set up, and additional information.

1.6 *Call supervision message group*

This message group includes messages sent in the forward or backward direction, relating to the supervision of the call. Signals from § 3.5 are included.

1.7 *Circuit supervision message group*

This message group includes messages sent in the forward and backward direction, relating to the supervision of the circuit. Signals from § 3.6 are included.

1.8 *Circuit group supervision message group*

This message group contains messages from § 3.7, relating to the supervision of circuit groups.

1.9 *Circuit network management message group*

This message group includes network management messages sent in the backward direction, which are used to control traffic flow to reduce exchange switching congestion. Messages so far specified are as follows.

1.9.1 *Automatic congestion control information message*

A type of message containing information relating to the congestion status of the exchange. Signals from § 3.8 are included.

2 Service information

The service information provides the highest level of discrimination between different sets of signalling messages. It contains the following components. (See also Note.)

2.1 Service indicator

Information used to identify the User Part to which the signalling message belongs.

2.2 Network indicator

Information used for discrimination between international and national messages. In case of national messages, it may for example also be used for discrimination between different label alternatives for national use.

Note - The service information octet and the label are not included in messages transferred between the telephone user part and the signalling connection control part (e.g., node to node messages).

3 Signalling information

3.1 Label components

In the case of the telephone signalling messages, the label is used for message routing and, in general, identification of the concerned telephone circuit. The standard label structure consists of the following components.

3.1.1 Destination point code

Information identifying the signalling point to which the message is to be routed.

3.1.2 Originating point code

Information identifying the signalling point from which the message has been originated.

3.1.3 Circuit identification code

Information identifying the telephone circuit among those interconnecting the destination point and originating point.

3.2 Message format identifiers

3.2.1 Heading

Information discriminating, as applicable, between different groups or individual types of messages within the set of messages identified by the service information. The heading is split into two levels. The first level discriminates between different groups. The second level either discriminates between different message types or contains a signal.

3.2.2 Field length indicator

Information associated with and indicating the length of a variable length field.

3.2.3 Field indicator

Information associated with and indicating the presence or absence of an optional field.

3.3 Forward set-up telephone signals

3.3.1 Address signal

A call set-up signal sent in the forward direction containing one element of information (digit 0, 1, 2, ..., 9, Code 11 or Code 12) about the called party's number or the end-of-pulsing (ST) signal.

For each call, a succession of address signals is sent.