SLS 1111 : 1995
ISO 2709 : 1981

Sri Lanka Standard
DOCUMENTATION – FORMAT FOR BIBLIOGRAPHIC INFORMATION INTERCHANGE ON MAGNETIC TAPE

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SRI LANKA STANDARDS INSTITUTION

SLS 1111 : 1995
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Sri Lanka Standard
DOCUMENTATION - FORMAT FOR BIBLIOGRAPHIC INFORMATION INTERCHANGE ON MAGNETIC TAPE.

NATIONAL FOREWORD

This standard was approved by the Sectoral Committee on Information Technology on 1994.12.06 and was authorized for adoption and publication as a Sri Lanka Standard by the Council of Sri Lanka Standards Institution on 1995.12.14.

This Sri Lanka Standard is identical with ISO 2709 : 1981 Documentation - Format for bibliographic information interchange, on magnetic tape published by the International Organization for Standardization (ISO).

TERMINOLOGY AND CONVENTIONS

The text of the International Standard has been accepted as suitable for publication without deviation, as a Sri Lanka Standard. However, certain terminology and conventions are not identical with those used in Sri Lanka standards, attention is therefore drawn to the following;

a) Wherever the words "International standard" appear, referring to this standard, they should be interpreted as "Sri Lanka standard".

b) The comma has been used throughout as a decimal makrer. In Sri Lanka standard it is the current practice to use a full point on the base line as the decimal marker.

c) Wherever page numbers are quoted, they are ISO page numbers.

CROSS REFERENCE

International Standard	Corresponding Sri Lanka Standard
ISO 1001 : 1986 Information processing - File structure and labelling of magnetic tapes for information interchange.	SLS 1110 : 1995 Information processing - File structure and labelling of magnetic tapes for information interchange.

International Standard 2709

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION•МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ•ORGANISATION INTERNATIONALE DE NORMALISATION

Documentation — Format for bibliographic information interchange on magnetic tape

Documentation — Disposition des données sur bande magnétique pour l'échange d'informations bibliographiques

Second edition — 1981-10-01

UDC 681.327.64.04 : 025.3 **Ref. No. ISO 2709-1981 (E)**

Descriptors : documentation, data processing, bibliographic records, information interchange, magnetic tapes, data layout.

Price based on 5 pages

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 developed by Technical Committee ISO/TC 46, *Documentation*, and was circulated to the member bodies in June 1980.

It has been approved by the member bodies of the following countries :

Australia	France	Poland
Austria	Germany, F. R.	Romania
Belgium	Hungary	South Africa, Rep. of
Brazil	India	Spain
Canada	Iran	Sweden
China	Italy	Switzerland
Czechoslovakia	Japan	United Kingdom
Denmark	Korea, Rep. of	USA
Egypt, Arab Rep. of	Mexico	USSR
Finland	Netherlands	

No member body expressed disapproval of the document.

This second edition cancels and replaces the first edition (i.e. ISO 2709-1973).

Printed in Switzerland

INTERNATIONAL STANDARD ISO 2709-1981 (E)

Documentation — Format for bibliographic information interchange on magnetic tape

1 Scope and field of application

This International Standard specifies the requirements for a generalized exchange format which will hold records describing all forms of material capable of bibliographic description as well as related records such as authority records. It does not define the length or the content of individual records and does not assign any meaning to tags, indicators or identifiers; these specifications being the functions of an implementation format.

This International Standard describes a generalized structure, a framework designed specially for communications between data processing systems and not for use as a processing format within systems. Although this International Standard is designed for magnetic tape, its structure may be used for other data carriers.

2 References

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_1, IS_2 and IS_3.

ISO 1001, *Information processing — Magnetic tape labelling and file structure for information interchange.*

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. It also specifies a block spanning technique.

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.

NOTE — If required for bibliographic reasons, linking of bibliographic records and their division into subrecords is allowed and should be implemented as specified in the explicit exchange format.

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 footnote to 4.3.1.).

NOTE — Its first or only character should always be IS_1 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 footnote to 4.3.2.).

3.5 record : See 3.1, *bibliographic record.*

3.6 directory : An index to the location of the datafields within a record. (See 4.2.).

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

3.8 directory map : A set of parameters specifying the structure of the entries in the directory.

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

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

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

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

3.13 (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.

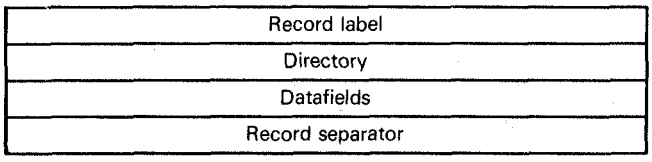

Figure 1 — General structure

A bibliographic record includes the items defined in clause 3 and contains the following fixed and variable length fields in the sequence shown in figure 2

— a record label	fixed length
— a directory	variable length
— record identifier	variable length
— reserved fields	variable length
— bibliographic fields	variable length
— field separator(s)	character IS_2 of ISO 646
— a record separator	character IS_3 of ISO 646

The directory, record identifier, reserved fields and bibliographic fields are terminated by the field separator. The record is terminated by the record separator.

4.1 Record label

The record label shown in figure 2 is fixed in length and defined as follows :

4.1.1 Record length (character positions 0 to 4)

The number of character positions in the record including the record label and the record separator. The length is a 5-digit decimal number justified right with zero fill if necessary.

NOTE — The record length described here is a logical record length. For practical reasons relating to machine processing of data, the information may have to be divided into blocks. A standardized technique for spanning such blocks is specified in ISO 1001.

4.1.2 Record status (character position 5)

A single character, to be defined in an implementation International Standard[1)], describing the status of a record, for example, new or amended.

4.1.3 Implementation codes (character positions 6 to 9)

The codes are not defined.[1)]

4.1.4 Indicator length (character position 10)

One decimal digit giving the number of character positions of the indicators. If indicators are not used, the indicator length is set to zero.

4.1.5 Identifier length (character position 11)

One decimal digit giving the number of character positions of the identifier. The first or only character of this identifier shall always be IS_1 of ISO 646.

If the identifier is not used, the identifier length is set to zero.

4.1.6 Base address of data (character positions 12 to 16)

Five decimal digits justified right with zero fill if necessary, and equal to the combined length in characters of the record label and the directory including the field separator at the end of the directory.

4.1.7 Defined by user systems (character positions 17 to 19)

4.1.8 Directory map

Character position 20 : One decimal digit equal to the length in characters of the "length of field" part of each entry in the directory.

Character position 21 : One decimal digit equal to the length in characters of the "starting character position" part of each entry in the directory.

Character position 22 : One decimal digit equal to the length in characters of the "implementation-defined part" of each entry in the directory.

Character position 23 : Reserved for future use.

4.2 Directory

The directory consists of a variable number of entries each corresponding to its respective datafield (record identifier, reserved and bibliographic fields). The directory ends with a field separator (fs).

1) In the absence of an International Standard special agreement has to be reached between the interchange partners.

4.2.1 Directory entry

An entry consists of a "tag", a "length of datafield", "starting character position", and "implementation-defined part", in that sequence.

The length of the "tag" is three characters. No part of the entry may exceed nine characters in length. All entries in a directory have the same structure.

4.2.2 Tag

Three characters, which, according to definition in an implementation International Standard[1], specify the name of any associated datafield.

4.2.3 Length of datafield

This length is either :

a) the total number of characters (including indicator(s) and field separator) in the datafield indicated by the preceding tag; or

b) zero, implying that the directory entry refers to a datafield whose total length is greater than the largest decimal number (n) which can be stored in the "length" of a directory entry. In this case, the datafield is regarded as being divided into a number of parts of which all but the last are of equal length (n). Each part has a corresponding directory entry containing the tag for the datafield and the starting character position of the part to which the directory entry refers. A length "zero" indicates that the directory entry refers to a part of the datafield which is not the final part and that the length of this part is to be taken as (n); or

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

In the cases descibed in b) and c), all directory entries which refer to parts of the same datafield shall 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 0 (zero)].

4.2.5 Implementation-defined part

The "implementation-defined part" of the entry, if present, contains control information relative to the datafield referenced by the entry.

4.3 Datafields

All datafields shall end with a field separator.

There are three types of fields :

— record identifier field : tag 001[2];

— reserved fields : tags 002 to 009 and 00A to 00Z[3] as required;

— bibliographic fields : tags 010 to 999 and 0AA to ZZZ as required.[4]

4.3.1 Record identifier field[5]

Characters identifying the record and assigned by the organization creating the bibliographic record.

4.3.2 Reserved fields[5]

A reserved datafield supplies data which may be required for the processing of the bibliographic record.

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 shall be used consistently within each bibliographic field of the record.

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

a) data — In this case, the indicator length and the identifier length in the record label are set to zero. See figure 2, alternative 1.

b) identifier 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.

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1) In the absence of an International Standard special agreement has to be reached between the interchange partners.

2) 0 has the meaning of zero in all these cases.

3) For alphabetic characters use either capital or small letters.

4) Any combination of numeric and alphabetic characters is allowed; numerals only, alphabetic characters only, or a mixture of both. For alphabetic characters use either capital or small letters. When alpha-numeric tags are used they should never start with 00 since only reserved fields start with two zeros.

5) Record identifier fields and reserved data fields do not contain indicators or identifiers.

c) indicator 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.

d) indicator, identifier, 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 Related documents

ISO 962, *Information processing — Implementation of the 7-bit coded character set and its 7-bit and 8-bit extensions on 9-track* 12,7 mm (0,5 in) *magnetic tape.*

This document specifies the implementation of the 7-bit coded character set and its 7-bit and 8-bit extensions on 9-track 12,7 mm (0,5 in) magnetic tape.

ISO 1861, *Information processing — 7-track* 12,7 mm (0,5 in) *wide magnetic tape for information interchange recorded at* 8 rpmm (200 rpi).

This document specifies a 7-track, 8 rows per millimetre (rpmm) [200 rows per inch (rpi)] 12,7 mm (0,5 in) wide magnetic tape for interchangeability of tape between information processing systems which utilize 6- and 7-bit coded character sets, the latter being as specified in ISO 646.

ISO 1863, *Information processing — 9-track* 12,7 mm (0,5 in) *wide magnetic tape for information interchange recorded at* 32 rpmm (800 rpi).

This document provides a format and recording standard for 9-track 12,7 mm (0,5 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 or its 7-bit or 8-bit extensions specified in ISO 2022.

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

This document specifies methods of extending the 7-bit code, remaining in a 7-bit environment or increasing to an 8-bit environment.

ISO 3788, *Information processing — 9-track,* 12,7 mm (0,5 in) *wide magnetic tape for information interchange recorded at* 63 rpmm (1 600 rpi) *phase encoded.*

This document provides a format and recording standard for 9-track, 12,7 mm (0,5 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 or its 7-bit or 8-bit extensions specified in ISO 2022.

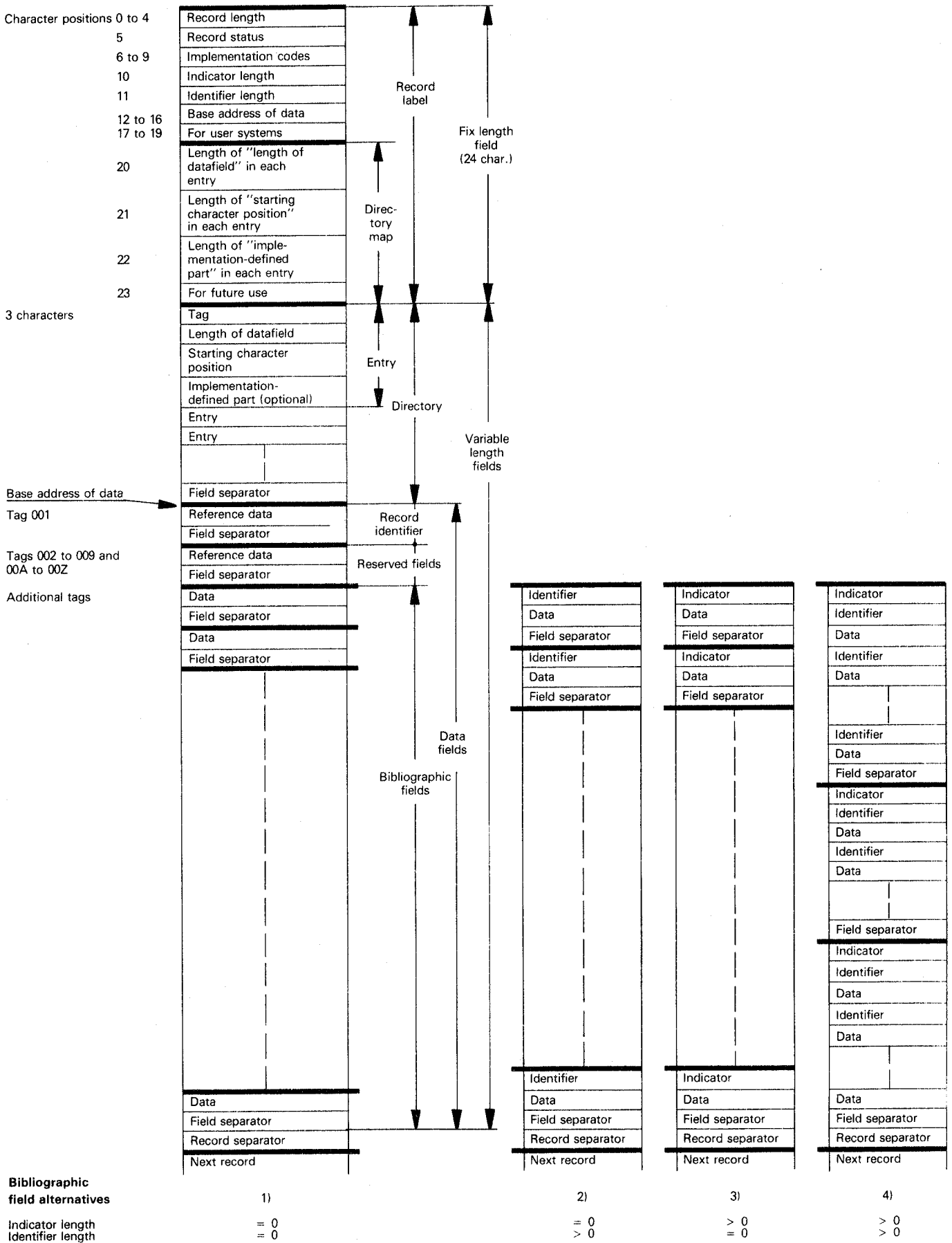

Figure 2 — Detailed record structure