

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

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### Interpretation Request #125

**Topic:** Basic Regular expressions **Relevant Clauses:** 2.8.3.3

Subclause 2.8.3.3 (lines 2994-3010) describe interval expressions in Basic Regular Expressions: (5) when a BRE matching a single character, a subexpression, or a backreference is followed by an interval expression of the format  $\{m\}$ ,  $\{m,\}$ , or  $\{m,n\}$ , it shall match (together with that interval expression) what repeated consecutive occurrences of the BRE would match. The values of  $m$  and  $n$  shall be decimal integers in the range  $0 \leq m \leq \{RE\_DUP\_MAX\}$  where  $m$  specifies the exact of minimum number of occurrences and  $n$  specifies the maximum number of occurrences. When the interval is  $\{0,0\}$  what does it mean to match zero occurrences of the preceding BRE? Does this mean match the empty string or match the BRE plus an additional zero occurrences? For example, BRE=" $([a-c]^*)\{0,0\}$ " input="abcd" Will this match before the first 'a' character? Or will it match the entire "abc" portion? Or will something else occur?

### Interpretation Response

Parentheses are not grouping characters in a BRE. Assuming that what was intended was BRE=" $([a-c]^*)\{0,0\}$ " then a literal reading of the text would say that this expression is equivalent to the null regular expression. The meaning of the null regular expression is not specified by the standard, and as such no conformance distinction can be made between alternative implementations based on this. This is being referred to the sponsor.

### Rationale for Interpretation

None.