# INTERNATIONAL STANDARD ISO 2628

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## Basic mode control procedures — Complements

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## FOREWORD

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Draft International Standards adopted by the Technical Committees are circulated to the Member Bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 2628 was drawn up by Technical Committee ISO/TC 97, *Computers and information processing,* and circulated to the Member Bodies in May 1972.

It has been approved by the Member Bodies of the following countries :

| | | |
|---|---|---|
| Australia | Ireland | Spain |
| Belgium | Italy | Sweden |
| Canada | Japan | Switzerland |
| Czechoslovakia | Netherlands | Thailand |
| Egypt, Arab Rep. of | New Zealand | United Kingdom |
| France | Portugal | U.S.A. |
| Germany | South Africa, Rep. of | U.S.S.R. |

No Member Body expressed disapproval of the document.

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# Basic mode control procedures – Complements

## 0 INTRODUCTION

A data communication system may be considered as the set of the terminal installations and the interconnecting network that permits information to be exchanged.

A data link comprises terminal installations connected to the same network, operating at the same speed, in the same code. Any "store and forward" delay or intermediate data processing separates data links. Any system is constituted of one or several data links.

The information transfer in a data link is monitored by data link control procedures where some characters, selected within a coded character set, are given particular meanings according to the transmission phase and are used for various purposes such as to delineate information, to reverse the direction of transmission, to ask questions, to answer, etc.

This International Standard defines complements to the basic mode and its extensions :

1) Recovery procedures

   – System guidelines are given for the use of timers, counters, etc.;

2) Abort and interrupt procedures

   – Defines abort procedures which are always initiated by the master station, and interrupt procedures which are always initiated by the slave station;

3) Multiple station selection

   – Gives means whereby a master station may select more than one slave station so that all the selected slave stations receive the same transmission at the same time.

## 1 SCOPE AND FIELD OF APPLICATION

This International Standard extends the digital basic mode control procedures as defined in ISO/R 1745 and ISO 2111, to allow the following features :

1) Recovery procedures;

2) Abort and interrupt procedures;

3) Multiple station selection.

Those systems which conform to ISO/R 1745 do not necessarily have to include the functions described in this International Standard. However, those systems implementing the functions described in this International Standard and conforming to ISO/R 1745 and ISO 2111, must follow these recommendations.

## 2 REFERENCES

ISO/R 1745, *Basic mode control procedures for data communication systems.* (At present under revision.)

ISO 2111, *Data communication – Basic mode control procedures – Code independent information transfer.*

CCITT Recommendation V24, *Function and electrical characteristics of circuits at the interface between data terminal equipment and data communication equipment.*

## 3 RECOVERY PROCEDURES

### 3.1 General

These recovery procedures are system guidelines which should be used by all stations, as applicable. However, it is recognized that the detailed method of station mechanization, absolute value of timers, etc., may vary with applications and communication facilities.

In some cases, these recovery procedures can only detect the error condition and then notify the operator or the processor program, or both. In more sophisticated cases, automatic recovery is partially or completely possible. In other cases, only operators can perform the recovery procedures. Operator recovery procedures are not part of this International Standard. However, the operator may do such things as retry *n* more times, establish voice communication to the distant station in order to determine trouble, etc.

For a good system, the functions of timers A, B, and C defined below, must be utilized. The value of the timer may vary over a wide range depending upon whether they are implemented via hardware, software, or human operator.

It is recognized that in some systems additional timers may be required for such purposes as aiding synchronization procedures, added reliability, etc.

### 3.2 Timers and counters

Timers are primarily used as aids in recovery procedures when recognition of specific control characters does not occur. The action taken following a time-out is specified in

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