

**ISO/IEC JTC 1/SC 22
Programming Languages**

Document Type: Summary of Voting/Table of Replies

Document Title: Summary of Voting on SC 22 N 4319, Registration Ballot for ISO/IEC CD 1539-1, Programming languages – Fortran – Part 1: Base language

Document Source: SC 22 Secretary

Document Status: As per the results of this ballot, the CD is registered. WG 5 is instructed to review the comments received and provide a response. The summary of voting on the CD ballot is contained in N 4405.

Action ID: ACT

Due Date:

No. of Pages: 6

Result of voting

Ballot Information:

Ballot reference:	SC 22 N 4319 - Registration Ballot
Ballot type:	CIB
Ballot title:	ISO/IEC 1539-1, Information technology - Programming languages - Fortran - Part 1: Base language
Opening date:	2008-03-29
Closing date:	2008-08-31
Note:	Please submit your vote by the due date indicated.

Member responses:

Votes cast (15)	Canada (SCC) China (SAC) Denmark (DS) France (AFNOR) Germany (DIN) Italy (UNI) Japan (JISC) Korea, Republic of (KATS) Netherlands (NEN) Romania (ASRO) Spain (AENOR) Switzerland (SNV) Ukraine (DSSU) United Kingdom (BSI) USA (ANSI)
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Comments submitted (0)

Votes not cast (3)	Austria (ON) Kazakhstan (KAZMEMST) Russian Federation (GOST R)
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Questions:

Q.1	"Does your National Body approve that the text contained in SC 22 N 4319 be registered as a CD?"
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Answers to Q.1: "Does your National Body approve that the text contained in SC 22 N 4319 be registered as a CD?"

9 x	Yes	Canada (SCC) China (SAC)
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		Germany (DIN) Italy (UNI) Japan (JISC) Korea, Republic of (KATS) Netherlands (NEN) Romania (ASRO) USA (ANSI)
9 x	Yes	Canada (SCC) China (SAC) Germany (DIN) Italy (UNI) Japan (JISC) Korea, Republic of (KATS) Netherlands (NEN) Romania (ASRO) USA (ANSI)
5 x	Abstain	Denmark (DS) France (AFNOR) Spain (AENOR) Switzerland (SNV) Ukraine (DSSU)
1 x	No	United Kingdom (BSI)

Comments from Voters		
Member:	Comment:	Date:
United Kingdom (BSI)	<i>Comment File</i>	2008-08-26 17:23:05
CommentFiles/UnitedKingdom(BSI).doc		

Comments from Commenters		
Member:	Comment:	Date:

Template for comments and secretariat observations

1	2	(3)	4	5	(6)	(7)
MB ¹	Clause No./ Subclause No./ Annex (e.g. 3.1)	Paragraph/ Figure/Table/ Note (e.g. Table 1)	Type of comment ²	Comment (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
UK	General		GE	<p>Extent of revision. The current standard has not been fully implemented four years after publication and five years after technical stabilization. The language has proved to be bigger and more complicated than anticipated. Some features of Fortran 2003, for example parameterized derived types and input/output for user-defined derived types, have been found to be difficult to implement and/or to use. The proposed revision does not address these problems but instead adds considerable further complication to the language.</p> <p>It is not merely disappointing but is becoming a matter of serious concern that no full implementations are available after this period of time. Until it has proved its viability, by having several full implementations and significant vendor and user experience which can influence a revision, no new version that adds significant extra complexity should be published.</p> <p>The revision should also be seeking to consider the causes of the problems with Fortran 2003, and to address any that are wholly or partially caused by the standard. The approach of SC22/WG4, which is proposing that features in the 2002 Cobol standard that have proved difficult to implement be reclassified from mandatory to optional, should be considered in order to reduce the implementation difficulties of Fortran 2003.</p> <p>There is in any case concern over the volume of extensions contained in this revision. What was expected, and what was clearly needed, was a minor tidying-up revision, in the manner of Fortran 95 relative to Fortran 90.</p>		
UK	General		GE	<p>MPI. MPI is widely used by Fortran programmers for parallel programming. Features should be added to Fortran to facilitate its use.</p>		

1 **MB** = Member body (enter the ISO 3166 two-letter country code, e.g. CN for China; comments from the ISO/CS editing unit are identified by **)

2 **Type of comment:** **ge** = general **te** = technical **ed** = editorial

NOTE Columns 1, 2, 4, 5 are compulsory.

Template for comments and secretariat observations

Date: 2008-08-26

Document: ISO/IEC CD 1539-1

1	2	(3)	4	5	(6)	(7)
MB ¹	Clause No./ Subclause No./ Annex (e.g. 3.1)	Paragraph/ Figure/Table/ Note (e.g. Table 1)	Type of com- ment ²	Comment (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
UK	General		GE	<p>Coarrays - technical aspects. While it includes volatile coarrays, the coarray model fits well with some vendors' hardware but it would be difficult to implement on distributed memory systems and may be impractical on commodity clusters. Furthermore, volatile coarrays provide scope for unsafe programming. They should be therefore be removed from any development of the proposals.</p> <p>A full justification for these comments will be submitted directly to SC22/WG5.</p>		
UK	General		GE	<p>Coarrays - disposition. Coarrays are a large feature with ramifications throughout the language.</p> <p>The comments of rest of this section do not reflect all opinion in the UK, but do reflect that of a majority.</p> <p>The current coarray model is not sufficiently general for standardization and it is not clear that it is the best model for Fortran to adopt for the longer term. Since it is difficult to detect violation of synchronisation requirements, programs using coarrays are liable to be unreliable and difficult to debug; they may work correctly or not apparently randomly.</p> <p>Coarrays are not yet sufficiently mature to be standardized.</p> <p>Moreover it is not clear that the Fortran programmer who has need of parallel computation facilities would prefer coarrays to more established alternative systems such as MPI.</p> <p>These points lead to the conclusion that coarrays should be not be in the base language but should be developed separately as an optional feature, either as a Technical Report or as an optional part of the standard.</p>		
UK	General		GE	<p>Description of Coarrays. The normative text pertaining</p>	A paper with full details will be submitted to	

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				to the memory model and how an image accesses data on another image is insufficiently precise. Improvements are also needed to the normative text for SYNC MEMORY and user-defined ordering. There may also need to be constraints on the use of external interfaces (including I/O and companion processors), to avoid deadlock in some standard-conforming programs executed by some conforming processors.	SC22/WG5.	
UK	10.7.5		TE	Generalized output editing. It is proposed that generalized output editing of real and complex data be extended by allowing (a) G0.d to mean output in the smallest field width but showing exactly d significant digits and (b) Gw with w non-zero to mean output in a field of w character positions with as many significant digits as can be fitted into that width. These edit descriptors are not currently defined.	A paper specifying detailed edits, principally to subclause 10.7.5, will be presented to the SC22/WG5 meeting in November 2008	

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