

IEEE Standards Interpretations for IEEE Std 1003.1c™-1995 IEEE Standard for Information Technology--Portable Operating System Interface (POSIX(R)) - System Application Program Interface (API) Amendment 2: Threads Extension (C Language)

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Interpretation Request #28

Topic: Waiting on a Condition Errors **Relevant Clauses:** 11.4.4.4

Clause 11.4.4.4, Waiting on a Condition Error All error conditions, except ETIMEDOUT for pthread_cond_timedwait, are reported by returning EINVAL. One of the error conditions in particular, “the mutex was not owned by the current thread at the time of the call” is an error that would be detected by unlocking the specified mutex prior to waiting. This same error is reported by pthread_mutex_unlock by returning the error EPERM. The standard should not report the same error in different places using different error codes. This error should be reported by returning EPERM for both pthread_cond_wait and pthread_cond_timedwait.

Interpretation Response

The standard is clear that pthread_cond_timedwait should report EINVAL when the mutex was not owned by the current thread at the time of the call and a conforming implementation must return that value. The interpretations committee believes that this is not what was intended and has referred the issue to the sponsor for consideration.

Rationale for Interpretation

None.