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# INTERNATIONAL STANDARD



# 2709

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## Documentation — Format for bibliographic information interchange on magnetic tape

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## FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO Member Bodies). The work of developing International Standards is carried out through ISO Technical Committees. Every Member Body interested in a subject for which a Technical Committee has been set up 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.

International Standard ISO 2709 was drawn up by Technical Committee ISO/TC 46, *Documentation*, and circulated to the Member Bodies in April 1972.

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

Austria	Germany	Romania
Belgium	India	South Africa, Rep. of
Brazil	Ireland	Sweden
Canada	Israel	Switzerland
Denmark	Italy	Thailand
Egypt, Arab Rep. of	Netherlands	Turkey
Finland	New Zealand	United Kingdom
France	Portugal	U.S.A.

The Member body of the following country expressed disapproval of the document on technical grounds :

Czechoslovakia

# Documentation — Format for bibliographic information interchange on magnetic tape

## 1 SCOPE

This International Standard specifies the requirements for a generalized machine format which will hold any type of bibliographic record. It does not define the content of individual records or the meanings assigned to tags, indicators or identifiers; it only describes a generalized structure, a framework designed specially for communications between data processing systems and not for use within systems.

## 2 FIELD OF APPLICATION

This International Standard describes a generalized structure which can be used to transmit, between data processing systems, records describing all forms of material capable of bibliographic description.

Although this International Standard is designed for magnetic tape, its structure may be used for other data carriers of bibliographic description, as well as related records such as authority records.

## 3 DEFINITIONS

For the purpose of this International Standard the following definitions apply. They are listed in the order corresponding to Figure 2.

**3.1 bibliographic record** : A collection of fields, including a record label, a directory and bibliographic data describing one or more bibliographic units treated as one entity.

**3.2 datafield** : A variable length portion of the bibliographic record containing a particular category of data, following the directory and associated with one entry of the directory.

NOTE — A datafield may contain one or more subfields.

**3.3 (subfield) identifier** : A data element, one or more characters immediately preceding and identifying a subfield. (See Note to 4.3.1.)

NOTE — Its first or only character must always be IS<sub>1</sub> of ISO 646.

**3.4 indicator** : The first data element, if present, associated with a datafield supplying further information about the contents of the field, about the relationship

between the field and other fields in the record, or about the action required in certain data manipulation processes. (See Note to 4.3.2.)

**3.5 record** : See 3.1, bibliographic record.

**3.6 directory** : A table of entries giving the tag, length and location within the record of each datafield.

**3.7 record label** : A field occurring at the beginning of each bibliographic record providing parameters for the processing of the record.

**3.8 separating character** : A control character used to separate and qualify units of data logically, and in some cases hierarchically.

**3.9 subfield** : A part of a field containing a defined unit of information.

**3.10 subrecord** : A group of fields within a record which may be treated as an entity.

**3.11 structure** : An arrangement of the parts constituting a bibliographic record.

**3.12 (field) tag** : Three characters associated with a field and used to identify it.

## 4 STRUCTURE OF COMMUNICATION FORMAT FOR BIBLIOGRAPHIC RECORD

The general structure of a bibliographic record is shown schematically in Figure 1. A more detailed structure is shown schematically in Figure 2, which includes four alternatives for the bibliographic fields.

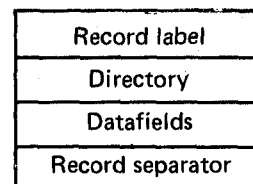


FIGURE 1 — General structure



3) the number of characters (including field separator) in the final part of a datafield which has been treated as described in 2).

In the cases described in 2) and 3), all directory entries which refer to parts of the same datafield must be adjacent and in sequence.

**4.2.4 starting character position:** A decimal number giving the position of the first character of the datafield identified by the preceding tag, relative to the base address of data (i.e. the starting character position of the first datafield following the directory is  $\phi$ ).

### 4.3 DATAFIELDS

All datafields shall end with a field separator.

There are three types of field :

- record identifier field : tag 001;
- reserved fields : tags 002 to 009 as required;
- bibliographic field : tags 010 to 999 as required.

**4.3.1 record identifier<sup>1)</sup> field:** Characters uniquely associated with the record and assigned by the organization creating the bibliographic record.

**4.3.2 reserved fields<sup>1)</sup>:** A reserved datafield supplies parameters which may be required for the processing of the bibliographic record.

When, for bibliographic reasons, it is necessary to divide bibliographic records into subrecords, tag 002 shall be used for a subrecord directory constructed in the same way as the directory and referring to the directory.

**4.3.3 bibliographic fields :** Each bibliographic field consists of an indicator (optional), identifier(s) (optional), data and a field separator. The presence and length of the indicator(s) or identifier(s) are determined by the indicator length and identifier length as defined in the record label and must be used consistently within each bibliographic field of the record.

Each bibliographic field in a record must therefore be constructed according to one of the following alternatives :

- 1) data — In this case, the indicator length and the identifier length in the record label are set to zero. See Figure 2, alternative 1.
- 2) identifier(s) and data — In this case, the indicator length in the record label is set to zero and the identifier length is set to 1 or more. See Figure 2, alternative 2.

3) indicator(s) and data — In this case, the indicator length in the record label is set to 1 or more and the identifier length is set to zero. See Figure 2, alternative 3.

4) indicator(s), identifier(s) and data — In this case, the indicator length and the identifier length in the record label are set to 1 or more. See Figure 2, alternative 4.

## 5 REFERENCES

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

This document describes a character set for general usage, including letters, figures, punctuation marks, other symbols and control characters, with their coded representation.

NOTE — In ISO 646 the separators used below are specified under IS<sub>1</sub>, IS<sub>2</sub> and IS<sub>3</sub>.

**5.2 ISO/R 962, Implementation of the 7-bit coded character set on 9-track 12,7 mm (1/2 in) magnetic tape.**

This document describes how the codes for the characters in the 7-bit code are represented on 9-track magnetic tape.

**5.3 ISO/R 1001, Magnetic tape labelling and file structure for information interchange.<sup>2)</sup>**

This document relates to information interchange utilizing magnetic tape, by providing magnetically recorded labels to identify and structure files, and by providing a standard structure for the blocks containing the records that constitute a file.

**5.4 ISO/R 1863, 9-track 32 RP mm (800 RPI) magnetic tape for information interchange.**

This document provides a format and recording standard for 9-track 12,7 mm (1/2 in) wide magnetic tape and reels to be used for information interchange among information processing systems, communication systems, and associated equipment utilizing the 7-bit coded character set specified in ISO 646.

**5.5 ISO 2022, Code extension techniques for the use of the 7-bit coded character set.**

This document describes the use of combinations of characters from the 7-bit set to provide characters not included in that set.

1) Record identifier field and reserved datafields do not contain indicator(s) or identifier(s).

2) At present under revision.

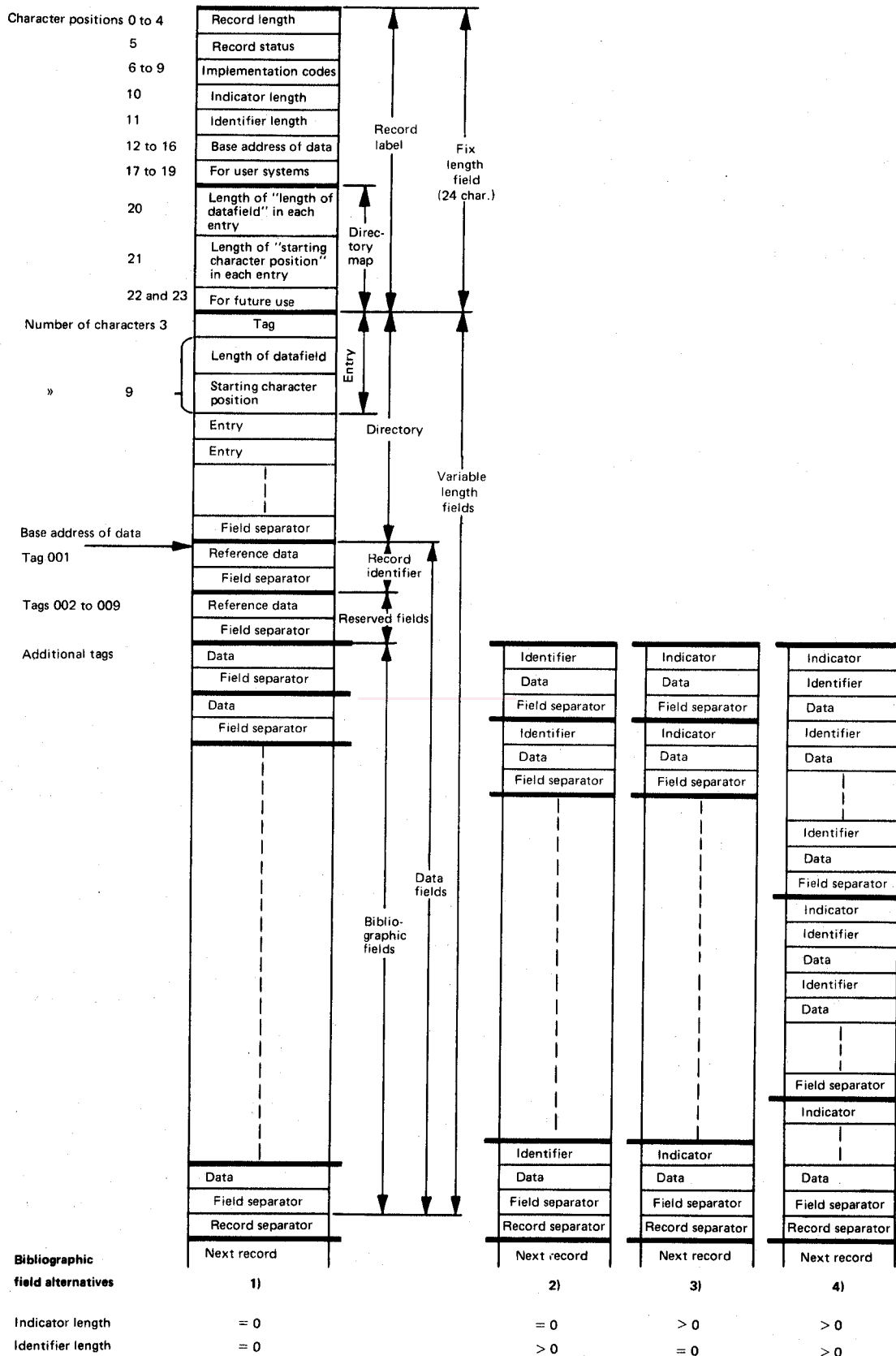


FIGURE 2 - Detailed structure

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