WG 14, n2982

Change request for C2x Undefined Behavior 153

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In n2731, there is a paragraph about making sure you have an intervening function when switching between reading and writing a file. Section 7.21.5.3, paragraph 7 says:

*When a file is opened with update mode ('+' as the second or third character in the above list of mode argument values), both input and output may be performed on the associated stream. However, output shall not be directly followed by input **without** an intervening call to the fflush function or to a file positioning function (fseek, fsetpos, or rewind), and input shall not be directly followed by output **without** an intervening call to a file positioning function, unless the input operation encounters end-of-file. Opening (or creating) a text file with update mode may instead open (or create) a binary stream in some implementations.*

However, Annex J.2, Undefined Behavior has text referencing this paragraph (UB#153). The J2 text says:

*An output operation on an update stream is followed by an input operation **without** an intervening call to the fflush function or a file positioning function, or an input operation on an update stream is followed by an output operation **with** an intervening call to a file positioning function (7.21.5.3).*

The word "with" should be changed to "without" to preserve the meaning of paragraph 7. Furthermore, the "input operation encounters end-of-file" text has been omitted. Rectifying both issues produces this paragraph, our recommended rewrite:

*An output operation on an update stream is followed by an input operation **without** an intervening call to the fflush function or a file positioning function, or an input operation on an update stream is followed by an output operation **without** an intervening call to a file positioning function, unless the input operation encountered end-of-file. (7.21.5.3).*