

Proposal for C2Y WG14 N3962

Title: Clarify the requirements in H.11.4
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Proposal category: Editorial
References: N3685

Rationale:

This issue is connected to the taxonomy of H.2.5 Classification of real floating types. The intention of the first paragraph of H.11.4 is to say that the defined encoding functions must be implemented for all supported types, whether or not they have full support in arithmetic operations. The current observation that implementations need not support non-arithmetic encoding types incorrectly suggests that such implementations need not implement the following functions. This change clarifies the requirement.

Suggested change:

Change to H.11.4.1p1:

From:

This subclause introduces `<math.h>` functions that, together with the numerical conversion functions for encodings in H.12, support the non-arithmetic interchange formats specified by ISO/IEC 60559. Support for **these** formats is an optional feature of this annex. Implementations **that do not support non-arithmetic interchange formats are not required to declare the functions in this subclause.**

To:

This subclause introduces `<math.h>` functions that, together with the numerical conversion functions for encodings in H.12, support **both the arithmetic and** the non-arithmetic interchange formats specified by ISO/IEC 60559. Support for **non-arithmetic interchange** formats is an optional feature of this annex. Implementations **shall define the functions in this subclause for all supported arithmetic and non-arithmetic interchange formats.**

Compatibility:

The current wording might be interpreted as saying that implementations not supporting non-arithmetic interchange format do not need to implement any of the functions in H.11.4. This clarification of the requirement may indicate that some implementations need to add support for these functions.