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COMPUTER GRAPHICS—METAFILE FOR THE STORAGE AND TRANSFER OF PICTURE DESCRIPTION INFORMATION

Part 2—CHARACTER ENCODING

(ISO Title: Information processing systems—Computer graphics—Metafile for the storage and transfer of picture description information—Part 2: Character encoding)

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Australian Association of Permanent Building Societies
Australian Bankers' Association
Australian Bureau of Statistics
Australian Computer Equipment Manufacturers Association
Australian Computing Services Association
Australian Computer Users Association
Australian Information Industry Association
Canberra College of Advanced Education
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Department of Industry, Technology and Commerce
Latrobe University
Life Insurance Federation of Australia
Public Service Board, N.S.W.
Telecom Australia
University of Technology, Sydney

AUSTRALIAN STANDARD

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(ISO Title: Information processing systems—Computer graphics—Metafile for the storage and transfer of picture description information—Part 2: Character encoding)

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PREFACE

This Standard was prepared by the Association's Committee on Information Processing Systems in response to rapid developments and growth of interest in computer related graphics. It is identical with, and has been reproduced from, International Standard ISO 8632-2:1987, drawn up by ISO TC 97, Information Processing Systems.

The computer graphics metafile provides a file format suitable for the storage and retrieval of picture information. The file format consists of a set of elements that can be used to describe pictures in a way that is compatible between systems of different architectures and devices of different capabilities and design.

For the purpose of this Australian Standard, the text of the ISO Standard should be modified as follows:

(a) *Terminology*—The words 'Australian Standard' should replace the words 'International Standard' wherever they apply.

(b) *Cross-reference*—The references to International Standards should be replaced by reference to Australian Standards as follows:

Reference to International Standards		*Relevant Australian Standard*	
ISO		AS	
646	Information processing—ISO 7-bit coded character set for information interchange	1776	Information processing—7-bit coded character set for information interchange
2022	Information processing—ISO 7-bit and 8-bit coded character sets—Code extension techniques	1953	Information processing—ISO 7-bit and 8-bit coded character sets—Code extension techniques
6429	Information processing—7-bit and 8-bit coded character sets—Additional control functions for character-imaging devices	2761	Information processing—7-bit and 8-bit coded character sets—Additional control functions for character-imaging devices

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0 Introduction

0.1 Purpose of the character encoding

The Character Encoding of the Computer Graphics Metafile (CGM) provides a representation of the Metafile syntax intended for situations in which it is important to minimize the size of the metafile or transmit the metafile 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 8632/3 may be more appropriate. If human readability is the most important criterion, an encoding such as the Clear Text Encoding in ISO 8632/4 may be more appropriate.

0.2 Objectives

This encoding was designed with the following objectives:

a) regular syntax: All elements of the metafile should be encoded in a uniform way so that parsing the metafile is simple;

b) compactness: The encoding should provide a highly compact metafile, suitable for systems with restricted storage capacity or transfer bandwidth;

c) extensibility: the encoding should allow for future extensions;

d) transportability: the encoding should be suitable for use with transport mechanisms designed for character-oriented data based on a standard national character set derived from ISO 646.

0.3 Metafile characteristics

Each CGM command follows a simple regular syntax. Thus, new commands can be added in a future revision of ISO 8632 such that existing CGM interpreters can recognize (and ignore) the new commands. Also, new operands can be added to existing commands in the future revision of the standard such that existing CGM interpreters can recognize (and ignore) the additional operands.

Each CGM operand follows a simple regular syntax. Operands are variable in length. This permits small values to be represented by the smallest number of bytes.

A certain range of operand values of standard commands have been reserved for private use; the remaining range is either standardized or reserved for future standardization.

0.4 Relationship to other International Standards

The Character Encoding has been developed in collaboration with the ISO subcommittee responsible for character sets and coding, ECMA, and CEPT. 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 ISO 8632/2 follows the rules of ISO 646 and ISO 2022.

For certain elements, the CGM defines value ranges as being reserved for registration. The values and their meanings will be defined using the established procedures (see ISO 8632/1, sub-clause 4.11.)

0.5 Status of annex

The annex does not form an integral part of this part of ISO 8632/2 but is included for information only.