
International Standard



5807

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Information processing — Documentation symbols and conventions for data, program and system flowcharts, program network charts and system resources charts

Traitement de l'information — Symboles de documentation et conventions applicables aux données, aux organigrammes de programmation et d'analyse, aux schémas des réseaux de programmes et des ressources de système

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Foreword

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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 5807 was prepared by Technical Committee ISO/TC 97, *Information processing systems*.

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Information processing — Documentation symbols and conventions for data, program and system flowcharts, program network charts and system resources charts

0 Introduction

This International Standard consolidates the information given in ISO 1028 and ISO 2636, and in so doing, supersedes them.

Charts are widely used to depict various types of information processing problems and their means of solution. This International Standard does not restrict their use to the particular applications exemplified herein.

In-house rules may have to be devised to suit the process or data specification being considered. However, there are guiding principles which, if followed, will enhance readability and expedite cross-reference to the text.

Charts consist of symbols having a given signification, brief explanatory text, and connecting lines. This International Standard does not deal with the wording of the text. Nevertheless, each symbol relates to an unambiguous and meaningful name (unabbreviated if possible) which is consistent throughout the documentation.

Charts may be used at various levels of detail; the number of levels depending on the size and complexity of the information processing problem. The level of detail should be such that the various parts and the interrelationship between the parts are comprehensible as a whole.

Typically there will be a chart of the whole system showing the main constituent parts and this will form the top of a hierarchy of charts; each lower level providing a more detailed description of one or more parts shown on the next higher level chart.

1 Scope and field of application

This International Standard specifies symbols to be used in information processing documentation and gives guidance on the conventions for their use in

- a) data flowcharts;
- b) program flowcharts;
- c) system flowcharts;
- d) program network charts;
- e) system resources charts.

2 Reference

ISO 2382/1, *Data processing — Vocabulary — Part 01: Fundamental terms.*¹⁾

3 Definitions

For the purpose of this International Standard the definitions in ISO 2382/1 and the following apply.

3.1 basic symbol: Symbol used when the precise nature or form of, for example, the process or data media is not known or when it is not necessary to depict the actual medium.

3.2 specific symbol: Symbol used when the precise nature or form of, for example, the process or data media is known and when it is necessary to depict the actual medium.

3.3 flowchart: Graphical representation of the definition, analysis, or method of solution of a problem in which symbols are used to represent operations, data, flow, equipment, etc.

4 Data flowchart

Data flowcharts represent the path of data in the solving of a problem and define processing steps as well as the various data media used.

A data flowchart consists of

- a) data symbols to indicate the existence of data; they may also indicate the medium used for this data;
- b) process symbols to indicate the process to be executed on data; they may also indicate the machine function which is used for this process;
- c) line symbols to indicate the data flow between processes and/or data media;
- d) special symbols to facilitate the reading and the writing of the flowchart.

1) At present at the stage of draft. (Revision of ISO 2382/1-1974.)

By definition, process symbols should be preceded and followed by data symbols. A data flowchart begins and ends with data symbols (except special symbols as specified in 9.4).

5 Program flowchart

Program flowcharts represent the sequence of operations in a program.

A program flowchart consists of

- a) process symbols for the actual processing operations including symbols that define the path to be followed taking into account the logical conditions;
- b) line symbols to indicate the flow of control;
- c) special symbols to facilitate the reading and the writing of the flowchart.

6 System flowchart

System flowcharts represent the control of operations and the data flow of a system.

A system flowchart consists of

- a) data symbols to indicate the existence of data; they may also indicate the medium used for this data;
- b) process symbols to indicate the operations to be executed on data, as well as to define the logical path to be followed;
- c) line symbols to indicate data flow between processes and/or data media as well as the control flow between processes;
- d) special symbols to facilitate the reading and writing of the flowchart.

7 Program network chart

Program network charts represent the path of program activations and the interactions to related data. Each program in a program network chart is shown only once, whereas in a system flowchart it may appear in more than one control flow.

A program network chart consists of

- a) data symbols to indicate the existence of data;
- b) process symbols to indicate the operations to be executed on data;

c) line symbols to show the flow between processes and data as well as the activations of processes;

d) special symbols to facilitate the reading and writing of the network charts.

8 System resources chart

System resources charts represent the configuration of data units and process units suitable for the solving of a problem or of a set of problems.

A system resources chart consists of

- a) data symbols to show input, output or storage devices;
- b) process symbols to represent processors, for example, central processing units, channels, etc.;
- c) line symbols to represent the data transfer between data devices and processors and control transfer between processors;
- d) special symbols to facilitate the reading and the writing of the system resources chart.

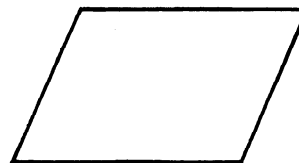
9 Symbols

9.1 Data symbols

9.1.1 Basic data symbols

9.1.1.1 Data

This symbol represents data, the medium being unspecified.



9.1.1.2 Stored data

This symbol represents stored data in a form suitable for processing, the medium being unspecified.



9.1.2 Specific data symbols

9.1.2.1 Internal storage



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