

INTERNATIONAL
STANDARD

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9637-1

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**Information technology — Computer
graphics — Interfacing techniques for
dialogues with graphical devices (CGI) —
Data stream binding —**

Part 1:
Character encoding

*Technologies de l'information — Infographie — Techniques
interfaciales de dialogues avec dispositifs graphiques (CGI) — Liaison
de courant D —*

Partie 1: Codage des caractères



Reference number
ISO/IEC 9637-1:1994(E)

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Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. 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 voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

International Standard ISO/IEC 9637-1 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Sub-Committee SC 24, *Computer graphics and image processing*, in collaboration with the European Computer Manufacturers Association (ECMA) and the European Conference of Postal and Telecommunications Administration (CEPT).

ISO/IEC 9637 consists of the following parts, under the general title *Information technology — Computer graphics — Interfacing techniques for dialogues with graphical devices (CGI) — Data stream binding*:

- *Part 1: Character encoding*
- *Part 2: Binary encoding*
- *Part 3: Clear text encoding*

Annexes A and B of this part of ISO/IEC 9637 are for information only.

Introduction

0.1 Purpose of the character encoding

The character encoding of the Computer Graphics Interface (CGI) provides a data stream representation of the CGI function syntax intended for situations in which it is important to minimize the size of the encoded data or transmit the data through character-oriented communications services. The encoding uses compact representation of data that is optimized for storage or transfer between computer systems.

If minimizing the processing overhead is more important than data compaction, an encoding such as the binary encoding contained in ISO/IEC 9637-2 may be more appropriate.

0.2 Objectives

This encoding was designed with the following objectives:

- a) *regular syntax*: All CGI functions are encoded in a uniform way so that parsing the encoded data is simple;
- b) *compactness*: the encoding provides a highly compact data stream, suitable for systems with restricted storage capacity or transfer bandwidth;
- c) *extensibility*: the encoding allows for future extensions;
- d) *transportability*: the encoding is suitable for use with transport mechanisms designed for character-oriented data based on a standard national character set derived from ISO/IEC 646.

0.3 Relationship to other International Standards

The character encoding has been developed in collaboration with the ISO/IEC JTC1/SC2. The encoding conforms to the rules for code extension specified in ISO 2022 in the category of complete coding system.

The representation of character data in this part of ISO/IEC 9637 follows the rules of ISO/IEC 646 and ISO 2022.

For certain functions, ISO/IEC 9636 defines value ranges as being reserved for registration. The values and their meanings will be defined using the established registration procedures (see ISO/IEC 9636-1).

This encoding is based on that for the Computer Graphics Metafile ISO/IEC 8632-2. Wherever possible, the opcodes and parameter representations of CGM elements have been followed.

Information technology — Computer graphics — Interfacing techniques for dialogues with graphical devices (CGI) — Data stream binding —

Part 1:

Character encoding

1 Scope

This part of ISO/IEC 9637 specifies a character encoding of the Computer Graphics Interface. For each of the functions specified in ISO/IEC 9636 an encoding is specified.

This encoding of the Computer Graphics Interface provides a highly compact representation of the data, suitable for applications that require the data to be of minimum size and suitable for transmission with character-oriented transmission services.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this part of ISO/IEC 9637. At the time of publication the editions indicated were valid. All standards are subject to revision, and parties to agreements based to this part of ISO/IEC 9637 are encouraged to investigate the possibility of applying the most recent editions of the standards listed below. Members of ISO and IEC maintain registers of currently valid international standards.

- ISO/IEC 646:1991, *Information technology — ISO 7-bit coded character set for information interchange.*
- ISO 2022:1986, *Information processing — ISO 7-bit and 8-bit coded character sets — Coded extension techniques.*
- ISO 2375:1985, *Data processing — Procedure for registration of escape sequences.*
- ISO/IEC 6429:1992, *Information technology — Control functions for coded character sets.*
- ISO 7942:1985, *Information processing systems — Computer graphics — Graphical Kernel System (GKS) functional description.*
- ISO/IEC 8632-2:1992, *Information technology — Computer graphics — Metafile for the storage and transfer of picture description information — Part 2 : Character encoding.*
- ISO/IEC 9636-1:1991, *Information technology — Computer graphics — Interfacing techniques for dialogues with graphical devices (CGI) — Functional specification — Part 1: Overview, profiles and conformance.*
- ISO/IEC 9636-2:1991, *Information technology — Computer graphics — Interfacing techniques for dialogues with graphical devices (CGI) — Functional specification — Part 2: Control.*
- ISO/IEC 9636-3:1991, *Information technology — Computer graphics — Interfacing techniques for dialogues with graphical devices (CGI) — Functional specification — Part 3: Output.*
- ISO/IEC 9636-4:1991, *Information technology — Computer graphics — Interfacing techniques for dialogues with graphical devices (CGI) — Functional specification — Part 4: Segments.*
- ISO/IEC 9636-5:1991, *Information technology — Computer graphics — Interfacing techniques for dialogues with graphical devices (CGI) — Functional specification — Part 5: Input and echoing.*
- ISO/IEC 9636-6:1991, *Information technology — Computer graphics — Interfacing techniques for dialogues with graphical devices (CGI) — Functional specification — Part 6: Raster.*
- ISO/IEC 9637-2:1992, *Information technology — Computer graphics — Interfacing techniques for dialogues with graphical devices (CGI) — Data stream binding — Part 2: Binary encoding.*
- ISO/IEC TR 9973:1988, *Information processing — Procedures for Registration of Graphical Items.*
- ECMA 96, *Graphics Data Syntax for a multiple Workstation Interface.*
- CEPT, *Rev. of T/CD 6.1 Videotex Presentation Layer Data Syntax.*