
International Standard



2111

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**Data communication — Basic mode control procedures —
Code independent information transfer**

Téléinformatique — Procédures de commande en mode de base — Transfert des données indépendantes du code

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Descriptors : data processing, data transmission, control procedures, communication procedure.

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work.

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. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 2111 was prepared by Technical Committee ISO/TC 97, *Information processing systems*.

ISO 2111 was first published in 1972. This second edition cancels and replaces the first edition, of which it constitutes a technical revision.

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Data communication — Basic mode control procedures — Code independent information transfer

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 really 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, or to answer.

The data link control procedures are categorized in classes that are referred to as modes of operation. The basic mode is defined in the introduction to ISO 1745.

This International Standard defines the means by which systems can transfer information without coding restrictions. This is achieved by use of the DLE character, and is called code independent transmission.

The procedures described allow for code dependent information messages to alternate with code independent information messages.

1 Scope and field of application

1.1 This International Standard defines the means by which a data communication system operating according to the basic mode procedures defined in ISO 1745 can transfer information messages without code restrictions.

1.2 This International Standard extends Phase 3 (Information transfer) as defined in ISO 1745. It also describes other uses of the DLE character than that described in ISO 1745. Phase 2

(Establishment of data link) and Phase 4 (Termination) are not affected by this International Standard.

2 References

ISO 646, *Information processing — ISO 7-bit coded character set for information interchange.*

ISO 1177, *Information processing — Character structure for start/stop and synchronous transmission.*

ISO 1745, *Information processing — Basic mode control procedures for data communication systems.*

3 Formatting rules

3.1 Initiation of code independent text

The sequence "DLE.STX" shall be used to initiate a code independent text.

3.2 Termination of code independent text

The sequence "DLE.ETB" or "DLE.ETX" shall be used to terminate a code independent block or text respectively.

3.3 Filling

When filling is necessary within the information message, the sequence "DLE.SYN" shall be used in lieu of the single character "SYN". Filling sequences shall not be inserted between any two characters forming a DLE sequence.

3.4 Character parity

The characters forming the DLE sequences shall carry the character parity used by the data transmission system through which the code independent text is being transferred. When the system is asynchronous, the character parity shall be even; when the system is synchronous, it shall be odd. (See ISO 1177.)