

IEEE Standards Interpretations for IEEE Std 1003.1™-2001 IEEE Standard for Information Technology - Portable Operating System Interface (POSIX®)

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Interpretation Request #29

Topic: popen errors **Relevant Sections:** XSH popen

If the mode value is any character other than “r” or “w”, according to line 28523 the result is undefined. However, at line 28535, there is a defined error value (under a “may fail”). ... assuming that a bad char * pointer will cause undefined behavior, while a good pointer to a bad value will result in EINVAL. This could be explained more clearly. (NOTE, this is not an issue with fdopen or fopen, since these functions do not contain the “undefined” language).

EITHER Change line 28523 to: If the value of the mode argument is a valid pointer, but does not reference the strings “r” or “w”, popen shall fail and return a null pointer; otherwise the result is undefined. OR (following fdopen and fopen model): Delete line 28523 [[leaving simply the “May Fail” error condition]]

Interpretation Response

The standards states the error handling requirements for popen(), and conforming implementations must conform to this. However, concerns have been raised about this which are being referred to the sponsor.

Rationale for Interpretation

None.

Notes to the Editor (not part of this interpretation)

A proposed future revision should change from: 3. If mode is any other value, the result is undefined. to: 3. If mode is any other value, the result is unspecified.