IEEE Standards Interpretations for IEEE Std 1003.2™-1992 IEEE Standard for Information Technology--Portable Operating System Interfaces (POSIX®)-- Part 2: Shell and Utilities

Interpretation Request #86
Topic: backreferences **Relevant Clauses:** 2.8.3.3

In the description of backreferences in POSIX.2 subclause 2.8.3.3, the standard states (in part): The backreference expression \n shall match the same (possibly empty) string of characters as was matched by a subexpression enclosed between (and) preceding the n. The character n shall be a digit from 1 through 9, specifying the n'th subexpression... My question revolves around the use of the word " shall" in the last sentence. Is this a restriction on applications, or on implementations? In the former case, an expression with a backreference such as \0 would be nonportable, having unspecified behavior. In the latter case, it would have to be treated as invalid by any conforming implementation.

Interpretation Response
" The character n shall be a digit from 1 through 9, ..." is a requirement for a standard conforming application. The standard does not require that an implementation return an error if another value such as 0 is used. The standard clearly states behavior for back-reference expressions and conforming implementations must conform to this.

Rationale for Interpretation
None.