

# ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

## ISO RECOMMENDATION R 646

6 AND 7 BIT CODED CHARACTER SETS  
FOR INFORMATION PROCESSING INTERCHANGE

1st EDITION

December 1967

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Printed in Switzerland

Also issued in French and Russian. Copies to be obtained through the national standards organizations.



## BRIEF HISTORY

The ISO Recommendation R 646, *6 and 7 bit coded character sets for information processing interchange*, was drawn up by Technical Committee ISO/TC 97, *Computers and information processing*, the Secretariat of which is held by the United States of America Standards Institute (USASI).

Work on this question by the Technical Committee began in 1962 and led, in 1966, to the adoption of a Draft ISO Recommendation.

In October 1966, this Draft ISO Recommendation (No. 1052) was circulated to all the ISO Member Bodies for enquiry. It was approved, subject to a few modifications of an editorial nature, by the following Member Bodies:

|           |             |                |
|-----------|-------------|----------------|
| Argentina | Germany     | Turkey         |
| Australia | Israel      | U.A.R.         |
| Belgium   | Italy       | United Kingdom |
| Brazil    | Netherlands | U.S.A.         |
| Canada    | Sweden      | U.S.S.R.       |
| France    | Switzerland |                |

Four Member Bodies opposed the approval of the Draft:

Austria  
Japan  
Poland  
Spain

The Draft ISO Recommendation was then submitted by correspondence to the ISO Council, which decided, in December 1967, to accept it as an ISO RECOMMENDATION.

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## 6 AND 7 BIT CODED CHARACTER SETS FOR INFORMATION PROCESSING INTERCHANGE

### 1. GENERAL

#### 1.1 Scope

- 1.1.1 This ISO Recommendation describes two character sets for general usage, including letters, figures, punctuation marks, other symbols and controls, with their coded representation.
- 1.1.2 The requirements for graphics and controls in data handling and programming, in accordance with computer and ancillary equipment characteristics, have been taken into account in determining these character sets.
- 1.1.3 This ISO Recommendation consists of two tables with notes, a key, explanatory notes and the definitions of functional characteristics related to control characters.
- 1.1.4 These character sets are primarily intended for the interchange of information among data processing systems and associated equipment. They may be regarded as basic alphabets in an abstract sense.
- 1.1.5 These character sets are applicable to all Latin alphabets.
- 1.1.6 One character set contains 6-bit characters and provides 64 coded characters, the other contains 7-bit characters and provides 128 coded characters. The two sets are compatible in that they are logically related. This facilitates the conversion between the two sets.

#### 1.2 Implementation

- 1.2.1 These character sets may be implemented in various media with logically related codes, as appropriate. For example, this could include punched tapes, punched cards, magnetic tapes and transmission channels, thus permitting interchange of data to take place either indirectly by means of an intermediate recording in a physical medium, or by local electrical connection of various units (such as input and output devices and computers) or by means of data transmission equipment.
- 1.2.2 Other ISO Recommendations describe the means of recording these character sets in physical media and the means of encoding them for transmission while taking into account the need for error checking \*.

\* For the implementation of codes

- on punched tape, see ISO Recommendation R ..., *Representation of 6 and 7 bit coded character sets on punched tape* (at present at the stage of draft proposal);
- on punched cards, see ISO Recommendation R ..., *Implementation of ISO 7 bit coded character set on 12 row punched card* (at present at the stage of draft proposal);
- on 7 and 9 track magnetic tape, see ISO Recommendation R ..., *Implementation of the 6 and 7 bit coded character sets on 7 track 1/2 in (12.7 mm) magnetic tape* (at present Draft ISO Recommendation No. 1320) and ISO Recommendation R ..., *Implementation of the 7 bit coded character set on 9 track 1/2 in (12.7 mm) magnetic tape* (at present Draft ISO Recommendation No. 1321).