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**Information technology — Programming languages — COBOL**

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## **Introduction**

This Record of Response contains defect reports concerning ISO/IEC 1989:2002, Information technology — Programming languages — COBOL. Associated corrections and clarifications are contained in Technical Corrigendum 3 to ISO/IEC 1989:2002, Information technology — Programming languages — COBOL.

DR-14 Output operations and SELECT WHEN

**PART 1 - TO BE COMPLETED BY WG SECRETARIAT**

**DEFECT REPORT NUMBER:** 1989/052

**WG SECRETARIAT:** ANSI

**DATE CIRCULATED BY WG SECRETARIAT:**

**DEADLINE ON RESPONSE FROM EDITOR:**

**PART 2 - TO BE COMPLETED BY SUBMITTER**

**SUBMITTER:** Ann Bennett (Project Editor)

**FOR REVIEW BY:** SC22/WG4

**DEFECT REPORT CONCERNING:**

ISO/IEC 1989:2002 Information technology — Programming languages — COBOL

**QUALIFIER:** Omission

**REFERENCES IN DOCUMENT:**

1. Page 334, 13.16.41.3, RECORD clause, General Rule 8
2. Page 345, 13.16.49 SELECT WHEN clause
3. Page 507, 14.8.33, REWRITE statement
4. Page 568, 14.8.47, WRITE statement

**NATURE OF DEFECT:**

When the record-name in a REWRITE or WRITE record-name statement includes a SELECT WHEN clause, the standard is ambiguous as to whether the record specified in the WRITE clause or the record specified in the SELECT WHEN clause is written.

This ambiguity stems from the fact that, for output operations, the SELECT WHEN clause was intended to apply only to REWRITE and WRITE statements with the FILE phrase. This was not clearly stated.

[Reference: INCITS/J4 05-0250 (DF 14), Output operations and SELECT WHEN)

**SOLUTION PROPOSED BY THE SUBMITTER:**

**Changes for a Technical Corrigendum**

1. Page 345, 13.16.49.3, SELECT WHEN clause, Replace General Rule 1 with the following text:

For a given file-description entry, any SELECT WHEN clauses of associated record-description entries are evaluated for READ statements, for REWRITE statements with the FILE phrase, and for WRITE statements with the FILE phrase, if the associated file-description entry also contains a CODE-SET clause or a FORMAT clause.

2. Page 345, 13.16.49.3, SELECT WHEN clause: Add the following after all text for General Rule 2:

SELECT WHEN clauses of record description entries specified in the file section have no effect for statements other than READ statements, REWRITE statements with the FILE phrase, and WRITE statements with the FILE phrase, when those statements reference the associated file.

3. Page 345, 13.16.49.3, SELECT WHEN clause, Replace General Rule 5 with the following text (retaining the existing NOTE):

The implementor shall specify whether a SELECT WHEN clause takes effect for READ statements, for REWRITE statements with the FILE phrase, and for WRITE statements with the FILE phrase, when the associated file-description entry contains neither a CODE-SET clause nor a FORMAT clause.

**PART 3 - EDITOR'S RESPONSE:**

The following changes are introduced in Technical Corrigendum 3:

1. Page 345, 13.16.49.3, SELECT WHEN clause, general rule 1, replace the existing text with the following text:  
"For a given file-description entry, any SELECT WHEN clauses of associated record description entries are evaluated for READ statements, for REWRITE statements with the FILE phrase, and for WRITE statements with the FILE phrase, if the associated file-description entry also contains a CODE-SET clause or a FORMAT clause." [DR-14]
2. Page 686, Annex B.2, Implementor-defined language element list, item 139, replace the parenthetical text with the following:  
"(whether a SELECT WHEN takes effect for READ statements and REWRITE or WRITE statements with the FILE phrase in the absence of a CODE-SET clause or a FORMAT clause)" [DR-14]
3. Page 345, 13.16.49.3, SELECT WHEN clause, general rule 2, add the following sentence at the end of the paragraph:  
"SELECT WHEN clauses of record description entries specified in the file section have no effect for statements other than READ statements, REWRITE statements with the FILE phrase, and WRITE statements with the FILE phrase, when those statements reference the associated file." [DR-14]
4. Page 345, 13.16.49.3, SELECT WHEN clause, general rule 5, replace the existing text with the following text (retain the existing NOTE):  
"The implementor shall specify whether a SELECT WHEN clause takes effect for READ statements, for REWRITE statements with the FILE phrase, or for WRITE statements with the FILE phrase, when the associated file-description entry contains neither a CODE-SET clause nor a FORMAT clause." [DR-14]

**DR-18 ADDRESS OF Strongly-Typed Group Item**

**PART 1 - TO BE COMPLETED BY WG SECRETARIAT**

**DEFECT REPORT NUMBER:** 1989/018

**WG SECRETARIAT:** ANSI

**DATE CIRCULATED BY WG SECRETARIAT:**

**DEADLINE ON RESPONSE FROM EDITOR:**

**PART 2 - TO BE COMPLETED BY SUBMITTER**

**SUBMITTER:** Ann Bennett (Project Editor)

**FOR REVIEW BY:** SC22/WG4

**DEFECT REPORT CONCERNING:**

ISO/IEC 1989:2002 Information technology — Programming languages — COBOL

**QUALIFIER:** Clarification required

**REFERENCES IN DOCUMENT:**

8.4.2.11, Data-address-identifier

**NATURE OF DEFECT:**

8.4.2.11.2, Data-address-identifier, SR4 is unclear. The standard is correct, but the separation of the syntax and general rules makes it difficult to understand. This can be alleviated by adding a note to 8.4.2.11.2, Data-address-identifier, SR4, which makes its purpose clear.

[Reference: INCITS/J4 04-0140 (DF-18.1) — ADDRESS OF Strongly-Typed Group Item]

**SOLUTION PROPOSED BY THE SUBMITTER:**

**Changes for a Technical Corrigendum**

8.4.2.11.2, Data-address-identifier, SR4, add the following after the rule:

“NOTE The effect of this rule, along with 8.4.2.11.3, Data-address-identifier, GR2, is to produce a restricted data-pointer.”

**PART 3 - EDITOR'S RESPONSE:**

The following changes are being introduced in Technical Corrigendum 3:

1. Page 99, 8.4.2.11.2, Data-address-identifier, syntax rule 4, add the following note after the rule:

“NOTE The effect of this rule, along with 8.4.2.11.3, Data-address-identifier, general rule 2, is to produce a restricted data-pointer.” [DR-18]

**DR-36 Problems with SORT and type declaration****PART 1 - TO BE COMPLETED BY WG SECRETARIAT****DEFECT REPORT NUMBER:** 1989/036**WG SECRETARIAT:** ANSI**DATE CIRCULATED BY WG SECRETARIAT:****DEADLINE ON RESPONSE FROM EDITOR:****PART 2 - TO BE COMPLETED BY SUBMITTER****SUBMITTER:** Ann Bennett (Project Editor)**FOR REVIEW BY:** SC22/WG4**DEFECT REPORT CONCERNING:**

ISO/IEC 1989:2002 Information technology — Programming languages — COBOL

**QUALIFIER:** Error**REFERENCES IN DOCUMENT:**

1. Page 237, 13.3.5.2, Sort-merge file description entry, Syntax Rule 2
2. Page 476, 14.8.23.3, MERGE statement, General Rules 13a and 13b
3. Page 530, 14.8.36.3, SORT statement, General Rules 15a and 15b

**NATURE OF DEFECT:**

The standard does not clearly differentiate between a type-declaration entry and a record-description entry. This causes ambiguities in sort-merge file description entries in which at least one record-description entry must appear.

[Reference: INCITS/J4 05-0078 (DF-36.3) Problems with SORT]

**SOLUTION PROPOSED BY THE SUBMITTER:****Changes for a Technical Corrigendum:**

1. Page 232, 13.1.1, Data division, general format: Add "type-declaration-entry" immediately beneath "record-description-entry" in each of the six locations in the formats in which the latter syntactic element occurs.
2. Page 233, 13.3.1, File section, general format: Add "type-declaration-entry" immediately beneath "record-description-entry" in each of the two locations in the format in which the latter syntactic element occurs.
3. Page 233, 13.3.1, File section, general format, meta-language terms: Add the following term and subclause to the list:

type-declaration-entry      13.10a, Type declaration entry

4. Page 238, 13.4.1, Working-storage section, general format: Add "type-declaration-entry" immediately below "record-description-entry" in the format.
  5. Page 238, 13.4.1, Working-storage section, general format, meta-language terms: Add the following term and subclause to the list:
- type-declaration-entry      13.10a, Type declaration entry
6. Page 239, 13.5.1, Local-storage section, general format: Add "type-declaration-entry" immediately below "record-description-entry" in the format.
  7. Page 239, 13.5.1, Local-storage section, general format, meta-language terms: Add the following term and subclause to the list:

type-declaration-entry      13.10a, Type declaration entry



8. Page 240, 13.6.1, Linkage section, general format: Add "type-declaration-entry" immediately below "record-description-entry" in the format.
9. Page 241, 13.6.1, Linkage section, general format, meta-language terms: Add the following term and subclause to the list:

type-declaration-entry 13.10a, Type declaration entry

10. Page 247. 13.10, Record description entry, first paragraph: Replace the last sentence with "Any data item that has been described with level-number 1 and whose declaration does not include the TYPEDEF clause is a record."
11. Page 247: Add the following after all text, on a new page:

### **13.10a Type declaration entry**

A type declaration entry is a data description entry that contains a TYPEDEF clause. A type declaration entry may have a hierarchical structure beginning with level-number 1. The structure of a type declaration entry and the elements allowed in a type declaration entry are explained in 8.5.1.2, Levels, and in 13.14, Data description entry.

A type declaration entry has no storage associated with it.

Further details regarding the specification of a type declaration entry are described in 13.16.56, TYPEDEF clause.

12. Page 296, 13.16.31.3, Level-number, General rule 1: Change in part to read "... record description, type declaration, or report group."
13. Page 359, 13.16.56, TYPEDEF clause: Add the following after the introductory paragraph:
 

NOTE A data description entry declared at level-number 1 that includes a TYPEDEF clause is not a record description entry.
14. Page 530, 14.8.36.3, SORT statement, general rules 15a, first sentence and 15b, first sentence: Change the occurrences of "file-name-2" to "file-name-3".
15. Index, add an index at 13.10a for "type-declaration entry".

### **PART 3 - EDITOR'S:**

The following changes are being introduced in Technical Corrigendum 3:

1. Page 232, 13.1.1, Data division, general format: add "type-declaration-entry" immediately beneath "record-description-entry" in each of the six locations in the formats in which the latter syntactic element occurs. [DR-36]
2. Page 233, 13.3.1, File section, general format: add "type-declaration-entry" immediately beneath "record-description-entry" in each of the two locations in the format in which the latter syntactic element occurs. [DR-36]
3. Page 233, 13.3.1, File section, general format, meta-language terms: add the following term and subclause to the list:

"type-declaration-entry 13.10a, Type declaration entry" [DR-36]

4. Page 238, 13.4.1, Working-storage section, general format: add "type-declaration-entry" immediately below "record-description-entry" in the format. [DR-36]
5. Page 238, 13.4.1, Working-storage section, general format: Add "type-declaration-entry" immediately below "record-description-entry" in the format. [DR-36]
6. Page 238, 13.4.1, Working-storage section, general format, meta-language terms: Add the following term and subclause to the list:
 

"type-declaration-entry 13.10a, Type declaration entry " [DR-36]
7. Page 239, 13.5.1, Local-storage section, general format: Add "type-declaration-entry" immediately below "record-description-entry" in the format. [DR-36]
8. Page 239, 13.5.1, Local-storage section, general format, meta-language terms: Add the following term and subclause to the list:
 

"type-declaration-entry 13.10a, Type declaration entry " [DR-36]
9. Page 240, 13.6.1, Linkage section, general format: Add "type-declaration-entry" immediately below "record-description-entry" in the format. [DR-36]
10. Page 241, 13.6.1, Linkage section, general format, meta-language terms: Add the following term and subclause to the list:
 

"type-declaration-entry 13.10a, Type declaration entry " [DR-36]
11. Page 247. 13.10, Record description entry, first paragraph: Replace the last sentence with "Any data item that has been described with level-number 1 and whose declaration does not include the TYPEDEF clause is a record." [DR-36]
12. Page 247: Add the following after all text, on a new page:

### **"13.10a Type declaration entry**

A type declaration entry is a data description entry that contains a TYPEDEF clause. A type declaration entry may have a hierarchical structure beginning with level-number 1. The structure of a type declaration entry and the elements allowed in a type declaration entry are explained in 8.5.1.2, Levels, and in 13.14, Data description entry.

A type declaration entry has no storage associated with it.

Further details regarding the specification of a type declaration entry are described in 13.16.56, TYPEDEF clause. " [DR-36]

13. Page 296, 13.16.31.3, Level-number, General rule 1: Change in part to read " ... record description, type declaration, or report group." [DR-36]
14. Page 359, 13.16.56, TYPEDEF clause: Add the following after the introductory paragraph:

"NOTE A data description entry declared at level-number 1 that includes a TYPEDEF clause is not a record description entry." [DR-36]

15. Page 530, 14.8.36.3, SORT statement, general rules 15a, first sentence and 15b, first sentence: Change the occurrences of "file-name-2" to "file-name-3". [DR-36]
16. Index, add an index at 13.10a for "type-declaration entry". [DR-36]

**DR-37 Definitions for compiled code terms****PART 1 - TO BE COMPLETED BY WG SECRETARIAT****DEFECT REPORT NUMBER:** 1989/037**WG SECRETARIAT:** ANSI**DATE CIRCULATED BY WG SECRETARIAT:****DEADLINE ON RESPONSE FROM EDITOR:****PART 2 - TO BE COMPLETED BY SUBMITTER****SUBMITTER:** Ann Bennett (Project Editor)**FOR REVIEW BY:** SC22/WG4**DEFECT REPORT CONCERNING:**

ISO/IEC 1989:2002 Information technology — Programming languages — COBOL

**QUALIFIER:** Clarification required**REFERENCES IN DOCUMENT:**

1. Page 15, 4.166, Run unit
2. Page 15, 4.167, Runtime element
3. Page 15, 4.168, Runtime module
4. Page 385, 14.5.1, Run unit organization

**NATURE OF DEFECT:**

The definition of "run unit" in 4, Terms and Definitions, is insufficient and possibly misleading in comparison to the definition of the term in 14.5.1, Run unit organization. The former definition fails to state that a run unit may be executed without communicating with, or being coordinated with, another run unit except in very specific ways.

[Reference: INCITS/J4 05-0080 (DF-37.3), Definitions for compiled code terms]

**SOLUTION PROPOSED BY THE SUBMITTER:****Changes for a Technical Corrigendum**

1. Page 15, Terms and Definitions, 4.166, run unit: change to read "One or more runtime modules that interact and that function at execution time as an independent entity."
2. Page 15, Terms and Definitions, 4.167, runtime element: change to read "The code and data produced by the compilation of a source element."
3. Page 15, Terms and Definitions, 4.168, runtime module: change to read "One or more runtime elements that result from compiling a compilation unit."
4. Page 168, 10.1, Compilation units and runtime modules: Delete "and runtime modules" from the heading

**PART 3 - EDITOR'S RESPONSE:**

The following changes are being introduced in Technical Corrigendum 3:

1. Page 15, Terms and Definitions, 4.166, run unit: replace the text of the definition with the following text:

"One or more runtime modules that interact and that function at execution time as an independent entity."  
[DR-37]

2. Page 15, Terms and Definitions, 4.167, runtime element: replace the text of the definition with the following text:

"The code and data produced by the compilation of a source element." [DR-37]

3. Page 15, Terms and Definitions, 4.168, runtime module: replace the text of the definition with the following text:

"One or more runtime elements that result from the compilation of a compilation unit." [DR-37]

4. Page 168, 10.1, Compilation units and runtime modules:

- delete "and runtime modules" from the heading
- third bullet, change in part to read: "...outermost program, including its nested programs"  
[DR-37]

**DR-39 Types within Classes**

**PART 1 - TO BE COMPLETED BY WG SECRETARIAT**

**DEFECT REPORT NUMBER:** 1989/039

**WG SECRETARIAT:** ANSI

**DATE CIRCULATED BY WG SECRETARIAT:**

**DEADLINE ON RESPONSE FROM EDITOR:**

**PART 2 - TO BE COMPLETED BY SUBMITTER**

**SUBMITTER:** Ann Bennett (Project Editor)

**FOR REVIEW BY:** SC22/WG4

**DEFECT REPORT CONCERNING:**

ISO/IEC 1989:2002 Information technology — Programming languages — COBOL

**QUALIFIER:** Omission

**REFERENCES IN DOCUMENT:**

1. Page 104, 8.4.5.1.1, Scope of condition-names, constant-names, data-names, file-names, record-names, report-names, screen-names, and type-names
2. Page 290, 12.16.25.2, GLOBAL clause, Syntax Rules

**NATURE OF DEFECT:**

Type-names are omitted from the list of kinds of names that are global when they are defined in a source element for an object definition. This means that data description entries in methods of the object cannot reference a common type definition.

[Reference: INCITS/J4 05-0061 (DF-39.1) Types within Classes]

**SOLUTION PROPOSED BY THE SUBMITTER:**

**Changes for a Technical Corrigendum**

Change in part the second sentence of 8.4.5.1.1, Scope of condition-names..., to read:

“A constant-name, data-name, file-name, or type-name declared in a source element....”

**PART 3 - EDITOR'S RESPONSE:**

The following change is being introduced in Technical Corrigendum 3:

1. Page 104, 8.4.5.1.1, Scope of condition-names ..., second sentence, change "data-name or file-name" to "data-name, file-name, or type-name". [DR-39]

**DR-42 UNSTRING and INSPECT of zero-length items****PART 1 - TO BE COMPLETED BY WG SECRETARIAT****DEFECT REPORT NUMBER:** 1989/042**WG SECRETARIAT:** ANSI**DATE CIRCULATED BY WG SECRETARIAT:****DEADLINE ON RESPONSE FROM EDITOR:****PART 2 - TO BE COMPLETED BY SUBMITTER****SUBMITTER:** Ann Bennett (Project Editor)**FOR REVIEW BY:** SC22/WG4**DEFECT REPORT CONCERNING:**

ISO/IEC 1989:2002 Information technology — Programming languages — COBOL

**QUALIFIER:** Clarification required**REFERENCES IN DOCUMENT:**

1. Page 464, 14.8.21.3, INSPECT statement, General rule 1
2. Page 546, 14.8.44.3, UNSTRING statement, General rule 2

**NATURE OF DEFECT:**

The standard does not clearly state that when the source operand in an UNSTRING or INSPECT statement is of zero length, the immediacy of termination implies that neither the ON OVERFLOW nor the NOT ON OVERFLOW phrase is executed.

[Reference: INCITS/J4 05-0082 (DF-42.3) UNSTRING and INSPECT of zero-length items]

**SOLUTION PROPOSED BY THE SUBMITTER:****Changes for a Technical Corrigendum**

1. Page 464, 14.8.21.3, INSPECT statement, General rule 1: Replace with the following two rules:
  - 1) For purposes of determining its length, identifier-1 is treated as a sending data item.

- 1a) If the data item referenced by identifier-1 is a zero-length item:
  - a) execution of the INSPECT statement is successful
  - b) control is immediately transferred to the end of the INSPECT statement
  - c) the content of the data items referenced by identifier-1 and identifier-2 is unchanged.

2. Page 546, 14.8.44.3, UNSTRING statement, General rule 2: Replace with the following rule:
  - 2) If the data item referenced by identifier-1 is a zero-length item:
    - a) control is immediately transferred to the end of the UNSTRING statement
    - b) neither imperative-statement-1 nor imperative-statement-2 is executed
    - c) the execution of the UNSTRING statement is successful
    - d) the content of the data items referenced by identifier-4, identifier-6, identifier-7, and identifier-8 is unchanged.

**PART 3 - EDITOR'S RESPONSE:**

The following changes are being introduced in Technical Corrigendum 3:

1. Page 464, 14.8.21.3, INSPECT statement, general rule 1: replace with the following two rules:

"1) For purposes of determining its length, identifier-1 is treated as a sending data item.

1a) If the data item referenced by identifier-1 is a zero-length item:

- a) the contents of the data items referenced by identifier-1 and identifier-2 are unchanged
- b) the execution of the INSPECT statement is successful
- c) control is immediately transferred to the end of the INSPECT statement " [DR-42]

2. Page 546, 14.8.44.3, UNSTRING statement, general rule 2: replace with the following rule:

"2) If the data item referenced by identifier-1 is a zero-length item:

- a) the contents of the data items referenced by identifier-4, identifier-6, identifier-7 and identifier-8 are unchanged. "
- b) neither imperative-statement-1 nor imperative-statement-2 is executed
- c) the execution of the UNSTRING statement is unsuccessful
- d) control is immediately transferred to the end of the UNSTRING statement"  
[DR-42]



**DR-45 Miscellaneous typos and editorial items****PART 1 - TO BE COMPLETED BY WG SECRETARIAT****DEFECT REPORT NUMBER:** 1989/045**WG SECRETARIAT:** ANSI**DATE CIRCULATED BY WG SECRETARIAT:****DEADLINE ON RESPONSE FROM EDITOR:****PART 2 - TO BE COMPLETED BY SUBMITTER****SUBMITTER:** Ann Bennett (Project Editor)**FOR REVIEW BY:** SC22/WG4**DEFECT REPORT CONCERNING:**

ISO/IEC 1989:2002 Information technology — Programming languages — COBOL

**QUALIFIER:** Clarification required**REFERENCES IN DOCUMENT:**

1. Page 58, 7.2.19, TURN directive
2. Page 86, 8.4.1.2.2, Subscripts
3. Page 133, 8.8.4.1.4.2, Condition-name condition (condition variable), rule 1
4. Page 245, 13.9, Constants, syntax rule 2
5. Page 262, 13.16.4.3, BACKGROUND-COLOR clause, general rule 2
6. Page 284, 13.16.21.3, FOREGROUND-COLOR clause, general rule 2
7. Page 298, 13.16.32.3, LINAGE clause, general rule 6
8. Pages 395-6, Table 14, Exception-names and exception conditions
9. Page 494, 14.8.27.3, PERFORM statement, general rule 11,
10. Page 549, 14.8.45, USE statement, syntax rule 2
11. Page 702, D.1, Notations, item 1

**NATURE OF DEFECT:**

There are some typos and editorial corrections that have been collected from various sources. These should be corrected.

[Reference: INCITS/J4 04-0240 (DF-45.1) — Collected typos and editorial items]

**SOLUTION PROPOSED BY THE SUBMITTER:****Changes for a Technical Corrigendum**

1. Page 133, 8.8.4.1.4.2, Condition-name condition (conditional variable), rule 1, change to read as follows:

"If condition-name-1 is associated with one or more range of values, then the conditional variable is tested to determine whether its value is within the specified range or ranges, including the end values."

2. Page 245, 13.9, Constants, syntax rule 2, change in part to read:

"Constant-name-1 may be used anywhere, except in a compiler directive, that a format specifies... "

3. Page 262, 13.16.4.3, BACKGROUND-COLOR clause, general rule 2, change "data-item" to "data item".
4. Page 284, 13.16.21.3, FOREGROUND-COLOR clause, general rule 2, change "data-item" to "data item".
5. Page 298, 13.16.32.3, LINAGE clause, general rule 6, last paragraph, last sentence, delete "special register".
6. Page 395, Table 14, Exception-names and exception conditions, description of EC-I-O-LINAGE, change to read:  
"The value of a data item referenced in the LINAGE clause is not within the required range"

7. Page 396, Table 14, Exception-names and exception conditions, description of EC-RANGE-INDEX, change to read:  
"Index set outside the range of values allowed by the implementor"
8. Page 701, D.1, Notations, item 1, put a comma after "... respectively)".

**PART 3 - EDITOR'S RESPONSE:**

The following changes are being introduced in Technical Corrigendum 3:

1. Page 133, 8.8.4.1.4.2, Condition-name condition (conditional variable), rule 1, replace the existing text with the following text:  
  
"If condition-name-1 is associated with one or more ranges of values, the conditional variable is tested to determine whether its value is within the specified range or ranges, including the end values." [DR-45]
2. Page 245, 13.9, Constant entry, syntax rule 2, change in part to read:  
  
"Except in a compiler directive, constant-name-1 may be used anywhere that a format specifies a literal ... "  
[DR-45]
3. Page 262, 13.16.4.3, BACKGROUND-COLOR clause, general rule 2, change "data-item" to "data item".  
[DR-45]
4. Page 284, 13.16.21.3, FOREGROUND-COLOR clause, general rule 2, change "data-item" to "data item".  
[DR-45]
5. Page 298, 13.16.32.3, LINAGE clause, general rule 6, last paragraph, second sentence, change "LINAGE-COUNTER special register" to "LINAGE-COUNTER". [DR-45]
6. Page 395, Table 14, Exception-names and exception conditions, entry for EC-I-O-LINAGE, replace the existing text with the following text:  
  
"The value of a data item referenced in the LINAGE clause is not within the required range" [DR-45]
7. Page 396, Table 14, Exception-names and exception conditions, entry for EC-RANGE-INDEX, replace the existing text with the following text:  
  
"Index set outside the range of values allowed by the implementor" [DR-45]
8. Page 701, D.1, Notations, item 1, put a comma after "... respectively)" [DR-45]

**DR-47 SUM clause: SIZE ERROR and ROUNDED****PART 1 - TO BE COMPLETED BY WG SECRETARIAT****DEFECT REPORT NUMBER:** 1989/047**WG SECRETARIAT:** ANSI**DATE CIRCULATED BY WG SECRETARIAT:****DEADLINE ON RESPONSE FROM EDITOR:****PART 2 - TO BE COMPLETED BY SUBMITTER****SUBMITTER:** Ann Bennett (Project Editor)**FOR REVIEW BY:** SC22/WG4**DEFECT REPORT CONCERNING:**

ISO/IEC 1989:2002 Information technology — Programming languages — COBOL

**QUALIFIER:** Omission**REFERENCES IN DOCUMENT:**

13.16.52, SUM clause

**NATURE OF DEFECT:**

1. Page 348, 13.16.52, General format includes the ROUNDED phrase, but no rule directly references the phrase.
2. Page 349, 13.16.52.3, SUM clause, general rule 3 indicates that the addition process is consistent with the general rules for ADD and COMPUTE statements with the ON SIZE ERROR phrase, but there is no ON SIZE ERROR phrase (or NOT ON SIZE ERROR, for that matter), to handle the size error indicator or any specification as to what the sum counter contains in the event of a size error condition. In contrast, Page 349, 13.16.52.3, SUM clause, general rule 4 states that when an item with a SUM clause also has a COLUMN clause, a size error condition has the consequence that the data item contains spaces and the EC-REPORT-SUM-SIZE exception condition is set to exist.
3. The ROUNDED phrase applies only to the implicit MOVE from the sum counter to the visible result, and that result is visible only when the subject of the entry also has a COLUMN clause, and therefore ROUNDED should appear only when COLUMN also appears. No syntax rule so specifies.

[Reference: INCITS/J4 05-0159, SUM clause: SIZE ERROR and ROUNDED]

**SOLUTION PROPOSED BY THE SUBMITTER:****Changes for a Technical Corrigendum**

1. Page 348, SUM clause, syntax rules: Add a new syntax rule as follows:
  - 2a) The ROUNDED clause may be specified in the SUM clause only if the COLUMN clause is specified for the subject of the entry.
2. Page 349, 13.16.52.3, SUM clause, General rules: Change the last sentence of general rule 3 to read in part: "... if a size error occurs, the EC-REPORT-SUM-SIZE exception condition is set to exist."
3. Page 349, 13.16.52.3, SUM clause, General rules: Add a new sentence in general rule 4 before the sentence that begins "If the associated ..." to read: "If ROUNDED is specified, the content of the sum counter is obtained according to the general rules for the COMPUTE statement with the ROUNDED phrase, as described under 13.16.51, the SOURCE clause."

**PART 3 - EDITOR'S RESPONSE:**

The following changes are being introduced in Technical Corrigendum 3:

1. Page 348, SUM clause, syntax rules: add a new syntax rule as follows:

"2a) The ROUNDED phrase may be specified in the SUM clause only if the COLUMN clause is specified for the subject of the entry." [DR-47]

2. Page 349, 13.16.52.3, SUM clause, general rule 3, last sentence, change in part to read:

"... if a size error occurs, the EC-REPORT-SUM-SIZE exception condition is set to exist." [DR-47]

3. Page 349, 13.16.52.3, SUM clause, general rule 4, insert the following after the first sentence (before the sentence that begins "If the associated ..."):

"If the ROUNDED phrase is specified in the SOURCE clause, the content of the sum counter is computed according to the general rules for the COMPUTE statement with the ROUNDED phrase, as described under 13.16.51, the SOURCE clause." [DR-47]

**DR-48 Typographical and Minor Errors****PART 1 - TO BE COMPLETED BY WG SECRETARIAT****DEFECT REPORT NUMBER:** 1989/048**WG SECRETARIAT:** ANSI**DATE CIRCULATED BY WG SECRETARIAT:****DEADLINE ON RESPONSE FROM EDITOR:****PART 2 - TO BE COMPLETED BY SUBMITTER****SUBMITTER:** Ann Bennett (Project Editor)**FOR REVIEW BY:** SC22/WG4**DEFECT REPORT CONCERNING:**

ISO/IEC 1989:2002 Information technology — Programming languages — COBOL

**QUALIFIER:** Editorial Clarification required**REFERENCES IN DOCUMENT:**

1. 14.8.4.3, CALL statement
2. 14.8.13.2, EXIT statement
3. 14.8.24.3, MOVE statement
4. 14.8.26.3, OPEN statement
5. 14.8.35.2, SET statement
6. E.15, Common exception processing

**NATURE OF DEFECT:**

1. 14.8.4.3, CALL statement, general rule 2, last sentence, reference is incorrect.
2. 14.8.13.2, EXIT statement, syntax rule 5b: the reference to "containing source element" is unclear.
3. 14.8.24.3, MOVE statement, general rule 4, "deducting" is a typographical error for "de-editing".
4. 14.8.26.3, OPEN statement, general rule 3 refers to an undefined term.
5. 14.8.35.2, SET statement, syntax rule 14b2 refers to an incorrect element in the syntax diagram.

[Reference: INCITS/J4 05-0125, Combined Editorial Changes to the 2002 Standard #1]

**SOLUTION PROPOSED BY THE SUBMITTER:****Changes for a Technical Corrigendum**

1. Page 423, 14.8.4.3, CALL statement, general rule 2, change "14.3, Procedure division, general rules" to "14.1, Procedure division, structure, general rules".
2. Page 447, 14.8.13.2, EXIT statement, syntax rule 5b: Change in part to read "... RAISING phrase of the procedure division header of the source element containing this EXIT statement."
3. Page 479, 14.8.24.3, MOVE statement, general rule 4, first sentence: Change "deducting" to "de-editing".
4. Page 486, 14.8.26.3, OPEN statement, general rule 3: change "file-name" to "file-name-1".
5. Page 520, 14.8.35.2, SET statement, syntax rule 14b2, change "identifier-4" to "identifier-3".
6. Page 743, E.8.1, Weakly-typed items, replace the last line of code (which currently reads "3 Feature-list PIC X(15) OCCURS 10.") with the following code:
  - 3 Feature-list.
  - 4 Feature-name PIC X(15) OCCURS 10.
7. Page 762, E.15, Common exception processing, ninth paragraph (second on page), fourth sentence: delete "or NOT SIZE ERROR".

**PART 3 - EDITOR'S RESPONSE:**

The following changes are being introduced in Technical Corrigendum 3:

1. Page 393, 14.5.12.1.4, Exception objects, second item 1, subitem a), change in part to read: "... as in the RAISING phrase of the procedure division header of the source element that contains this EXIT statement." [DR-48]
2. Page 423, 14.8.4.3, CALL statement, general rule 2, second paragraph, change "14.3, Procedure division, general rules." to "14.1.3, Procedure division structure, General rules.". [DR-48]
3. Page 447, 14.8.13.2, EXIT statement, syntax rule 5a, change in part to read: "... as in the RAISING phrase of the procedure division header of the source element that contains this EXIT statement." [DR-48]
4. Page 447, 14.8.13.2, EXIT statement, syntax rule 5b, change in part to read: "... as in the RAISING phrase of the procedure division header of the source element that contains this EXIT statement." [DR-48]
5. Page 471, 14.8.22.3, INVOKE statement, general rule 7 d), change "14.3, Procedure division, general rules" to "14.1.3, Procedure division structure, General rules". [DR-48]
6. Page 479, 14.8.24.3, MOVE statement, general rule 4, first paragraph, first sentence: change "deducting implied by " to "de-editing implied by". [DR-48]
7. Page 486, 14.8.26.3, OPEN statement, general rule 3: change "file-name" to "file-name-1". [DR-48]
8. Page 488, 14.8.26.3, OPEN statement, general rule 25 a): change "file-name" to "file-name-1" [DR-48]
9. Page 520, 14.8.35.2, SET statement, syntax rule 14 b) 2, change "identifier-4" to "identifier-3". [DR-48]
10. Page 743, E.8.1, Weakly-typed items, fourth paragraph, replace the last line of code (which currently reads "3 Feature-list PIC X(15) OCCURS 10.") with the following code:  
"  
3 Feature-list.  
4 Feature-name PIC X(15) OCCURS 10. " [DR-48]
11. Page 762, E.15, Common exception processing, ninth paragraph (second on page), fourth sentence: delete "or NOT SIZE ERROR". [DR-48]