

INTERNATIONAL
STANDARD

ISO
11442-3

First edition
1993-09-01

**Technical product documentation —
Handling of computer-based technical
information —**

Part 3:

Phases in the product design process

*Documentation technique de produits — Gestion des informations
techniques assistée par ordinateur —*

Partie 3: Phases du processus de conception de produits



Reference number
ISO 11442-3:1993(E)

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established 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. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 11442-3 was prepared by Technical Committee ISO/TC 10, *Technical drawings, product definition and related documentation*.

ISO 11442 consists of the following parts, under the general title *Technical product documentation — Handling of computer-based technical information*:

- Part 1: *Security requirements*
- Part 2: *Original documentation*
- Part 3: *Phases in the product design process*
- Part 4: *Document management and retrieval systems*

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International Organization for Standardization
Case Postale 56 • CH-1211 Genève 20 • Switzerland

Printed in Switzerland

Technical product documentation — Handling of computer-based technical information —

Part 3:

Phases in the product design process

1 Scope

This part of ISO 11442 provides guidelines for establishing new routines required for the production of design documentation. The routines apply to manual as well as computer-based design work, but are particularly important when computers are used.

The use of this standard facilitates:

- communication within the company and between different companies;
- quality assurance;
- purchase and development of systems for technical management.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO 11442. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this part of ISO 11442 are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 10209-1:1992, *Technical product documentation — Vocabulary — Part 1: Terms relating to technical drawings: general and types of drawings*.

ISO/TR 10623:1991, *Technical product documentation — Requirements for computer-aided design and draughting — Vocabulary*.

3 Definitions

For the purposes of this part of ISO 11442, the definitions given in ISO 10209-1 apply. Further terminology is given in ISO/TR 10623.

4 Routines

The design process is divided into different phases, shown with their respective computer-aided activities, in accordance with the diagram in figure 1.

The transfer of data from one phase to another shall be made in accordance with established routines adapted to the need of the computer-aided activity. These routines shall be well documented.

4.1 Development phase

The phase in which the actual product development work is carried out is termed the development phase. Several proposals for design solutions may appear in parallel. This may occur without any formal recourse to revision routines.

4.2 Approval phase

In the approval phase, the design solution chosen is formally checked and approved. By this process, the data set is authorized for further handling/processing in the production process. Marking or visible proof of approval shall be made on the original document. This shall be made on the same medium used in the development phase (see also signature document). For further information concerning authorization with respect to different activities in computer-aided design, see ISO 11442-1.

4.3 Distribution phase

When the check/approval phase is completed, issuing and distribution are carried out. Issuing means that the approved original document is transferred to the storage phase, and copies of the different documents generated are sent to subscribers as specified on a Document Issuing List (DIL). The DIL should comprise the subscriber's name and address, the type of medium (paper, aperture card, tape, etc.), together with the relevant number of copies.

4.4 Storage phase

In this phase, the issued documents are stored. From this place of storage, documents are lent to persons authorized to read/copy or revise.

4.5 Revision phase

Issued documents which require any form of revision are transferred from the storage phase to the revision phase. This transfer requires an approved revision order. In computer-aided design, the person responsible for carrying out the transfer shall have the authority to revise the document concerned. When the original document is transferred to the revision phase, a copy

shall remain in the storage phase. This copy shall have a marking showing that the original document has been taken out to be revised. When the revision has been completed, the revised document is transferred to the approval phase and undergoes the same procedure that applies to new documents. Transfer then takes place to the distribution phase where the revised original document is issued and copies are distributed to subscribers by means of the Document Issuing List.

4.6 Phasing out

Phasing out involves removal of the design documents of a product from the storage for active documents to a storage or archive to which access time may be considerable.

For a product which is no longer of interest, a routine for phasing out shall be applied to the technical documentation for that product. This routine is based on an approved phasing-out plan, in which the product in question is evaluated. A routine shall be created to inform subscribers of such phasing out. The possibility of retrieval of relevant documents at a low degree of priority in any future repair/revision activities should be taken fully into account.

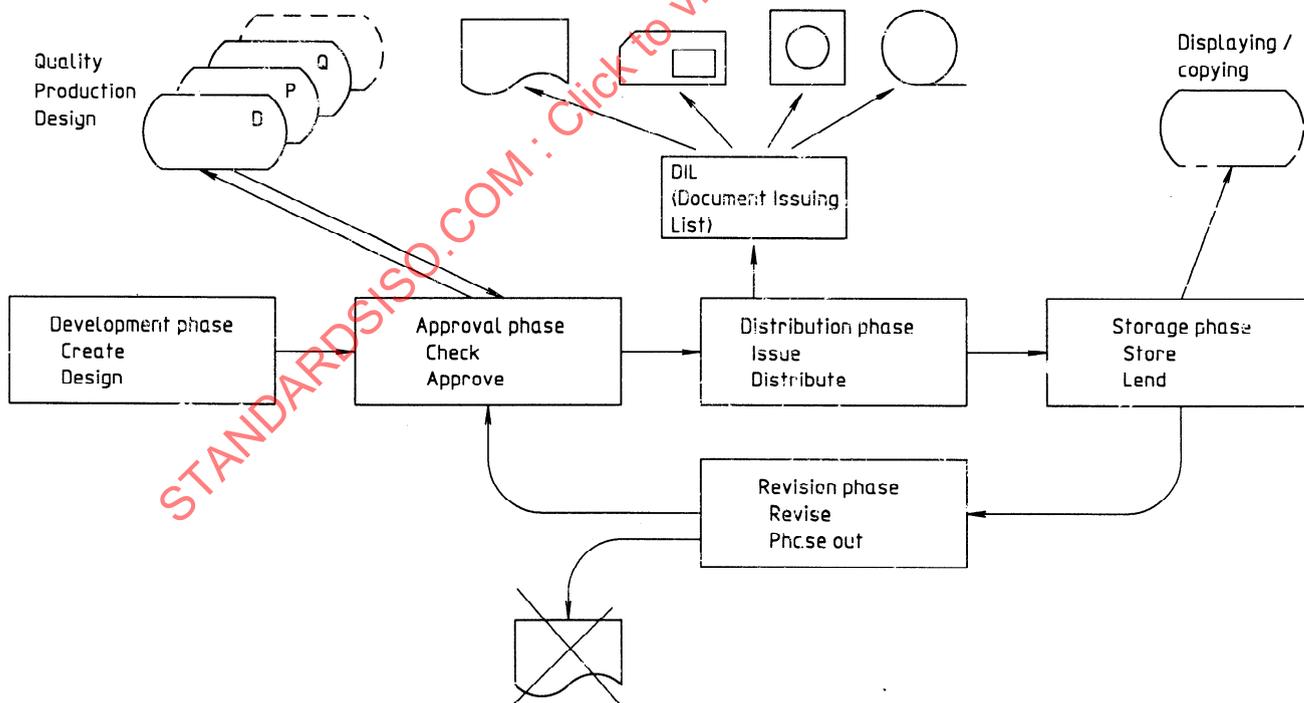


Figure 1 — Design process

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