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ITU-T

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OF ITU

Q.932

Amendment 1
(06/2000)

SERIES Q: SWITCHING AND SIGNALLING

Digital subscriber Signalling System No. 1 – Network layer

Digital Subscriber Signalling System No. 1 –
Generic procedures for the control of ISDN
supplementary services

Amendment 1

ITU-T Recommendation Q.932 – Amendment 1

(Formerly CCITT Recommendation)

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ITU-T Recommendation Q.932

Digital Subscriber Signalling System No. 1 – Generic procedures for the control of ISDN supplementary services

AMENDMENT 1

Summary

This Amendment 1 to ITU-T Q.932 (1998) is provided in order to support the Generic Addressing and Transport protocol as defined in ITU-T Q.860 (2000). Additionally, various ASN.1 module definitions according to ITU-T X.680/X.880 are also added and necessary updates and corrections for existing ASN.1 modules are provided.

Source

Amendment 1 to ITU-T Recommendation Q.932 was prepared by ITU-T Study Group 11 (1997-2000) and approved under the WTSC Resolution 1 procedure on 15 June 2000.

FOREWORD

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The World Telecommunication Standardization Conference (WTSC), which meets every four years, establishes the topics for study by the ITU-T study groups which, in turn, produce Recommendations on these topics.

The approval of ITU-T Recommendations is covered by the procedure laid down in WTSC Resolution 1.

In some areas of information technology which fall within ITU-T's purview, the necessary standards are prepared on a collaborative basis with ISO and IEC.

NOTE

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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Recommendation Q.932

Digital Subscriber Signalling System No. 1 – Generic procedures for the control of ISDN supplementary services

AMENDMENT 1

Text and tables to ITU-T Q.932 are amended as follows:

1) **Clause 1**

Change the heading of the existing clause 1 to "Scope".

2) **Subclause 1.1**

A new subclause "1.1 Definitions" should be added as follows:

For the purpose of the GAT protocol, the following definitions apply:

1.1.1 local signalling: a signalling procedure restricted to the exchange of application protocol data units between adjacent application entities.

1.1.2 general signalling: a signalling procedure for the exchange of application protocol data units between application entities that need not be adjacent.

3) **Subclause 6.1.1 Introduction**

Insert a 3rd paragraph as follows:

The support of the GAT protocol as defined in ITU-T Q.860 is a network and user option and its use is based on bilateral agreement between the network and user.

The extensions of the generic functional protocol required for the support of the GAT protocol are described in ITU-T Q.860 (generic part) and in this Recommendation (transport mechanisms and coding of the facility information element).

4) **Subclause 6.4.3 Effect of reservation on channel selection for a new call**

The following new Table 6-1 bis is the ASN.1 module according to ITU-T X.680/X.880 and should be added after Table 6-1 as follows:

**Table 6-1 bis/Q.932 – Explicit network controlled channel reservation
(ASN.1 module according to ITU-T X.680/X.880)**

```

Explicit-Network-Controlled-Channel-Reservation
{itu-t recommendation q 932 explicit-network-controlled-channel-reservation(4)}

DEFINITIONS ::=

BEGIN

EXPORTS    explicitReservationCreationControl, explicitReservationManagement,
              explicitReservationCancel, maximumNumberOfReservationsReached,
              noExplicitReservationExistsOrInvalidReservationIndicator, unwantedReservationCreated,
              implicitReservationUsed, ReservationIndicator;

IMPORTS    OPERATION, ERROR
              FROM Remote-Operations-Information-Objects
              {joint-iso-itu-t remote-operations(4) informationObjects(5) version1(0)};
              notAvailable, notSubscribed
              FROM General-Errors {itu-t recommendation q 950 general-errors-list(1)};

explicitReservationCreationControl OPERATION ::=
    {
        ARGUMENT controlOption ENUMERATED {
            noReservationRequired (0),
            reservationRequiredWithReservationIndicator (1),
            reservationRequiredWithoutReservationIndicator (2)}
        RESULT ReservationIndicator -- optional
        ERRORS {
            maximumNumberOfReservationsReached|
            notAvailable|
            notSubscribed|
            unwantedReservationCreated}
        CODE                local:20
    }

explicitReservationManagement OPERATION ::=
    {
        ARGUMENT ReservationIndicator -- optional
        RESULT
        ERRORS {
            noExplicitReservationExistsOrInvalidReservationIndicator|
            notAvailable|
            notSubscribed|
            implicitReservationUsed}
        CODE                local:21
    }

explicitReservationCancel OPERATION ::=
    {
        ARGUMENT ReservationIndicator -- optional
        RESULT
        ERRORS {
            noExplicitReservationExistsOrInvalidReservationIndicator|
            notAvailable|
            notSubscribed}
        CODE                local:22
    }

maximumNumberOfReservationsReached                ERROR ::= {CODE local:33}
noExplicitReservationExistsOrInvalidReservationIndicator ERROR ::= {CODE local:34}
unwantedReservationCreated                        ERROR ::= {CODE local:35}
implicitReservationUsed                            ERROR ::= {CODE local:36}
ReservationIndicator ::=                            INTEGER (-128..127)

END -- of Explicit-Network-Controlled-Channel-Reservation

```

5) 8.2.3 Facility

a) *Insert the following text after the 4th paragraph:*

This subclause defines in addition the structure and the coding of the Facility information element, required for the support of the GAT protocol, as described in ITU-T Q.860. Specific procedures describing applications of the GAT protocol are outside the scope of this Recommendation.

b) *A new Figure 8-2 bis specifies the layout of the Facility information element for the GAT protocol and should be inserted after Figure 8-2 as follows:*

8	7	6	5	4	3	2	1	Octets
0	Facility information element identifier							1
Length of Facility information element								2
ext. 1	0	0	Protocol profile					3
GATPDU (Note)								4, etc.

NOTE – When the protocol profile field in Octet 3 contains the value "GAT Protocol", a single GATPDU component (as defined in ITU-T Q.860) shall be included in octet group 4.

Figure 8-2 bis/Q.932 – Facility information element

c) *Replace Table 8-5 with the following:*

Table 8-5/Q.932 – Facility information element

Protocol Profile

Bits

5 4 3 2 1

1 0 0 0 1	Remote Operations Protocol (Note 1)
1 0 0 1 0	CMIP Protocol (see ITU-T Q.941 [11]) (Note 2)
1 0 0 1 1	ACSE Protocol (see ITU-T X.217 and X.227 [12]) (Note 3)
1 0 1 1 0	GAT Protocol (Note 5)
1 1 1 1 1	Networking extensions (Note 4)

All other values are reserved and their usage is the subject of other Recommendations.

NOTE 1 – When this codepoint is used, the NFE, NPP, and the Interpretation components shall be excluded. In addition, ITU-T defined local values apply for the components.

NOTE 2 – When this codepoint is used, the NFE, NPP, and the Interpretation components shall be excluded. See ITU-T Q.941 for the CMIP protocol.

NOTE 3 – When this codepoint is used, the NFE, NPP, and the Interpretation components shall be excluded. See ITU-T X.217 and X.227 for the ACSE protocol.

NOTE 4 – When this codepoint is used, the NFE, NPP, and the Interpretation components as defined in ISO/IEC 11582 can be included. In this case, only ISO/IEC defined local values apply for the components. For consistency with ISO/IEC 11582, a Facility information element with the protocol profile value "networking extensions" shall not be included in the SETUP ACKNOWLEDGE, CALL PROCEEDING, and CONNECT ACKNOWLEDGE messages as these messages are of local significance.

NOTE 5 – When this codepoint is used, a single GATPDU component as defined in ITU-T Q.GFT shall be included in octet group 4 of the Facility information element.