



Office of Information Technology Services

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New York State Information Technology Policy	No: NYS-P98-003
IT Policy: Date/Time Conversion Contract Language	Updated: 05/09/2019
	Issued By: NYS Office of Information Technology Services Owner: Division of Legal Affairs

1.0 Purpose and Benefits

In the past, date/time conversions on specific dates raised critical software technology issues during rollover. Similar issues can be anticipated in the future. This Policy contains information and contract language to help plan for those incidents and, where possible, prevent them from occurring.

2.0 Authority

Section 103(10) of the State Technology Law provides the Office of Information Technology Services (ITS) with the authority to establish statewide technology policies, including technology and security standards. *Section 2 of Executive Order No. 117* provides the State Chief Information Officer with the authority to oversee, direct and coordinate the establishment of information technology policies, protocols and standards for State government, including hardware, software, security and business re-engineering. Details regarding this authority can be found in NYS ITS Policy, [NYS-P08-002 Authority to Establish State Enterprise Information Technology \(IT\) Policy, Standards and Guidelines](#).

3.0 Scope

This policy applies to all “State Government” entities as defined in Executive Order 117 or “State Agencies” as defined in Section 101 of the State Technology Law (“State Entities”), their employees; and all others, including third parties of State Entities (such as local governments, consultants, vendors and contractors), that use or access any ITS Information Technology Resource for which ITS has administrative responsibility, including systems managed or hosted by third parties on behalf of the ITS. Where a

conflict exists between this policy and a State Entity's policy, the more restrictive policy will take precedence.

4.0 Information Statement

Background

Rolling over from the year 1999 to the year 2000 raised critical technology concerns ("Year 2000 Problem" or "Y2K"). The common practice of representing years in software with two digits rather than four digits resulted in logic errors causing incorrect date-related computer processing. This gained wide media coverage including reports of computer programs misinterpreting "00" as referring to the year 1900 instead of 2000.

Similar date/time software issues can re-emerge on other critical dates. These issues are anticipated in the future, either through generic coding error, ill-advised patches made during Y2K remediation, or from other date "bugs" (such as the so-called "Unix Millennium 2038 Bug" which is reportedly already causing problems with some systems. <http://www.statemaster.com/encyclopedia/Year-2038-problem>).

The Unix Millennium 2038 Bug is an inherent limitation of the 32-bit integer computing system. Since January 1, 1970, 32-bit computers have been keeping track of time to the unit of seconds. With each second being an integer-ticker on that system, the time/date will reach the largest integer that a 32-bit system can process on January 19, 2038 at 03:14:07 (UTC). The solution is upgrading or replacing 32-bit systems to 64-bit systems which will not run out of integers for time/date processing until the year 292,277,026,596.

In anticipation of these date/time conversions issues, State Entities should include date/time warranty provisions in procurements for software, systems, enhancements and equipment. ITS predecessor, the Office for Technology, collaborated with the Office of General Services (OGS) in 1998 on procedures and language addressing the Y2K date/time problem. In 2004, the two agencies again worked together on a shorter version of the warranty language which is found in OGS's Appendix B (revised in April 2016).

By strategically planning for date/time problems now, it will help alleviate potential conversion issues. Benefits of incorporating a date/time conversion warranty language into relevant procurements include:

- Enhanced resource utilization by remaining at the forefront of the date/time conversion problem.
- Potential cost savings by incorporating the date/time conversion warranty now for the "Unix Millennium 2038 Bug."

Benefits of being prepared for future date/time conversion issues include:

- Greater awareness of risk management, risk exposures, and planning for business continuity.

- Maintaining competitive advantage by installing or updating systems as they provide more advanced functionality for State government entities.
- Standardized software and hardware systems.

Contract Language

Except where a date/time warranty has already been negotiated into a pre-established contract, State Entities must continue to include date/time warranties in their contracts, RFPs, IFBs, or mini-bids.

The form of the date/time warranty shall be substantially similar to the following language, currently found in § 54(e) of OGS Appendix B (revised April 2016):

Date/Time Warranty

Contractor warrants that Product furnished pursuant to this Contract shall, when used in accordance with the product documentation, be able to accurately process date/time data (including, but not limited to, calculating, comparing, and sequencing) transitions, including leap year calculations. Where a Contractor proposes, or an acquisition requires that specific Products must perform as a package or system, this warranty shall apply to the Products as a system.

Where Contractor is providing ongoing services, including but not limited to: i) consulting, integration, code or data conversion, ii) maintenance or support services, iii) data entry or processing, or iv) contract administration services (e.g., billing, invoicing, claim processing), Contractor warrants that services shall be provided in an accurate and timely manner without interruption, failure or error due to the inaccuracy of Contractor's business operations in processing date/time data (including, but not limited to, calculating, comparing, and sequencing) various date/time transitions, including leap year calculations. Contractor shall be responsible for damages resulting from any delays, errors or untimely performance resulting therefrom, including but not limited to the failure or untimely performance of such services.

5.0 Compliance

This policy shall take effect upon publication. Compliance is expected with all enterprise policies and standards. ITS may amend its policies and standards at any time; compliance with amended policies and standards is expected.

6.0 Definitions of Key Terms

Except for terms defined in this policy, all terms shall have the meanings found in <http://www.its.ny.gov/glossary>.

Term	Definition
Product	Shall include, without limitation: when solicited from a vendor in a State government contracts, RFPs, IFBs, or mini-bids, any piece or component of equipment, hardware, firmware, middleware, custom or commercial software, or internal components or subroutines therein which perform any date/time data recognition function, calculation, comparing or sequencing. Where services are being furnished, e.g., consulting, systems integration, code or data conversion or data entry, the term "Product" shall include resulting deliverables.

7.0 Contact Information

Submit all inquiries and requests for future enhancements to the policy owner at:

Division of Legal Affairs
Reference: NYS-P98-003
NYS Office of Information Technology Services
State Capitol, ESP, P.O. Box 2062
Albany, NY 12220
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Statewide technology policies, standards, and guidelines may be found at the following website: <http://www.its.ny.gov/tables/technologypolicyindex>

8.0 Revision History

This policy shall be reviewed at least once every two years to ensure relevancy.

Date	Description of Change	Reviewer
04/17/1998	Issued policy	CIO/OFT
08/30/2011	Revised policy	CIO/OFT
02/07/2017	Update policy	Division of Legal Affairs
05/09/2019	Updated Policy	Division of Legal Affairs

9.0 Related Documents

[Section 54\(e\) of OGS's Appendix B \(revised April 2016\)](#)