INTERNATIONAL STANDARD

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AMENDMENT 1
2012-##-##

Information technology — Document description and processing languages — Office Open XML File Formats —

Part 4: Transitional Migration Features

AMENDMENT 1

Technologies de l'information — Description des documents et langages de traitement — Formats de fichier "Office Open XML" —

Partie 4: Caractéristiques de migration transitoire

AMENDEMENT 1

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Foreword

ISO (the International Organization for Standardization) and IEC (the International Electrotechnical Commission) form the specialized system for worldwide standardization. National bodies that are members of ISO or IEC participate in the development of International Standards through technical committees established by the respective organization to deal with particular fields of technical activity. ISO and IEC technical committees collaborate in fields of mutual interest. Other international organizations, governmental and non-governmental, in liaison with ISO and IEC, also take part in the work. In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of the joint technical committee is to prepare International Standards. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75% of the national bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO and IEC shall not be held responsible for identifying any or all such patent rights.

Amendment 1 to ISO/IEC 29500-4 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 34, *Document description and processing languages*.

Introduction

ISO 8601 dates are permitted in SpreadsheetML cell values in both Strict and Transitional variants. In other aspects, Transitional ISO/IEC 29500-4 is identical to ECMA-376, edition 1, but applications able to read ECMA-376 edition 1-compliant documents will regard ISO/IEC 29500-4 Transitional documents containing ISO 8601 dates as corrupt.

ISO/IEC 29500-1:2011/Amd.1:2012 removes the leap year bug by removing the "1900 backward-compatibility date base". This amendment (ISO/IEC 29500-4:2011/Amd.1:2012) alters the "1900 date base" such that Transitional documents must always exhibit the leap year bug. As a result, support for the date bases is as follows:

Date Base	Status in ISO/IEC 29500-1:2011/Amd.1:2012	Status in ISO/IEC 29500-4:2011/Amd.1:2012
"1900"	Stays as "1900"	Removed
"1900 backward-compatibility"	Removed	Renamed to "1900"
"1904 backward-compatibility"	Renamed to "1904"	Renamed to "1904"

Notational conventions

The title of each change is the complete reference to the clause or subclause being modified. In all cases, the title begins with the clause or subclause number, the clause or subclause name, and the page number. In those cases containing changes to a particular row of a table, the value in that row's first column is appended to the title. As the lines in each XML schema subclause are numbered starting at 1 and going to the end of a schema, modifications to schemas also contain the numbers of the lines being modified.

A change can contain any one or more of the following kinds of edits:

1. Addition of text: New text is displayed in blue and is underlined, as demonstrated here.
2. Deletion of text: ~~Deleted text is displayed in red and is struck-through, as demonstrated here.~~
3. Change of format of text: Text whose format (but not its content) has changed is displayed in green and is double-underlined, as demonstrated here.

Some changes involve edits to large paragraphs, tables, and/or XML fragments. In such cases, the changes contain only as much unchanged content as is necessary to establish the correct context of each change. Unchanged content that is not necessary to establish the correct context of a change is represented by an ellipsis (…).

Within a change, intent that cannot be represented visually as an edit is written as an instruction in italic and delimited by curly brackets; for example: *{In paragraph 2, item 4, and in paragraph 4, make the numbers in the text "17–23" hyperlinked forward references to Clauses 17 and 23.}*

Except for whole clauses or annexes that are identified as being informative, informative text that is contained within normative text is indicated in the following ways:

1. [*Example:* code fragment, possibly with some narrative … *end example*]
2. [*Note:* narrative … *end note*]
3. [*Rationale:* narrative … *end rationale*]
4. [*Guidance*: narrative … *end guidance*]

Information technology — Document description and processing languages — Office Open XML File Formats —

Part 4:
Transitional Migration Features

AMENDMENT 1

1. §15.2.4, "Modified content for Date Conversion for Serial Date-Times (Part 1, §18.17.4.1)", new subclause

When interpreting a document of a transitional conformance class, Part 1, §18.17.4.1 is replaced by the following text:

A *serial date-time* is a number that represents a date and time. This signed value is in units of days relative to the base date for the selected date system. Serial date-times increase by 1 into each successive day, and decrease by 1 into each preceding day. Fractional portions of serial date-times represent fractions of a single day. [*Example*: When using the 1900 date system, which has a base date of 30th December 1899, a serial date-time of 1.5 represents midday on the 31st December 1899 (serial date-time day 1); that is, 1899-12-31T12:00. A serial date-time of -4.25 represents 6 pm on the 25th December 1899; that is, 1899-12-25T18:00. *end example*] The base dates and the related serial date-times represent local date and time.

Two different bases are used for converting dates to and from serial date-times:

- In the *1900 date system*, the lower limit is January 1, 1900, 00:00:00, which has a serial date-time of 1. The upper limit is December 31, 9999, 23:59:59, which has a serial date-time of 2,958,465.9999884. The base date for this date base system is December 31, 1899, which has a serial date-time of 0.
- In the *1904 date system*, the lower limit is January 1st, 0001, 00:00:00, which has a serial date-time of -695055. The upper limit is December 31st, 9999, 23:59:59.999, which has a serial date-time of 2,957,003.9999884. The base date for this system is midnight (00:00:00) on the morning of January 1st, 1904, which has a serial date-time of 0.

A serial date-time outside the temporal range for the selected date system is invalid.

The date system is specified by the value of the date1904 attribute of the workbookPr element. [*Example*:

1900 date system: `<workbookPr showObjects="all"/>`
1904 date system: `<workbookPr date1904="1" showObjects="all"/>`

end example]

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