# OUR GOAL: Many of the brand name products you'll find on the commercial

We're Ready\_

### What is Y2K and Why???

Y2K is shorthand for Year 2000 and is used most often when people refer to the anticipated computer problems that may occur in the switch to the Year 2000. Why do so many computers have the same problem? Back when computers were first built, the people who designed the software programs that make computers run used only two numbers instead of four to indicate the year. For example, 1998 was 98 and the year 2000 will be 00, which could equate to 1900 or 2000 depending on the software used on your computer or embedded in the microprocessors in your electronics. The use of the two digits was done to save space on the computer Random Access Memory (RAM) and Read Only Memory (ROM). Many of the old programs are still running computers today. Out of habit, many programmers continued to use two numbers instead of four in the 1980's and even into the 1990's when developing software.

The Y2K problem could affect any and all parts of your life. From your electric alarm clock, your VCR, your TV, your electrical power grid, your water supply to your wrist watch. No one can be sure of how big the problem is going to be until it gets here, but if everyone works together the problem can be minimized.

### Please visit these informative Y2K Websites for more information:

### Federal Y2K – Commercial Off-the-Shelf (COTS) Product Database

http://y2k.policyworks.gov/gsa

This website is sponsored by the Federal Chief Information Officers (CIO) Council to support Federal agencies in meeting the Year 2000 challenge. Individual agencies are seeking assurance from computer software vendors that their software is compliant or will be made compliant in accordance with the Federal Acquisition Regulation (FAR) definition – Section 39 (see page 11).

The Federal Year 2000 COTS Product Database provides a centralized repository of information for all Federal Agencies which will speed the research and investigation of products used by Federal agencies. There is also a toll-free number for Y2K information for consumers: 1-888-USA-4-Y2K.

#### The U.S. Federal Government Community Guide to Y2K http://www.itpolicy.gsa.gov/mks/yr2000/community/comm unity.htm

This site serves to help the public evaluate their individual and community Year 2000 (Y2K) readiness, and includes;

- Preparing for the Year 2000 (Y2K) Challenge.
- Y2K is not just a computer problem.
- Y2K can affect your bank balance, your prescription drugs, your heat and electricity, almost every part of your daily life.

### U.S. Federal Government Gateway for Year 2000 Information Directories

http://www.itpolicy.gsa.gov/mks/yr2000/y2khome.htm

Chief Information Officers Council Committee on Year 2000 For a clearinghouse of Y2K information from best practices for the Y2K project team to advice for the consumer and citizen, choose the Chief Information Officers Council Committee on Year 2000: http://www.itpolicy.gsa.gov/mks/yr2000/cioy2k.htm

#### International Y2K Conference

To read over 80 papers written by Y2K experts, go to: http://www.itpolicy.gsa.gov/mks/yr2000/y2kconf/g7conf.htm

### Other Year 2000 Related Sites at http://www.year2000com./y2klinks.html

This site provides a wide scope of products and services relating to Year 2000 issues.

#### President's Council on Year 2000 http://www.y2k.gov/

This site provides information on just what the problem is and on what governments and businesses are doing to ensure that their critical systems are ready for the new millennium.

#### TASC Year 2000 Service Bureau

http://www.tasc.dot.gov/y2k/

This site provides full life cycle Year 2000 Services to Federal, State and Local Governments.

#### The Year 2000 Problem

http://www.reeusda.gov/issp/y2k-over.htm

This page contains links to online news stories related to Year 2000 computing issues.

#### Year 2000 Managers' Toolbox

http://www.govexec.com/tech/year2000/

This toolbox is a resource for managers who need to be familiar with Year 2000 issues but don't have the time to sort through the mounds of technical jargon inundating most Year 2000 resources.

All of these sites are official U.S. Government sources for information. Inclusion of links to other web sites does not imply endorsement of contents.

### We're here to help ...

Excerpts from the Report on the Committee's Oversight review/House Subcommittee on Government Management, Information, and Technology

### The Federal Year 2000 Problem

The Federal Government is confronting the Year 2000 problem on two levels. The first is the Federal effort to prepare its own technology for January 1, 2000. The second is the Federal effort to play a leadership role in the United States and throughout the world.

#### **Mission Critical Systems**

As we get closer to January 1st 2000, we can all expect to hear more and more about the potential problems that could be created by the technological world we live in. We here at Federal Supply Service are actively working to guarantee that you have all of the information you need to be Y2K compliant.

### Background - Y2K

The Year 2000 problem first became apparent in large—and often old—mainframe computer systems. The challenge of preparing these systems for the new century was measured by how many lines of computer code would need to be reviewed and renovated. Generally, organizations scheduled their Year 2000 project around the ultimate goal of having these systems fixed, tested, and implemented by the end of 1999. Slowly, organizations have begun to realize that there are several other aspects of preparing for the date change, including embedded systems, data exchanges, and contingency planning.

Embedded systems—microprocessors embedded in devices ranging from fax machines to elevators to assembly line equipment—are easily overlooked. In part, this is because Year 2000 projects naturally fall to an organization's computer or information technology group, while embedded systems are generally under the care of those in maintenance. Another reason is that embedded systems are hard to locate and hard to test.

Embedded chips are a special case of the Year 2000 problem because of the difficulties of finding them, assessing their compliance, and renovating them. Embedded chips feed data to process control systems, which in turn, feed data to software applications. The embedded chips themselves may fail. The process control logic boards may fail. And, the dependent software may fail. Worse, an embedded chip failure may cause a process control misunderstanding, which in turn may purposefully cause the software application to shut the whole system down.

Although most information technology executives and managers have understood their interdependency on the Year 2000 status of organizations with which they share data, most have also been slow about pursuing this aspect of the problem. One popular solution to the date problem is called "windowing." This is a shortcut that allows organizations to avoid the time consuming and expensive process of changing all two-digit years to four-digit years. Windowing enables the computer to calculate the date from a base year. For example, a system would be programmed to interpret "00" as 1970 plus 30. However, if organizations choose different base years for their windowing, their data exchanges might not work. The subcommittee learned that many critical technology systems depend on automated devices that control their operations. These can include security systems for badge readers, surveillance and home security systems, medical devices, factory machinery, and telephone systems. Furthermore, telephone systems, video

recorders, bar code readers, automatic teller machines, factory machinery, civilian and military avionics, process control and monitoring equipment, sprinkler systems, and air-conditioning systems could all be at risk. Automated devices such as these malfunction when they encounter situations that their software is not designed to recognize. Sometimes the malfunction means failing to perform properly. Sometimes it means shutting down altogether. Many products contain multiple embedded systems made by multiple manufacturers. Testing these products for year 2000 compliance is difficult and can be expensive.

Harris Miller testified about the Information Technology Association of America's (ITAA) Year 2000 certification program, called ITAA\*2000. This was ITAA's response to Chairman Horn's 1996 request for a industry-based "Good Housekeeping Seal of Approval" on Year 2000 repairs. Mr. Miller testified that as of March 1997, 11 organizations had received certification under the program, while a further 18 were under technical evaluation and a total of 189 had requested the questionnaire necessary to become certified. "The focus of the program is on the processes and methods that organizations use to develop Year 2000 compliant software and services. . . [W]e have designed the program to apply to any company, organization, government agency, or any entity involved in a Y2K conversion. . . It provides an independent, third party review of their Y2K processes and methods."

Joe Thompson testified that the General Services Administration was working to raise awareness of the Year 2000 problem throughout the government. He reported that GSA's Federal Supply Service has notified manufacturers and service and equipment providers that all products sold to the Government must be Year 2000 compliant. He also described GSA's database of Year 2000 compliant commercial-off-the-shelf products. Representative Morella, chair of Science's Technology Subcommittee, asked how GSA determines that these products are compliant. Mr. Thompson noted that GSA lacked the resources to carry out the testing itself. "Those items have been tested and verified by the corporations themselves whose records of testing can be obtained from them."

Increasingly, organizations are taking into account these different aspects of the Year 2000 problem. This is a major step forward, but time is running short.

### Testing

Testing is a major aspect of the Year 2000 problem. According to many experts, testing is also the hardest, most expensive, and most

time-consuming aspect of fixing the problem. The concern is that many Federal agencies will not have sufficient time to thoroughly test their systems. Evidence so far suggests that this is a major problem. The General Accounting Office described the state of Federal testing as "one of the more alarming problems we have come across."

Agencies need a significant amount of time for essential end-to-end testing of multiple systems that have individually been deemed Year 2000 compliant. Such end-to-end testing seeks to ensure that systems collectively supporting a core business function operate as intended. Without such testing, systems individually deemed as compliant may not work as expected when linked together with other systems in an operational environment. These systems include not only those owned and managed by the organization, but also any external systems with which they interface.

For example, the Federal Aviation Administration's Enhanced Traffic Management System monitors flight plans nationwide, controlling high-traffic situations and alerting airlines and airports to bring in more staff during times of extra traffic. Since it must exchange data with airlines' flight planning systems in order to accomplish this, end-to-end testing is essential, and would include systems for all entities involved, as well as their supporting telecommunications.

It is particularly important that the testing process involve verification by an outside source, called Independent Validation and Verification. The General Accounting Office has voiced the concern that most of the data available on the Year 2000 status of Federal agencies is self reported. It is crucial that these data are subjected to independent review. GAO points to two known instances of inaccurate reporting. The Inspector General at the Department of Defense found that the Department had no adequate basis for reporting about 320 Year 2000 compliant mission critical systems in November of 1997. And in May of 1998, the Department of Agriculture reported as Year 2000 compliant 15 replacement systems that were still in the planning stages.

### **Embedded Chips**

Only a small percentage of embedded chips keep track of the year (many operate on a 24-hour clock or on a seven day week, ignoring longer measures of time), and many of those that do are Year 2000 compliant. Nevertheless, there are billions of embedded chips in operation throughout the world and in the Federal Government and they all need to be tested for Year 2000 compliance. It is extremely difficult to identify and to locate all of the embedded chips in any given system or piece of equipment. Even once located, it is difficult to test the chips for compliance.

The problem is exacerbated by the fact that identical pieces of equipment—two fax machines made by the same manufacturer, for example—will often use different embedded chips. This is because manufacturers frequently switch chip suppliers based on the best available price. Sometimes suppliers will use chips that keep track of the date even though the piece of equipment does not need that particular function. This means that organizations cannot eliminate potential Year 2000 failures simply by asking whether a particular system or piece of equipment relies on a date function. The chip may fail even if its date function is unused in a particular piece of equipment. The Department of Defense is especially susceptible to the embedded chip problem. The Office of Management and Budget conceded the seriousness of the embedded chip problem when Deputy Director for Management Edward DeSeve observed that "this is the great unknown about the Year 2000 problem. . . . At this point, it appears that any large piece of machinery could have an embedded chip problem." Defense has focused on fixing "Commercial-Off-the-Shelf" embedded chips. Since creating chips from scratch is prohibitively expensive, many Defense weapons and systems have traditionally relied on these cheap and readily available mass-produced chips. Some generic chips are suspected of having time functions that might effect operations even though the system does not utilize date fields in everyday operations. Thus, the absence of direct date functions in a communications network or weapons system is not necessarily an accurate indicator of future success in weathering the change to year 2000.

Deputy Secretary of Defense John Hamre graphically defined the risks while briefing Senate Armed Services Committee on June 4, 1998. In his remarks, Secretary Hamre stated: "The failure of an embedded microchip in a discrete, localized computer or machine, such as a wristwatch or the air-conditioning system in a building, can be merely inconvenient. However, failure of a microchip in a critical, large, or dangerous piece of machinery—loss of air pressure in an F-15 or a submerged submarine—can be devastating and even life-threatening."

The Chief Information Officers Council has created interagency working groups in areas such as biomedical devices and laboratory equipment, commercial products, and telecommunications. Each interagency working group, chaired by a key program agency, is tasked with raising awareness across government and working with manufacturers to assure that products are fixed. Each group is contacting vendors on behalf of the entire Federal Government, performing tests to verify the compliance of products, and sharing information through electronic databases.

### **Data Exchanges**

As computers play an ever-increasing role in our society, exchanging data electronically has become a common method of transferring information among Federal, State, and local governments, as well as nongovernmental organizations throughout society. The Social Security Administration exchanges data files with the states to determine the eligibility of disabled persons for disability benefits. The National Highway Traffic Safety Administration provides states with information needed for driver registrations.

As computer systems are converted to process Year 2000 dates, the associated data exchanges must also be made Year 2000 compliant. If the data exchanges are not Year 2000 compliant, data will not be exchanged or invalid data could cause the receiving computer systems to malfunction or to produce inaccurate computations.

Federal agencies have more than 10,000 data exchanges with each other, foreign governments, State and local governments, and private entities. The subcommittee was informed by the Office of Management and Budget that the Executive branch is working closely with the National Association of State Information Resource Executives as well as the National Governors' Association. OMB has directed Federal agencies to report on their inventory of data exchanges, State by State, and to ensure that they are all Year 2000 compliant by March 1999.

For example, agencies that administer key Federal benefits payment programs, such as the Department of Veterans Affairs, exchange data with the Department of the Treasury which, in turn, interfaces with various financial institutions to ensure that benefits checks are issued. In addition, Department of Defense systems interface with thousands of systems belonging to foreign military sales customers, private contractors, other federal agencies, and international organizations such as the North Atlantic Treaty Organization.

### **Contingency Planning**

The General Accounting Office has found that contingency planning by Federal agencies has been inadequate. "Without [contingency] plans, when unpredicted failures occur, agencies will not have well-defined responses and may not have enough time to develop and test alternatives. Because Federal agencies depend on data provided by their business partners and services provided by the public infrastructure [including] voice and data telecommunications, it's imperative that contingency plans be developed for all systems supporting critical core business processes, regardless of whether these systems are owned by the agency."

In March 1998, OMB clarified its contingency plan instructions, stating that plans should be developed for all core business functions. Further, on April 28, 1998, OMB asked agencies to describe their processes and activities for developing contingency plans. Although these are positive steps, much work on contingency planning remains to be completed.

# Basic Infrastructure: Electricity, Telecommunications, Water

"Frankly, we as a nation do not know where we stand on key infrastructure areas like power, water, and telecom. . . There's a lot of talk but when you get beneath that talk there is no underlying data."

### a. Electricity

The importance of electricity is almost too obvious to merit discussion. Without power, the Year 2000 readiness of virtually all technology will be a moot point. But as a society, we rely on electricity for much more than computers. One witness before the subcommittee discussed the importance of power in the context of agriculture. "In Iowa, we have 14 million hogs in confined environmentally maintained houses. In Minnesota, they have 44 million turkeys in the same types of situations. . . The important fact to understand here is that when we lose ventilation systems in these houses, we can have animals die in six hours." And: "Power interruptions on a cold winter's day could lead to severe problems and animal loss, particularly for poultry and livestock producers."

Unfortunately, experts are raising grave concerns about the preparedness of the power industry. The production and distribution of power rely to a great extend on embedded technology. Furthermore, the "power grid" is highly interconnected. Failure in one region of the country could precipitate failures elsewhere. "[I]t's very likely that we will have brownouts in this country, and possibly some intermittent blackouts . . . only because if you look at the entire grid . . . it's basically an end-to-end system that has to be tested. There are 6,000 power plants out there that all have to be remediated; and unfortunately,

as we look at the work from our analysis, we don't see that [remediation and testing] is being done in every case."

The Consolidated Edison Company of New York reported that its critical systems were either renovated or in the process of being renovated, with an expected completion dates in the fourth quarter of 1999. Other systems of lesser importance are expected to be completed by June 1999. The Consolidated Edison Company of New York also reported that it is researching the embedded systems in its control systems components to determine if they are Year 2000 compliant. The company reported that it has not identified any fatal flaws that would have a catastrophic effect on its operations. Renovation of these embedded systems is expected to be completed by mid-1999.

The Texas Utilities Company reported that more than 90 percent of inventory and assessment activities are complete and 25 percent of its testing. The utility company reported it is examining 291 software products and approximately 300 client-server applications. Additionally, the company reported that its Year 2000 project was on schedule and that 25 percent of the inventoried applications are compliant. Software conversion and testing was in progress and would continue through 1998 with full integrated testing and implementation in 1999. Assessment of its information technology infrastructure was scheduled for completion by the end of the summer and work was scheduled to be complete by the end of the year. Inventory of the utility companies embedded systems (about 11,000) has been in progress since last year and conversion is expected to be mostly completed by the end of 1998, with some work extending into 1999. The Texas Utilities Company reported an expected Year 2000 cost between \$28 and \$31 million.

FirstEnergy reported that it was nearing the completion of a fullscale inventory and assessment of all computer hardware, software, and embedded systems and is identifying which systems need to be renovated and which need to be replaced. This phase of FirstEnergy's Year 2000 project is expected to be completed by the end of 1998. In particular, the FirstEnergy is (1) assessing its power generation function, which was projected to be completed in the fall, (2) evaluating its nuclear power plants, and (3) assessing its fossil plants (its largest ones are currently undergoing an inventory). FirstEnergy expects to complete Year 2000 remediation by the first quarter of 1999 and testing by the third quarter of 1999. Mr. John Gill, Senior Vice President, FirstEnergy Corporation, observed that "power generation is probably the most complicated area to assess because of the number and complexity of the systems."

### b. Telecommunications

With almost half of the world's computer capacity and 60 percent of its Internet assets, the United States is the world's most advanced —and most dependent—producer and user of information and telecommunications technologies. Such technologies have helped fuel the growth of the U.S. economy and have enabled major improvements in the Nation's infrastructure. The Year 2000 readiness of these telecommunications technologies is therefore of great concern.

The telecommunications infrastructure is comprised of the public telecommunications network, the Internet, and the millions of computer systems for government, defense, commercial, and personal use. The telecommunications network includes communications and information transmissions via a complex web

of interconnected networks operated by local and long-distance telephone carriers, cellular networks, and satellite services. Significant portions of the Internet rely on services provided by the public telecommunications networks.

The array of reliable telecommunications services is made possible by a complex web of highly interconnected networks supported by switches and other telecommunications devices. Along with national and local carriers and service providers, important links in the chain include the equipment manufacturers and suppliers and customers. The key is connectivity: all of the pieces must work together.

All telecommunications network components – including switches, routers, PBXs, and Internet servers – must be assessed and tested to ensure compliance with the Year 2000 computer problems. The potential problems are further compounded by the global nature of today's telecommunications systems, which rely on seamless connections among widely scattered and widely diverse networks.

Telecommunications systems are critical to the operations of nearly every public and private sector organization including financial services and brokerage institutions; health, safety, and emergency services; transportation; utilities; and manufacturing and small business. Disruption in the service provided by the public telecommunications network can affect millions of users and cause massive financial losses.

The Federal Government depends heavily on the telecommunications infrastructure. Many agencies, including those in the Department of the Treasury and Department of Health and Human Services (HHS), rely on both their private networks and on the public telecommunications network to conduct mission-critical business. An electronic Medicare payment, for example, may traverse several networks: those operated by HHS, computer systems and networks at the Department of the Treasury, and the Federal Reserve's Fedwire electronic funds transfer system.

Businesses and financial institutions rely heavily on telecommunications networks to participate in the global payments system, to exchange information with trading partners and regulatory agencies, and to manage their internal control systems and sophisticated computer equipment.

Year 2000 failure in the telecommunications infrastructure would bring potentially disastrous consequences. Financial institutions would be unable to process financial transactions and trades. Major disruption in the service provided by the public telecommunications network can affect millions of users and cause massive financial losses. The cost of disruptions and outages caused by noncompliant computer or telecommunications systems was discussed in a recent study of the potential impact of Year 2000-related foreign exchange settlement failures. According to the study, the market costs of a single major bank's inability to settle its trades could reach \$3.3 billion in a single week. Other basic services are also vulnerable. Air traffic control communications systems would fail; some consumer credit card transactions would fail; and 911 emergency service transmissions could not be processed.

Most major carriers expect to achieve Year 2000 compliance of their network services by December 1998. Most major carriers also plan to be fully compliant, including support services and systems, by mid-1999. At a June 1998, House Ways and Means subcommittee hearing, the General Accounting Office testified that it will be a "massive challenge" to bring the telecommunications industry into compliance on time. With less than nineteen months remaining, the GAO was concerned that no one currently had an overall assessment of the degree of year 2000 risk in the telecommunications infrastructure. There may not be time to ready all systems, but there is time to concentrate on the most important ones affecting health, safety, national defense and economic concerns.

Ameritech reported that it will come close, though not quite achieve, its goal of having its mission critical systems ready by January 1, 1999. As of the end of the second quarter, 1998, Ameritech had remediated over 80 percent of Ameritech-owned code and certified and deployed over one half of its applications. In addition, Ameritech reported that, by the end of the second quarter of 1998, it had tested and completed the deployment of Year 2000 upgrades in over 50 percent of its network switches requiring upgrades. Assessments of Ameritech's facilities and product management is on-going (and expected to be completed during the third quarter of 1998).

Ameritech is participating in the Year 2000 Telco Forum Interoperability Testing. This testing, which was due to start in July 1998, will cover a broad cross-section of services, from voice to high speed data circuits to complex 911 emergency services. It will use a laboratory to simulate peak traffic loads and analyze actual network performance. Ameritech also reported that it is participating with the Alliance for Telecommunications Industry Solutions (ATIS) which is planning additional nations, and possibly international, interoperability testing of the telecommunications network.

#### c. Water

To power and telecommunications, a third essential service must be added: the water supply. Water is essential for not only for human consumption, but for sanitation as well. A failure in the water supply could very quickly lead to dangerous conditions, including a lack of potable water and sewage backups. Water and sewer companies rely on computers as well as equipment operated by embedded chips for a wide range of functions. These include electronic pressure recorders, generators, collection systems monitoring, flow monitoring, mobile equipment, meter reading, and routing. They also include laboratory analysis, industrial compliance determinations, and geographic information systems. If their technology fails, a variety of malfunctions could result.

The Public Utilities Company of Ohio sounded an optimistic note when testifying before the subcommittee. "I would say every utility in Ohio, primarily due to I think the initial Federal efforts but then obviously subsequent State efforts, have gone through the process of awareness and assessment. They have all inventoried, they have all gone fairly well through remediation and testing."

David Hall, an embedded chip expert and Senior Engineer, CARA Corporation, reported on his discouraging observations of Year 2000 preparations at water treatment plants: "Every municipality I have worked with said that their wastewater treatment and wastewater flow is the most critical item, bar none, even electricity. And I have yet to see anybody from a national level or even a state level start looking or trying to get everybody together to determine whether the water and the wastewater flow and the other things can come together." The General Accounting Office made a similar observation: "[T]here is increasing evidence of a great number of embedded chips in water and wastewater systems that must be dealt with quickly."

### Federal Computer Week - BEST & FINAL

August 16, 1999

**Y2K Protection.** The Year 2000 problem certainly has attracted its share of deviants and kooks, and no one knows that better than the federal employees working on the issue. In fact, General Services Administration employees have begun taking measures to protect themselves from hundreds of prisoners and extremists who write and call about Year 2000 preparedness.

"We have gotten a lot of goofy telephone calls", said Cynthia Warner, director of GSA's Year 2000 operation. "Someone may take out their Year 2000 problems on GSA. We're trying to be a little prudent."

Warner said that letters from prisoners, although nonthreatening, provided an additional reason for government employees working on Year 2000 fixes to protect their privacy. Their names have been deleted from their e-mail addresses and replaced with a more general phrase, such as "Y2K mailbox".

"They want to know how would the Year 2000 affect their parole," she said. "They don't want to be locked in their forever. But our business is not to answer Year 2000 questions. We sent them brochures." We're betting that many of these inmates are more concerned about how the Year 2000 bug will affect the prisons' lock systems.

For the Procrastinators. In a repeat performance from last year, GSA plans to sponsor a Year 2000 pavilion at Comdex/Fall '99. GSA, working with the CIO Council and the IT industry, envisions the pavilion as a vehicle to disseminate information on off-the-shelf products that are Year 2000-compliant. The agency last month issued a notice asking vendors to participate in the endeavor.

However, the event takes place November 15-19, 1999, only about a month and a half before the Year 2000 deadline. Anyone who hasn't begun installing their Year 2000 fixes by then will have brought new meaning to the word "procrastination."

### Federal Computer Week - FEDWIRE BRIEFS

August 23, 1999

**GSA** awards services pacts. The General Services Administration's Federal Supply Service this month awarded the first two contracts on its new Professional Engineering Services schedule to Management Engineering Associates and MPR Associates, Inc.

Services available under the schedule include planning and development; system design; engineering and integration; testing and evaluation; support; and acquisition and life-cycle management.

### Federal Computer Week - POLICY & PROCUREMENT

August 23, 1999 By: Carl Peckinpaugh

### A Legal View

A reader raised the following question:

Many government acquisitions are being accomplished through interagency transactions. For example, the General Services Administration manages several programs that support other agencies. Some of these programs employ a revolving fund that may be exempt from normal constraints on the use of appropriated funds. Does an Interagency transaction allow the user to take advantage of these exemptions?

The answer is found in the way an agency "obligates" the funds that Congress appropriates for its use. In general, Congress appropriates funds for an agency's use on a fiscal-year basis. An agency may obligate funds only for the bona fide needs of the fiscal year for which the funds were appropriated. If the agency obligates less than its total appropriation by the end of the year, it must return the unobligated balance to the general revenue funds for reappropriation. If on the other hand, the agency obligates more than was appropriated for its use, it has committed an Antideficiency Act violation, which must be reported to Congress and may result in severe penalties for those responsible.

As part of the bona fide needs rule, an agency must determine whether a particular need is "severable" or "entire," which means nonseverable. Typically, a severable requirement is one that is satisfied by a series of separate actions, for example, daily janitorial services. For severable services, an agency must assure that each fiscal year's appropriation is charged for the services rendered that year only.

An entire requirement is a single discrete project, such as the procurement of a computer system, for example. When an agency enters into a contract with a private entity to satisfy an entire requirement, it must obligate sufficient current year funds to cover its entire commitment even if the contract will not be finished during the current year.

For example, if an agency has a bona fide need in Fiscal 1999 for 1,000 new desktop computers, and awards a contract to buy the systems, it must obligate sufficient Fiscal 1999 funds to pay for the desktops even though delivery may not be completed until the following year. Indefinite-delivery, indefinite-quantity contracts are treated the same way, but the focus is shifted to the ordering process. Thus the foregoing example is no different whether the agency awards a new contract for the 1,000 computers or chooses to place an order for the computers under a pre-existing IDIQ contract.

The rules for obligating funds are the same, except for when an agency decides to use an interagency transaction instead of contracting on its own. Using the preceding example, if an agency chooses to acquire the computers through GSA's Federal System Integration and Management Center, it would obligate the funds for the transaction upon entering into a binding agreement with Fedsim. In fact, the governing statute treats contracts with private entities and agreements with other agencies together by reference to "a binding agreement between an agency and another person (including an agency)." [See 31 U.S.C. 1501 (a) (1).]

However, an additional rule applies to interagency transactions that are undertaken pursuant to the Economy Act (31 U.S.C. 1535). Fiscal Year appropriations used in an Economy Act transaction must be returned to the general treasury if the servicing agency has not completed performance or incurred binding obligations for the requiring agency before the end of the fiscal year [See, for example, 58 Comp. Gen. 471 (1979).] Common Economy Act transactions to which this rule applies include transactions that employ a Military Interdepartmental Procurement Request to transfer funds between defense Department agencies [See 59 Comp. Gen. 563 (1980)] and most purchases by one agency using a different agency's contract.

If the interagency transaction is authorized by a statute other than the Economy Act, the special requirement to return the funds at the end of a fiscal year is inapplicable. Common interagency transaction that are authorized by a statute other than the Economy Act include GSA programs, such as Fedsim, that rely on GSA's Information Technology Revolving Fund (see 55 Comp. Gen. 1497 (1976)] and acquisitions through contracts designated by the Office of Management and Budget pursuant to 40 U.S.C. 1424.

By entering into a binding agreement with another agency pursuant to a statute other than the Economy Act, the using agency effectively increases the life of its appropriation. For this reason, some agencies will get into these agreements at the end of a fiscal year, when they realize that they have insufficient time to spend the money any other way. Once the money is committed to such an agreement, it can be used only in furtherance of that transaction. There is no authority to return funds to the original agency after the fiscal year for which it was appropriated has expired.

Many of the agencies that provide services to other agencies have been given special authorities by Congress to maintain and use money without regard to fiscal year or other "earmarking" limitations. Many also have been given contract authority, allowing them to contract in advance of appropriations. How these authorities work and how they can benefit requiring agencies will be discussed in another column.

NOTE: THE REVISED RECOMMENDED YEAR 2000 CONTRACT LANGUAGE (AUGUST 22, 1997) ENDORSED BY THE CIO COUNCIL SUB-COMMITTEE ON YEAR 2000 COMPLIES WITH THE FOLLOWING AUGUST 22, 1997, FINAL FAR RULE ON YEAR 2000 COMPLIANCE.

[Federal Register: August 22, 1997 (Volume 62, Number 163)] [Rules and Regulations] [Page 44830]

### Department of Defense General Services Administration National Aeronautics and Space Administration

48 CFR Parts 39 and 52 [FAC 97-01; FAR Case 96-607; Item XVII] RIN 9000-AG90 Federal Acquisition Regulation; Year 2000 Compliance

### **AGENCIES:**

Department of Defense (DoD), General Services Administration GSA), and National Aeronautics and Space Administration (NASA).

### **ACTION:**

Interim rule adopted as final with changes.

### **SUMMARY:**

The Civilian Agency Acquisition Council and the Defense Acquisition Regulations Council have agreed to adopt as final, with changes, the interim rule published as Item XIV of Federal Acquisition Circular 90-45. The rule amends the Federal Acquisition Regulation (FAR) to increase awareness of Year 2000 procurement issues and to ensure that solicitations and contracts address Year 2000 issues. This regulatory action was not subject to Office of Management and Budget review under Executive Order 12866, dated September 30, 1993, and is not a major rule under 5 U.S.C. 804.

### **DATES:**

Effective October 21, 1997.

### FOR FURTHER INFORMATION CONTACT:

The FAR Secretariat, Room 4035, GS Building, Washington, DC 20405, (202), 501-4755 for information pertaining to status or publication schedules. For clarification of content, contact Ms. Linda Nelson, Procurement Analyst, at (202) 501-1900. Please cite FAC 97-01, FAR case 96-607.

### SUPPLEMENTARY INFORMATION:

#### A. Background

An interim rule was published on January 2, 1997 (61 FR 273). The interim rule is converted to a final rule with revisions. Revisions were made to the definition, "Year 2000 compliant", at FAR 39.002 to better convey the intent of the definition.

Twenty comments from five respondents were received during the public comment period. All comments were considered in the development of the final rule.

The final rule will provide needed coverage to ensure that information technology products to be acquired and used by Federal agencies after December 31, 1999, will be able to process date related data into the next century. Solicitations and contracts should require Year 2000 compliant technology, or require that non-compliant information technology be upgraded to be compliant in a timely manner. The rule also recommends that agency solicitations describe existing information technology that will be used with the information technology to be acquired and identify whether the existing information technology is Year 2000 compliant. If proper date/time data is provided, the Year 2000 compliant information technology must be able to process the data accurately. If it cannot process proper date/time data accurately, its failure will not be excused because of the noncompliance of another information technology product. Agencies are expected to test for Year 2000 compliance. However, lack of testing does not excuse failure of the information technology to be Year 2000 compliant.

### List of Subjects in 48 CFR Parts 39 and 52

### Government procurement.

Dated: August 7, 1997. Edward C. Loeb, Director, Federal Acquisition Policy Division.

### Interim Rule Adopted as Final With Changes

Accordingly, the interim rule amending 48 CFR Parts 39 and 52, which was published at 61 FR 273, January 2, 1997, is hereby adopted as final with the following change:

### PART 39—ACQUISITION OF INFORMATION TECHNOLOGY

1. The authority citation for 48 CFR Part 39 continues to read as follows:

Authority: 40 U.S.C. 486(c); 10 U.S.C. chapter 137; and 42 U.S.C. 2473(c).

2. Section 39.002 is amended by revising the definition of `Year 2000 compliant" to read as follows:

### 9.002 Definitions.

Year 2000 compliant, as used in this part, means, with respect to information technology, that the information technology accurately processes 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.

### 39.106 [Redesignated as 39.107]

3. Section 39.106 is redesignated as 39.107, and a new section 39.106 is added to read as follows:

#### 39.106 Year 2000 compliance.

- (a) When acquiring information technology that will be required to perform date/time processing involving dates subsequent to December 31, 1999, agencies shall ensure that solicitations and contracts:
  - (1) Require the information technology to be Year 2000 compliant; or
  - (2) Require that non-compliant information technology be upgraded to be Year 2000 compliant prior to the earlier of (i) the earliest date on which the information technology may be required to perform date/time processing involving dates later than December 31, 1999, or (ii) December 31, 1999; and
- (b) As appropriate, describe existing information technology that will be used with the information technology to be acquired and identify whether the existing information technology is Year 2000 compliant.

## PART 52 SOLICITATION PROVISIONS AND CONTRACT CLAUSES

52.239-1 [Amended]

4. Section 52.239-1 is amended in the introductory text by revising [39.106] to read [39.107].