Building a database of secular and religious holidays for world-wide use

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Knowing the dates of secular and religious holidays is important to business and government in arranging travel, meetings, loans and contracts. For the database builder or manager, the determination of the dates, and particularly the automatic generation of these dates, represents a considerable effort, since such holidays are determined by a variety of different rules. In some cases, the determination is based on calendars other than the traditional and familiar Gregorian calendar.

Even if algorithms can be derived to cope with the transformation of rules into dates, changes may be made as a result of decisions by any of a widely distributed set of political or religious bodies. The construction of software to implement such algorithms, when known and updated is a non-trivial task which, in general, is not well assisted by the commonly available database or spreadsheet packages.

This paper surveys the task of building a database of the type described and considers data structures, algorithms, and procedures suitable to its construction, operation and management. The material base of this work includes the building of a bibliography of sources of information on the dates of holidays as well as a taxonomy of the rules which allow these dates to be generated for any given (Gregorian calendar) year. This information will be used to suggest possible structures for the holidays database and possible mechanisms for its generation and maintenance.