



INTERNATIONAL STANDARD ISO/IEC 9945-3:2003
TECHNICAL CORRIGENDUM 1

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INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION
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Information technology — Portable Operating System Interface (POSIX®) —

Part 3: Shell and Utilities

TECHNICAL CORRIGENDUM 1

Technologies de l'information — Interface pour la portabilité des systèmes (POSIX®) —

Partie 3: Enveloppe et services

RECTIFICATIF TECHNIQUE 1

Technical Corrigendum 1 to ISO/IEC 9945-3:2003 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 22, *Programming languages, their environments and system software interfaces*.

1 Scope

This technical corrigendum addresses issues raised in defect reports and interpretation requests submitted up to 14 August 2003, and that meet all of the following criteria:

- a. They are in the scope of the approved International Standard.
- b. They contain no new APIs (functions/utilities), however, they may add enumeration symbols, non-function # defines, and reserve additional namespaces.
- c. They address contradictions between different parts of the International Standard, or add consistency between it and overriding International Standards, or address security-related problems.

2 Changes to ISO/IEC 9945-3

Change Number: XCU/TC1/1 [XBD ERN 20]

On Page: xxxii Line: "ISO/IEC 8859" Section: Referenced Documents

Add after line starting "Part 10":

"Part 11: Latin/Thai Alphabet"

Add after line starting "Part 15":

"Part 16: Latin Alphabet No. 10"

Change Number: XCU/TC1/2 [XCU ERN 29]

On Page: 5 Line: 139-150,170 Section: 1.7.1.4

In Table 1-1, change the dash (-) entries to letter "U" on lines 140, 141 and 150 (rows for types B, C and T respectively).

Change all the dash (-) entries in the T column to letter "U".

Add after line 170

"U The effect is unspecified unless specified by the utility description."

Change Number: XCU/TC1/3 [XRAT ERN 2]

On Page: 41 Line: 1704 Section: 2.6.4

Add a new paragraph before the existing paragraph that commences "As an extension, the shell may recognize arithmetic expressions beyond those listed...":

"All changes to variables in an arithmetic expression shall be in effect after the arithmetic expansion, as in the parameter expansion \${x=value}.

If the shell variable x contains a value that forms a valid integer constant then the arithmetic expansions \$((x)) and \$((x)) shall return the same value."

Change Number: XCU/TC1/4 [XCU ERN 17]

On Page: 48 Line: 1986-1990 Section: 2.9.1.1

In Section 2.9.1.1 Command Search and Execution

Change From:

"If the `execve()` function fails due to an error equivalent to the [ENOEXEC] error defined in the System Interfaces volume of IEEE Std 1003.1-2001, the shell shall execute a command equivalent to having a shell invoked with the command name as its first operand, with any remaining arguments passed to the new shell."

To:

"If the `execve()` function fails due to an error equivalent to the [ENOEXEC] error defined in the System Interfaces volume of IEEE Std 1003.1-2001, the shell shall execute a command equivalent to having a shell invoked with the pathname resulting from the search as its first operand, with any remaining arguments passed to the new shell, except that the value of \$0 in the new shell may be set to the command name."

Change Number: XCU/TC1/5 [XCU ERN 30]

On Page: 212 Line: 8323-8324 Section: c99

In the OPTIONS section

Change From:

"If a directory specified by the -L option contains files named `libc.a`, `libm.a`, `libl.a`, or `liby.a`, the results are unspecified."

To:

"If a directory specified by the -L option contains files with names starting with any of the strings `"libc."`, `"libl."`, `"libpthread."`, `"libm."`, `"librt."`, `"libtrace."`, `"libxnet."`, or `"liby."`, the results are unspecified."

Change Number: XCU/TC1/6 [XCU ERN 19]

On Page: 215,218 Line: 8466-8467,8583-8588 Section: c99

In the EXTENDED DESCRIPTION section, Programming Environments

Change From:

`"shall be output by a getconf command using the _POSIX_V6_WIDTH_RESTRICTED_ENVS argument."`

To:

`"shall be output by a getconf command using the POSIX_V6_WIDTH_RESTRICTED_ENVS argument, as a <newline>-separated list of names suitable for use with the getconf -v option."`

(Note the removed leading underscore on POSIX_V6_WIDTH_RESTRICTED_ENVS.)

In the EXAMPLES section

Change From:

`"# ... if there are no additional constraints, the first one will do:``CENV=$(getconf _POSIX_V6_WIDTH_RESTRICTED_ENVS | head -n 1)``# ... or, if an environment that supports large files is preferred,``# look for names that contain "OFF64" or "OFFBIG". (This chooses``# the last one in the list if none match.)``for CENV in $(getconf _POSIX_V6_WIDTH_RESTRICTED_ENVS) "`

To:

`"# ... if there are no additional constraints, the first one will do:``CENV=$(getconf POSIX_V6_WIDTH_RESTRICTED_ENVS | head -n 1)``# ... or, if an environment that supports large files is preferred,``# look for names that contain "OFF64" or "OFFBIG". (This chooses``# the last one in the list if none match.)``for CENV in $(getconf POSIX_V6_WIDTH_RESTRICTED_ENVS)``"`

Rationale:

This change corrects the name of the variable not to include the underscore.

Change Number: XCU/TC1/7 [XCU ERN 33]

On Page: 343 Line: 13238-13240,13451 Section: ed

In the EXTENDED DESCRIPTION section (List command)

Delete the sentence:

`"If the size of a byte on the system is greater than nine bits, the format used for non-printable characters is implementation-defined."`

In the RATIONALE section:

Change From:

`"Systems with bytes too large to fit into three octal digits must devise other means of displaying non-printable characters. Consideration was given to requiring that the number of octal digits be large enough to hold a byte, but this seemed to be too confusing for applications on the vast majority of systems where three digits are adequate. It would be theoretically possible for the application to use the getconf utility to find out the CHAR_BIT value and deal with such an algorithm; however, there is really no portable way that an application can use the octal values of the bytes across various coded character sets, so the additional specification was not worthwhile."`

To:

`"Prior versions of this standard allowed for implementations with bytes other than eight bits, but this has been modified in this version."`

Change Number: XCU/TC1/8 [XCU ERN 31]

On Page: 370 Line: 14333-14334 Section: ex

In the EXTENDED DESCRIPTION section

Change From:

"Implementations may restrict the set of characters accepted in lhs or rh, except that printable characters and <blank>s shall not be restricted. Additional restrictions shall be implementation-defined."

To:

"Implementations may restrict the set of characters accepted in lhs or rhs, except that printable characters and <blank>s shall not be restricted. Additional restrictions shall be implementation-defined."

Note to editor: The change is from "rh" to "rhs".

Change Number: XCU/TC1/9 [XCU ERN 33]

On Page: 380 Line: 14705-14709,16154 Section: ex

In the EXTENDED DESCRIPTION section (Print command)

Delete the sentence:

"If the size of a byte on the system is greater than 9 bits, the format used for non-printable characters is implementation-defined."

Add to the RATIONALE section:

"Prior versions of this standard allowed for implementations with bytes other than eight bits, but this has been modified in this version."

Change Number: XCU/TC1/10 [XCU ERN 26,28]

On Page: 447-448 Line: 17290-17292,17297-17300,17317-17322 Section: file

On lines 17290-17292

Change From:

"The type shall consist of the type specification characters c, d, f, s, and u, specifying character, signed decimal, floating point, string, and unsigned decimal, respectively."

To:

"The type shall consist of the type specification characters d, s, and u, specifying signed decimal, string, and unsigned decimal, respectively."

On lines 17297-17300

Change From:

"The type specification characters d, f, and u can be followed by an optional unsigned decimal integer that specifies the number of bytes represented by the type. The type specification character f can be followed by an optional F, D, or L, indicating that the value is of type float, double, or long double, respectively."

To:

"The type specification characters d and u can be followed by an optional unsigned decimal integer that specifies the number of bytes represented by the type."

On lines 17317-17322

Delete the paragraph:

"For the type specifier f, the default number of bytes shall correspond to the number of bytes in the basic double precision floating-point data type of the underlying implementation. The implementation shall support values of the optional number of bytes to be converted corresponding to the number of bytes in the C-language types float, double, and long double. These numbers can also be specified by an application as the characters F, D, and L, respectively."

Change Number: XCU/TC1/11 [XCU ERN 27]

On Page: 447-448 Line: 17280 Section: file

In the EXTENDED DESCRIPTION section

On line 17280

Change From:

"Each line shall be composed of the following four <blank>-separated fields:"

To:

"Each line shall be composed of the following four <tab>-separated* fields:

Footnote:* Implementations may allow any combination of one or more white space characters other than <newline> to act as field separators."

On lines 17336-17341

Change From:

"\character