

Revised

ISO

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

ISO RECOMMENDATION

R 1001

MAGNETIC TAPE LABELLING AND FILE STRUCTURE
FOR INFORMATION INTERCHANGE

1st EDITION

March 1969

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BRIEF HISTORY

The ISO Recommendation R 1001, *Magnetic tape labelling and file structure for information interchange*, was drawn up by Technical Committee ISO/TC 97, *Computers and information processing*, the Secretariat of which is held by the American National Standards Institute (ANSI).

Work on this question led to the adoption of a Draft ISO Recommendation.

In September 1967, this Draft ISO Recommendation (No. 1323) 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 :

Australia	Israel	Sweden
Belgium	Italy	Switzerland
Canada	Japan	Turkey
Czechoslovakia	Korea, Rep. of	U.A.R.
Denmark	Netherlands	United Kingdom
France	New Zealand	U.S.A.
Germany	Portugal	

No Member Body opposed the approval of the Draft.

The Draft ISO Recommendation was then submitted by correspondence to the ISO Council, which decided, in March 1969, to accept it as an ISO RECOMMENDATION.

MAGNETIC TAPE LABELLING AND FILE STRUCTURE FOR INFORMATION INTERCHANGE

INTRODUCTION

The basic reason for producing an ISO Recommendation for magnetic tape labelling is to give protection, via an operating system, against procedural and human errors in handling data from magnetic tape. When a tape is read a check can be made of the identification on the tape against that supplied by the operator/programmer and writing or reading stopped before any damage has been done.

In producing this ISO Recommendation cognizance has been taken of the fact that the data on tape may be sent from tape to data link and the control characters have been excluded from the characters allowable in labels. However, it should be noted that no restriction has been placed upon the information that may be recorded in data blocks and that, in particular, if the record length is given in binary, control characters could be encountered.

It cannot be overstressed that this ISO Recommendation, in its present form, is a Recommendation for magnetic tape labelling. Even though other media, as the data transmission example above, have been considered, the Recommendation does not have universal applicability.

Although this ISO Recommendation was written to be used specifically with the ISO 7-bit code, the principles contained herein are equally applicable with other code structures.

1. SCOPE

This ISO Recommendation 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.

2. DEFINITIONS OF TERMS

As used in this ISO Recommendation, the following items have the meanings indicated. When a term is in common use in a context related to the subject-matter of this ISO Recommendation, the definition conforms to common usage; when a term has been used in related ISO Recommendations, the definition conforms to its usage there.

- 2.1 *Record.* Collection of related terms of data which for operating systems logic purposes is treated as a unit of information. Conceptually, a record corresponds (in the context of business data) to a transaction, a customer's account, etc. In other contexts, the delineation of a record may be relatively arbitrary, and is determined by the designer of the information formats.
- 2.2 *Block.* Group of contiguous characters recorded on and read from magnetic tape as a unit. A block may contain one or more complete records.

- 2.3 *File*. Major collection of information, consisting of all the records pertaining to a general subject. Conceptually, this term (in the context of business data) relates to such collections as a Payroll File, an Inventory File, etc. In other contexts, the delineation of a file may be relatively arbitrary.
- 2.4 *File set*. Collection of one or more related files recorded on one or more volumes. A file set may consist of
- one file recorded on a single volume,
 - more than one file recorded on a single volume,
 - one file recorded on more than one volume,
 - more than one file recorded on more than one volume.
- 2.5 *Volume*. Physical unit of storage media. The word volume, as used in this ISO Recommendation, is completely synonymous with "reel of magnetic tape".
- 2.6 *Label*. Block at the beginning or end of a volume or a file which serves to identify and/or delimit that volume or file.
- 2.7 *Label Group*. Collection of contiguous labels of the same type (see clause 3.1.3 for label types).
- 2.8 *Tape Mark*. Special configuration recorded on magnetic tape, essentially indicating the boundary between files and labels, and also between certain label groups. The Tape Mark configuration is defined in the relevant ISO Recommendations for recorded magnetic tape.
- 2.9 *Operating System*. Programme or set of programmes, usually provided by the manufacturer, which, among other things, handles the functions of reading and writing blocks on tape, label handling and related functions.

3. LABELLING

3.1 Elements of the labelling scheme

3.1.1 *The labels*. Each label shall be an 80-character block.

3.1.2 *Classes of labels*. Labels are divided into the two following general classes :

- Operating System Labels and
- User Labels.

In addition, labels are classified as required or optional.

3.1.3 *Types of labels*

The two types of labels are

- Volume labels and
- File labels.

3.1.4 *Label Identifiers*. The identifiers and numbers (4 characters) for the various classes and types of labels are shown in the following chart. The labels are also classified to show which labels are required by this ISO Recommendation and which additional labels are permissible (optional).

Type	Class		
	Operating System		User
Volume	VOL1	(None)	UVL1-9
	EOV1	EOV2-9	UTLx
File	HDR1	HDR2-9	UHLx
	EOF1	EOF2-9	UTLx
	Required	Optional	

x = any "a" character as defined in clause 3.3