Subject: RRSPACING (UTI 092)
From: Van Snyder

1 Introduction

UTI 092 argues that RRSPACING(X) should be an IEEE NaN if X is IEEE Inf. On the other hand, however, RRSPACING(X) can be written as ABS(FRACTION(X)) * RADIX(X) / EPSILON(X). RADIX and EPSILON are inquiry functions, so their result values don't depend upon their argument values, while the result value of FRACTION(X) is defined to be "the same value as X" if X is an IEEE infinity. I would be really surprised if ABS(Inf) or ABS(-Inf) were not Inf, so RRSPACING(±Inf) ought to be +Inf.

2 Edits

Edits refer to 07-007. Page and line numbers are displayed in the margin. Absent other instructions, a page and line number or line number range implies all of the indicated text is to be replaced by associated text, while a page and line number followed by + (-) indicates that associated text is to be inserted after (before) the indicated line. Remarks are noted in the margin, or appear between [and] in the text.

[Editor: "zero" ⇒ "an IEEE NaN".] 420:9

[Editor: Delete UTI 092.] 420:10+

3 On the other hand

[Editor: insert "= ABS(FRACTION(X)) * RADIX(X) / EPSILON(X)" after "b^p".] 420:7

[Editor: "zero" ⇒ "IEEE_VALUE(X,IEEE_POSITIVE_INF) (14.1, 14.10.36)" or "zero" ⇒ "positive IEEE infinity".] 420:9

[Editor: Delete UTI 092.] 420:10+