

Subject: Updating complex parts  
From: Van Snyder  
Reference: 04-384r1, 05-128, WG5/N1626-J3-015, 05-200r1

1 **1 Detailed specification**

2 Provide a syntax that allows one to update or reference the real and imaginary parts of a complex  
3 variable individually without updating or referencing the whole thing. For consistency allow reference  
4 to the real and imaginary parts of a complex named constant.

5 **2 Syntax**

6 Allow the real and imaginary parts of a complex variable to be accessed by component-like syntax.  
7 The “component” names considered by subgroup were RE & IM, REAL & IMAG, and REAL & AIMAG.  
8 Subgroup chose RE and IM. They are short, and their use is common in the scientific and engineering  
9 communities. Being different from the intrinsic function names will lead to less confusion, since these  
10 are not intrinsic function references.

11 **3 Edits presented at meeting 174**

12 Edits refer to 04-007. Page and line numbers are displayed in the margin. Absent other instructions, a  
13 page and line number or line number range implies all of the indicated text is to be replaced by associated  
14 text, while a page and line number followed by + (-) indicates that associated text is to be inserted after  
15 (before) the indicated line. Remarks are noted in the margin, or appear between [ and ] in the text.

16 [Editor: Delete the last sentence of 2.4.3.1 (“Subobjects of complex ...”) because it’s unhelpful and 17:1  
17 open to misinterpretation: Functions return values, not references to objects.]

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**or** *complex-part-designator* 107:12+

19 [Editor: “rank or” ⇒ “rank, the *array-section* is a *complex-part-designator* that is an array, or”.] 107:14