Infotehnoloogia. Programmi keeletarindid ja nende esitusreeglid

Information technology - Program constructs and conventions for their representation

EESTI STANDARDIKESKUS
ESTONIAN CENTRE FOR STANDARDISATION

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 28631:1999 sisaldab Euroopa standardi EN 28631:1993 ingliskeelset teksti.	This Estonian standard EVS-EN 28631:1999 consists of the English text of the European standard EN 28631:1993.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 31.05.1993.	Date of Availability of the European standard is 31.05.1993.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 35.080

Võtmesõnad: computer programs, data processing, programming(computers),

EUROPEAN STANDARD **EN 28631:1993**

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Descriptors: Data processing, Information interchange, computer programs, logical structure, data representation, graphic symbols

English version

Information technology - Program constructs and conventions for their representation (ISO/IEC 8631:1989)

Technologies de l'information - Structures de programmes et normes pour leur représentation (ISO/IEC 8631:1989)

Informationstechnik - Programmkonstrukte und Regeln für ihre Anwendung (ISO/IEC 8631:1989)

This European Standard was approved by CEN on 1993-05-25. CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

The European Standards exist in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CEN

European Committee for Standardization
Comité Européen de Normalisation
Europäisches Komitee für Normung

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

Foreword

On the proposal of the CEN Central Secretariat, the Technical Board has decided to submit the international Standard:

"Information technology - Program constructs and conventions for their representation (ISO/IEC 8631:1989)"

to the formal vote.

The result of the formal vote was positive.

For the time being, this document exists only in English and in French.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by November 1993, and conflicting national standards shall be withdrawn at the latest by November 1993.

In accordance with the CEN/CENELEC Internal Regulations, the following countries are bound to implement this European Standard:

Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

Endorsement notice

The text of this European Standard is identical to the text of the International Standard ISO/IEC 8631:1989 without any modifications.

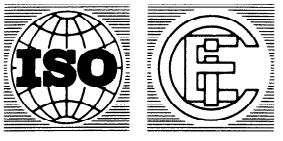
INTERNATIONAL STANDARD

ISO/IEC 8631

Second edition
1989-08-01

Information technology — Program constructs and conventions for their representation

Technologies de l'information — Structures de programmes et normes pour leur représentation



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Contents

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Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) together form a system for worldwide standardization as a whole. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work.

In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1. Draft International Standards adopted by the joint technical committee are circulated to national bodies for approval before their acceptance as International Standards. They are approved in accordance with procedures requiring at least 75 % approval by the national bodies voting.

International Standard ISO/IEC 8631 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*.

This second edition cancels and replaces the first edition (ISO 8631 : 1986), of which it constitutes a minor revision.

Annex A of this International Standard is for information only.

Introduction

It is accepted that a limited number of distinct constructs combined in a well-defined manner is sufficient to express any process. A program is considered to be well-structured if it is built from the constructs contained in this International Standard and follows the rules of combination.

A program may be viewed at several conceptual levels. At any but the lowest level, one construct may be represented as a number of constructs at a lower level.

Information technology — Program constructs and conventions for their representation

1 Scope

This International Standard is concerned with the expression of procedure oriented algorithms. It

a) defines the nature of program constructs;

b) indicates the manner in which constructs can be combined;

c) provides specifications for a set of constructs;

d) permits the definition of a variety of subsets of the defined constructs.

See annex A for symbolic representations.

2 Definition of program construct

A program construct consists of a set of one or more procedure parts and a control part which may be implicit.

Each procedure part consists of one or more operations to be performed or may be null.

The control part determines the manner in which the procedure parts are to be executed. It can consist of a directive and a set of conditions. The control part then activates or de-activates the procedure part(s) depending on the nature of the directive and the values of the conditions. If there is neither directive nor condition, control is called implicit.

3 How constructs may be combined

The only way in which constructs can be combined to build a well-structured program is by replacing a procedure part of one construct by a complete construct.

4 Specification of constructs

4.1 Imperative construct

This construct contains one procedure part and an implicit control part which determines that the procedure part is executed exactly once.

4.2 Serial construct

This construct contains two or more procedure parts and an implicit control part which determines that the procedure parts are to be executed exactly once in the sequence given.

4.3 Parallel construct

This construct consists of two or more procedure parts and a control part which initiates these procedure parts. Execution of the construct is finished when all initiated procedure parts are completely executed.

4.4 Iterative construct

a) Pre-tested iteration

This construct consists of a procedure part and a control part with one condition, the value of which determines whether the procedure part is executed zero or more times.

b) Post-tested iteration

This construct consists of a procedure part and a control part with one condition, the value of which determines whether the procedure part is executed more than once.

c) Continuous iteration

This construct consists of a procedure part and a control part with an implicit condition which specifies that the procedure part will be repeated indefinitely.

4.5 Selective choice construct

a) Monadic selective

This construct consists of a single procedure part and a control part with one condition, the value of which determines whether or not the procedure part is to be executed.

b) Dyadic selective

This construct consists of two procedure parts and a control part with one condition, the value of which determines which one of the two procedure parts is to be executed.