

S19 MEMORANDUM

September 5, 1990

To: X3J3
From: Mike Metcalf
Subject: Change document

This document contains the complete list of changes passed at the Oxford meeting, and was used to produce the marked-up copy of S8.115. A small number of case, font, layout, line number, and punctuation errors in the original items have been corrected, and the list has been checked by John Reid. Where an item is marked with a number like #145, this indicates the N600 item that it replaces or supplements.

1. Replace the header on each page by a new one, left-adjusted on even-numbered pages and right-adjusted on odd-numbered pages:
'ISO/IEC 1539 : 1991 (E)'(note blanks).
2. Move the Table Of Contents to the beginning of the document, starting on page ii (page i is the front cover). Change its title to **'Contents'**, left adjusted.
3. Follow the Table Of Contents by a blank, numbered page headed **'Foreword'**, left adjusted.
4. Roman page numbers appear on the left of even-numbered pages and the right of odd-numbered pages, without the date and the word **'Page'**.
5. Replace the date and page numbers on all other pages by running Arabic numbers starting with 1 on p. 1-1 to 338 on p. F-7. The number is centered.
6. Delete all line numbers.
7. i: Replace **'FOREWORD'** by **'Introduction'**, left adjusted.
8. i/1: Delete
9. i/2 and all following bold headings: start text on a new line.
10. i/2 and i/15: Replace **'standard'** by **'International Standard'**.
11. i/11. Change **'that in'** to **'that of'**.
12. i/14: Replace **'OVERVIEW'** by **'Overview'**, left adjusted.
13. i/34; #102. Change **'These'** to **'The array extensions'**.
14. ii/38: Replace **'DOCUMENT ORGANIZATION'** by **'Organization of this International Standard'**, left adjusted.
15. iv/27. Before **'non-Fortran'** add **'the means of accessing'**.

16. iv/35-39: Delete.
17. v. Replace heading by 'Acknowledgements' left adjusted.
18. v. Delete Subgroup Heads Table.
19. vi. Modify by Chair.
20. xiii: Before 'A. GLOSSARY OF TECHNICAL TERMS...' add a line 'Annexes', left adjusted.
21. 1-1: Change '1. SCOPE OF STANDARD' to 'Section 1 : Overview' (note blanks), left adjusted.
22. 1-1/1: Change 'Purpose' to 'Scope'.
23. 1-1/1 and all subheadings globally: set text on a new line.
24. 1-1/1, 7, 9 and 14: Change 'standard' to 'International Standard'.
25. 1-1/7 and globally: Change such that only the first letter of a sub-heading is in upper case, except for Fortran keywords.
- ✓26. 1-2/25. After 'given' add 'an interface body or'.
27. 1-5/36: Add '- Information interchange - Representation of dates and times' at end of line.
28. 1-5/37: Replace by 'ISO 646:1983 Information processing - ISO 7-bit coded character set for information interchange'.
29. 2-1 and globally: Add 'Section' before the Section number, replace '.' by ':' (note blanks), and set only the first letter of the title in upper case; left adjust.
- ✓30. 2-3/40-41. Change 'A ... invoked.' to 'Procedures are either functions or subroutines.'
- ✓31. 2-4/16. Change 'procedure' to 'procedures'.
32. 2-5 and globally: Set the whole Table caption in bold, and centre it.
33. 2-5/1: Move to follow Figure, centered.
34. 2/5: Frame Table 2.1.
- ✓35. 2-5/Table 2.1. Add after the line 'Misc. Declarations ...' the line 'DATA Statement Yes Yes Yes Yes Yes No'.
On line 44 delete ', DATA Statements'.
36. 2-5/44-46 and globally: set such Notes one point size smaller.

- ✓ 37. 2-5/48-50. On line 48 change 'and' to ', module subprogram, and'; add a '.' after first 'statement' and delete the rest of the sentence.
- ✓ 38. 2-6/30. Add 'The length type parameter specifies the number of characters for the character type.'
- ✓ 39. 2-7/17. Change 'has a value that can become' to 'may be'.
- ✓ 40. 2-7/19-23. On line 19 change 'that' to 'and'. On line 22 change 'has a value that cannot become defined or' to 'cannot be' and on line 23 change 'that' to 'its value'.
41. 2-7/25-29. Change 'DIGIT' to 'HEX DIGIT' seven times and insert 'ABCDEF' on line 25 after '9'. Change '10' to '16' on line 25.
42. 2-7/26+. Add 'INTEGER :: I'
- ✓ 43. 2-7/35. delete 'or by a defined operation'.
- ✓ 44. 2-8/15. Change 'An' to 'A rank-one' and delete 'rank-one'.
- ✓ 45. 2-8/18-19. Replace 'It must not ... (7.5.2)' with 'A pointer is associated with a target by allocation (6.3.1) or pointer assignment (7.5.2). A pointer must not be referenced or defined until it is associated'.
- ✓ 46. 2-9/14. Do not start a new paragraph here.
- ✓ 47. 2-9/27. Change 'through' to '...'
- ✓ 48. 3-1/22. Replace 'define' with 'defines'.
- ✓ 49. 3-1/34: Replace 'are:' by 'are shown in Table 3.1.'
- ✓ 50. 3-2/18-: Add in centre: 'Table 3.1 Special Characters'.
- ✓ 51. 3-4/24. Delete '(between ... of)' and add '(4.3.2.1)' at end of line.
- ✓ 52. 3-4/26-27. Replace by 'A comment may contain any character that may occur in any character context.'
- ✓ 53. 3-5/2+. Add 'MODULE PROCEDURE' to second column after 'IMPLICIT NONE'.
- ✓ 54. 3-6/46. Replace line by 'Inclusion of the source text referenced by an INCLUDE line must not, at any level of nesting, result in inclusion of the same source text.'
- ✓ 55. 4-2/10. Do not start a new paragraph here.
- ✓ 56. 4-2/21. Change 'with the ASSIGNMENT interface' to 'and an ASSIGNMENT interface block'.

- ✓ 57. 4-2/21; #35. Change 'defines' to 'define'.
- ✓ 58. 4-3/20; #115. Delete 'nonnegative'.
- ✓ 59. 4-3/24. Change 'entity' to 'variable'.
- ✓ 60. 4-3/37. Set second 'digit' in italics.
- ✓ 61. 4-3/45. After 'systems.' insert 'If the processor supports lower-case letters in the source form, the hex-digits A through F may be represented by their lower-case equivalents.'
- ✓ 62. 4-4/46-47. Replace 'named integer constant' with 'scalar integer named constant' and insert 'valid' before 'kind type'.
- ✓ 63. 4-5/17-22. Replace with ' If the real part and the imaginary part of a complex literal constant are both real, the kind type parameter of the complex literal constant is the kind type parameter value of the part with the greater decimal precision; if the precisions are the same, it is the kind type parameter value of one of the parts as determined by the processor. If a part has a kind type parameter value different from that of the complex literal constant, the part is converted to the approximation method of the complex literal constant.'
- ✓ 64. 4-6/32-35. Replace with corrected cut-and-paste text from Miles Ellis.
- ✓ 65. 4-6/36. Replace 'named constants' with 'scalar integer named constants'.
- ✓ 66. 4-6/37-38. Change 'Hungarian' to 'Magyar (Hungarian)'
- ✓ 67. 4-6/38. Replace 'Hihongo' by 'Nihongo', twice.
- ✓ 68. 4-6/39; #89. Change 'Hungarian' to 'Magyar'.
- ✓ 69. 4-7/14: Replace 'ANSI X3.4-1986 (ASCII)' by 'ISO 646:1983 (International Reference Version)'
- ✓ 70. 4-7/16: After '.' insert 'Note that ISO 646:1983 is the international equivalent of ANSI X3.4-1986, commonly known as ASCII.'
- ✓ 71. 4-7/19: Delete sentence beginning 'Note that ... '.
- ✓ 72. 4-7/44. Add 'They are called the **ultimate components**.'
- ✓ 73. 4-8/28. After 'derived' add 'type'.
- ✓ 74. 4-9/20. Move '(5.2.3)' to follow 'access-stmt'.
- ✓ 75. 4-9/38. Replace 'X1, Y1, X2, Y2' by 'X1, Y2 in row 1, X2, Y2 in row 2'.
- 76. 4-12/15. Change 'agree' to 'conform'.

- ✓77. 4-13/6. Change 'sequence' to 'array-constructor'.
- ✓78. 4-13/32. Remove spaces around second '/'.
- ✓79. 5-1/1. Add comma after 'example'.
- ✓80. 5-2/11. Replace 'INTENT' with 'TARGET, INTENT'.
- ✓81. 5-2/13. Replace 'EXTERNAL' with 'POINTER, EXTERNAL'.
- ✓82. 5-3/6-7. Move these lines to 5-4/14+, and delete '(R509)'.
- ✓83. 5-4/1-2. Replace by
- or (LEN=type-param-value, KIND=scalar-int-initialization-expr)
or (type-param-value, [KIND=scalar-int-initialization-expr])
- ✓84. 5-4/8+. Add new constraint:
'Constraint: The optional comma in a length-selector is permitted only in a type-spec in a type-declaration-stmt'.
- ✓85. 5-4/10+. Add new constraint:
'Constraint: char-length must not have a kind type parameter specified for it.'
- ✓86. 5-4/43. Change 'by a derived-type-def' to 'in the scoping unit or be accessible there by use or host association'.
- ✓87. 5-5/40-41. Delete.
- ✓88. 5-7/18-19. Change 'rank. But' to 'rank, but'.
- ✓89. 5-8/4-5. Add 'argument' before 'associated', twice.
- ✓90. 5-8/41+. Insert new paragraph: 'Objects declared with the SAVE attribute in the scoping unit of a subprogram are shared by all instances (12.5.2.4) of the subprogram.'
- ✓91. 5-10/24. Before 'is accessible' add '(12.3.2.1) that is public'.
- ✓92. 5-10/26. Change 'ACCESS statement' to 'access-stmt'.
- ✓93. 5-12/42+. Insert 'or structure-component'.
- ✓94. 5-13/1. Replace 'must not be a subobject with a constant parent' with 'or structure-component must not have a constant parent'.
- ✓95. 5-13/7-8. Change 'be a constant expression' to 'be an initialization expression'.
- ✓96. 5-13/17. Change '.' to ', and each operation must be intrinsic.'

- ✓97. 5-13/22. Before first ',' insert 'and structure components'.
- ✓98. 5-17/15. After 'pointer' add 'at any level of component selection'.
- ✓99. 5-17/36-39. Add 'default' before 'Character' and add 'default' before 'character' three times.
- ✓100. 6-2/29. Change 'structure-component' to 'structure component'.
- ✓101. 6-2/40. Add 'A part-name to the right of a part-ref with nonzero rank must not have the POINTER attribute.'
- ✓102. 6-2/42. Change first 'is' to 'of'.
- ✓103. 6-3/25. Change 'at least one' to 'the last'.
- ✓104. 6-3/28-29. Change constraint to read: 'In an array-section, exactly one part-ref must have nonzero rank, and either the final part-ref has a section-subscript-list with nonzero rank or another part-ref has nonzero rank.'
- ✓105. 6-3/43. Delete 'the object is an array of shape specified by the section-subscript-list and'.
- ✓106. 6-4/5+. Add 'An array element or an array section has the INTENT, TARGET, or PARAMETER attribute if its parent has the attribute, but it never has the POINTER attribute.'
- ✓107. 6-4/8-11. On lines 8 & 9 delete 'component' (twice). On lines 10-11, change 'component ... parent' to 'array section'.
- ✓108. 6-4/49-50. Delete 'designated by an array name or designator with a section subscript list'.
- ✓109. 6-4/51. Change 'Each' to 'In an array-section having a section-subscript-list, each'.
- ✓110. 6-5/4. Change 'The' to 'In an array-section with no section-subscript-list, the rank and shape of the array is the rank and shape of the part-ref with nonzero rank; otherwise the'.
- ✓111. 6-5/33. Do not start a new paragraph here.
- ✓112. 6-6/15+. Add as second paragraph for 6.3: 'The ALLOCATE and DEALLOCATE statements are also used to create and deallocate arrays with the ALLOCATE attribute.'
- ✓113. 6-6/23-38 On line 23, change 'explicit' to 'allocate'. On line 25+ add

R625a allocate-shape-spec is [allocate-lower-bound:] allocate-upper-bound

R625b allocate-lower-bound is scalar-int-expr

R625c allocate-upper-bound is scalar-int-expr

On line 27, change 'allocation explicit-' to 'allocate-. On line 30, change 'explicit' to 'allocate' and change 'allocation explicit-' to 'allocate-. On line 35, delete 'in an ... (5.1.2.4.1)'.

✓ On lines 37-38, replace sentence 'Note ... ' by 'If the lower bound is omitted, the default value is 1. If the upper bound is less than the lower bound, the extent in that dimension is zero and the array has zero size. Note that allocate-object may be of type character with zero character length.'

✓ 114. 6-7/11. After 'assignment.' add 'Allocation of a pointer creates an object that implicitly has the TARGET attribute.'

✓ 115. 6-8/7. Change 'array-name' to 'array' twice.

✓ 116. 6-8/18. Change 'target' to 'target or a portion of the target'.

✓ 117. 7-5/10-13: Move these lines to follow Table; replace '(' by 'Note:'; delete ')'; set lines one point smaller.

✓ 118. 7-5/43-52. On lines 43-44, delete 'that specifies ... defined-unary-op.'
On line 45, change first 'a' to 'the'.
On line 46, delete 'that specifies ... intrinsic-operator'.
On lines 48-49, delete 'that specifies ... defined-binary-op'. *gone?*
On line 50, change 'an' to 'the'.
On lines 51-52, delete 'that specifies ... intrinsic-operator'.

✓ 119. 7-8/44-45; #308-310. Delete 'where ... expression'
7-9/1. Add 'or a variable that is a subobject of a dummy argument' before ','
7-9/2. Add 'or a variable that is a subobject of a variable in a common block' before ','
7-9/3. Add 'or a variable that is a subobject of such a variable' before ','
7-9/18. Change '.' to ','
7-9/18+. Add (not as part of (10)) 'and where any subscript, section subscript, substring starting point, or substring ending point is a restricted expression.'

✓ 120. 7-9/15-17. Change the layout to:

... inquiry function (13.10.8) where each argument is either

a restricted expression or

a variable whose type parameters or bounds inquired about are not assumed or defined by an ALLOCATE statement or a pointer assignment,

or

✓ 121. 7-9/26. Add 'type' before 'declaration'.

✓ 122. 7-18/10. Change 'associated' to 'disassociated'.

- ✓123. 7-18/33. After 'type' insert ', and there is no accessible interface block with an ASSIGNMENT(=) specifier for objects of this derived type'.
- ✓124. 7-18/36: Move to top of 7-19.
- ✓125. 7-19/14-15. Change 'that ... (12.3.2.1)' to 'and an interface block (12.3.2.1) that specifies ASSIGNMENT(=)'.
- ✓126. 7-21/9-10. After 'POINTER attribute' add '.' and delete rest of the sentence.
- ✓127. 7-21/14-18. Replace with 'If the target is not a pointer, the pointer assignment statement associates the pointer-object with the target. If the target is a pointer that is associated, the pointer-object is associated with the same object as the target. If the target is a pointer that is disassociated, the pointer-object also becomes disassociated. If the target is a pointer with undefined association status, the pointer-object also acquires an undefined association status.'
- ✓128. 7-21/19. Replace 'pointer' by 'pointer-object'.
- ✓129. 7-22/18. Change 'where block' to 'WHERE block'.
- ✓130. 8-5/40+. Add 'On a processor that supports the nondefault character sets corresponding to Chinese, Hungarian, Japanese, Punjabi, Russian, and Spanish, a code fragment to request the user's name in his own language, as long as it is one of those supported by the processor, or in English otherwise, is:
- ! LANGUAGE has the value of the kind type parameter
! of the required language.
! CHINESE, HUNGARIAN, ... are the named constants whose
! values are the appropriate kind type parameters.
! NAME_C, NAME_H, ... are character variables of the
! appropriate kind type.
- ```
SELECT CASE (LANGUAGE)
 {cut-and-paste text supplied by Miles Ellis}
END SELECT
```
- ✓131. 8-12/25,29. After 'integer' add 'and must not be an array-element' (twice).
- ✓132. 9-11/17. Replace 'and' by 'an'.
- ✓133. 9-21/7-20. Change 'true' to '.TRUE.' five times and change 'false' to '.FALSE.' five times.
- ✓134. 10-3/9-23. Change lines 9, 10, 11, and 21 to obsolescent font. Change lines 22-23 back to normal font, except for 'the characters following the H ... and'.
- ✓135. 10-3/34-35. Change 'one input record' to 'for advancing input/output, one input record' on line 34, and on line 35 insert before the period 'and, for nonadvancing input/ output, the position within the current record is unchanged'.



- ✓136. 10-5/26. After '.' add 'If a processor is capable of representing letters in both upper and lower case, the lower-case hexadecimal digits a through f in a hexadecimal input field are equivalent to the corresponding upper-case hexadecimal digits.'
- ✓137. 10-6 to 10-8. Insert a space before '99' when preceded by '&le;'; after '99' when followed by '<', '999', and '10' on lines 10-6/32-50, 10-7/2, 10-7/28-44, 10-8/20-33, and 10-8/36. Insert a space before '99', '999', and '10' on lines 10-6/32-50, 10-7/2, 10-7/28-44, 10-8/20-33, and 10-8/36.
- ✓138. 10-13/14+ and 10-17/27+. Add the paragraph (twice):  
  
'When the next effective item is of type integer, the value in the input record is interpreted as if an Iw edit descriptor with a suitable value of w were used.'
- 10-16/40. Change 'type logical' to 'types logical and integer'.
- ✓139. 10-15/6, 10-18/46. Change 'cases involved' to 'numeric constants output' (twice).
- ✓140. 10-15/5-6. Move these lines to follow line 11.
- ✓141. 10-16/46+. Add 'The name-value subsequences are evaluated serially, in left to right order. A namelist group object name or subobject designator may appear in more than one name-value sequence.'
- ✓142. 10-17/20, 26, 28; #84. Replace 'corresponding' by 'next effective' (thrice).
- ✓143. 10-18/16. Add 'I = 6,' after 'X(3:4) = 2\*1.5'.
- ✓144. 10-18/18+. Change the value of I in the table from '12345' to '6'.
- ✓145. 11-1/34. Add after 'an INTENT statement': ', an ENTRY statement,'.
- ✓146. 11-2/15. Add after 'a stmt-function-stmt': ', an entry-stmt,'.
- ✓147. 11-2/20. Add after 'statement function definitions': ', ENTRY statements,'.
- ✓148. 11-4/18. Change title to '11.3.3.3 Derived types.'
- ✓149. 11-5/43. Replace 'the modules ... too.' by 'the referenced modules also contain USE statements.'
- ✓150. 12-1/39. After 'local' add '(14.1.2)'
- ✓151. 12-1/45-46. Change 'associated target ... not saved.' to 'completion causes the target to become undefined (item (4) of 14.7.6).'
- ✓152. 12-4/27. After 'generic-spec' add 'and has a host that is a module or accesses a module by use association; each procedure-name must be the name of a module procedure that is

accessible in the host'.

- ✓ 153. 12-5/1+. Add line 'REAL X'.
- ✓ 154. 12-5/25; #174. Change 'that' to 'the'.
- ✓ 155. 12-5/40. Replace 'original' with 'specific'.
- ✓ 156. 12-5/44 and 12-6/27; #175, 176. Delete ',' (twice).
- ✓ 157. 12-6/4. After '(IN)' add 'and the function result must not have assumed character length'.
- ✓ 158. 12-6/28. Before 'The' add 'Each argument must be nonoptional.'
- ✓ 159. 12-6/41; #174. Add to end of line:  

! Contains definition of type STRING
- ✓ 160. 12-9/5. After 'value' add ', if any,'.
- ✓ 161. 12-9/6-9. Before 'If' on line 6, add 'The character length of an actual argument of type nondefault character must agree with that of the dummy argument.'. On lines 6 and 9 add 'default' before 'character'.
- 162. 12-9/6-13. Start new paragraph before 'If' on line 6 and before 'Except' on line 13.
- ✓ 163. 12-9/31; #141a. Change 'a named' to 'an'.
- ✓ 164. 12-9/31. Change 'explicit-shaped or assumed size' to 'not an assumed-shape or pointer array'.
- ✓ 165. 12-10/12. Delete 'array,'.
- ✓ 166. 12-10/14. Change 'is a' to 'is of type default character and is an' and delete 'character' thrice.
- ✓ 167. 12-10/18-19. Change 'length ... itself.' to 'character length of the dummy array.'.
- ✓ 168. 12-11/2,4. On line 2 change 'INTENT(OUT) and INTENT(INOUT) actual' to 'actual arguments corresponding to INTENT(OUT) and INTENT(INOUT) dummy'. On line 4 change 'INTENT(OUT) and INTENT(INOUT) arrays' to 'arrays that correspond to INTENT(OUT) and INTENT(INOUT) dummy arguments'.
- ✓ 169. 12-11/34-35. Replace constraint by  
'Constraint: If RESULT is specified, the function-name must not appear in any specification statement in the scoping unit of the function subprogram.'.
- ✓ 170. 12-12/31-32. On line 31 change 'CUMM\_SUM' to 'C\_SUM' and on line 32 interchange

'CUMM\_SUM' and 'C\_SUM'.

- ✓171. 12-13/28. After 'declaration' add 'statement'.
- ✓172. 12-13/33+. Add constraint:  
'Constraint: If RESULT is specified, the entry-name must not appear in any specification statement in the scoping unit of the function subprogram.'
- ✓173. 12-13/39. Replace 'EXTERNAL' by 'EXTERNAL or INTRINSIC'.
- ✓174. 12-14/5. Change twice 'scalar' to 'scalars without the POINTER attribute'.
- ✓175. 12-15/13. After 'than' add 'as'.
- ✓176. 12-15/30-31. Indent 3 spaces.  
12-15/37. Adjust to align with line 33.  
12-16/39-42. Indent 3 spaces.
- ✓177. 12-17/15, 17. On line 15 change 'another' to 'a'. On line 17 after 'unit' insert 'and must not be the name of the statement function being defined'.
- ✓178. 12-17/28. Change 'within' to 'local to'.
- ✓179. 13-1/28. After '(OUT)' add 'and INTENT(INOUT)'.
180. 13-2/5 and globally, change 'LEN\_TRIM' to 'LENTRIM'.
- ✓181. 13-5/2. Replace 'has ... values,' with 'has a maximum and minimum value,'.
- ✓182. 13-7/8. Add to first column 'Optional P,R'.
183. 13-12/37, 18/1, 18/2, 22/12, 22/14, 24/6, 25/11, 33/26, 33/27, 34/14, 34/25, 35/32, 35/39, 35/44, 36/30, 37/5, 38/7, 38/14, 38/19, 42/4, 42/28, 42/35, 44/9, 44/11 (twice), 44/13, 44/14, 44/15, 50/12, 51/36, 51/39; #145. Add 'kind' before 'type parameter'.  
13-33/28, 38/15, 38/19, 42/5. Change 'parameters' to 'parameter'.  
13-25/34. Add 'type' after 'kind'.
- ✓184. 13-13/10-12. Replace 'has a value ... sign of A' by 'has a value equal to the integer whose magnitude is the largest integer that does not exceed the magnitude of A and whose sign is the same as the sign of A'.
185. 13-14/2, 15/21, 15/23, 15/25, 15/28, 15/31, 16/37, 17/2, 17/3 (twice), 31/17, 31/31, 32/4, 32/6, 32/18, 32/21, 33/11, 41/32; #147. Change 'true' to '.TRUE.'. 13-14/3, 15/22, 15/24, 15/26, 15/27, 15/34, 16/38, 17/3 (6 times), 31/18, 31/19, 31/32 (twice), 31/33, 32/5, 32/19 (twice), 41/33. Change 'false' to '.FALSE.'.
186. 13-17/12, 24/36, 30/23, 36/21, 41/12, 53/32, 54/7; #148. Change 'Example.' to 'Examples.'.

187. 13-19/44. Replace

|       |    |       |
|-------|----|-------|
| A B C | by | 1 2 3 |
| D E F |    | 4 5 6 |
| G H I |    | 7 8 9 |

188. 13-20/1. Replace

|       |    |       |
|-------|----|-------|
| C A B | by | 3 1 2 |
| F D E |    | 6 4 5 |
| I G H |    | 9 7 8 |

189. 13-20/2. Replace

|       |    |       |
|-------|----|-------|
| C A B | by | 3 1 2 |
| E F D |    | 5 6 4 |
| G H I |    | 7 8 9 |

✓190. 13-20/5. Delete 'character'.

191. 13-20/9-21. On lines 9, 15, and 21, add 'of' before 'type'.

✓192. 13-23/37-38; #157. Start 'BOUNDARY' on a new line.

✓193. 13-24/25. Add 'The result is undefined if the processor cannot represent e in the default integer type.'

✓194. 13-25/25. Replace 'must be' by 'are'.

✓195. 13-28/5,9. Replace '=' by '=' (twice).

✓196. 13-28/7. Replace 'one' with 'zero'.

✓197. 13-28/11. Replace 'LEN(String)+1' with 'zero'.

✓198. 13-28/29+. Add (not as part of case (iii)) 'The result is undefined if the processor cannot represent the result in the specified integer type.'

✓199. 13-28/39. Fix this and other Tables (e.g. 13-25/37).

✓200. 13-31/2. After 'characters' add 'remaining'.

✓201. 13-31/18 and 13-32/5. After '.' add 'The result is .TRUE. if both strings are of zero length.' (twice).

✓202. 13-33/27, 28; #228. Replace '7.1.4' by '7.1.4.2' (twice), and on line 28 replace 'expression ... MATRIX\_B' by 'arguments'.

- ✓203. 13-36/21. Change the second row of the first array from '2 4 6' to '2 9 6'.
- ✓204. 13-38/40, 13-39/10,12. Change 'defined' to 'dependent' (thrice).
- ✓205. 13-38/41. After '1.0' add '(approximately)'.
- ✓206. 13-38/42. Replace second '-3' by '3'.
- ✓207. 13-39/9-10. Replace 'If ... P.' by 'If  $P \neq 0$  then  $\text{MODULO}(A,P)$  has the value R such that  $A=Q \cdot P+R$ , where Q is an integer, the inequalities  $0 \leq R < P$  hold if  $P > 0$ , and  $P < R \leq 0$  hold if  $P < 0$ '.
- ✓208. 13-39/29. Change 'positions' to 'position' (twice).
- ✓209. 13-40/17. After '.' add 'The result is undefined if the processor cannot represent the result in the specified integer type.'
- ✓210. 13-43/9. Change 'RANDOM' to 'RANDOM\_NUMBER'.
- ✓211. 13-44/36. Replace 'Change ... .' by 'Constructs an array of a specified shape from the elements of a given array.'
212. 13-44/40. Change '>=' to 'greater than or equal to'.
213. 13-45/16. Move second 'RESHAPE' to next line.
- ✓214. 13-45/36, 13-47/23. After 'within range' add '; if not, the result is processor dependent' (twice).
- ✓215. 13-46/36, 13-47/13. Before 'default' add 'a' (twice).
- ✓216. 13-50/5. Change 'with mask' to 'corresponding to the true elements of'.
- ✓217. 13-50/41. Replace 'basic' by 'processor'.  
13-51/5. Replace 'basic' by 'processor'.  
13-51/11. Replace 'basic system' to 'processor'.
- ✓218. 13-52/34. Change '[1.1 + 2.2i]' to '(/ (1.1,2.2) /)'.  
✓219. 13-54/14; #164. Before '.' add 'by identifying the position of the first character in a string of characters that does not appear in a given set of characters'.
- ✓220. 13-54/24-27. On lines 24 and 27 change 'in SET' to 'not in SET' (twice).
- ✓221. 14-1/1. Delete 'A data entity ... constant'.
- ✓222. 14-2/25. After 'same' add 'generic'.

- ✓ 223. 14-2/29-33. On lines 29-30 delete 'when each ... scalar' and on line 33 delete 'when each ... scalar'.
- ✓ 224. 14-5/11-19. Replace by
- 14.4 Scope of operators.** The intrinsic operators are global entities. A defined operator is a local entity. Within a scoping unit an operator may identify additional operations as specified by the rules for generic operators (12.3.2.1).
- 14.5 Scope of the assignment symbol.** The assignment symbol is a global entity. Within a scoping unit the assignment symbol may identify additional assignment operations as specified by the rules for generic assignment (12.3.2.1).
- ✓ 225. 14-5/35. Change 'execution' to 'invocation'.
- ✓ 226. 14-6/27-28. Delete sentence 'An associated ... defined.'
- ✓ 227. 14-7/34. Delete second 'storage'.
- ✓ 228. 14-7/37-38. Add 'or' before 'an ENTRY' and delete ', or a procedure reference'.
- ✓ 229. 14-7/48. Add 'storage' before 'association'.
- ✓ 230. 14-8/4. Change first 'an' to 'An'.
231. A-1 and all Annex titles: set on four lines thus:

**Annex A**  
(informative)

**Glossary of Technical Terms**

and delete line 1 of each Annex.

- ✓ 232. A-1/10-11. Change 'whose ... containing an' to 'having the'.
- ✓ 233. A-2/14. Change 'datum ... character' to 'scalar that is not a pointer and is of type default character and character length one'.
- ✓ 234. A-2/31-32. Delete the sentence 'Note ... constants.'
235. A-2/42. Set 'subobject' in Italic.
- ✓ 236. A-3/8. Change 'that ... interface' to 'and an interface block that specifies ASSIGNMENT(=)'.
- ✓ 237. A-3/38. Before ', or' add ', a recursive procedure referenced in its own scoping unit'.

- ~~238.~~ A-4/20. After 'unit' add 'other than its own'.
239. A-5/7; #100. Add 'Note that in FORTRAN 77, this was called simply a constant.'
- ~~240.~~ A-5/24. Change '2.4.9' to '14.6.3.1' and 'datum' to 'scalar that is not a pointer and is'.
- ~~241.~~ A-5/33-34. Change '(2.4.8) ... containing' to '(2.4.6). A variable that has'.
- ~~242.~~ A-6/29. Change '14' to '2.2'.
- ~~243.~~ A-6/30, 32; #27. Hyphenate 'derived type'.
- ~~244.~~ A-6/31. After 'any' add 'derived-type definitions and'.
- ~~245.~~ A-7/12. Delete ', 2.4.9' change 'or' to ',' and after 'unit' add', or an unspecified storage unit'.
- ~~246.~~ A-7/15. Change 'structure' to 'a data object of derived type' and set 'type' in Roman.
247. A-8/1+. Add
- ~~248.~~ **unspecified storage unit (14.6.3.1).** A unit of storage for holding a pointer or a scalar that is not a pointer and is of type other than default integer, default character, default real, double precision real, default logical, or default complex.
248. B-1/4: Change 'standard' to 'International Standard'.
- ~~249.~~ C-1/13. Change 'semantics or' to 'semantics of'.
250. C-1/16, 36, 41, and C-2/6. Move '.' after the reference (four times).
251. C-3/6. Change 'X3.9-1978' to 'FORTRAN 77'.
- ~~252.~~ C-4/34-35. Delete line 34; after line 35 add the statement
- NULLIFY (CURRENT % NEXT\_CELL)
- ~~253.~~ C-5/3. Move to follow line 5.
- ~~254.~~ C-9//1-34. Delete.
254. C-18/42. Remove the blank before the asterisk (twice).
- ~~255.~~ C-19/21. After 'unit' add 'by'.
- ~~256.~~ C-19/27 ff. Move section C.11.2 to become C.12.1, and renumber. The reference in the title becomes '12.1.2.2.1'.
- ~~257.~~ C-19/27. Change 'valid examples of' to 'examples of valid'

- ✓ 258. C-19/28. Change 'invalid example of host' to 'example of invalid host'.
259. C-19/31. Indent line 31 like the examples on lines 43-47.
- ✓ 260. C-22/23. After 'exist' add ','.
- ✓ 261. C-22/34. Change 'extends the' to 'defines the'.
- ✓ 262. C-22/42. Change 'size ... set)' to 'cardinality'.
263. C-22/43+. Add
- ! This module is intended to illustrate use of  
! the module facility to define a new data type,  
! along with suitable operators.
- ✓ 264. C-24/3. Change '(/X/)' to 'X'.
- ✓ 265. C-24/14. Replace by
- IF (SUBSET) THEN
- C-24/15-17. Indent these lines by 3 spaces.  
C-24/17+. Add
- END IF
- ✓ 266. C-29/19-20. Change 'the most common use is' to 'a common use may be'.
- ✓ 267. C-30/14. Remove ''
- ✓ 268. C-31/26. Add space after 'cos'.
- ✓ 269. C-31/35. After 'A(1)' add ''.
- ✓ 270. C-34/39. Change 'BE + CF + DG' to 'B\*E + C\*F + D\*G'.
- ✓ 271. C-35/29. Change 'ABS' to 'ABS(A)'.
272. C-37, C-38. Delete the whole of section C.14.1 and renumber.