



**INTERNATIONAL STANDARD ISO/IEC 1989:2002**  
**TECHNICAL CORRIGENDUM 3**

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## **Information technology — Programming languages — COBOL**

### **TECHNICAL CORRIGENDUM 3**

*Technologies de l'information — Langages de programmation — COBOL*

*RECTIFICATIF TECHNIQUE 3*

Technical Corrigendum 3 to ISO/IEC 1989:2002 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 22, *Programming languages, their environments and system software interfaces*.

The defect reports associated with these changes are contained in ISO/IEC JTC 1/SC 22 document SC22-N-4402, titled Record of Response 3 for ISO/IEC 1989:2002. The related defect report number is indicated in brackets at the end of each change item. "[DR-12]", for example, is a reference to Defect Report 1989/012.

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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]

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4. 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]

5. 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]

6. 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]

7. Page 168, 10.1, *Compilation units and runtime modules*:

- Delete "and runtime modules" from the subclause title.
- Change in part the third bullet to read "outermost program, including its nested programs.". [DR-37]

8. 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]

9. 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]

10. 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]

11. Page 238, 13.4.1, *Working-storage section, general format*: Add "type-declaration-entry" immediately below "record-description-entry" in the format. [DR-36]

12. 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]

13. Page 239, 13.5.1, *Local-storage section, general format*: Add "type-declaration-entry" immediately below "record-description-entry" in the format. [DR-36]

14. 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]

15. Page 240, 13.6.1, *Linkage section, general format*: Add "type-declaration-entry" immediately below "record-description-entry" in the format. [DR-36]

16. 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]

17. Page 245, 13.9.2, *Constant entry, syntax rule 2*: Change in part the first sentence to read:

"Except in a compiler directive, constant-name-1 may be used anywhere that a format specifies a literal ...". [DR-45]

18. *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]

19. *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 given in 13.16.56, TYPEDEF clause." [DR-36]

20. *Page 262, 13.16.4.3, BACKGROUND-COLOR clause, general rule 2*: Change "data-item" to "data item". [DR-45]

21. *Page 284, 13.16.21.3, FOREGROUND-COLOR clause, general rule 2*: Change "data-item" to "data item". [DR-45]

22. *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]

23. *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]

24. *Page 345, 13.16.49.3, SELECT WHEN clause, general rule 1*: Replace the existing text with the following:

"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]

25. *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]

26. *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]

27. *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]

28. *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]

29. *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]

30. *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]

31. *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, or". [DR-48]

32. *Page 395, Table 14, Exception-names and exception conditions, entry for EC-I-O-LINAGE:* Replace the existing description with the following text:

"The value of a data item referenced in the **LINAGE** clause is not within the required range". [DR-45]

33. *Page 396, Table 14, Exception-names and exception conditions, entry for EC-RANGE-INDEX:* Replace the existing description with the following text:

"Index set outside the range of values allowed by the implementor". [DR-45]

34. *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]

35. *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]

36. *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]

37. *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]

38. *Page 471, 14.8.22.3, INVOKE statement, general rule 7 d):* Change "14.1.3, General rules of the procedure division" to "14.1.3, Procedure division structure, General rules". [DR-48]

39. *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]

40. *Page 486, 14.8.26.3, OPEN statement, general rule 3:* Change "file-name" to "file-name-1". [DR-48]