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Section 2: Revisions to Terminology and General Requirements

Editor's Note: This section is new for Draft 3. It is not further diff-marked.

Editor's Note: The following material on symbolic links is related to P1003.1a/D5; the definition is from that draft verbatim. All of the symbolic link material in this and later sections is contingent on P1003.1a being approved before P1003.2b; if it is not, all of this may be put into an informative annex. When P1003.1a is approved, a number of the P1003.2 definitions copied from POSIX.1 {8} will be updated automatically.

2.2.2 General Terms

⇒ **2.2.2 General Terms.** *Modify the contents of subclause 2.2.2, General Terms, to add the following definitions in the correct sorted order [disregarding the subclause numbers shown here].*

2.2.2.201 symbolic link: A type of file that contains a pathname.

The pathname is interpolated into a pathname being resolved, during pathname resolution, to create a new pathname when it is encountered. [P1003.1a/D5]

2.9.2 Pathname Resolution

⇒ **2.9.1.8 Pathname Resolution.** *Add a new sentence at the end of the subclause:*

When resolving the pathname of file being created, the effects of symbolic links shall be undefined unless the {POSIX_2_SYMLINKS} variable is in effect for the directory in which the link would be created.

Editor's Note: The following rationale will be added to E.2.9.1.8, but is kept here for this draft:

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Pathname Resolution Rationale. *(This subclause is not a part of P1003.2b)*

P1003.1a now includes symbolic links in pathname resolution and a number of concepts are automatically inherited in POSIX. 2 by this inclusion. The large majority of standard utilities resolve pathnames and operate on files without special arrangements for symbolic links. Because of the global POSIX .1 {8} inheritance, this entails very few modifications to utility descriptions.

2.11.3 Operands

⇒ **2.11.4 Operands (POSIX .1: Def)** *Add a new paragraph at the end of the subclause:*

All of the standard utilities shall be consistent in their processing of symbolic links specified directly on the command line versus those found elsewhere in the file hierarchy as a consequence of their operation.

Editor's Note: The following rationale will be added to E.2.11.4, but is kept here for this draft:

Operands Rationale. *(This subclause is not a part of P1003.2b)*

In most cases, the standard utilities follow symbolic links to access individual files, but when they traverse file hierarchies, they stop descending when they reach a symbolic link. (The developers of the standard use the informal term ''physical walk'' to describe this case.) There are stated exceptions to this (''logical walks''), such as `cp` and `du`. However, none of the utilities treat their command-line arguments any differently than their encountered files. For example, `find` does not follow symbolic links by default. In the following example:

```
find /foo -print
```

if `/foo` is a symbolic link, no output will result, because `find` treats its arguments consistently with files found during its hierarchy traversal. When modified to:

```
find /foo -follow -print
```

the output would include `/foo` from the command line and all of the files below it, including those found in traversing symbolic links. Not all historical practice is as consistent as the POSIX. 2 standard utilities in this regard.

2.13.3 Pathname Variable Values

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