# SVENSK STANDARD
# SS-ISO 12637-1:2007

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## Grafisk teknik – Ordlista –
## Del 1: Grundläggande termer (ISO 12637-1:2006, IDT)

## Graphic technology – Vocabulary –
## Part 1: Fundamental terms (ISO 12637-1:2006, IDT)

**Swedish Standards Institute**

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Den internationella standarden ISO 12637-1:2006 gäller som svensk standard. Detta dokument innehåller den officiella engelska versionen av ISO 12637-1:2006.

The International Standard ISO 12637-1:2006 has the status of a Swedish Standard. This document contains the official English version of ISO 12637-1:2006 .

Upplysningar om sakinnehållet i standarden lämnas av SIS, Swedish Standards Institute, telefon 08-555 520 00.
Standarder kan beställas hos SIS Förlag AB som även lämnar allmänna upplysningar om svensk och utländsk standard.

Information about the content of the standard is available from the Swedish Standards Institute (SIS), tel +46 8 555 520 00.
Standards may be ordered from SIS Förlag AB, who can also provide general information about Swedish and foreign standards.

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# 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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. 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.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 12637-1 was prepared by Technical Committee ISO/TC 130, *Graphic technology*.

ISO 12637 consists of the following parts, under the general title *Graphic technology — Vocabulary*:

— *Part 1: Fundamental terms*

— *Part 5: Screen printing terms*

The following parts are under preparation:

— *Part 2: Prepress terms*

— *Part 3: Printing terms*

— *Part 4: Postpress terms*

# Introduction

Documentation gives rise to numerous international exchanges of both intellectual and material nature. These exchanges often become difficult, either because of the great variety of terms used in various fields or languages to express the same concept, or because of the absence of, or the imprecision of, useful concepts.

To avoid misunderstandings due to this situation and to facilitate such exchanges, it is advisable to select terms to be used in various languages or in various countries to express the same concept, and to establish definitions providing satisfactory equivalents for the various terms in different languages.

The purpose of this part of ISO 12637 is to provide definitions in English that are rigorous, uncomplicated and which can be understood by all concerned. The scope of each concept defined has been chosen to provide a definition that is suitable for general application within graphic technology. Graphic technology includes the processes of design through the final printed product. In those circumstances, where a restricted application is concerned, the definition may need to be more specific. Additional definitions are included where necessary to exemplify the terms shown in Figure 1.

The intention of this part of ISO 12637 is to define fundamental terminology due to the enormous changes brought about by digital processes/methods within the graphic field.

Present technology is addressed to traditional printing systems and processes while the model proposed in the following pages contemplates the peculiarities of the new technologies as well.

Graphic technology has been divided into three workflow stages: prepress, printing and postpress.

In prepress, analog and digital technologies begin with original design concepts and end up with the preparation of image carriers that can be validated by proofing.

The distinction between reprographic and printed copies of original images, based mainly on qualitative criteria, has been substituted by the presumption that all graphic original reproduction methods can be considered printing processes.

With a view to creating a structure that can include all present graphic systems and processes/methods and adapt itself to the needs of future technologies, without becoming rapidly obsolete, ISO 12637 separated printing systems into three groups according to the techniques employed in each and every one and established parameters so as to determine the relationships of the various processes/methods to their respective systems.

The first group, called "forme-based printing technology", includes the so called traditional or conventional processes/methods that use inked formes to reproduce original images onto substrates.

The second group, called "formeless printing technology", dispenses with those specific image carriers and uses ink-jet, thermal-transfer and electrographic systems to reproduce original images onto substrates.

The third group, named "inkless printing technology", does away with image carriers and printing inks and employs specially prepared substrates and chemical or physical reactions produced by various ways of applied energy to reproduce original images on their surface.

In the postpress stage of this part of ISO 12637, finishing is considered a technology, whose systems are responsible for the general surface properties of blank and printed substrates and their definite sizes.

Converting is viewed as a technology whose systems are capable of transforming the purely physical form of blank and printed substrates into consumer products.

The fundamental terms deal specifically with the workflow stages of graphic technology and its final product, hard-copy printed matter. Digital processes/methods and virtual images are considered only as intermediate by-products.
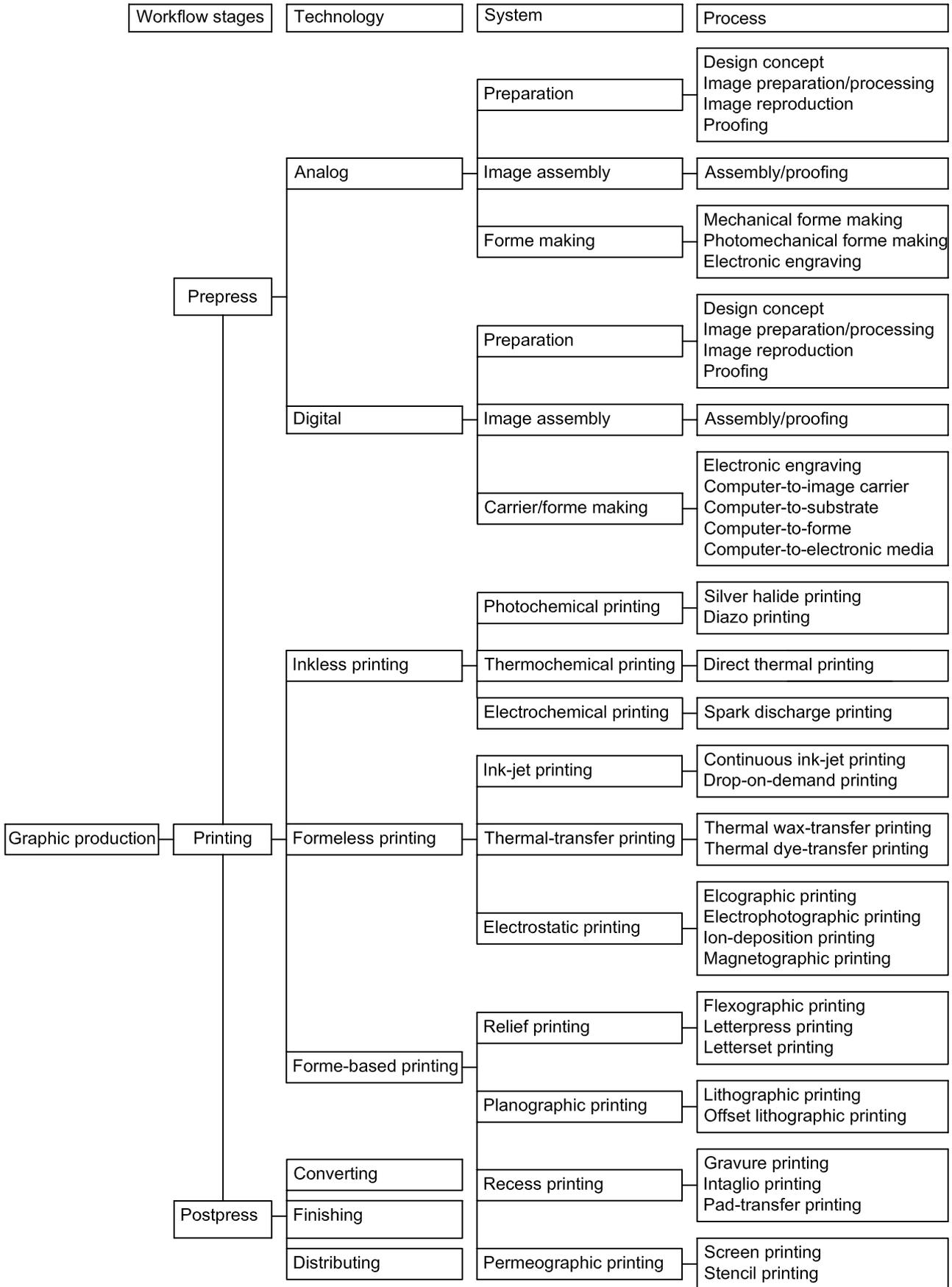
| Workflow stages | Technology | System | Process |
|---|---|---|---|
| | | Preparation | Design concept<br>Image preparation/processing<br>Image reproduction<br>Proofing |
| | Analog | Image assembly | Assembly/proofing |
| | | Forme making | Mechanical forme making<br>Photomechanical forme making<br>Electronic engraving |
| Prepress | | Preparation | Design concept<br>Image preparation/processing<br>Image reproduction<br>Proofing |
| | Digital | Image assembly | Assembly/proofing |
| | | Carrier/forme making | Electronic engraving<br>Computer-to-image carrier<br>Computer-to-substrate<br>Computer-to-forme<br>Computer-to-electronic media |
| | | Photochemical printing | Silver halide printing<br>Diazo printing |
| | Inkless printing | Thermochemical printing | Direct thermal printing |
| | | Electrochemical printing | Spark discharge printing |
| | | Ink-jet printing | Continuous ink-jet printing<br>Drop-on-demand printing |
| Graphic production → Printing | Formeless printing | Thermal-transfer printing | Thermal wax-transfer printing<br>Thermal dye-transfer printing |
| | | Electrostatic printing | Elcographic printing<br>Electrophotographic printing<br>Ion-deposition printing<br>Magnetographic printing |
| | | Relief printing | Flexographic printing<br>Letterpress printing<br>Letterset printing |
| | Forme-based printing | Planographic printing | Lithographic printing<br>Offset lithographic printing |
| Converting | | Recess printing | Gravure printing<br>Intaglio printing<br>Pad-transfer printing |
| Postpress | Finishing | | |
| | Distributing | Permeographic printing | Screen printing<br>Stencil printing |

**Figure 1 — Structure of fundamental terms**

# Graphic technology — Vocabulary —

# Part 1:
# Fundamental terms

## Scope

This part of ISO 12637 defines a set of fundamental terms that can be used in the drafting of other International Standards for graphic technology. In order to facilitate their translation into other languages, the definitions are worded so as to avoid, where possible, any peculiarity attached to one language. The entries in this part of ISO 12637 are arranged alphabetically.

## Terms and definitions

**1**
**analog technology**
representation, transmission and reproduction of visual data in unbroken succession, such as in continuous-tone art, films and photographic images

NOTE   In common practice, analog processes (sometimes called conventional processes) are differentiated from digital methods, as their original images are computed and written only once to produce reuseable physical carriers in forme-based printing technology.

**2**
**assembly**
⟨analog⟩ prepress process used to join photographic negatives or positives of individual image elements into film flats following layout and imposition directives to reproduce images in forme-based printing technology

**3**
**assembly**
⟨digital⟩ prepress process used to place all original texts and illustrative material in their proper position according to layout directives, within a digital page file to reproduce images by forme-based, formeless, and inkless printing technologies

**4**
**computer to electronic media**
process in which computers store original image data for reproduction onto any kind of substrate

**5**
**computer to forme**
process in which computers interface with printing formes to reproduce original images onto substrates

**6**
**computer to image carrier**
process in which computers interface with image carriers to reproduce original images onto substrates

**7**
**computer to substrate**
process in which computers interface with substrates to reproduce original images onto their surfaces

**8**
**continuous ink-jet printing**
formeless process using high-frequency vibrations to break up a stream of liquid ink into electrostatically charged droplets deflected and positioned by electric fields controlled by digital data, to reproduce images directly onto a substrate

**9**
**converting**
technology using systems including die-cutting, gluing, binding and other methods, to create consumer products other than plain blank or printed substrates

**10**
**design concept**
prepress process used to convert a visual message addressed to a target audience into an original, following briefing directives and the requirements of graphic production

**11**
**diazo printing**
inkless photochemical process using substrates, coated with non-silver light sensitive compounds, and exposed by ultraviolet illumination through transparencies of image areas, that are developed either by heat or by ammonia vapours

**12**
**digital technology**
representation, transmission and reproduction of visual data in discrete steps, such as in half-tone art, films and photographic images

NOTE   In common practice, digital processes are differentiated from analog methods as the number of times their original images are computed and rewritten is identical with the number of their printed copies, reproduced in forme-based, formeless, and inkless technologies.

**13**
**direct printing**
image transfer from an image carrier to a substrate

**14**
**distributing**
technology using systems used to label, wrap and transfer printed products to their destination, employing on-line or off-line processes

**15**
**drop-on-demand printing**
formeless process using mechanisms controlled by digital data, to expel only the ink droplets required to reproduce image areas onto a substrate

**16**
**elcographic printing**
formeless process that uses an electrolytic mechanism controlled by digital data, to coagulate polymeric inks and develop original images on a cylinder that transfers them onto substrates by cold pressure

**17**
**electrochemical printing**
system using chemical reactions induced by electrical energy controlled by digital data, to reproduce images from digital data onto specially coated substrates using processes such as spark discharge printing

**18**
**electronic engraving**
process that uses optical or mechanical means to generate image and non-image areas onto relief or recess printing formes