Recommendation 7

NUMERICAL REPRESENTATION OF DATES, TIME, AND PERIODS OF TIME

The Group of Experts on Automatic Data Processing and Coding, a subsidiary organ of the Working Party on Facilitation of International Trade Procedures, set up by the Economic Commission for Europe, agreed at its eighth session in October 1974 to study the question of the numerical representation of dates, time and periods of time for information interchange with a view to preparing a draft recommendation on this subject. At its ninth, tenth and eleventh sessions, the Group of Experts considered proposals for a draft Recommendation which was forwarded to the Working Party for adoption.

A first edition of the Recommendation was adopted by this Working Party at its fourth session in September 1975. A number of the then existing International Standards adopted in this field by the International Organization for Standardization (ISO) were used as a basis for the Recommendation.

The present version of the Recommendation on the numerical representation of dates, time and periods of time was prepared pursuant to the development of a new International Standard ISO-8601 (which cancels and replaces International Standards ISO-2014, ISO-2015, ISO-2711, ISO-3307 and ISO-4301, of which it constitutes a technical revision) and was adopted by the Working Party at its twenty-eighth session in September 1988.

RECOMMENDATION

The Working Party on Facilitation of International Trade Procedures,

Recommends that participants in international trade, Governments and international organizations accept and use, and promote the general acceptance of the method set out hereafter of expressing dates, time and periods of time, whenever these data are to be used in international trade.

At the twenty-eighth session of the Working Party representatives attended from: Austria; Belgium; Canada; Czechoslovakia; Denmark; Finland; France; German Democratic Republic; Germany, Federal Republic of; Hungary; Italy; Netherlands; Norway; Poland; Romania; Spain; Sweden; Switzerland; Turkey; Union of Soviet Socialist Republics; United Kingdom of Great Britain and Northern Ireland; United States of America.

The following intergovernmental organizations and non-governmental organizations were also represented: United Nations Conference on Trade and Development (UNCTAD); European Economic Community (EEC); Customs Co-operation Council (CCC); International Chamber of Commerce (ICC); International Organization for Standardization (ISO); International Air Transport Association (IATA); International Association of Ports and Harbours (IAPH); International Chamber of Shipping (ICS); International Civil Airports Association (ICAA); International Data Exchange Association (IDEA); International Railway Transport Committee (CIT); International Road Transport Union (IRU); International Federation of Freight Forwarders Associations (FIATA) and International Union of Railways (UIC).

Also present at the invitation of the secretariat were a representative of the European Free Trade Association (EFTA) and representatives from the Korean Committee for Simplification of International Trade Procedures (with headquarters located in the Republic of Korea).

I. BACKGROUND

1. Information on dates and periods of time is needed in most documents used in international trade. However, varying methods of expressing these data elements have led to confusion and sometimes resulted in legal disputes, particularly when all-numerical representations have been used (e.g. in North America 1.12.1988 means 12 January 1988 whereas in Europe the same figures indicated 1 December 1988.

2. Although some of these difficulties can be overcome by spelling out the name of the month, an all numerical character representation of these data elements would greatly reduce the difficulties arising from differences in languages and alphabets and would facilitate abbreviation and coding.

3. By 1975, the International Organization for Standardization (ISO) had adopted a number of standards in this field, including ISO-2014 “writing of Calendar Dates in All-Numeric Form”, ISO-2015 “Numbering of weeks”, ISO-2711 “Representation of Ordinal Dates” and ISO-3307 “Information interchange – Representations of time of the day”, which were considered suitable as a basis for

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a Recommendation relevant to the requirements in international trade.

4. In September 1975 the first version of the Recommendation was adopted by the Working Party on Facilitation of International Trade Procedures at its fourth session.

5. In 1978 ISO adopted in this field another International Standard ISO-4031 "Information interchange – Representation of local time differentials."

6. Finally in 1988 ISO adopted a new International Standard ISO-8601 "Data elements and interchange formats – Information interchange – Representation of dates and times" which constitutes a technical revision and merger which cancels and replaces the standards previously issued in this field and mentioned above.

7. Through its secretariat the Working Party took an active part in the preparation of International Standard ISO-8601. Following its adoption by ISO the Working Party agreed that a new, second edition of the Recommendation should be prepared to ensure its compatibility with the new standard.

II. SCOPE AND FIELD OF APPLICATION

8. This Recommendation establishes a method for a standardized and unambiguous all-numerical designation of a given date, a given time of the day and a given period of time. It applies in all cases where these data are presented as separate entries in numerical form but not when they are part of a plain language text.

III. RECOMMENDATIONS

Calendar date

9. Numerical representation of year, month and day in descending order, separated when required by hyphen, and with the possibility of omitting indication of century if not needed.

Example:	10 May 1994	1994-05-10 19940510 94-05-10 940510

Ordinal date

10. Numerical representation of year and date, with the date expressed by its original number counted from 1 January (001) to 31 December (365 or 366).

Example:	10 May 1994	1994130

Time of the day

11. Numerical representation of hour and minute with a constant length of four digits. When combined with a date, the character "T" should be used as a designator to start the time representation. By mutual agreement of the partners in information interchange the character "T" may be omitted in applications where there is no risk of confusing with other representations in this Recommendation a combined representation of date and time.

Example:	Ten o'clock 10 May 1994	19940510T1000 1994-05-10T1000 199405101000

Co-ordinated Universal Time (UTC)

12. To express the time of the day in Co-ordinated Universal Time (formerly known as Greenwich Mean Time) the representations specified above should be used, followed immediately by the time designator "Z". Differences between UTC and local time shall be indicated by appending the time difference in hours and minutes, or hours only, with a leading "+" or "-" sign, as the case may be.

Examples:	20 minutes and 30 seconds past 23 hours	232030Z
	27 minutes and 46 seconds past 15 hours locally in Geneva and in New York indicated in respect of UTC	152746+0100 (or +01) 152746-0500 (or -05)

Week

13. Numerical representation of a period of seven calendar days, starting with Monday and numbered from 01 to 53, with number 01 assigned to the first week containing at least four days of the new year, and preceded by the letter "W" if needed in order to avoid misunderstanding.

Example:	The week 11-17 April 1994	1994 W 15 199415

Other periods of time

14. Numerical representations of the dates and times indicating the beginning, respectively, the end of a period of time, separated by a solidus. (In certain application areas a double hyphen is used as a seperator instead of a solidus).

Examples:

***Periods expressed with precision in years*:**

1994 to 1996	1994/1996

***Periods expressed with precision in months*:**

February to April 1994	1994-02/04
February 1994 to April 1994	1994-02/1994-04

***Periods expressed with precision in weeks*:**

11 April to 23 May 1994	1994 W 15/21
11 April 1994 to 23 May 1994	1994 W 15/1994 W 21

***Periods expressed with precision in days*:**

8 to 13 May 1994	1994-05-08/13
8 May to 10 June 1994	1994-05-08/06-10
8 May 1994 to 10 June 1994	1994-05-08/1994-06-10

***Periods expressed with precision in hours*:**

10 to 18 o'clock 8 May 1994	1994-05-08T1000/1800
10 o'clock 8 May to 18 o'clock 10 May 1994	1994-05-08T1000/10T1800
10 o'clock 8 May to 18 o'clock 10 June 1994	1994-05-08T1000/06-10T1800
10 o'clock 8 May 1994 to 18 o'clock 10 June 1994	1994-05-08T1000/1994-06-10T1800

(In all the examples given under paragraph 13, hyphen and, by mutual agreements, "T" designators could be omitted as shown under paragraphs 9 and 11. However, the solidus should always be used as indicated.)

15. Numerical representation of a given duration of time preceded by the designator "P" and with the designators "Y", "M", "W", "D", "H", and "M" following the number of years, months, weeks, days, hours, and minutes in the representation respectively. (The character "T" shall be used to designate hour and minute section in a representation as in paragraph 11.)

The representation may be associated with a specific start or end as in paragraph 14.

Examples:

A period of two years, ten months, fifteen days, ten hours, twenty minutes	P2Y10M15DT10H20M
A period of one year, six months beginning on 8 May 1994	19940508/P1Y6M