IEEE Std 1224/1327/1224.1/INT
March 1994 Edition

IEEE Standards Interpretations for IEEE Std 1224-1993 IEEE Std 1327-1993 and IEEE Std 1224.1-1993

Sponsor

Portable Applications Standards Committee of the IEEE Computer Society

Abstract: The Portable Applications Standards Committee of the IEEE Computer Society carried out a series of analyses of various problems encountered by users of IEEE Std 1224-1993, IEEE Standard for Information Technology—Open Systems Interconnection (OSI) Abstract Data Manipulation—Application Program Interface (API); IEEE Std 1327-1993, IEEE Standard for Information Technology—Open Systems Interconnection (OSI) Abstract Data Manipulation C Language Interfaces—Binding for Application Program Interface (API); and IEEE Std 1224.1-1993, IEEE Standard for Information Technology—X.400-Based Electronic Messaging—Application Program Interface (API). The results of its deliberations are presented in this document. The intent is to give the 1224 community reasonable ways of interpreting unclear portions of these standards.

Keywords: computer, computer environments, interfaces, interpretations, OM API, OSI, X.400

The Institute of Electrical and Electronics Engineers, Inc.
345 East 47th Street, New York, NY 10017-2394, USA

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IEEE Standards Interpretations

Occasionally, questions may arise regarding the meaning of portions of standards as they relate to specific applications. Such requests for interpretations should ask for clarifications of the exact nature of the contents of the standard.

Questions relating to such interpretations are reviewed and evaluated by a balance of members representing the specific committee interests. This officially formed interpretations subgroup creates and circulates a draft interpretation among its members. It transmits a final interpretation to the party initiating the request only after consensus has been achieved. The interpretation is also given to the standards-developing committee to consider addressing it in a supplement or the next revision to the standard.

Interpretations are issued to explain and clarify the intent of the standard and are not intended to constitute an alteration to the original standard or to supply consulting information. The interpretations subgroup cannot make new rules to fit situations not yet covered in the standard, even if the investigations of the subgroup lead it to conclude that the requirement is incomplete or in error. Changes to the standard are made only through revisions or supplements to the standard.

It is recognized that requests are frequently received that are partially or totally requests for information rather than requests for an interpretation. It is inappropriate to issue an official interpretation to answer such requests. The interpretations subgroup may, however, find from its research that the literal printing of the standards text is not identical to that approved by the standards developers and may issue an editorial correction as a part of its interpretation.

The original interpretations requests in this document have been lightly edited to remove extraneous matter and to focus on the problem presented. Some illustrations have been redrawn for publication. With these exceptions, requests are in the form received.

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Procedure for Requesting an Interpretation

Requests for interpretations should be addressed to

Secretary, IEEE Standards Board
IEEE Standards Department
445 Hoes Lane
P.O. Box 1331
Piscataway, NJ 08855-1331

Requests for interpretations should include

a) The specific designation of the standard, including the year of publication.
b) The specific subclause being questioned.
c) The applicable conditions for the case in question.

Line drawings should be black ink or excellent black pencil originals. Photos should be black-and-white glossy prints. These illustrations must be reproduced for committee circulation and eventually will be used to supplement the text of the next edition. Clear diagrams and pictures will make the work of interpretation easier and more valuable to users.

Requests, including all supplementary material, must be in a form that is easily reproducible. If suitable for consideration, requests will be sent to the interpretations subgroup. After consideration by the subcommittee, which may involve many exchanges of correspondence, the inquirer will be notified of the decision of the subgroup. Decisions will be published from time to time in cumulative form and may be ordered from the IEEE.

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Introduction

After approval and publication of a standard, questions may arise regarding the meaning of portions of standards as they relate to users of the standard. In the case of IEEE Std 1224-1993, IEEE Std 1327-1993, and IEEE Std 1224.1-1993, these questions arose from both system implementors and application authors. When a need for interpretation is brought to the attention of the IEEE, the Institute initiates action to prepare appropriate responses.

IEEE Std 1224-1993 (the OM API), IEEE Std 1327-1993, and IEEE Std 1224.1-1993 were developed by the Portable Applications Standards Committee (PASC) of the IEEE Computer Society. IEEE Std 1327-1993 is a C language binding to the content of IEEE Std 1224-1993. Each interpretation request is forwarded to the members of the PASC interpretations group and a subgroup is invited to generate a draft interpretation for review. The draft interpretation is made available to the whole interpretations group for review and comment. When consensus has been reached within the interpretations group, the IEEE transmits the final interpretation to the party initiating the request.

It is recognized that requests are frequently received that are partially or totally requests for information rather than requests for interpretation. The IEEE considers it inappropriate to issue an official interpretation to answer such requests. This includes requests for advice as to the means by which particular facilities described in the standard could be implemented.

Every IEEE standard is subjected to review at least every five years for revision or reaffirmation. The revision process takes input from a wide variety of sources in order to develop a revised standard. One of these sources is the interpretations that have been issued against the extant version of the standard. It is not to be expected that the text of the interpretation will appear in the revised standard, but rather that the revision will address the issues raised by the interpretation request through the consensus process. The revision process is allowed to resolve ambiguities in the original standard through textual change; this capability is not allowed within the interpretations process.

This document contains a compilation of all of the interpretations completed against IEEE Std 1224-1993, IEEE Std 1327-1993, and IEEE Std 1224.1-1993 as of February 1994. The IEEE will provide details of interpretation requests received that have not yet appeared in a publication. Where a formal interpretation has been completed, this will include the text of the interpretation.

At the time that this compilation of interpretations was published, the following members had participated in the IEEE Std 1224-1993/IEEE Std 1224.1-1993 interpretations group:

Portable Applications Standards Committee

Chair:	Jim Isaak
Vice-Chair, Interpretations:	Andrew Josey

Charles Hammons	Graham Jack	Jim Sides
Chris Harding	Ed Owens	Alec Tashjian
Khiem Ho	Pierre Perret	Trevor John Thompson

Mary Lynne Nielsen
IEEE Standards Project Editor

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Interpretations for

IEEE Std 1224-1993

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Interpretation Number: 1
Topic: Meaning of Value Length
Relevant Clauses: 4.5
Classification: Editorial defect

Interpretation request

In general, IEEE Std 1224-1993 defines the term "value length" to mean:

- The number of bits in a bit string
- The number of octets in an octets string
- The number of characters in a characters string

For the purposes of discussion, this definition is termed the "elements definition" of Value Length.

At a late stage in the development process, the description of the class definition table heading Value Length, given in 4.5, was modified to read:

> under the heading **Value Length**, any constraints upon the number of octets in each value that is a string.

For the purposes of discussion, this definition is termed the "storage definition" of Value Length. This definition conflicts with the text later in the same section, defining the conditions for minimal consistency, the description of the String syntax given in 5.4, and the description of the om_value_length_type datatype given in 6.2.26, all of which align with the elements definition of Value Length given above.

Please identify the correct definition of the term Value Length and the meaning of the column of that name in OM Class tables.

Interpretation for IEEE Std 1224-1993

The meaning of the Value Length column of a class definition table is the "elements definition" one. That is, the number of bits in a bit string, the number of octets in an octet string, or the number of characters in a character string.

The alternative "storage definition" given in 4.5 is an editorial defect that should be corrected in a future edition of the standard.

Rationale for interpretation

It is the belief of the 1224 interpretations group that the referenced text was modified incorrectly during the ballot procedure.

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