TITLE: CIB 98-13 Year 2000 Warranty Clauses for IT Acquisitions

May 5, 1998

MEMORANDUM FOR CONTRACTING OFFICERS AND NEGOTIATORS

TO: Distribution List FAC

FROM: M/OP/OD, Marcus L. Stevenson, Procurement Executive

SUBJECT: Year 2000 Warranty Clauses for IT Acquisitions

CONTRACT INFORMATION BULLETIN 98 - 13

The well-publicized Year 2000 (Y2K) computer problem threatens catastrophic data processing failures and equipment malfunctions that could hamstring critical Agency functions and programs if information technology and other electronic equipment products do not correctly process dates in the Year 2000 and beyond. Accordingly, I am instructing USAID contracting officers and negotiators to incorporate the appropriate warranty clause and the USAID standard for Y2K compliance that are prescribed in the attached memo from Mr. Nygard, dated March 3, 1998, into all procurement actions covered by his memo.

Inquiries concerning the Y2K warranties should be addressed to Mr. John Streufert, who has replaced Ms. Joan Matejceck as the USAID Y2K Program Director subsequent to Mr. Nygard's memo. His phone number is (202)
712-5460.

Attachment: a/s

March 3, 1998

MEMORANDUM

TO: M/OP, Marcus Stevenson

FROM: DAA/M, Richard Nygard

SUBJECT: Year-2000 Procurement Guidance

As you know, there are significant implications of the Year-2000 computer problem (Y2K) in the procurement of new information technology (IT) components, and also in the maintenance of those components. These components include computer hardware, its operating software, and user software. It is essential that all future expenditures on such items result in Y2K compliant components.

In order to ensure that such IT product components (and services to develop such components) are (or become) Y2K compliant, all procurements (whether contracts, small purchases, credit card purchases, or by other procurement mechanisms) of such components include the requirement to comply with:

1)   The standard FAR language for Y2K compliance (Attachment A) adopted on 22 AUG 1997, and

2)   The USAID Standard for Y2K compliance(Attachment B), which clarifies the FAR guidance.

By this memo, I am requesting you to take the necessary steps to ensure that all personnel who use USAID funds to procure:

1)   IT commodities,
2)   services to develop IT components,
3)   the routine maintenance of IT components,
4)   Y2K renovation of IT components, or
5)   any other Y2K sensitive products or services

include the specified Y2K language as standard provisions in the corresponding procurement documents. These personnel include USAID officials and any other officials responsible for contracting actions using USAID funds. This requirement applies to all USAID-funded procurement actions, whether executed in Washington or overseas.

Questions concerning this policy may be directed to the Deputy CIO and Y2K Program Director, Joan Matejceck, M/IRM/OD, at (202)-712-5460.

Attachments:
A   The FAR language for Y2K procurements.
B   The USAID Standard for Y2K Compliance.

Attachment A

Recommended Language to Implement FAR Guidance (adopted 27 August 1997)

Commercial Supply Products Warranty

This clause is recommended for voluntary use by Federal agencies in their solicitations and contracts for Year 2000 compliant software, hardware, and systems comprised of commercial information technology products with the following exceptions: (1) the requirement will not continue to exist after December 31, 1999, or (2) the agency has decided to accept offers from vendors that do not have the needed Year 2000 compliant products, but will be required under the contract to upgrade the information technology items to be Year 2000 compliant by a suitable date in advance of the year 2000. The clause may be used when some but not all of the products being acquired are required to be Year 2000 compliant.

The words "listed below" in the clause refer to products that the offeror has identified as being Year 2000 compliant in response to the procuring agency's specifications. For unlisted products, contracting officers are reminded to adhere to the provisions of Federal Acquisition Regulations (FAR) Part 12, and to obtain an express warranty that includes repair and replacement of any such defective unlisted products discovered within a reasonable period of time after acceptance if merchantability and fitness for use are

waived and not included in the offeror's commercial warranty for those unlisted products.

Year 2000 Warranty--Commercial Supply Items

The contractor warrants that each hardware, software, and firmware product delivered under this contract and listed below shall be able to accurately process date/time data (including, but not limited to, calculating, comparing, and sequencing) from, into, and between the twentieth and twenty-first centuries, and the years 1999 and 2000 and leap year calculations to the extent that other information technology, used in combination with the information technology being acquired, properly exchanges date/time data with it. If the contract requires that specific listed products must perform as a system in accordance with the foregoing warranty, then that warranty shall apply to those listed products as a system. The duration of this warranty and the remedies available to the Government for breach of this warranty shall be as defined in, and subject to, the terms and limitations of the contractor's standard commercial warranty or warranties contained in this contract, provided that notwithstanding any provision to the contrary in such commercial warranty or warranties, the remedies available to the Government under this warranty shall include repair or replacement of any listed product whose non-compliance is discovered and made known to the contractor in writing within ninety (90) days after acceptance. Nothing in this warranty shall be construed to limit any rights or remedies the Government may otherwise have under this contract with respect to defects other than Year 2000 performance.

Note for solicitations and new contracts: The solicitation should describe the existing computer system or the products (i.e., firmware, middleware, etc.) that will be used with the commercial products and systems being acquired, and as appropriate, whether those existing systems and products are Year 2000 compliant, and any efforts currently underway to provide this capability.

Note for existing contracts: It is recommended that agencies negotiate modifications to existing contracts for acquisition of new products using the above clause as a guide. Prior to modifying the contract, the project team must ensure (1) that performance is possible considering the characteristics of the existing products, (2) the suppliers' agreements with the integrator will allow this work to be performed, (3) cost of performance will not be prohibitive, and (4) that the contractor will agree to the modification (should be a bilateral modification). The Government may elect to acquire versions of those products that warrant accurate performance in the processing of date and date related data.

Non-Commercial Supply Items Warranty

This clause is recommended for voluntary use by agencies for their solicitations and contracts for custom computer items (e.g. hardware, software and systems) with the following exceptions: (1) the requirement will not continue to exist after December 31, 1999, or (2) the agency has decided to accept offers from vendors that do not have the needed Year 2000 compliant items, but will be required under the contract to upgrade those items to be Year 2000 compliant by a suitable date in advance of the year 2000. The clause may be used when some but not all of the items being acquired are required to

be Year 2000 compliant. The words "listed below" in the clause refer to items that the offeror has identified as being Year 2000 compliant in response to the procuring agency's specifications.

Year 2000 Warranty--Non-Commercial Supply Items

The contractor warrants that each non-commercial item of hardware, software, and firmware delivered or developed under this contract and listed below shall be able to accurately process date/time data (including, but not limited to, calculating, comparing, and sequencing) from, into, and between the twentieth and twenty-first centuries, and the years 1999 and 2000 and leap year calculations to the extent that other information technology, used in combination with the information technology being acquired, properly exchanges date/time data with it. If the contract requires that specific listed items must perform as a system in accordance with the foregoing warranty, then that warranty shall apply to those listed items as a system. The duration of this warranty and the remedies available to the Government for breach of this warranty shall be as defined in, and subject to, the terms and limitations of any general warranty provisions of this contract, provided that notwithstanding any provision to the contrary in such warranty provision(s), or in the absence of any such warranty provision(s), the remedies available to the Government under this warranty shall include repair or replacement of any listed item whose non-compliance is discovered and made known to the contractor in writing within ninety (90) days after acceptance. Nothing in this warranty shall be construed to limit any rights or remedies the Government may otherwise have under this contract with respect to defects other than Year 2000 performance.

Note for solicitations and new contracts: The solicitation should describe the existing computer system or the items (i.e., firmware, middleware, etc.) that will be used with the software and systems being acquired, and as appropriate, whether those existing systems, items, and software are Year 2000 compliant, and any efforts currently underway to provide this capability.

Note for existing contracts: It is recommended that agencies negotiate modifications to existing contracts for acquisition of new items using the above clause as a guide. Prior to modifying the contract, the project team must ensure (1) that performance is possible considering the characteristics of the existing items, (2) the suppliers' agreements with the integrator will allow this work to be performed, (3) cost of performance will not be prohibitive, and (4) that the contractor will agree to the modification (should be a bilateral modification). The Government may elect to acquire versions of those items that warrant accurate performance in the processing of date and date related data.

Attachment B

All information technology components delivered under this procurement shall be Year-2000 (Y2K) compliant. A component is Year-2000 compliant if:

1)   The component contains and processes no date/time data.
or
2)   The component contains or processes date /time data and:

a)   If the component is a repository to store and keep date/time data, then the component can record and differentiate dates from 1 January 1900 thru 31 December 2099, and time-of-day within those dates (or a wider range if required by the component's purpose).

b)   If the component depends on an internal clock for time data to use in its operation, that the component will continue to operate correctly a) at the present time and b) over a period equal to twice the expected remaining life of the product. If that period includes the change of millenium or other "special dates" then the component shall continue to operate correctly through these "special dates", as required.

c)   If the component process data time data the component can and does accurately perform any date/time function calculations required by the official purpose of the component.

d)   If the component process data time data, a mechanism to accurately sort and index a date column or a list of n date/time values exists, and is used properly, as required.

e)   If the component interchanges data/time data with other components, a mechanism(s) to properly interchange the date/time data a) exists and b) is consistently used, as required.

f)   it uses the appropriate recommended means, see below, to achive Y2K compliance.

 All information technology components delivered under this procurement shall use the following recommended means to achieve Year-2000 compliance unless approved in advance by the procurement official, based on the criteria specified in note 10. Recommended Means to Achieve Year-2000 Compliance shall include:

1)   All custom and off-the-shelf non-system software and data-bases (especially data to be exchanged) shall explicitly represent century in all date/time data elements a) externally at user interfaces, and b) internally to the software logic in memory (on-line) and in storage (off-line).

All other components shall represent century in a way that allows the component to unambiguously represent all dates which will be entered or displayed by the user, and will use one common criteria or rule by which to infer century. This will prevent user confusion about which inferencing rule to use.

2)   The number of variations in date/time syntax shall be less than:
    a)   five for internal storage (memory and disk).
    b)   four for external display and data exchange.

3)   In an international environment a date format for either external display or data exchange which also uses the month name (rather than number) is less subject to misinterpretation than one using numbers and shall be used.

4)   All applications in the same source language shall share and use the same routines (functions, sort procedures, etc.) for all date/time operations.

5)   All extension to date/time semantics and embedded date constants (in code) shall be eliminated.

Notes:

1 An Information Technology Component (noun) is an element of an information technology system which a) is expected to operate as a unit to meet a defined requirement, and b) has a defined external interface to enable it to interoperate with other the parts of the system (possibly including a human interface). Examples of information technology components include the following:

    software applications (including subroutines, procedures, and functions)
    firmware implementations of software
    hardware components including chips, boards, and computers
    facilities including a users computing facility to a multicomputer
    server facility
    networks including both local and wide area networks
    related airconditioners, telephone equipment, etc. which must
    interoperate with the above.

The component may contain other (sub) components. The sub-components may be assumed to be y2k compliant, if the component which contains them is y2k compliant. Conversely, if a component is not y2k compliant, it may be useful to determine which of its sub-components (if they are subject tomodification or replacement) are not y2k compliant.

2 Date shall be understood to include the representation of:
    a particular day.
    Individual components of a date (such as day-of-month, month, year).
    periods of time between two dates.

Note that a component of a date (such as a month) can mean either:
    a particular period (such as 1-AUG-1997 thru 31-AUG-1997), or
    a repeating period (such as 1-AUG thru 31-AUG in every year).

When some component of a date/time (such as a year) is extracted from the full date/time, the component shall have all the information needed to fully represent that component within a complete date/time.

When some component of a date/time is used to represent either a particular period or a repeating period, the full date/time of the beginning and end of the period(s) shall either be explicitly stored, or a function to accurately compute such beginning and end shall be available.

3 The requirement to manage date/time data includes time (to the precision required by the application) because a) a specific time on a given day is part of the same conceptual value as the date and should be treated as such, and b) if some years are stored with two

digits, and others with four there is a strong chance that time and date data will be confused with date data. Thus assuring the integrity and quality of time data is part of the Year-2000 compliance issue.

4 Date/Time related information embedded in text fields, word processing documents, graphics, and other binary large objects will not be considered within the scope of this standard, unless the object includes a method to identify and extract the date/time data for external processing.

5 Required, as used in these criteria means, "as required to meet the necessary business purpose of the component".

6 The expected remaining life must be long enough to justify the procurement and continued maintenance of the component using normal capital budgeting techniques.

7 Special dates are those which have been identified as dates that may cause operational problems. They include, but are not limited to the following:

Special Date Examples:	Reason(s) it may cause operational problems:
1/1/2000	Hardware clock may revert to an earlier date Stored dates of two digits provide ambiguous century.Two digit dates in the 21st century may not produce correct results when compared for date order.
1/1/01	These dates have often been used to mean date
9/9/99	no applicable,or the maximum or minimum date.
2/29/1900	The first date is not valid. The second date
2/29/2000	is.
1/1/2051	Many programs assume that a two digit year entered is between 1951 and 2050. Dates after 2051 may not be processed correctly

8 date/time functions commonly required include, but are not limited to:
    A. is a valid date/time(DATE).
    B. days between(DATE1,DATE2).
    C. what date is X days after/before(DATE,X).
    D. last day in month(MONTH,YEAR).
    E. is a leap year(YEAR).
    F. ordinal day of year(DATE).
    G. day of week(DATE).
    H. ordinal week within year(DATE).
    I. year(DATE).

J. month(DATE).
K. day-of-month(DATE).
L. ordinal month within year(DATE).
M. month_number(MONTH_NAME).
N. month name(MONTH_NUMBER).
O. local date format(DATE,FORMAT).
P. next clock date/time(DATE/TIME).
Q. local time format(DATE/TIME).
R. 12 hour to 24 hour conversion(DATE/TIME).
S. 24 hour to 12 hour conversion(DATE/TIME).
T. time between(DATE/TIME1,DATE/TIME2).
U. X time before/after(DATE/TIME,X).
V. truncate(DATE/TIME,precision).
W. is_true(DATE/TIME, operator, DATE/TIME),
     where operator is one of [<, <=, =, =,].

9 Interchanges include, but are not limited to:
   batch exchanges between components using file based media
   OLE, and related protocols
   SQL mediated interchanges in C/S applications
   interface oriented conversions from external to internal format within a language
   etc.

10 These criteria shall be followed unless there is a clear and compelling evidence that
the cost outweighs the benefits.

11 If the user has the option of specifying the rule in some consistent mechanism, this is
still considered one common criterion, even though each user might pass different
parameters to the mechanism.

12 This includes, for example, using the year 99 or 00 to mean something other than the
year 99 (AD) or 00 (AD).