



INTERNATIONAL TELECOMMUNICATION UNION

CCITT

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THE INTERNATIONAL
TELEGRAPH AND TELEPHONE
CONSULTATIVE COMMITTEE

STAGE 3 DESCRIPTION FOR SUPPLEMENTARY SERVICES USING DSS 1

STAGE 3 DESCRIPTION FOR CALL COMPLETION SUPPLEMENTARY SERVICES USING DSS 1

SECTION 1 – CALL WAITING

Recommendation Q.953



Geneva, 1992

FOREWORD

The CCITT (the International Telegraph and Telephone Consultative Committee) is a permanent organ of the International Telecommunication Union (ITU). CCITT is responsible for studying technical, operating and tariff questions and issuing Recommendations on them with a view to standardizing telecommunications on a worldwide basis.

The Plenary Assembly of CCITT which meets every four years, establishes the topics for study and approves Recommendations prepared by its Study Groups. The approval of Recommendations by the members of CCITT between Plenary Assemblies is covered by the procedure laid down in CCITT Resolution No. 2 (Melbourne, 1988).

Recommendation Q.953, § 1 was prepared by Study Group XI and was approved under the Resolution No. 2 procedure on the 4th of February 1992.

CCITT NOTE

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

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STAGE 3 DESCRIPTION FOR CALL COMPLETION SUPPLEMENTARY SERVICES USING DSS 1

1 Call Waiting (CW)

1.1 Definition

The Call Waiting (CW) supplementary service permits a subscriber to be notified of an incoming call (as per basic call procedures) with an indication that no information channel is available. The user then has the choice of accepting, rejecting, or ignoring the waiting call.

1.2 Description

1.2.1 General description

The CW supplementary service allows a subscriber to be notified of an incoming call when a B-channel is not available. The notification is done out-of-band following basic call procedures.

The CW supplementary service may be invoked when both the B-channels are in use or when only one B-channel is in use.

An audible inband indication may be generated locally by the called customer premises equipment, but no inband tone is provided by the network.

1.2.2 Specific terminology

The following terms are used in this Recommendation:

– **called user**

The user who reacts to a call that is offered at the terminating interface.

– **calling user**

The user who originates a call.

– **waiting call**

A call that is offered to an ISDN number using the CW supplementary service procedures. A call ceases to be a waiting call when the call is cleared or when the call is answered.

1.2.3 Qualifications on the applicability of telecommunication services

Same as § 2.3 of Recommendation I.253.1.

1.2.4 State definitions

No states beyond those defined in Recommendation Q.931 are needed for the CW supplementary service operation.

1.3 Operational requirements

1.3.1 Provision/withdrawal

The CW supplementary service may be provided by prior arrangement with the Administration or be available on a general basis. Withdrawal will be at the request of the customer or for administrative reasons.

1.3.2 Requirements on the originating network side

For the operation of the CW supplementary service, the originating network may deliver the notification indicator information element in the ALERTING message to the calling user if received from the terminating network.

1.3.3 *Requirements in the network*

This section is not applicable to DSS 1 (digital subscriber Signalling System No. 1).

1.3.4 *Requirements on the terminating network side*

For the operation of the CW supplementary service, the terminating network may maintain the following counters:

- *Number of calls*

The counter maintained by the network to keep track of the current number of calls established via a SETUP message (in either direction) for a given ISDN number. When a call for a given ISDN number is cleared, the number of calls counter is decremented.

- *Number of waiting calls*

The counter maintained by the network to keep track of the current number of waiting calls for a given ISDN number or group of ISDN numbers. When a call ceases to be waiting, the number of waiting calls counter is decremented.

In addition, the network may maintain the following parameters:

- *Number of B-channels per interface*

The parameter maintained by the network that indicates the maximum number of B-channels allowed in use (either busy or reserved) per interface.

- *Number of B-channels per ISDN number*

The parameter maintained by the network that indicates the maximum number of B-channels allowed in use per ISDN number or group of ISDN numbers.

- *Call Waiting subscription*

The parameter maintained by the network that indicates whether an ISDN number has subscribed to the CW supplementary service.

- *Calling user notification of waiting call*

The parameter maintained by the network that indicates whether the calling party shall receive a notification that their call is being offered using the Call Waiting service operation. This parameter shall be set for each ISDN number that is subscribed to the CW supplementary service.

1.3.5 *Assumptions made about the terminal*

The terminal used with the CW supplementary service must support call offering from the network (as defined in Recommendation Q.931) using the channel negotiation procedures defined in § 1.5.2.1.3.3. Terminals using this service shall recognize the channel identification information element in the CONNECT ACKNOWLEDGE message.

The calling terminal shall support the procedure contained in § 1.5.2.1.3.2 if the optional indication that their call is waiting is to be understood.