



INTERNATIONAL TELECOMMUNICATION UNION

CCITT

I.370

THE INTERNATIONAL
TELEGRAPH AND TELEPHONE
CONSULTATIVE COMMITTEE

**INTEGRATED SERVICES
DIGITAL NETWORK (ISDN)**

**OVERALL NETWORK ASPECTS
AND FUNCTIONS,
ISDN USER-NETWORK INTERFACES**

**CONGESTION MANAGEMENT
FOR THE ISDN FRAME RELAYING
BEARER SERVICE**

Recommendation I.370



Geneva, 1991



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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 I.370 was prepared by Study Group XVIII and was approved under the Resolution No. 2 procedure on the 25th of October 1991.

CCITT NOTES

- 1) In this Recommendation, the expression "Administration" is used for conciseness to indicate both a telecommunication Administration and a recognized private operating agency.
- 2) A list of abbreviations used in this Recommendation can be found in Annex A.

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Recommendation I.370

CONGESTION MANAGEMENT FOR THE ISDN FRAME RELAYING BEARER SERVICE

1 Congestion management principles

1.1 *Scope*

This Recommendation describes U-plane based congestion management strategy and mechanisms for ISDN frame relay bearer services. It covers both network and end user mechanisms and responsibilities to avoid or recover from periods of congestion. C-plane procedures at the user network interface other than clearing or not accepting calls are not recommended. Procedures, objectives and requirements for C-plane congestion management between networks are for further study. Special provisions for the treatment of continuous bit stream oriented (CBO) traffic is outside the scope of the Recommendation. This strategy is intended to operate for access channel rates up to 2048 kbit/s.

1.2 *Definitions*

access rate

The data rate of the user access channel (D, B or H). The speed of the access channel determines how much data (maximum rate) the end user can inject into the network.

committed burst size, B_c

The maximum committed amount of data a user may offer to the network during a time interval T_c . B_c is negotiated at call set-up.

excess burst size, B_e

The maximum allowed amount of data by which a user can exceed B_c during a time interval T_c . This data (B_e) is delivered in general with a lower probability than B_c . B_e is negotiated at call set-up.

committed rate measurement interval, T_c

The time interval during which the user is allowed to send only the committed amount of data (B_c) and the excess amount of data (B_e). T_c is computed.

committed information rate (CIR)

The information transfer rate which the network is committed to transfer under normal conditions. The rate is averaged over a minimum increment of time T_c . CIR is negotiated at call set-up.

forward explicit congestion notification (FECN)

See Recommendation Q.922 for the full definition.