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ISO/IEC JTC1/SC22

N868

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TITLE : Additional comments received on document N796 - Language Compatible Arithmetic Standard

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WORK ITEM : JTC1.22.28

STATUS : New

CROSS REFERENCE : N851, 797, 796

DOCUMENT TYPE : Member Body comments

ACTION : For information to SC22 Member Bodies.
This document will be submitted to WG11 for consideration.

Czechoslovak comments on document of ISO/IEC SC 22 N 797

1. We think it is important to clarify basic properties that are common for all programming languages. The draft could help to create standard languages in a similar manner. But we mean that it is not good to consider the draft as a separat supplement of standard language.

2. Arithmetic operations have unambiguous mathematical background and therefore they are not source of great misunderstanding. It could be very significant to elaborate similar documents dealing with other common properties of programming languages. The following specifications should be considered:

    1. assignment
    2. indexing
    3. parameter passing

    These subjects are major sources of many misunderstandings and hardly detected errors.

3. Page 23 is missing.

4. We assume that definition of parameter denorm is contradictory with its use. Denorm=true means that unnormalized values exist (see page 12). IBM 370 format allows use of unnormalized values so we have denorm=true (it does not agree to the table on page 33). As far as we know IEEE standard 754 defines only normalized values so it is denorm=false (it contradicts to text on pages 33, 51).

5. We do not understand why conversion operations between floatin points of different radices are omitted. Really, it is possibl and more simple to define conversion operations

    1. between any two distinct integer types
    2. from any floating point type to any integer type
    3. from any arithmetic type to any floating point type.

    The definitions remain the same as they are on pages 18, 19. In fact, in third case conversion depends only on rounding and checking function of target type.