

ACCESS AMERICA Reengineering Through Information Technology

Report of the National
Performance Review
and the Government
Information Technology
Services Board

VICE PRESIDENT
AL GORE

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Access America



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CONTENTS



INTRODUCTION	1
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ELECTRONIC GOVERNMENT - "SERVING THE PUBLIC ON ITS TERMS"

A01: IMPROVE THE PUBLIC'S ACCESS TO GOVERNMENT SERVICES	5
A02: IMPLEMENT NATIONWIDE, INTEGRATED ELECTRONIC BENEFITS TRANSFER	15
A03: PROVIDE ALL FEDERAL PAYMENTS USING ELECTRONIC FUNDS TRANSFER BY 1999	21
A04: BRING ENVIRONMENTAL INFORMATION TO THE PUBLIC	25
A05: BUILD AN ELECTRONIC ENVIRONMENT, SAFETY, AND HEALTH ASSISTANCE RESOURCE FOR BUSINESS	31
A06: ESTABLISH THE INTERGOVERNMENTAL WIRELESS PUBLIC SAFETY NETWORK	35
A07: ADDRESS THE INFORMATION TECHNOLOGY NEEDS OF OUR NATION'S CRIMINAL JUSTICE COMMUNITY	39
A08: PROVIDE SIMPLIFIED EMPLOYER TAX FILING AND REPORTING	45
A09: SUPPORT INTERNATIONAL TRADE WITH BETTER DATA, AVAILABLE FASTER	51
A10: CREATE ELECTRONIC EXPORT ASSISTANCE CENTERS	55
A11: USE ELECTRONIC COMMERCE TO STREAMLINE GOVERNMENT BUSINESS PROCESSES	61
A12: EXPAND THE INTERGOVERNMENTAL INFORMATION ENTERPRISE	67
A13: IMPROVE THE SHARING OF INFORMATION TECHNOLOGY EXPERIENCE WORLDWIDE	71

SUPPORT MECHANISMS - "THE TOOLS TO OPERATE AN ELECTRONIC GOVERNMENT"

A14: GUARANTEE PRIVACY AND SECURITY	77
A15: INTEGRATE THE GOVERNMENT SERVICES INFORMATION INFRASTRUCTURE	83
A16: IMPROVE INFORMATION TECHNOLOGY ACQUISITION	87
A17: INCREASE THE PRODUCTIVITY OF FEDERAL EMPLOYEES	91
A18: ENHANCE INFORMATION TECHNOLOGY LEARNING	95

APPENDICES

A. EXECUTIVE ORDER 13011, FEDERAL INFORMATION TECHNOLOGY	A-1
B. SUMMARY OF ACTION ITEMS	B-1
C. STATUS OF ORIGINAL NPR INFORMATION TECHNOLOGY REENGINEERING RECOMMENDATIONS	C-1
D. ABBREVIATIONS	D-1



INTRODUCTION BY VICE PRESIDENT AL GORE

When the President asked me in 1993 to lead the reinvention of government, the first thing I did was start talking with front-line federal employees about what was broken and how to fix it. In agency offices and at the National Performance Review (NPR), inspired teams worked day and night through the summer of 1993 generating ideas. They got a lot of help from the best in business, as well as state and local reinventors.

When the work was finished, we had 1,200 actions that I recommended to the President. He reviewed them, gave them his endorsement, and made a personal commitment. He said, "Wherever this report says, 'the President should,' this President will."

Among the 1,200 recommended actions was a set of imaginative proposals to make government work better and cost less by reengineering through information technology.

The idea of reengineering through technology is critical. We didn't want to automate the old, worn processes of government. Information technology (IT) was and is the great enabler for reinvention. It allows us to rethink, in fundamental ways, how people work and how we serve customers.

The old way of organizing work is patterned on a factory, a hierarchical system. The system has top management, middle management, and workers, who are seen as cogs in a machine, programmed by those at the top of the pyramid to do simple tasks over and over. This approach forfeits the greatest asset of the organization — the unused brain power, energy, and creativity of the men and women in the organization.

The factory model has outlived its usefulness. Today's computers and communications let us organize to work in a new way. Based on the "distributed intelligence" concept in computing, this new model distributes information and the tools to use that information throughout an organization. Decision-making authority can be placed with employees

on the front lines, where change is encountered first.

The 1993 NPR report applied the distributed intelligence model. The recommendations ranged from electronic services for customers to better communications links for employees trying to collect information and work together.

A little over three years later, it is clear that these ideas are living up to their promise. Processes are being reengineered, and they do work better and cost less. But three years later it is just as clear that we can now make even bolder plans.

There are two reasons. First, programs spawned by the original report have been tremendously successful. They warrant an added push to put them over the top. Even the boldest ideas, like a national Electronic Benefits Transfer (EBT) system, dramatically simplified tax reporting for business, and one trade data system rather than 40, are within reach.

Second, technology continues to change dramatically. Computing power in a standard PC is 50 times what it was then, and storage capacity is 10 times greater — both occurred without an increase in cost. Telecommunications costs are down, and the biggest change of all is the explosive use and capacity of the Internet. The federal government is now delivering millions of tax forms on-line, taking requests for retirement estimates, and providing advice to business. But we have just begun to exploit this new tool.

For these two reasons and more, and in a striking demonstration of the new way to

work, teams all over government joined to create the recommendations in this report. Taken together, the recommendations here paint a picture of the kind of government we should have as we begin the next century. It will be a government where all Americans have the opportunity to get services electronically and where, aided by technology, the productivity of government operations will be soaring.

In this new government —

- Seniors will provide facts just once to cover Medicare and all pension programs; payment will, of course, be direct to their account, accessed by a single card that they carry in their wallet or purse.
- Police on the street will get electronic fingerprint checks and criminal records while suspects are in their grasp, not weeks later.
- Parents will check environmental conditions around town before picking out a new house.
- Students will make their application for loans, get their answers, and if approved, receive their funds, on-line.
- Communities will seek grants, apply for permits, and file reports electronically.
- Companies seeking export markets for their products will go on-line to a one-stop government shop for export assistance.
- And behind the scenes for all these transactions, the government will be operating an electronic system that, compared to today's paper-based services, improves privacy and security for individuals.

INTRODUCTION

These images are not the half of it. This report is named "Access America" because it calls for service improvements that will affect all Americans. It doesn't just propose electronic services, it calls for new ways to bring electronic options to all who want them, including those in underserved and rural areas. For each of the actions proposed, we are also mindful of the work that must be done to ensure that technology solutions are truly accessible to individuals with disabilities.

The President and I are just as committed to carrying out the recommendations in this report as we were to the original set. Our commitment is supported not just by better technology, but also by better management.

The Information Technology Management Reform Act of 1996, signed by the President, plus the President's order on Federal Information Technology, and guidance from the Office of Management and Budget have everyone in government thinking in new ways about how to manage IT. The Government Information Technology Services (GITS) Board and its system of champions will promote every idea. The Chief Information Officers (CIOs) at each agency and their new council, established to improve delivery of IT, will provide the leadership for the hard work of carrying out these recommendations agency by agency. As a council, they will take the lead on several governmentwide initiatives.

We are now working with a better procurement system as well. Many of the new hardware and software components

we want to use can be purchased off the shelf, and we are using the past performance of vendors to make smarter choices.

This report does not contemplate increases to the President's budget. Indeed, done well, these projects will be a source of savings. The taxpayer error rates for TeleFile tax returns by phone are a fraction of those for paper returns — less follow-up, less cost. Dozens of law enforcement and public safety communications antennas now in rented space atop the World Trade Center in New York could be replaced with two, and one will be back-up. Reengineering means not just new technology and streamlined processes, it means shifting existing money from old to new ways. The job is to manage those resources and make investments so that these projects can begin to pay off.

The underlying technologies in these recommendations are today's technologies. Tomorrow is certain to bring new, more powerful tools. We can plan on continuing improvement.

We can also expect this report to be a catalyst for more ideas that can fill in and enrich the picture of access for all Americans. I'm asking the GITS Board and the CIO Council to be active proponents for these new ideas and proposals. Those groups should lead us to an ever improving government that will serve America as never before.

Al Gore

ELECTRONIC GOVERNMENT –

**“SERVING THE PUBLIC ON ITS
TERMS”**



A01:

IMPROVE THE PUBLIC'S ACCESS TO GOVERNMENT SERVICES

LESS BURDEN, MORE SERVICE

Imagine this: A woman with a serious illness is discharged from the hospital. Her doctor advises her to stop working. To find out what social security disability benefits she could get, she sits at her home computer and requests a Personal Earnings and Benefit Estimate Statement via the Internet. In seconds, her earnings history and a benefit estimate appear on the screen.

She calls the Social Security Administration's 800 number to schedule an appointment to file a disability claim.

During the claims interview, with her permission, the social security worker verifies her date of birth by searching on-line state vital statistics records and retrieves electronic medical evidence documenting her disability. She does not have to bring her birth certificate to the social security office or contact the hospital for her medical records. After a determination is made that she is disabled, her monthly benefit will be deposited directly into her bank account,

giving her access to the money immediately without having to leave home to cash a check. The Social Security Administration takes care of coordinating the direct deposit enrollment with her bank based on information she gave to the social security worker at the time she filed her disability claim.

This kind of story seemed far-fetched just a few years ago. Not so now. Now it is within reach.

In October 1996, President Clinton and Vice President Gore announced a new feature on the White House home page (*Commonly Requested Services* (<http://www.whitehouse.gov/wh/welcome.html>)). With a couple of clicks, World Wide Web users can find an electronic form and transmit it directly to the Social Security Administration (SSA) to request a Personal Earnings and Benefit Estimate Statement (PEBES). A printed statement is mailed back to the user. Passport applications can be downloaded at the same site. Visitors to the site can apply to AmeriCorps and much more.

ACCESS AMERICA

The *Commonly Requested Services* feature responds to recurring demands from government's customers – don't just give us more information; let us carry out transactions electronically, when we want to. The new feature is popular.

Electronic services are getting better all over. The Department of Transportation's Operation Timesaver uses cameras and roadway sensors to collect data about how traffic is moving. The data goes electronically to traffic management centers. These centers advise drivers of road conditions using roadway message boards, radios, and phones. The system first helped move traffic during the 1996 Atlanta Olympics. Timesaver can cut daily travel times by 15 percent. That means a commuter who travels two hours a day can save the equivalent of a two week vacation each year.

The Internal Revenue Service (IRS) has phone services that set a new standard. The TeleTax system provides information about 148 task-related topics 24 hours a day; nearly nine million taxpayers used the service in 1996. And Telefile lets 1040EZ taxpayers do their filing from a touch tone phone. It takes about eight minutes and there is no paper to mail in. Refunds can be deposited in taxpayers' accounts electronically within three weeks.

Increasing numbers of customers are making personal computers and on-line services another popular way to access government information. Most agencies have responded by establishing electronic Government Information

Locator Services (GILS) to help find government information on a timely and equitable basis. Most agencies also have Internet home pages.

To further simplify electronic access, several governmentwide entry points have been created on the Internet. The White House's home page links users to Congress and the federal agencies. The National Technical Information Service's FedWorld is another integrated, electronic source for finding and retrieving information spread across the government (<http://www.fedworld.gov>). The National Archives and Records Administration has created a virtual exhibit hall on the Internet (<http://www.nara.gov>) in which citizens can explore documents that are on display in the Archives building in Washington, DC.

Accessibility to information technology for people with disabilities is essential if electronic access to government information is to become a reality. Recent rapid advances in information technology have developed the potential for a level of independence and productivity for persons with disabilities that recently was only a dream. Devices that provide effective assistance enable people without speech to program and use computers to speak for them, and voice-activated computers enable people with limited motor capacity to write books. However, in this area, as well as with all the other issues that will improve electronic access to government information, there is work left to do.

IMPROVE THE PUBLIC'S ACCESS TO GOVERNMENT SERVICES

NEED FOR CHANGE

The sheer volume of rapid technological changes and their effects, coupled with the enormous number of government functions and services, will make it necessary to buy things in a new way. Changes in providing federal government services to the public will need to be based on a "build, test, fix a little" model, where manageable projects are used to validate improved approaches and then the proven improvements are exported throughout the government.

While these electronic advances are showing the payoff in thinking about and delivering government services in brand new ways, most services are still delivered the old ways. You can request your personal benefit statement from SSA via the Internet, but the statement is still mailed later. You can download a passport application, but you cannot fill it out on-line. These things are changing, but transactions are still highly dependent on paper forms to request services and report information; manual movement of paper through processing; and information and products printed on paper and mailed to the public. Handling this paper costs the public and government time and dollars. One solution that will provide citizens with on-line transactions is the Department of Housing and Urban Development (HUD) pilot project that enables bidders for HUD-controlled single family homes in the San Antonio, Texas area to offer bids electronically using the Internet.

There is a lot at stake for the public. According to the number given in their Accountability Report, 65,000 SSA

workers issue social security numbers or replacement cards to almost 16 million people; process wage reports from 6.5 million employers; update earnings histories for 137 million workers; adjudicate claims for 5 million retired and disabled workers and their survivors; and answer questions from approximately 48 million calls to their 800 number.¹

Government's customers still complain that they have to go door-to-door to complete their business. Even when they find the right agency, they may still be required to contact the agency multiple times, or contact other agencies, to furnish information which is already available in government records someplace else. This costs both the customer and the government time and effort.

There has been huge growth in the number of office and home computers in recent years, and there are more phones than citizens, but that still does not give all Americans the option of electronic access to government. Many Americans live in urban or remote rural areas where distance, location, or poverty reduce access to services available from existing service delivery mechanisms.

Comparing schools shows how different things can be. Most American schools provide our children with lots of ways to learn – books, periodicals, films, trips to museums, the zoo, and interactions with teachers and students from other cultures. Many classrooms can now log on to the Internet. The President and Vice President have set a goal that every classroom will have Internet access by the year 2000.²

Children living on remote Indian reservations and attending the 187 Bureau of Indian Affairs (BIA) schools have a very different learning experience. Here there are no opportunities to browse libraries, no day trips because most children already travel hours just to get to school, and no influx of new students bringing new ideas. The Department of Interior's Office of Indian Education is working to bring the information age to reservations. Corporations have already donated hundreds of computers for use in reservation schools through the Four Directions Presidential Challenge Grant initiative.³ But they face an added problem. Right now the new computers are sitting in boxes because most of the schools lack basic electrical and communication hookups.

Leaving many Americans as electronic "have-nots" is unacceptable and unnecessary. Vice President Gore has championed reform in the communications marketplace to bring the benefits of the information revolution to all Americans. Implementing the provisions of the Telecommunications Act of 1996, which will broaden access to universal telecommunications services and lower the costs for those services, should make these connections more available and affordable.

Through public and private partnerships and through the innovative use of such familiar delivery mechanisms as existing federal offices and postal vehicles operating like bookmobiles, the federal government can choose to ensure access to electronic services for all Americans that wish to use them. HUD has created the Campus of Learners to bring computer learning centers to 25 public

housing projects through the use of public-private partnerships. Similarly, the Neighborhood Networks Initiative is creating centers in insured and assisted housing developments. The potential for improvements in both service delivery and efficiency is so great as to define a new relationship between government and the people it serves.

Persons with disabilities face the same challenges discussed here, as well as several others. Access to the information technology tools that assist them is not always timely or practical. The devices are not always used because there is limited information about them or it is not disseminated in a timely manner. Funding to acquire these devices is not always available. And sometimes the technology can erect new barriers. For example, graphic user interfaces and touch screen kiosks can present barriers to persons who are visually impaired or blind. When they are developing the basic information technology products, vendors need to design these technologies with universal designs that will enable people with a wide range of abilities to use them.

ACTIONS

1. Identify a candidate set of government services suitable for electronic self-service.

Enough progress has been made in electronic government to permit identification and widespread deployment of a core set of commonly requested government services that customers can initiate and complete in a single electronic session. Agencies are already working on these transactions.

IMPROVE THE PUBLIC'S ACCESS TO GOVERNMENT SERVICES

For example, SSA is testing enhancements to its on-line benefit statement service which will let customers get their statements electronically within seconds of the request. Early pilot results indicate that once the fully electronic service is available, the customer will save up to three weeks in time waiting for a mailed response and SSA will save over \$1.00 for every electronic statement issued.⁴

The IRS and the Department of Veterans Affairs (VA) also are progressing toward fully electronic services. Both agencies offer numerous electronic forms, which can be requested from their Internet Web sites (<http://www.irs.treas.gov>, <http://www.va.gov>). The IRS home page received 100 million hits in 1996 and taxpayers used it to download over three million forms and publications. Additionally, by working with tax preparers or using commercial software packages, taxpayers can complete and file their tax returns electronically via modem; sending signature documents later by mail.

The San Francisco VA Medical Center is pioneering the development of a Web site (<http://va.ucsf.edu/elig1.html>) that, for the first time, allows veterans to apply on-line for enrollment in the VA health care system. With just a few clicks of the mouse, San Francisco area veterans are able to apply for VA care from home. The form is automatically transmitted to the medical center's business office, where it is processed. After a test period, it is expected that the VA will increase its presence in cyberspace by expanding this program to include the entire Sierra Pacific VA Network and eventually the entire nation.

In addition, the Small Business Administration (SBA) and the Department of Education are both developing electronic lending programs. SBA is piloting an electronic loan application and approval process with its largest lenders. The lender can sit with the prospective borrower and complete the entire loan process on-line — application, review, and approval — almost instantaneously. Also, electronic communications between the lenders and the loan servicing centers supports "early intervention" for avoiding loan defaults and, consequently, costs to the taxpayer.

The Department of Education has developed FAFSA Express, an electronic Free Application for Federal Student Aid (FAFSA). FAFSA Express is an easy, convenient, and, for the most part, paperless way for students to apply for financial aid. An applicant can download the electronic FAFSA and associated software for use on a personal computer (<http://www.ed.gov/offices/OPE/express.html>). The software will prevent omissions and most common errors. Once completed, the electronic FAFSA is transmitted via modem to the Department of Education for processing. Although a paper signature document is still required, once received, the average processing time for FAFSA Express users is 72 hours. By contrast, it takes 14 days, not including mail time, to process a paper FAFSA. The Department of Education is now expanding the electronic FAFSA to include transmission via the Internet.

By May 1997, the Government Information Technology Services (GITS) Board should identify a candidate set of commonly requested services using three

criteria. First, the more often a service is being requested today, the more likely it is to go on the list. Second, the bigger the improvement in service, the better. And third, the larger the potential savings, the more attractive.

By September 1997, the GITS Board, working with federal agencies, should complete an action plan for developing, testing, and deploying these commonly requested services. Pilot projects where services are delivered to the public should begin no later than January 1998. A core set of commonly requested services – those most desired by Americans – should be electronically accessible to all Americans by January 2000.

2. *Incorporate technology that will assure the public of security and privacy in their transactions.*

The teams developing public access systems should identify their security and privacy requirements to the GITS Board Security and Privacy Champions. The GITS Board should promote the development, testing, and use of methods that will assure the public of the security and privacy of their electronic transactions.

3. *Greatly expand the locations where the public can access information technology.*

As the number of electronic services increases, the GITS Board needs to sponsor initiatives to ensure that all citizens have equal access to the technology needed to take advantage of electronic self-service. This technology

includes touch tone telephones, kiosks, and personal computers. Although access to services improves almost daily, more can be done to reach out to underserved populations. The Census Bureau's Current Population Survey in November 1994 revealed that 6.2 percent of U.S. households do not have telephones.⁵ In a separate Nielsen study on Internet access and usage, it found that 72 percent of adults aged 16 or older living in the U.S. did not have access to the Internet either at home, work, or school.⁶ Many people just cannot take advantage of convenient, 24-hour service provided through automated telephone response systems or the Internet.

To broaden access to the underserved, information technology needs to be placed where the public can use it in convenient community locations, such as schools, libraries, senior centers, and local federal and other government offices. Broadening access to information also means ensuring that devices that assist persons with disabilities are developed and provided and that these devices are universally available and affordable. There should be help available for first-time users. The U.S. Postal Service is filling some of the gap with its Web Interactive Network of Government Services (WINGS) project (<http://www.wings.gov>). In partnership with other government agencies and the city of Charlotte, North Carolina, the U.S. Postal Service is providing Internet access to government information and services using kiosks in libraries, post offices, and other frequently visited locations.

IMPROVE THE PUBLIC'S ACCESS TO GOVERNMENT SERVICES

By May 1997, the GITS Board should identify federal locations nationally for WINGS and similar systems delivering the GITS Board set of commonly requested services. The new locations should begin operations services by January 1999.

4. *Establish truck-based and other service delivery capabilities to serve remote and underserved areas.*

Existing outreach programs need to be expanded since some categories of Americans are otherwise likely to remain underserved. Expansion could come through enlarging partnerships with commercial and public interest organizations or through old and new technologies such as scheduled service to rural American locations using 21st century "bookmobiles" – featuring personal computers connected to the Internet via cellular phone links.

The U.S. Postal Service has the technical and logistical capability to provide and maintain such a truck-based delivery system. The development of a prototype vehicle, which could then be field-tested and assessed by customers and other stakeholders, should be undertaken as soon as possible.

By April 1997, the GITS Board should identify an interagency working group, led by the U.S. Postal Service and including the Departments of Interior, Agriculture, Veterans Affairs, and Housing and Urban Development, the Small Business Administration, and other interested parties, which will develop a prototype vehicle, survey customer preferences, and coordinate

with appropriate federal, state, and local authorities to test the vehicle by December 1997. By May 1998, the working group should make a recommendation regarding feasibility of developing a regional or national program using a truck-based delivery system.

5. *Develop interagency information exchanges to reduce paperwork burden on the public.*

Working with the Chief Information Officer (CIO) Council, the GITS Board should support and facilitate agency efforts to reduce the paperwork burden on the public and decrease agency costs due to redundant data and systems. Programs paying retirement, survivors, and disability payments affect the lives of millions of Americans. Based on current demographic data, approximately one out of every six persons in the U.S. receives a social security payment.⁷ SSA records show that many of those people are entitled to benefits under other programs as well, such as Medicare or pensions payable to eligible veterans, federal civil servants, railroad workers, or coal miners.⁸

When applying for benefits, people must prove certain facts to show that they are eligible. For example, retirement benefits are based on age and, typically, applicants must submit birth certificates to prove when they were born. For many people, this means they must write to their state of birth to request a certified copy of their birth record, pay a fee, and wait for the copy to be mailed to them. Once received, the applicant must either mail the document or personally present

it to the agency, again costing the person time and money. If there is more than one benefit program involved, the applicant may have to repeat the process and mail or personally present the same documentation to other agencies.

There is a better way to prove eligibility. With more and more vital statistics records being automated, agencies can verify dates of birth, marriage, or death by retrieving this information electronically for the applicant.

Several agencies have already initiated efforts to increase data sharing. SSA has been piloting on-line access to state vital statistic records in Tennessee and Wisconsin, where authorized SSA employees now can retrieve state information on-line. As an example of the potential benefits, pilot results have shown that both SSA and state efficiency has improved and customers receive their first benefit payment up to one week earlier.⁹

Other agencies are reducing the reporting burden on the public. The Department of Veterans Affairs and the Railroad Retirement Board both have established direct links between their automated systems and SSA's electronic records to retrieve social security beneficiary information to assure correct payment of veterans and railroad retirement benefits. Coordination of payments is accomplished rapidly, reducing the number of incorrect payments and the resulting inconvenience to recipients.

By May 1997, the GITS Board and CIO Council should identify several pilot projects which demonstrate effective interagency exchange of eligibility

information. Potential participants should include SSA, IRS, the Departments of Health and Human Services and Veterans Affairs, and one or more states. The pilot projects should be conducted between June and December 1997 and evaluation reports should be completed by March 1998.

6. *Coordinate and demonstrate direct access to medical records for agency personnel who make medical determination for disability programs.*

Development and testing of appropriate safeguards is needed to demonstrate the feasibility of direct access to electronic medical records. To make payments for injury or disability, agencies must verify the claimant's medical condition. The collection of this evidence can take weeks, delaying benefits needed by claimants to replace lost wages and pay for treatment. In an evaluation of their disability claims process, the SSA found that it can take well beyond 100 days from the time a person first contacts SSA about applying for benefits to the time the person is notified of the claim decision.¹⁰ Collection of the medical evidence accounts for a considerable portion of that elapsed time. Processing time would be shortened, however, if medical evidence could be retrieved electronically.

As increasing numbers of hospitals and other providers automate their medical records to help control costs, electronic retrieval is becoming more feasible. First, though, the public must be assured that the confidentiality of their medical records will be protected at all times and that their records will be accessed only

IMPROVE THE PUBLIC'S ACCESS TO GOVERNMENT SERVICES

by those who are authorized.

The GITS Board should identify an interagency working group to develop, in cooperation with the Department of Health and Human Services, a national policy and guideline for ensuring the privacy and security of medical evidence and to develop supporting technical solutions and standards. Once acceptable safeguards are available, electronic medical evidence can be accessed directly by service agencies, with the applicant's permission, reducing the paperwork burden, time, and cost of processing disability claims.

7. Develop partnerships with the private sector to offer related services.

Agencies should seek partnerships with the private sector for integrating related public and private services. Businesses and agencies frequently need the same information about customers to deliver related products and services. To the extent that the customer bases overlap, opportunities may exist to provide one-stop service, reduce paperwork, and share the costs of expensive technology infrastructures.

SSA has established a close working relationship with the financial community. Benefit payments for over 28 million SSA customers are deposited electronically into bank accounts each month.¹¹ Because the customer bases overlap extensively, SSA and the financial community have teamed together to provide improved service to customers using the financial community's electronic funds transfer network – the Automated Clearing House.

Today, beneficiaries can initiate or change direct deposit of their checks either at their bank or their SSA office, whichever is more convenient. Reports of death also are simplified. Many married beneficiaries using direct deposit have their monthly payments directed into a joint bank account. If a spouse should die, SSA must be notified promptly to stop the deceased person's payment and avoid inconveniencing the survivor by having to return any incorrectly paid amounts. Because SSA and the financial community can electronically exchange this information, deaths reported to banks for direct depositors are also sent to SSA to stop erroneous benefits.

SSA also is working with CommerceNet, a nonprofit consortium of companies promoting commercial uses of the Internet. Through this organization, member agencies can cooperate with the private sector to address barriers limiting the use of the Internet for business in the U.S. and abroad and can find private sector partners for testing domestic and foreign service delivery options.

The National Park Service (NPS) is working in partnership with the National Park Foundation, Target stores, and others to raise awareness and resources to restore the Washington Monument. To help preserve this treasured landmark, Target stores created the Washington Monument Restoration Project Web pages hosted on the NPS's Internet site, which gives electronic visitors a virtual tour of the monument and information about the historic building and its restoration.

As they pursue the goal of a government that works better and costs less, agencies will enter into additional creative partnerships with the public and private sectors and test innovative information technologies to effectively deliver electronic services to the public.

By August 1997, the GITS Board should coordinate with the other federal departments and agencies and identify partnerships similar to those being conducted by SSA and NPS. Programs which use these partnerships should be in operation by January 1998.

8. *Create a plan to modernize BIA schools.*

By April 1997, the Office of Indian Education Programs at the Department of the Interior should create a plan to modernize the 187 BIA schools with the systems and processes necessary to link to information networks. These systems should be in place in all schools no later than the year 2000.

ENDNOTES

1. Accountability Report for Fiscal Year 1996, Social Security Administration, November 22, 1996, pp. 9-10.

2. Remarks by Vice President Albert Gore, Jr. to the Superhighway Summit, Royce Hall, UCLA, Los Angeles, CA, January 17, 1994.

Remarks by President William J. Clinton to the Democratic Leadership Conference, Washington, DC, December 11, 1996.

3. The Four Directions Presidential Challenge Grant is one of 19 national grants awarded in 1995 out of 200 applicants. The focus is to integrate Native American Culture and technology into education.

4. "Internet PEBES Request Services," Associate Commissioner for Program Support, Social Security Administration, January 22, 1997.

5. Falling Through the Net: A Survey of the "Have Nots" in Rural and Urban America, Department of Commerce, July 1995, p. 7.

6. Internet Demographic Recontact Study, Vol. 2, CommerceNet/Nielsen, March/April 1996, p. 1.

7. Derived from the Current U.S. Population Count, U.S. Census Bureau Web page, December 16, 1996, and number of OASDI beneficiaries reported in the Social Security Bulletin, Social Security Administration, Summer 1996, p. 96.

8. Accountability Report for Fiscal Year 1996, Social Security Administration, November 22, 1996, pp.4-5.

9. Briefing, Electronic Service Delivery Team, Social Security Administration, November 18, 1996.

10. "Plan for a New Disability Claim Process," Social Security Administration, September 1994, p. 9.

11. Director, Payment and Recovery Policy Staff, Social Security Administration, September 1996.



A02:

IMPLEMENT NATIONWIDE, INTEGRATED ELECTRONIC BENEFITS TRANSFER

THE CHALLENGE – A NATIONWIDE ELECTRONIC BENEFITS TRANSFER SYSTEM

***Imagine this:** A government that allows citizens to access a wide range of government benefits and services electronically – eliminating redundant paper-based systems, improving cost efficiencies and convenience, and empowering citizens through secure electronic access and delivery of government services.*

Let's consider one day in the life of Jane Smith. Jane took the morning off from work in order to meet the mailman as he delivers her federal income tax refund check. Her rent and utility payments were already overdue and last year her check was stolen from her mailbox. The mailman did not arrive until after noon and Jane rushed to take the bus to a check-cashing outlet where she was charged \$10 to cash her check and another \$5 for money orders to pay her bills. She stopped at the drug store to renew her prescription only to realize that she had forgotten her Medicaid

eligibility card. She took another bus to the post office and waited in line for stamps and envelopes to mail her bill payments. Already too late to get to work for the day, Jane did not have exact change for the bus and ended up walking home.

Now imagine Jane's day a few years from now. On the way to the bus in the morning, Jane stops at the local ATM, inserts her new Access Card, and pays her rent and utility bills electronically and securely. She is confident after checking her balance that her income tax refund has been transferred to her EBT account. She stops at the drug store, using her Access Card to verify her eligibility for Medicaid and to pay for additional items. Still with time before getting to work, Jane stops at the post office and inserts her card at a kiosk to purchase stamps, and remembers to update information at the same kiosk for the Department of Motor Vehicles on the car she is registering. Then she's off to work.

In 1993, Vice President Gore's National Performance Review launched the

development of a standard, nationwide system to deliver government benefits electronically. Electronic Benefits Transfer (EBT) enables the delivery of government benefits electronically using a single plastic card to access cash and food benefits at automated teller machine (ATM) and point-of-sale terminal locations. In addition to increased convenience and dignity for beneficiaries, EBT will dramatically reduce theft, fraud, and abuse in benefits delivery because there are fewer steps in the process, and patterns of abuse can be detected electronically. Much has been done to implement EBT nationwide. The foundation for national EBT operations has been built, and government and industry are rolling out EBT systems to provide for national operations by 1999. But EBT is just the beginning for the delivery of government services electronically to the public using card technologies.

The Federal EBT Task Force was created in November 1993 to serve as the catalyst for rapid implementation of nationwide EBT. In May 1994, Vice President Gore approved the EBT Task Force's report *From Paper to Electronics: Creating a Benefit Delivery System That Works Better & Costs Less – An Implementation Plan for Nationwide EBT*.¹ This plan has served as the blueprint for the implementation of nationwide EBT and has detailed a business model of practical steps.

- *Create Partnerships with States and the Private Sector.* States have joined together to form regional EBT alliances to share information, address regional issues related to the development of EBT, develop joint policy positions,

and maximize cost efficiencies. The first of the regional alliances was formed between the EBT Task Force and the Southern Alliance of States. Subsequently, other multi-state alliances, together comprising more than 40 states, were formed in the Northeast, mid-Atlantic, mid-West, Mountain Plains, and Western regions. The regional alliances are facilitating the development of a single system and procurement process that will allow users to move smoothly from state to state and allow states to clear transactions across state lines.

The private sector has expressed overwhelming support for a common set of operating rules and standards. Accordingly, the National Automated Clearinghouse Association formed the EBT Council, a not-for-profit voluntary association of all EBT stakeholders, such as financial institutions, electronic funds transfer networks, retail merchants, trade associations, and federal and state agencies.

In April 1996, the EBT Council approved the QUEST EBT Operating Rules, laying the foundation for a national, commercially compatible EBT program for all private sector participants.² Recipients of government benefits will be able to use their QUEST cards at any ATM or point-of-sale terminal in the country that displays the QUEST logo. For the private sector, the QUEST rules establish uniform roles, responsibilities, and business processes for all participants in national EBT.

- *Make EBT Happen and Save Money.* The EBT Task Force report set the goal

IMPLEMENT NATIONWIDE, INTEGRATED ELECTRONIC BENEFITS TRANSFER

of national EBT operations by 1999. To date, 43 states are either operating EBT systems or have made contract awards with a service vendor.³ The remaining states are involved in planning for EBT implementation. The federal and state governments have made nationwide EBT by 1999 a reality. The transformation from a paper-based to an electronic benefit transfer system would convert \$111 billion annually⁴ in paper-based benefit issuances – checks, vouchers, food stamps – to secure, streamlined electronic benefit delivery. EBT costs less than paper-based benefit delivery. For example, there are estimated to be \$424 million in potential savings to be realized between 1994 and 2000 by converting to EBT.⁵

The private sector will also share these cost savings. For example, \$24 billion annually in food stamps are printed, handled, and reconciled like cash but, unlike cash, are not re-circulated. Before being burned after only one use, food stamps are counted dozens of times by merchants, depository financial institutions, and the Federal Reserve. With EBT, the costs for this excess processing will no longer be passed on to the public.

NEED FOR CHANGE

In partnership, the government and private sector have built the foundation for nationwide EBT and now are focusing on national rollout of EBT systems for food stamps and simple cash payments. Initial EBT implementation has focused on the “tier one” programs involving food stamps and the programs with the least complex cash transactions – welfare

payments, social security, supplemental security income, child support, and state general assistance. The federal government should focus next on the “tier two” programs that require more complex data. Tier two programs include women, infants, and children (WIC); unemployment insurance and workman’s compensation; housing and utilities subsidies; veterans benefits; and health care. Implementation of EBT for the tier two programs would more than double electronic benefit delivery from \$120 billion to over \$250 billion annually and address the needs of more than 30 million recipients who do not have bank accounts. “Smart cards,” which contain a microchip, and which are already in widespread use in Europe, are another technology, beyond the magnetic stripe used on today’s EBT cards, that offer the government and EBT recipients great potential for convenience and cost savings. Several nations use smart cards as telephone cards. In Spain they are used as Social Security Cards, and in Germany smart cards are used as health and medical records.

One of the biggest advantages of EBT is its potential to reduce theft, fraud, and abuse. The U.S. Department of Agriculture (USDA) estimates the cost of \$850 million annually for food stamp fraud. The American taxpayers look to their governments to end this abuse. Smart card systems can further enhance security to ensure that government benefits are used as intended. The same security capabilities can actually increase privacy, preventing unauthorized access. For example, the cards store personal data on the microchips, which are less vulnerable to counterfeiting or theft of data than cards that use magnetic stripes.

While much has been accomplished in the past two years in the effort to deploy a nationwide EBT system, more work is needed.

ACTIONS

1. *Encourage EBT development and implementation consistent with the national EBT model for all states.*

The Office of Management and Budget (OMB), in concert with the participating federal and state agencies, should monitor EBT progress against clear milestones, identify problems, and take actions to ensure continued progress. To support this effort, the agencies should develop an integrated plan to accomplish the implementation of EBT systems by 1999. The USDA and Treasury should develop action plans for the implementation of EBT systems consistent with the national EBT model specific to each state. In particular, the General Services Administration (GSA) should assess the circumstances in each state to determine obstacles or issues blocking rapid EBT deployment. Such detailed, integrated action plans should be in place no later than March 1997.

2. *Conduct requirements analyses and develop EBT specifications for tier two programs for EBT systems integration.*

Working closely with the states and the private sector, the GSA should continue the design and development activities of the EBT Task Force to expand EBT services to programs including unemployment insurance and workman's compensation, WIC, veterans benefits, housing and utilities subsidies, and health

care. Systems specifications should be developed by December 1997 that can be adopted by states as common core requirements and integrated into existing or planned systems operations.

3. *Demonstrate improved service delivery through enhanced card services.*

The Government Information Technology Services (GITS) Board should identify an interagency task force to design a card pilot test by September 1997. The test would demonstrate the feasibility and customer acceptance of a government services card that gives the public the option to use one card to receive services from multiple agencies. The task force should include representatives from the U.S. Postal Service, Social Security Administration, Internal Revenue Service, and the Department of Veterans Affairs, and should consider frequently requested services where card-based delivery would result in significantly improved convenience for the customer and reduced cost for the agency.

ENDNOTES

1. "From Paper to Electronics: Creating a Benefit Delivery System That Works Better & Costs Less - An Implementation Plan for Nationwide EBT. Report of the Federal Electronic Benefits Transfer Task Force," Washington, DC, May 1994.
2. "Quest Operating Rules," April 25, 1996.
3. "Food and Consumer Service Status Report Ending August 1996," USDA Food and Consumer Service, Washington, DC.

IMPLEMENT NATIONWIDE, INTEGRATED ELECTRONIC BENEFITS TRANSFER

4. "From Paper to Electronics: Creating a Benefit Delivery System That Works Better & Costs Less - An Implementation Plan for Nationwide EBT. Report of the Federal

Electronic Benefits Transfer Task Force,"
Washington, DC, May 1994.

5. Ibid., page 38.



A03:

PROVIDE ALL FEDERAL PAYMENTS USING ELECTRONIC FUNDS TRANSFER BY 1999

THE CHALLENGE — NEW LAW REQUIRES THAT ALL FEDERAL GOVERNMENT PAYMENTS BE MADE ELECTRONICALLY

Imagine this: A government that disburses payments to its customers electronically in a timely, secure, and cost-effective manner using electronic funds transfer (EFT).

In Coral Gables, Florida, one retiree is upset about the loss of a check from his daughter when his mailman is robbed. His neighbor, although concerned about the incident, is relieved to know that her Railroad Retirement check has been sent to her bank electronically. She no longer worries about her safety in going to the bank to deposit a paper check. She also feels more secure knowing that funds will be there when she wishes to make a withdrawal.

This isn't the distant future. It is happening every day and will be occurring more and more in the next several years. Soon, most Americans will take advantage of information

technology to contact the government electronically. New and improved systems will make it easy for the public to initiate requests to receive benefits and find answers to their questions.

Recipients will no longer have to wait for their government checks to arrive in the mail, but will receive their payments electronically.

On April 26, 1996, President Clinton signed into law the Debt Collection Improvement Act of 1996, which mandates that all payments from federal agencies and corporations, with the exception of tax refunds, must be made electronically by 1999. Today, the government makes over 850 million payments annually to federal benefit recipients, federal salaried employees, grant recipients, and contractors. This legislation will provide far-reaching benefits to the American public, financial institutions, and the federal government.

By using EFT, government will work better and cost less. Federal government customers will receive their payments faster and without risk of loss or theft. In addition, EFT will significantly reduce

the administrative burden on financial institutions, allowing them to concentrate on satisfying customer needs and enhancing their competitive edge.

EFT will also provide significant cost savings to the federal government. For each check payment converted to EFT, the government saves about \$0.40. By eliminating postage and printing costs, the Department of the Treasury estimates it can save \$500 million over the first five years following implementation of the program.

NEED FOR CHANGE

Since the passage of the Debt Collection Improvement Act of 1996, the Treasury Department's Financial Management Service (FMS) and other government agencies have taken steps to move the government toward a 100 percent EFT environment. However, the government and the banking industry need to make many changes to overcome the barriers to full EFT use.

System Barriers

Some federal government agencies currently operate systems that are incapable of supporting EFT. In addition, there are other barriers, such as the shortage of automated teller machines (ATM) in rural areas and the lack of necessary hardware and communication tools throughout the government. FMS is currently working with key EFT stakeholders to either improve their systems or provide alternative solutions.

Electronic Payment Industry Barriers

Some financial institutions do not have the capability to provide addenda information with EFT payments. As a result, their customers have difficulty in accounting for EFT payments. FMS is working with the industry to establish alternative methods for transmitting this information electronically to the customers.

Organizational and Knowledge Exchange Barriers

Many government agency representatives and payment recipients are not well informed about EFT and are not aware of all the benefits. FMS is reaching out to the public and private sectors to educate them about these benefits.

ACTIONS

In order to educate key stakeholders about this new legislation, the following actions need to be accomplished:

1. *Establish focus groups and conduct seminars and workshops with federal agencies.*

By July 1997, the Department of the Treasury should establish focus groups that include benefits recipients, vendors, and financial institutions to determine what the federal government can do to educate people and organizations on the concept of electronic payments. The Treasury Department should also conduct workshops to educate federal employees about the new payment mechanisms. The workshops should continue through 1998, when the program will be fully implemented.

PROVIDE ALL FEDERAL PAYMENTS USING ELECTRONIC FUNDS TRANSFER BY 1999

2. *Create alternative mechanisms.*

By September 1997, the Department of the Treasury should establish a joint government-industry working group to identify alternative payment methods the industry can use to implement EFT by 1999.

A04:

BRING ENVIRONMENTAL INFORMATION TO THE PUBLIC

Imagine this: A publicly owned tract of land in a Midwestern community has become a trash-filled eyesore. A team of local citizens wants to restore the area to a native prairie, similar to how it was 150 years ago. By using a computer with access to the Internet, the team is able to quickly find the information it needs. Some of this information comes from a natural history museum in New York, some comes from a university in California, and some comes from the Department of Agriculture in Washington. In a short time, the team is able to retrieve and combine this information to learn what plants and animals lived on the site in the past. They can begin to plan how they could restore much of the original habitat and return the site to its former state as a healthy natural ecosystem. The restored prairie becomes a source of community pride and also helps to raise property values of nearby homes.

Practically everyone in today's society is interested in finding information about the environment. For example, home buyers with small children could search

for an environmentally safe location for their first home; science students examining a geographical area could get data on statistical probabilities of floods, earthquakes, or major storms; a business owner contemplating expanding her construction company to a waterfront area could find data on the environmental issues and potential environmental hazards she must address.

Citizens can find out all kinds of environmental information. The data are available in government and non-government files, publications, computers, libraries, botanical gardens, and museums around the country and the world. Federal, state, local, and many private sector organizations monitor the environment continuously. For example, the Environmental Protection Agency (EPA), in cooperation with states, collects water and air quality information. The Department of the Interior collects information about floods, biological systems, earthquakes, and geological formations. The National Oceanic and Atmospheric Administration collects vast quantities of oceanographic atmospheric and geophysical data.

The amount of information on the environment is incredible. Information about the Nation's biological resources ranges from the specimens collected by some of the first explorers of the U.S. (specimens which still exist in natural history museums today) to environmental data collected daily from satellites orbiting the earth. Much useful information, such as that describing museum specimens, is only available on paper, not in a computerized format, and therefore is not easily accessible to anyone outside of that institution. Even the data that could be accessed electronically is spread among hundreds of databases, some of them enormous national files. Much of this information is tied to specific geographic areas and categorized and indexed using different methods – zip codes, street addresses, or longitude and latitude.

NEED FOR CHANGE

In many cases, the individuals and agencies seeking certain information may not be aware that the information already exists in some public database. Even if someone successfully traversed the government information maze, the information gathered might be difficult or impossible to use because it could be out of date or measured with unknown methods.

Finding the right source of the information can be challenging. For example, one agency collects real-time data on stream flow while another provides information on emergency management in times of flooding. One department collects data to manage our National Parks and another acquires similar information related to National Forests.

Environmental Information Should Be More Accessible

There are already many federal agency programs and activities aimed at making environmental information more broadly accessible for different applications. For example, under President Clinton's Executive Order 12906, federal agencies, in cooperation with state, local, and tribal governments, are developing the National Spatial Data Infrastructure (NSDI). The NSDI is the technology, policies, standards, and human resources necessary to acquire, process, store, distribute, and improve the integration of geospatial data. A distributed network of geospatial data producers, managers, and users linked electronically through the National Geospatial Data Clearinghouse has been growing since the Clearinghouse began in 1994.

In addition, EPA reorganized its home page (<http://www.epa.gov>) to make environmental information more accessible to a variety of users, such as kids, teachers, and realtors. Since September 1996, there has been an explosion of use of EPA's home page, increasing from three to five million hits per day. EPA's on-line Envirofacts database allows users to obtain and combine data from up to six environmental databases. The Department of Housing and Urban Development (HUD) has extensive information on lead hazard control available on its home page (<http://www.hud.gov>). Not only can parents find basic information on lead paint hazards, but state and local governments and community development groups are downloading the

BRING ENVIRONMENTAL INFORMATION TO THE PUBLIC

information and distributing it to their constituents.

Work is also under way, through the National Biological Information Infrastructure, to improve the accessibility of biological information. Here the efforts are designed to provide access, cross-linkage, and coordination of this information among federal, state, local, and non-government organizations. However, there is no formal interagency mechanism for the communication, coordination, and leveraging of federal activities in this area. Coordination would involve defining common goals and objectives, agreeing on common interests and priorities, and promoting efforts to pool or share agency resources.

A potential solution would be to assign the Office of Science and Technology Policy's (OSTP) Committee on Environment and Natural Resources (CENR) responsibility for this task. This would also serve to link biological information with other related environmental science and conservation programs and policies. Additionally, the committee could also coordinate outreach activities with non-federal partners.

Better Tools To Search For Environmental Information

The Data Management Working Group within the OSTP CENR Task Force on Observation and Data Management has provided oversight for a prototype National Environmental Data Index. The National Oceanic and Atmospheric Administration did the development. The prototype index uses the World Wide

Web (<http://www.nedi.gov>) and provides a sort of "yellow pages" to environmental data and the search tools that link the information available on a designated subject to the databases that contain the information. The coverage of the prototype should be expanded by adding other partners to the Data Management Working Group such as the Departments of Health and Human Services, Transportation, and Education, as well as the Federal Emergency Management Agency.

Most agencies are currently developing separate indexes of their data holdings. Expanded common indexes would provide a comprehensive mechanism to integrate the individual agency data holdings into an easily accessible and understandable structure. By using electronic data interchange (EDI) or the Web, users requiring the data would be able to locate and access information easily.

There Is Also a Need for a National Biological Information Infrastructure (NBII)

The NBII is a broad cooperative effort led by the U.S. Geological Survey (USGS) to establish a distributed network of biological information and new computer tools to help users anywhere more easily find and retrieve the biological information they need, combine information from different sources, and apply biological information to actual resource management decisions. The NBII effort has already begun to provide greater access to biological information for its users (<http://www.nbs.gov/nbii>). This concept

is a significant component of the recommendations made by the National Academy of Science's National Research Council in their 1993 report entitled "A Biological Survey for the Nation."¹

An element of the National Information Infrastructure, the NBII is already working to increase access to many important automated sources of biological information, such as the North American Breeding Bird Survey, a major national database showing population trends and distributions for 400 species of birds over the last 30 years. Another data source provides information on outbreaks of wildlife diseases and wildlife mortality incidents across the U.S. There is also biodiversity information from each of the state natural heritage programs in the U.S. Another, the Flora of North America Project, covers the physical appearance and distribution of all North American plant species for the first time.

An additional goal of the NBII is to increase access to museum information on plant and animal specimens via the Internet. These data present a picture of changes in biological resources going back as much as 150 years.

Providing effective access to this data and carrying out the entire NBII concept will be easier, and in some cases only possible, if common information standards are developed. The Interagency Taxonomic Information System (ITIS) is one example of a cooperative effort among federal agencies to develop the needed standards. The agencies are: the Agricultural Research Service, EPA,

Natural Resources Conservation Service, National Oceanic and Atmospheric Administration, National Science Foundation, Smithsonian Institution, and USGS. ITIS is providing access to the first standardized set of scientific names for every U.S. plant and animal species. In electronic form it acts like a biological telephone directory with basic information, and as a "spell-checker" to validate different scientific names.

Similarly, as a result of an earlier National Performance Review recommendation, the USGS is working cooperatively through the Federal Geographic Data Committee (FGDC) to develop a standardized format to use in describing geographic databases. Besides providing formats for subject matter, this "metadata" standard will spell out how the data were collected and by whom, as well as addressing data accuracy and quality.

Obviously, many agencies are working on tasks relating to the NBII concept and the USGS is providing leadership, but there is no formal interagency mechanism for coordination. Again, the OSTP CENR could perform this role by forming an interagency coordinating committee at the federal level.

There Is a Need for an Environmentally Oriented Electronic National Atlas

An electronic National Atlas of the United States could be a visual front door to the wealth of information the federal government collects on the physical, historic, economic, and socio-cultural characteristics of this country.

BRING ENVIRONMENTAL INFORMATION TO THE PUBLIC

This electronic atlas would show roads, county boundaries, lakes and streams, towns and cities, and population distribution. It would guide Americans to the best and most current information available for their areas of interest.

To succeed, it would require collaboration among numerous government agencies and other public and private organizations that regularly collect U.S. regional and local information. The Departments of Interior, Agriculture, and Commerce, as well as the EPA would be key players. Agencies would continue to collect and maintain their data, but would agree to use a common format to present that data in the Atlas. Overlapping collection efforts would be easy to identify, which would allow agencies to reduce their collection and maintenance work. Serious outreach and collaboration would avoid duplication of private sector efforts.

ACTIONS

1. *Establish a federal interagency working group to coordinate the continued development of a National Biological Information Infrastructure.*

By April 1997, the Government Information Technology Services (GITS) Board, working with the CENR, should establish a federal interagency working group to coordinate all efforts to develop aspects of the NBII. This interagency group should include, but not be limited to, the Departments of Agriculture, Defense, Energy, and Interior, EPA, and the National Science Foundation. USGS should be designated as the lead agency in this effort. The group should further

interagency cooperation and coordination to create an NBII. It should build partnerships with the non-federal sector and provide a focal point for non-federal agencies and organizations to contribute to the NBII.

2. *Implement the national-level standards that are needed to support greater sharing and use of biological information.*

The federal ITIS partners should continue to look for opportunities to enhance and expand the ITIS through partnerships with the non-federal sector and in the international community. By June 1997, the Interagency Taxonomic Information System should be broadened to include the participation of, at a minimum, the Department of Defense, the National Institutes of Health, the National Science Foundation, and additional bureaus within the Departments of Agriculture and Interior.

3. *Expand the existing federal standard for describing geospatial data to include elements for describing biological information.*

Adoption of a descriptive standard by all federal agencies involved in the collection and use of information on biological resources will make it easier for users of this information, including citizens, scientists, resource managers, and private industry, to find the specific biological information they need. Good, easy-to-access descriptions of existing sources of biological information also mean that federal agencies can save taxpayer dollars by avoiding the unnecessary collection of information

that may already exist in the holdings of another agency. The Federal Geographic Data Committee should ensure that the elements for biological data are added to the existing standard by January 1998.

4. *Initiate a broad effort to develop an "electronic national natural history museum."*

The federal interagency NBII work group should initiate a national level, cooperative effort to create a distributed electronic database on the biological diversity of the U.S., as represented in our natural history museum collections.

5. *Promote the development and partnerships for the National Environmental Data Index (NEDI).*

The Data Management Working Group within the CENR Task Force on Observation and Data Management should work to advance NEDI's continued development and increase federal agencies partnerships with NEDI.

6. *Develop and maintain a National Atlas of the United States.*

The USGS, as a member of the Federal Geographic Data Committee, is leading the development and maintenance of the National Atlas. The Chair of the FGDC should encourage the active participation of other FGDC members in this effort.

The GITS Board should work with USGS to identify opportunities to collaborate with the business community in support of a National Atlas. An electronic atlas should be on-line by January 1999.

ENDNOTES

1. A Biological Survey for the Nation, National Academy Press, Washington, DC, National Research Council, 1993.

A05:

BUILD AN ELECTRONIC ENVIRONMENT, SAFETY, AND HEALTH ASSISTANCE RESOURCE FOR BUSINESS

**INTERNET ACCESS TO
ENVIRONMENT, SAFETY, AND
HEALTH REGULATORY
INFORMATION TO REDUCE COSTS,
IMPROVE AWARENESS, AND
ENHANCE UNDERSTANDING**

Imagine this: A dry cleaner worries about cleaning solvent spills. It hasn't happened yet, but it could. He knows there must be regulatory requirements on this subject. He sits down at a computer and goes to a free Internet site. With a key word search, he discovers that the key question is whether spills are a "reportable quantity." At the click of a button, he transfers to a site where, in real time, he uses the RQ.CALCULATOR to determine what he would have to report for the size of the container he uses. He presses another button and finds out where to report, as well as whom to call locally for help to clean up if a spill ever happens.

The federal government has recognized the importance to the regulated community of quick access to

environment, safety, and health regulatory information. Systems such as the Environmental Protection Agency's hot lines allow telephone access to regulatory specialists who can provide information on the status of emerging requirements or answer compliance-related questions on a rapid-response basis. The government has also developed hundreds of electronically accessible libraries and databases containing information such as government-sponsored software, research reports, and guidance materials to satisfy the demand for electronically accessible information. Today, the Internet greatly expands such services by providing instantaneous access to a vast array of information. However, with over 60 federal agencies in existence to assist or regulate business, finding what you need can be complicated and time consuming. Additionally, without proper interfaces to integrate the information into a context that can be easily understood, the sheer volume of raw information on the Internet leaves many users feeling overwhelmed.

The Clinton Administration has taken the first step in addressing this problem by developing the U.S. Business Advisor — the one-stop electronic link to government for business (<http://www.business.gov>). The Advisor provides an easy way for business people to get answers to frequently asked questions; find “how to” information; search through federal information; browse government documents; and view business-related news items from federal agencies.

As a dynamic service — growing and changing to meet the needs of the business community — a new component dedicated to providing environment, safety, and health regulatory information and services fits perfectly within the framework of the U.S. Business Advisor. Such a tool would be useful to non-profit, community, and environmental groups, as well.

At one electronic location, the regulated community could identify the requirements that pertain to a given business operation, obtain assistance in interpreting those requirements, and electronically submit requisite documents as necessary. Moreover, this service would be free to the user, substantially reducing compliance costs to business. The site would foster cooperation between business and regulators. Dialogue with regulators would be enhanced and expedited, misunderstandings could be avoided, and time spent on compliance activities reduced.

Expansion of the U.S. Business Advisor to include a robust environment, safety, and health component would provide a great benefit to large and small businesses across the country, resulting in better compliance and a cleaner, safer environment. The technology necessary to construct the site already exists, the regulatory information that would reside there is available, and the need and benefits are clear. Experience shows that the vast majority of business owners would prefer to know and play by the rules. The President has called for partnerships to help those who wish to comply. For many, this could be a key tool; for some, it may be the only one.

NEED FOR CHANGE

The environment, safety, and health regulatory frameworks within which U. S. businesses must operate are complex and constantly changing. Many federal statutes protect workers, the public, and the environment. To achieve the goals and objectives in these statutes, federal agencies have promulgated hundreds of regulations that specify: reporting and recordkeeping requirements; permitting procedures; clean-up specifications; and many other mandates with which businesses must comply. In many cases, the federal regulations set a minimum national standard; each state is then free to adopt its own, more stringent, standard or to impose additional requirements. Compliance with this large body of specific requirements presents a substantial challenge to business. Furthermore, regulations are in a state of flux, with new laws and regulations being added and existing requirements undergoing expansion, revision, or revocation.

Monitoring Regulations Is Time Consuming And Costly

The federal government currently provides businesses and the public with an avenue to comment on the development of new or revised regulations in the Federal Register. Any interested party may submit concerns or offer suggestions regarding specific regulations. All comments are considered in developing the final regulations. Thus, businesses affected by these actions can have some input into the shape and direction of regulatory requirements promulgated by various agencies. However, vigilant tracking of proposed changes through the Federal Register or attendance at meetings and hearings requires time and money that most small business owners cannot spare. Many give up, make their best guess, and hope the inspectors never come around.

Understanding Regulations Requires a Substantial Investment

Besides monitoring federal and state regulations, business owners must determine which requirements apply to their company's activities, determine what compliance options are available, and then comply with the applicable requirements. The typical business owner is faced with a stack of federal regulations that stands 21 feet high and contains 140,000 pages of information.¹ While it may be possible for large businesses to hire environmental and organizational safety and health specialists on their staffs, this option is not feasible for many small businesses. Not only are the salaries of such specialists high, but there also are

considerable costs associated with obtaining and analyzing regulatory information by traditional means. If maintained in-house, these costs constitute a substantial investment. Therefore, the small business owner is left with the choice of hiring consultants and lawyers on an intermittent, as-needed basis or tackling the issues alone. While most small business owners wish to comply with government regulations, doing so is extremely daunting. Many simply do the best they can, and hope their best is good enough.

ACTIONS

1. ***Build an electronic environment, safety, and health assistance resource for the Internet.***

The Government Information Technology Services (GITS) Board should identify a multi-agency task force by March 1997 to design an electronic environment, safety, and health resource. The site should be linked to the U.S. Business Advisor and should consist of a framework that could expand to additional agencies and content. The site should have four categories: Assistance, Rulemaking, Advisor, and Resources.

The first category, **Assistance**, would allow users to download copies of the various forms used to make required reports, to obtain examples of completed forms, and to submit their reports to the appropriate federal or state government agency in electronic form.

The second category, **Rulemaking**, would provide users with access to information about new initiatives that are

available for public comment. Two years ago, a White House task force recommended that all agencies develop the capability for conducting true electronic rulemaking. The Government Printing Office now provides electronic access to the text of proposed rules. This new rulemaking product would focus on the next step, enabling the electronic submission and posting of public comments so that citizens can engage in a dialogue about proposed initiatives.

The third category, **Advisor**, would constitute an on-line help system, providing one-stop access to various regulatory hot lines, expert systems such as the *Asbestos Advisor*, and compliance tools. Compliance tools, for example, would include the RQ.CALCULATOR, developed by the Department of Energy to assist in determining when releases of hazardous substances should be reported. Similar tools developed by other government agencies also would reside here.

The fourth category, **Resources**, would constitute an electronic library of existing environmental bills, laws, and regulations; current and past issues of the Federal Register; bulletin boards; and other expedited sources of regulatory information. In addition, Resources would provide interpretations and regulatory guidance, as well as information on state regulatory programs.

The site should be made available to the public by December 1997.

ENDNOTES

1. Based on actual measurements by the National Performance Review, January 1995.

A06:

ESTABLISH THE INTERGOVERNMENTAL WIRELESS PUBLIC SAFETY NETWORK

***Imagine this:** A nervous father reports a missing child to a local 911 telephone dispatch station. A broadcast is sent over the public safety wireless communications network describing the child. The broadcast is immediately received by all local, state, and federal public safety workers in the area. A local policeman sends out a radio message to all the public safety workers warning of dangerous flooding from heavy rains in the area the child was last seen. A park ranger responds to the flood area and locates the little girl trapped on an embankment between two washed out ravines. The ranger immediately notifies the fire and rescue services, which respond in minutes. The child is returned home safely. The little girl was rescued because all relevant public safety officials were able to communicate over a common, secure, communications network.*

The September 1993 National Performance Review report recognized the need for improving public safety communications capabilities. The report highlighted the need to address key

challenges, such as competition for limited radio spectrum, limited public safety budgets, and keeping pace with advances in technology. The National Performance Review recognized that if public safety agencies coordinated their efforts in developing future systems, they could conquer those challenges, greatly enhance their abilities to fight the war on crime, and save money in the process.

The National Performance Review tasked the Federal Law Enforcement Wireless Users Group (FLEWUG) to develop a plan for a future, intergovernmental, shared use, public safety wireless communications network.

In September 1996, the joint Federal Communications Commission/ National Telecommunications and Information Administration (NTIA) Public Safety Wireless Advisory Committee validated the underlying need for establishing the intergovernmental public safety wireless network. The report concluded that "unless immediate measures are taken to alleviate spectrum shortfalls and promote interoperability,

public safety agencies will not be able to adequately discharge their obligations to protect life and property in a safe, efficient, and cost effective manner.”¹

The FLEWUG has taken positive steps to develop an intergovernmental public safety wireless network. It developed a management plan that defined the goals, objectives, and actions required to develop the network.²

The management plan was used to obtain Congressional support and funding for testing the concept in several locations across the country. For example, the Public Safety Wireless Network Program Management Office is working with Iowa to establish a public safety wireless communications test bed. The FLEWUG has also implemented several consolidation projects. For example, in Hawaii, all the federal, state, and local law enforcement networks throughout the islands have been consolidated into a single microwave system under Project Rainbow. The U.S. Customs Service is sharing infrastructure to improve frequency utilization and conserve resources. In New York and New Jersey, Customs is sharing the infrastructure with the Department of Housing and Urban Development; in Grand Forks, North Dakota, and New Orleans, Louisiana, with the Immigration and Naturalization Service; and nationally, with the U.S. Border Patrol. The Customs Service and the National Guard Bureau are sharing frequencies and Over-the-Air Rekeying systems to improve drug interdiction efforts. Other agencies are also finding that they can improve efficiency and save resources by sharing.

In Homestead, Florida, the Federal Bureau of Investigation (FBI) is sharing its antenna site and microwave relay with the U.S. Postal Service. These cooperative efforts have also included equipment sharing. In New York, the Drug Enforcement Agency provided the U.S. Secret Service with UHF radios to use during the United Nations 50th Anniversary celebration.

NEED FOR CHANGE

Every day, local news stations report missing children, gang activities, drug wars, natural disasters, and other tragic events. People in the United States are concerned about public safety. Law enforcement and public safety workers must be provided with the best tools technology has to offer to make citizens secure in their homes and safe on their streets.

Today, critical federal, state, and local public safety communications are transmitted over tactical land mobile radio systems. Communicating across different agencies is difficult because systems have been purchased that operate in different frequencies. Most systems lack security and are open to interception and monitoring. Amateur radio enthusiasts and criminals are able to purchase scanning devices to monitor law enforcement and public safety frequencies.

In every metropolitan area of the country, federal, state, and local public safety officials operate separate tactical communications networks. In larger cities, dozens of radio antennas and

ESTABLISH THE INTERGOVERNMENTAL WIRELESS PUBLIC SAFETY NETWORK

network control centers located in the same building are unable to "talk" to one another. This inefficient and expensive use of resources demands both technical and policy solutions. The FLEWUG will demonstrate a prototype narrow band (12.5 kHz channel bandwidth) conventional, digital radio system in early 1997 with many law enforcement activities in the metropolitan Washington, DC, area. The prototype equipment was developed by several vendors, with federal agencies and the State of Virginia funding the demonstration.

ACTIONS

1. *Improve the coordination of public safety wireless communications.*

By July 1997, the President should issue an Executive Order which directs all federal agencies with a public safety mandate and federal activities supporting the public safety community to participate in the activities of the FLEWUG in developing the future Public Safety Wireless Network.

2. *Provide adequate radio frequency spectrum for public safety agencies.*

The Government Information Technology Services (GITS) Board and the National Telecommunications and Information Administration should work with the Federal Communications Commission to outline options to balance the spectrum needs of public safety agencies with the other spectrum users. A filing should be developed and submitted to the Commission by September 1997.

By December 1997, the FLEWUG, through the GITS Board, should submit a plan to implement the recommendations in the Public Safety Wireless Advisory Committee report.

3. *Support the development of technical standards for public safety wireless communications systems.*

Properly defined, technical standards can provide a migration path as new technology comes to the market. The government should coordinate with industry to define and develop these standards. By June 1997, the Public Safety Wireless Network Program Management Office should provide a report which defines a consolidated federal position on standards for public safety radio systems. The report should include a Common Operating Environment for current and emerging public safety land mobile radio equipment.

4. *Include security in all public safety land mobile radio systems.*

Future public safety land mobile radio systems must be secure. Lack of appropriate security controls creates the potential for overt or inadvertent damage, manipulation, exploitation, or denial of service. By April 1997, the GITS Board should assure that government systems security experts work with the public safety community and industry to define security guidelines, standards, and conformance test procedures for public safety land mobile radio systems and equipment.

- 5. *Establish an alternative funding mechanism for federal, state, and local public safety officials to improve their wireless communications systems.***

Congress has approved the use of "asset forfeiture funds" for test systems in fiscal year 1997. Asset forfeiture funds are sums of money generated by the auction of property seized by law enforcement as a result of a criminal conviction. This funding mechanism is but one innovative way to finance equipment purchases without increasing budgets.

By May 1997, the FLEWUG, the Department of the Treasury, the

Department of Justice, and the Department of Commerce should establish an interagency working group to develop recommendations for other innovative ways to fund wireless public safety systems. These recommendations should be presented to the Office of Management and Budget by September 1997.

ENDNOTES

1. Final Report of the Public Safety Wireless Advisory Committee (PSWAC), September 11, 1996, page 2.
2. The Public Safety Wireless Network of the Future, Management Plan, Working Draft, 2nd Edition, October 1995.

A07:

ADDRESS THE INFORMATION TECHNOLOGY NEEDS OF OUR NATION'S CRIMINAL JUSTICE COMMUNITY

Imagine this: At the scene of an accident, a police officer arrests a driver of a van for operating a vehicle while under the influence of alcohol. As a result of the accident, it can be seen that the van is filled with new computer equipment. The officer accesses the Global Criminal Justice Information Network at the scene. The local police unit swiftly scans in the driver's fingerprints and immediately transmits them as digital images to the police crime lab via a secure wireless link.

A match of the prints quickly establishes the offender's positive identity. His multimedia criminal record, complete with color photograph, fingerprints, and other data, appears on the screen. Noting that the record indicates the suspect was recently arrested in another jurisdiction for possessing stolen property, the officers check the serial numbers of the computer equipment. Through the information network, the officers learn that the computers were stolen from a New York City harbor freight terminal.

The arresting officers post an up-to-date digital photo identification of the van driver on the network. The driver is identified as a member of an international cartel and wanted by the U.S. and several other nations. The U.S. Customs Service and the United Kingdom Customs Service claim the computer property, which belongs to a London wholesaler.

The information network automatically notifies local booking record systems and other jurisdictions that the driver has been arrested and is in custody. The information is also automatically forwarded to the local prosecutor's office to initiate the filing of criminal charges against the suspect.

The war on crime is a global issue. A Global Criminal Justice Information Network, with proper security and privacy controls, would allow the criminal justice community to immediately share comprehensive case management, incident, and investigative data across local, regional, state,

national, and international boundaries. Quick and easy access to law enforcement incident and arrest records would assist all components of the criminal justice community in apprehending, charging, prosecuting, and convicting criminals.

In many cases, criminal records, arrest warrants, mug shots, fingerprints, and other relevant information are located in separate information systems that do not connect to one another. In other instances, much of the information can be found only in paper-based filing systems. Where automated record systems have been established, the information is primarily text-based. There has been little progress integrating graphical information such as prisoner mug shots and fingerprint records.

Complete and timely criminal justice information on-line would serve the courts and prosecution, providing criminal history record information for pretrial release and sentencing decisions. Corrections officials also need complete criminal history record information for housing, vocational, and programmatic decisions. Indeed, the entire criminal justice system needs immediate access to comprehensive, reliable, and timely data on individuals, incidents, and cases.

Recently, many federal, state, and local law enforcement agencies have purchased high-tech software applications, appliances, and hardware in an effort to modernize their organizations. Separate initiatives are underway to enable these organizations to improve information sharing.

For example, the Justice Department financed the development of six Regional Information Sharing Systems designed to support federal, state, and local law enforcement efforts to combat criminal activity across jurisdictional boundaries. The regional sharing centers focus on narcotics trafficking, violent crime, criminal gang activity, and organized crime. Because of its charge to investigate complex criminal organizations, the Federal Bureau of Investigation (FBI) has formed Criminal Intelligence Squads across federal, state, and local agencies. The ability to transmit color photographs and full text using off-the-shelf hardware and software is inherent in this important intelligence sharing system. The Financial Crimes Enforcement Network (FinCEN) is a network that links the law enforcement, financial, and regulatory communities. Three FinCEN programs, the Suspicious Activity Reporting System (SARS), Gateway, and the FinCEN Artificial Intelligence (AI) System are examples of integrated criminal justice information technology systems. SARS is a system for reporting and sharing suspicious financial activity among regulatory, law enforcement, and criminal justice organizations, such as the Federal Deposit Insurance Corporation, the U.S. Secret Service, and 93 U.S. Attorney Offices. Gateway provides law enforcement agencies in the 50 states and the District of Columbia the means to identify and stop money laundering activities. The AI system provides a means to evaluate widely disparate elements of information and develop leads for new investigations without the need for hiring additional analysts.

NEEDS OF OUR NATION'S CRIMINAL JUSTICE COMMUNITY

Unfortunately a significant part of this modernization is occurring without the aid of an overall plan for interconnecting these systems to create a Global Criminal Justice Information Network. As federal, state, and local agencies move forward to deploy the latest technologies and integrate them into their existing infrastructures, there should be a plan to ensure that systems are able to communicate with one another.

NEED FOR CHANGE

As the country continues to benefit from the information era, increased pressure will be placed on law enforcement and criminal justice organizations to modernize their records systems. As an example, the capture and booking of suspects is moving toward the use of digital fingerprint technology. Only a few law enforcement agencies at the federal and state levels have begun to explore the concept of an interconnected multimedia criminal record network that integrates information such as photograph identification, fingerprints, and arrest records. The foremost example is the Joint Automated Booking Station, which involves the electronic collection, storage, and transmittal of photographs, fingerprints, and biographical information about arrestees. However, concentration so far has been in the area of intra-state or intra-city information exchange.

Systems that are being produced are in different stages of development and implementation. They receive funding from various federal, state, and local sources and operate with widely varying degrees of coordination, effectiveness,

and integration with other law enforcement and criminal justice record systems. This diverse criminal justice information landscape includes sectors such as juvenile justice and, to a lesser extent, the courts and correction, which generally lag behind others in developing and using on-line and other automated information resources. To improve these conditions, the Clinton Administration should commit itself to a priority program to develop and coordinate criminal justice information resources.

Another challenge to realizing the implementation of a Global Criminal Justice Information Network is the disparate federal, state, and local software applications that run on independent platforms. These platforms can range from mainframe systems that were put in service in the 1970s, to PC-based applications that are locally customized, or to more sophisticated database designs used by state identification bureaus. A cost-effective global criminal justice network, using common interface standards, can be designed to facilitate information sharing across any agency or platform. For instance, a concept such as "data warehousing" is an ideal information sharing idea that is under development in Iowa. Federal access will be included in the warehouse concept. Other states have similar ideas.

To conserve resources, the current efforts to develop the National Information Infrastructure could be used to leverage investments in information technology and help the criminal justice community realize a greater return on investment dollars.

A Global Criminal Justice Information Network must also provide the necessary protection to maintain the privacy of records. Safeguards must be developed that would ensure that records are only used by law enforcement officers or others who have the authority and need to access the information. The records must be secure to protect personal privacy. People should be able to review information about themselves for accuracy and request changes. The corrections should be applied wherever the record appears. Procedures, such as case disposition information from the courts, must be in place that will assure the degree of accuracy needed to prevent false accusations. New record formats should be designed to ensure that all the necessary information is provided in the criminal record to eliminate error and confusion.

The challenges to implementing a Global Criminal Justice Information Network are not insurmountable. The Internet provides information about many products and applications being tested for use in law enforcement communications. Additionally, under the National Performance Review, actual laboratories are in place to test the application of information technology to specific network communications problems. Within the criminal justice community, there are numerous criminal justice Web sites that foster information sharing, to include federal and state criminal justice reference repositories containing statistics and other useful information. For instance, the National Center for Missing and Exploited Children has a directory of missing persons available on the Internet. Maps

and other open source information are available for law enforcement personnel through the Internet.

Telecommunications systems such as Justice Department networks, the Treasury Communications Systems, the National Crime Information Center (NCIC), and the National Law Enforcement Telecommunications Systems (NLETS) currently provide a secure and reliable infrastructure that must be included in plans for a Global Criminal Justice Information Network.

ACTIONS

The Attorney General, as the leader of a national initiative to coordinate the realization of a Global Criminal Justice Information Network, in cooperation with other federal, state, and local law enforcement entities, should undertake the following actions:

1. *Define the criminal justice community's information requirements.*

By May 1997, a joint federal, state, and local government advisory group should be formed to define the core requirements of a Global Criminal Justice Information Network. Core requirements should include security and privacy protections. By September 1997, this group should also identify the challenges, such as funding, standards, and leadership, that might delay the network's implementation.

2. *Test core requirements.*

By December 1997, conduct field tests that show how selected core

NEEDS OF OUR NATION'S CRIMINAL JUSTICE COMMUNITY

requirements can be implemented utilizing commercial-off-the-shelf (COTS) products.

3. *Establish a joint government-private sector Criminal Justice Information Advisory Group.*

By June 1997, a joint government and private sector advisory group of the federal, state, and local criminal justice agencies and the law enforcement information industry should be formed to promote market-based solutions.

4. *Prepare Global Criminal Justice Information Network plans.*

By June 1998, review the test results and prepare an implementation plan for the Global Criminal Justice Information Network. These system development and implementation plans should be used by criminal justice agencies at all levels of government to prepare the Fiscal Year 2000 budget requests.



A08:

PROVIDE SIMPLIFIED EMPLOYER TAX FILING AND REPORTING

***Imagine this:** The year 2000 — It's payday today, so as the payroll department manager, I pull up the employee payroll records on my computer. The employee wages and exemptions are the same for federal and state reports — it doesn't matter what state. All the taxes and deductions are also displayed. Now the part that makes me feel powerful. I hit "enter" and the employee paychecks and deposits are generated, along with one combined report that satisfies both the federal and state quarterly reporting requirements. This report is sent electronically to the agencies along with my payments. It's easy!*

On June 9, 1995, President Clinton endorsed the Simplified Tax and Wage Reporting System (STAWRS).¹ The STAWRS mission is to reduce the huge reporting burden on employers, while improving the efficiency and effectiveness of federal and state government revenue operations. The STAWRS program covers federal and state withholding taxes, employment tax, federal and state unemployment insurance, and wage information.

The Department of the Treasury, Internal Revenue Service (IRS), Department of Labor, and the Social Security Administration are partners in STAWRS. Treasury's Assistant Secretary for Management chairs its Executive Steering Committee. The program has three aims: Single Point Filing, Streamlined Customer Service, and Simplified Requirements. STAWRS is attacking core problems in the current system, but much remains to be done.

The federal tax, state tax, and unemployment insurance systems depend on accurate reporting by employers. All employers must withhold taxes from their employees' paychecks, keep specific wage-related records, report payroll information, and make periodic deposits of withheld money to a variety of federal and state agencies.

To do the job right, employers are required to understand and keep abreast of a bewildering array of wage and unemployment insurance rules, regulations, tax forms, filing procedures, and payment requirements. Complex in a single state because federal and state

requirements differ, the task is really daunting for multi-state employers who must keep current with federal rules and with perhaps as many as 50 different state wage and unemployment insurance requirements. Every employer also needs to know local, municipal, and territorial requirements. Small and start-up companies often go to outside payroll services because they cannot handle the task internally.

Government revenue agencies also struggle with the current system. Federal, state, and local governments often lack adequate resources to process the mountains of paper the system generates, issue timely regulations implementing legislative changes, provide customer assistance, and effectively manage compliance programs. Although many federal and state agencies require almost the same information, little has been done to share data. There have been both technical and legal barriers. State and federal governments store and process data differently. Legal issues involve disclosure practices having states act as agents for the federal government, and differing definitions of "wages." The STAWRS Program Office has formed partnerships with federal, state, and local revenue offices to improve tax operations in the three STAWRS focus areas.

Simplified Filing

The Oregon/STAWRS partnership was formed in May 1996, to reduce employers' quarterly tax filing burden. Oregon had already combined five wage reporting forms. Employers file one form, with the employment department, covering state income tax withholding,

state unemployment tax, workers' compensation assessment, and two local transit taxes. Through that single form, called OQ, all the state agencies' requirements are met.

The Oregon/STAWRS partnership, with help from an employers advisory group, created a new form that combines the Oregon OQ with the federal Form 941, the quarterly federal tax return for employers. The new Form OQ/941 will be filed by employers with Oregon, and Oregon will send the IRS the data it needs. The new form will be evaluated in a larger survey of businesses in 1997. Remaining legal and procedural issues will be wrapped up in 1997 as well.

A Montana/STAWRS partnership also started work in 1996 on joint filing and is addressing the issue of differences in definitions among federal and state tax statutes and regulations.

Simplified Requirements

Employers usually need separate records for federal income tax withholding, state income tax withholding, federal unemployment taxes, state unemployment insurance contributions, and deductions for Social Security/Medicare taxes. Reports must be filed with government agencies at different times, in different formats, and on different forms. Among those forms there are subtle differences in definitions, so record keeping is confounded. And, of course, definitions differ from state to state.

STAWRS's goal is to develop a national, "harmonized" wage code that greatly reduces or eliminates the employer's

PROVIDE SIMPLIFIED EMPLOYER TAX FILING AND REPORTING

burden of maintaining multiple wage and employment files. To reach that goal, legislators will need to change statutes, but a great deal can also be done by making changes to administrative procedures and regulations.

The first task is done. Approximately 25,000 federal and state elements of information were assessed to determine where harmonization would be possible. Based on that assessment, a draft Blueprint for a Harmonized Wage Code was written and presented at a September 1996, STAWRS Stakeholder Conference.² Feedback from conference attendees is being used to shape an action plan.

Simplified Form W-2 Reporting

Annually, employers are required to report individual employee wages, taxes withheld, and other information to both the Social Security Administration (SSA) and state tax agencies.

STAWRS partners, the IRS and the SSA, conducted a Single Point Filing initiative in which employers filed both federal and state wage and tax information – Form W-2 and Form W-3 – to one organization. In 1996, approximately 49 million records were filed with SSA for processing. SSA forwarded the data to the IRS for appending of additional data, sorting, and distribution to the 36 participating states.³

Electronic Data Interchange Pilot Project

The STAWRS Electronic Data Interchange (EDI) Pilot Project for Form W-2 is evaluating the technical feasibility

and economic benefits of electronically transmitting Form W-2 Wage and Tax Statements to the SSA. There is no current process that uses EDI for W-2s. This STAWRS project has several phases.

Phase I was conducted with South Carolina and two private sector employers trading data in 1995. The test showed the technical feasibility of sending and receiving the data in proper formats.

Phase II of the pilot project, using tax year 1996 data, will estimate the market for various W-2 filing options, address open technical issues, run more tests, and include additional employers. Next year, Phase III will expand the test to include the Internet and more employers.

Single Point Electronic Filing of Forms

In July 1996, STAWRS conducted its first operational field test for single point electronic filing of Employer's Quarterly Federal Tax Return (Form 941) in an EDI format. The test covered single point electronic filing of Forms 941, state revenue returns for Minnesota, and state unemployment insurance returns for California and Texas. Four companies participated in the test. The July test identified some problems that were then solved and a successful filing was carried out in October 1996. More partners will be added this year.

NEED FOR CHANGE

Collectively, the STAWRS projects have made a significant start toward establishing a simplified reporting system. However, building on these accomplishments, more remains to be done.

The Oregon and Montana/STAWRS partnerships have shown that the potential exists to provide employers simplified filing of quarterly paper returns. However, this limited test needs to be expanded by the participation of more states with different legal requirements. This increased participation will help the states and STAWRS to refine the concepts and improve the processes.

Existing regulations and policies still require employers to maintain multiple data sets for federal and state tax withholding information. The initial work to develop the Harmonized Wage Code Blueprint showed where the different codes could be harmonized to reduce the employers' burden, but this work needs to be completed and tested.

Employers now submit paper reports of employee withholding separately to federal and state revenue officials. This double burden can be eliminated through the use of information technology, such as the Simplified Form W-2 Demonstration Projects initiated by STAWRS. Use of this concept, in which information is reported once and shared among tax offices, needs to be expanded on a wide basis by improving the combined processes and forming more partnerships with states and employers.

Even if reporting of withholding information once is expanded, employers are still required to submit paper reports. This manual process is inefficient and prone to providing inaccurate information, despite the best efforts of employers and revenue offices. Electronic data interchange offers the capability to submit electronic reports, and many businesses currently have active EDI programs, which can serve as the basis for automating this process.

Employers still need a single point where they can file their tax forms electronically. Even automating the processes will not relieve the burden of maintaining different data sets and submitting multiple reports. A system that lets employers electronically file one report, which is then shared among revenue agencies, needs to be developed, tested, and used. The different STAWRS components, when they are fully operational, will provide this system.

ACTIONS

The STAWRS Executive Steering Committee, with the support of the Government Information Technology Services (GITS) Board, should:

1. ***Simplify filing of employers' quarterly paper returns.***

The STAWRS Executive Steering Committee should continue to work within the frameworks of the Oregon and Montana/STAWRS partnerships to simplify the filing of tax and wage reporting forms and should expand the STAWRS partnerships to five additional states by October 1998.

PROVIDE SIMPLIFIED EMPLOYER TAX FILING AND REPORTING

2. *Simplify the requirements.*

Using the Harmonized Wage Code Blueprint as a foundation, the STAWRS Executive Steering Committee should establish agreements with five state partners. These agreements should define the necessary regulatory and statutory changes needed to greatly reduce the multiple wage and employment data sets. Recommended changes should be reported by October 1998.

3. *Simplify Form W-2 reporting.*

In cooperation with the SSA, IRS should complete the evaluation of the Simplified Form W-2 Demonstration Projects by preparing and documenting recommendations on the feasibility and merits of this single wage reporting concept. Recommendations should be forwarded to agency heads by August 1997.

4. *Increase cost effective electronic transmission of Forms W-2.*

The STAWRS Executive Steering Committee and the Electronic Data Interchange Pilot Project participants should continue to conduct phases II and III of the project. By February 1998, ten additional employers should be recruited to take part in the project to further the goal of providing cost-effective electronic transmission of Form W-2 Wage and Tax Statements.

5. *Provide for single point electronic filing of forms.*

The STAWRS Executive Steering Committee should continue to expand the single point electronic filing tests and seek to institutionalize the concept of federal and state tax returns. The GITS Board should provide coordination and support as needed. Single Point Filing options should be made available to employers by Tax Year 2000.

ENDNOTES

1. White House press release: "President Clinton Reduces Burden on Small Business," announced the creation of STAWRS, June 9, 1995.
2. Technical Review Session, Harmonized Wage Code, *Receive/Evaluate/ Summarize Responses from Stakeholders*, September 9, 1996.
3. State participants are currently providing benefits received from this initiative. Assessment of the economic justification for full implementation is being conducted.

CROSS REFERENCES TO OTHER NPR

ACCOMPANYING REPORTS

Department of the Treasury, TRE05: Simplify Employer Wage Reporting.

A09:

SUPPORT INTERNATIONAL TRADE WITH BETTER DATA, AVAILABLE FASTER

***Imagine this:** Twenty loaded semis roll south toward the U.S. border at Buffalo, New York, carrying diverse cargo – electronics, fish, lumber, auto parts – destined for U.S. consumers. Hours earlier, information about the drivers, trucks, and shipments was sent by each shipper to the border station via the Internet. Satellite-based tracking devices relay the trucks' positions as they approach the U.S. One by one, nineteen trucks are waved through Customs without stopping, their cargo recorded and automatically available for the day's tally of U.S.-Canada trade statistics. One of the twenty trucks – identified in advance as a shipper of concrete posts coming across the border for the first time – is stopped for inspection. A close inspection reveals that the concrete posts contain the largest shipment of cocaine ever intercepted.*

Already under development, the International Trade Data System will provide user-friendly electronic access to basic export and import information, market research reports, overseas contacts, duty rates, and information on international trade financial assistance. It

will integrate information from 100 different government agencies (operational, statistical, trade promotion, licensing and permitting, and trade policy). The International Trade Data System will also standardize the trade and transportation data that is collected by operational agencies (Customs Service, Immigration and Naturalization Service, Department of Transportation, Food and Drug Administration, Environmental Protection Agency, and the Department of Agriculture) for both imports and exports. The standardized data will be the same information importers and exporters use in their normal conduct of business. The development program is being led by the International Trade Data System Board of Directors, which represents the participating agencies.

NEED FOR CHANGE

Technology has made the world a much smaller place. Voice and data communications link large countries and major cities with the most remote outpost.

Flourishing global commerce builds a strong economy, increases demand for goods and services, and promotes stability. Conditions have never been better for strengthening the economic ties among governments. Today, however, such commerce is often hampered by antiquated paper processes that slow or even choke the flow of goods and services. Truck drivers who carry international shipments routinely plan on waiting several days at many border crossing points. Some make hotel reservations well in advance of their arrival dates. Others sleep on cots beside the road and try to avoid the hot sun.

Meanwhile, enforcement agencies drown in duplicative data, spending too much time checking the good guys and not enough on catching the bad. And our ability to establish and negotiate policy is weakened by unreliable information in such areas as currency conversion, the safety of vehicles entering the country, and the volume of truck traffic for highway infrastructure.

ACTIONS

1. *Use the North American Trade Automation Prototype to validate the International Trade Data System concept.*

The North American Trade Automation Prototype should be used to provide the proof of concept for the International Trade Data System. The Prototype, a system being implemented as part of the North American Free Trade Agreement, is jointly operated by Canada, Mexico, and the United States under the auspices of the Heads of Customs Conference. The Prototype will test many key

features of the International Trade Data System. These include using commercial transaction level information for all shipments, standard data elements and definitions, pre-arrival processing, and Radio Frequency Identification Devices mounted on conveyances to provide notice of arrival and paperless transactions. The Internet is used for the transmission of electronic data interchange messages.

During the test, information will be available to participating trade agencies to analyze prior to the arrival of the conveyance or other cargo at the international border. The Prototype will interface with other commercial and government systems, including the Customs Service Automated Commercial System, Dunn and Bradstreet World Base, and the Department of Transportation Commercial Vehicle Information Systems and Networks. Currently being field tested in Otay Mesa, CA, the Prototype is scheduled for implementation in April 1997 at Nogales, AZ; Buffalo, NY; Detroit, MI; El Paso, TX; and Laredo, TX.

Testing should be completed by September 1997.

2. *Eliminate unnecessary reporting.*

A major benefit of this initiative will be the elimination of duplicative government reporting requirements on shippers and the standardization of the remaining data using commercial business information. The first step is to identify the minimum information federal agencies actually need. The International Trade Data System Board of Directors should complete its analysis

SUPPORT INTERNATIONAL TRADE WITH BETTER DATA, AVAILABLE FASTER

of the data requirements of the various federal international trade agencies by June 1997.

3. *Develop and execute an implementation plan.*

Exporters, international transportation companies, importers, customhouse brokers, and their respective business partners will benefit from the International Trade Data System. Those international traders will expect the new system to provide less costly data filing, more efficient and less cumbersome regulatory interventions in trade flow, and better information regarding the processing status of their shipments.

Numerous federal agencies will experience an improvement in licensing, border clearance, statistical, policy, and trade promotion activities because of the

more accurate and timely international trade information available through International Trade Data System.

Finally, business analysts, economic forecasters, and educational institutions will have access to information that will allow them to more intelligently plan U.S. international trade strategies.

By June 1998, the International Trade Data System Board of Directors, using the results of the North American Trade Automation Prototype, and in consultation with private sector stakeholders, should develop a plan to implement the International Trade Data System and present it to the Government Information Technology Services (GITS) Board for concurrence. The plan should identify and assess barriers to implementation and make recommendations for their removal.

A10:

CREATE ELECTRONIC EXPORT ASSISTANCE CENTERS

Imagine this: A small business owner wants to expand her conveying equipment business by selling to the mining industry in Chile. Living far from the nearest U.S. Export Assistance Center (USEAC), she turns to the International Trade Toolkit on the Internet to assess the feasibility of her plans. With the click of the mouse, she learns about Chile's import practices and discovers important unique features of her target market. Next, she moves on to the tutorials that help her evaluate the quality of her business plan and, ultimately, her trade readiness. After receiving satisfactory results, she's ready to tackle a major international trade issue — financing. She uses the International Trade Toolkit to research trade financing options and to locate specific lenders that meet her needs. She completes the appropriate forms and sends them directly to the lender. The lenders receive her request and use the International Trade Toolkit to establish a credit rating and perform risk analysis to determine if the proposed transactions should be funded. The small business owner has accessed the full range of information and services offered by a

U.S. Export Assistance Center — without leaving her office and without costing the Center an additional dime!

Since 1993, almost one-third of our economic growth is attributable to exports, supporting 1.5 million jobs.¹ Today, one in five manufacturing jobs is linked to exports and studies have shown that workers in export markets earn 13-18 percent more than the average wage paid in non-export markets.² In addition, the U.S. Department of Agriculture reports that agricultural exports support nearly one million additional jobs. The Trade Promotion Coordinating Committee's *National Export Strategy* annual report makes it clear that the American economy and standard of living have never been more dependent on trade.³

To help achieve national export objectives, U.S. Export Assistance Centers (USEACs) were established jointly by the Small Business Administration (SBA), the Department of Commerce, the Export-Import Bank, and the U.S. Agency for International Development (USAID) to promote the

entry of American businesses into exporting. The 1992 Export Enhancement Act, the enabling legislation for the USEACs, created a network of centers to “integrate and make more accessible a range of export services aimed at small to medium-sized export-ready firms.” Those firms are the fastest growing part of our economy and are the engine of our future job growth, employing 54 percent of the private workforce and accounting for half of our gross domestic product.⁴ The 17 USEACs provide exporters with information on all U.S. government export promotion and export finance services; assist exporters in identifying which federal programs may be of greatest assistance; and help exporters make contact with those federal programs.

But first-time exporters as well as seasoned international traders need more from their government. They need greater access to trade finance; more functionally driven and less organizationally focused information from federal agencies; tutorials and interactive guidance tools; and user-friendly interfaces to forms and forums.

Frequently, citizens must interact with several government agencies in order to complete a single task. The interaction is often uncoordinated and cumbersome, resulting in several rounds of inquiries and frequent routings from one government employee to another. The USEACs were created as one-stop shops for export assistance to address this problem. However, everyone who needs export assistance can't get to a USEAC and the government can't afford to build and operate additional centers to bring

services closer to the exporters. Therefore, the development of a “virtual” USEAC, which would deliver information and services to the business community electronically, provides a convenient and cost-effective solution.

The International Trade Toolkit — the “virtual” USEAC — will benefit prospective international trade businesses, customers, lenders, and the government agencies created to serve business in this area. It will help lenders make export loans and supplement the normal credit decisions a lender has to make. Once completed, this tool would help close the export gap by making comprehensive trade finance information available electronically to thousands of SBA lenders across the country and by helping lenders who have neither experience nor international trade departments structure trade deals. Such a tool would also simplify forms for exporting lending — reducing the time and cost for processing loans.

To develop this concept, the federal government should form partnerships with the private sector and the numerous agencies involved in international trade to design the “virtual” USEAC, a capability that uses information technology and telecommunications tools to provide new and better services for the export customer. Both government and specific industry resources would be more accessible through this electronic model. The Toolkit would significantly expand outreach and improve service delivery, increasing the number of American export firms. It also offers a model of working “smarter” in an era of scarcity and shows the power of effective teamwork.

The business community asked that the government stop drowning them in information. "Make it easy to find what we need and then let us do business," they said. The government's response to this request was the U.S. Business Advisor — the one-stop electronic link to government for business (<http://www.business.gov>). The U.S. Business Advisor takes the first step in offering government information and services targeted for the business community via the Internet. The Toolkit would enhance the U.S. Business Advisor and move it another step closer to its vision — "helping businesses to succeed on their terms."

NEED FOR CHANGE

Today the world is witnessing a true business revolution. Globalization of markets, collapse of traditional organizational structures, and the explosive growth of information technology has changed the way business is conducted. The speed of change is phenomenal. In the seventies, business owners went to the post office to pick up orders. In the eighties, they installed 800 numbers and fax machines. And in the nineties, they added electronic data interchange. The Administration recognizes that "computers and telecommunications are reshaping the basic structure of American enterprise."⁵ Consequently, government must use new technologies to improve its existing products and services and to deliver new ones. Interacting with citizens through electronic commerce, desktop video teleconferencing, and powerful Internet access gives the customer "anytime-anyplace" access to the federal government.

The International Trade Toolkit will help business development professionals and trade specialists around the country (in 17 USEACs, 950 Small Business Development Centers, 37 Business Information Centers, and 52 District Export Councils) be more effective and productive in advising businesses on trade matters. Upon completion, the Toolkit will be able to provide both a first time exporter/importer, as well as a seasoned international trade company, with a variety of information, ranging from banking and finance, export and import regulations, marketing, government affairs, research, and contacts, to logistics/freight forwarding. The international trader, unknowingly perhaps, will be served by the Departments of Commerce, State, Treasury, and Agriculture; the SBA; the Export-Import Bank; USAID; the Trade Information Center; and the Bureau of Export Administration, all without making a phone call or walking through a single door.

ACTIONS

1. *Build a Virtual Export Assistance Center.*

The Government Information Technology Services (GITS) Board should charter an interagency, intergovernmental team by March 1997 to construct the logical design and implement the technical architecture for an interactive international trade assistance site on the Internet. The team should include members from the four agencies managing the USEAC (SBA, Department of Commerce, USAID, and the Export-Import Bank), as well as from the Departments of Agriculture,

Treasury, and State, and state governments. Private sector partnerships will be instrumental in designing the appropriate categories for the Center and developing the technical architecture. Thus, the Small Business Development Center network should serve as a laboratory for business input and focus group sessions.

The International Trade Toolkit's design logic will help business in three major areas: trade readiness, trade promotion, and trade financing. Through a series of query- and form-driven screens, the potential international trader will be able to examine requirements to enter the international trade market, evaluate potential for success, investigate the risks inherent in a particular venture, perform appropriate market research, and develop international business and marketing plans. The Toolkit will also help businesses set pricing strategies, find trade leads and respond to potential deals, and prepare proforma documentation. Once completed, the Toolkit will contain a comprehensive trade finance module that will assist business owners in finding the proper financing, and assist lenders, who might not otherwise venture into trade financing, to structure deals. Ultimately, the business owner will be able to apply on-line for financial arrangements and ensure the successful completion of the transaction.

2. Develop a tool to increase access to trade finance information and services, as part of the International Trade Toolkit.

Over the past two years, SBA and the Export-Import Bank have worked with

about 200 lenders to guarantee loans to about 500 small and medium-sized businesses on a yearly basis.⁶ In 1996, the Foreign Agricultural Service guaranteed \$3.2 billion worth of agricultural exports. Although this represents a dramatic increase over previous years, there still remains an export gap. Many potential exporters remain without access to export financing and many lenders are not knowledgeable of trade financing processes.

This export gap exists primarily because of the structure, culture, and history of the United States' banking system. Banks engaged in export finance tend to be the large "money-center" institutions, foreign banks, and "super-regional" banks. Most trade finance leaders finance transactions that are larger than those of the typical small business. Export deals for small businesses usually range from \$30,000 to \$300,000 and have very high processing costs.⁷ Many small lenders do not have the capacity to handle international deals and large banks do not have the capacity to handle small transactions. The result: only 200 banks, of an approximate 9,000, handle export transactions for small businesses.

A major obstacle to providing trade finance for many banks is the lack of knowledge and expertise in evaluating foreign risk elements in an overseas transaction. The International Trade Toolkit team should work with SBA to develop a tool that performs international risk analysis of the foreign companies, foreign lenders, and the foreign countries as applicable to the transaction. The SBA is conducting a pilot project with its largest lenders to develop an electronic

lending system, which will allow the SBA to increase the number of annual loans above the current figure of 60,000, using fewer employees. This system has many capabilities that can be used in the toolkit.

If feasible, the tool should provide a "yes or no" determination of whether the international risk of an exporter's transaction is eligible for a guarantee. Information about the transaction should be entered on-line. A "yes or no" response would be given back to the lender derived from an analysis of the appropriate ratings provided by the rating service and the lender would be advised of the acceptability of the transaction risk to SBA. A "no" answer can be used by the USEAC, the lender, and the exporter to restructure the transaction to reach a favorable outcome. Such a tool would provide an incentive and means for lenders, especially those without in-house trade finance expertise, to loan export working capital. Furthermore, it would increase the communications capability between the USEAC and the lenders.

3. *Establish a test plan and a nationwide rollout schedule for the International Trade Toolkit.*

By April 1997, the team should establish a test plan and rollout schedule. A prototype system that can be shown to the business community for further development and refinement should be developed by July 1997. User and focus groups should be convened to bring the customer into the core development effort.

ENDNOTES

1. Department of Commerce, National Export Strategy, "Letters for President Clinton," October 1996.
2. Department of Commerce, National Export Strategy, "Letters for President Clinton," October 1996, page 8.
3. Department of Commerce, "Implementation of the National Export Strategy," III. Executive Summary (Internet site @ TA.doc.gov), October 1995.
4. Department of Commerce, *National Export Study*, October 1996, page 17.
5. Vice President Albert Gore, Jr., *Reengineering Through Information Technology* (Washington, DC; U.S. Government Printing Office, 1993), page 1.
6. Internal SBA working paper on Export Working Capital Program and Export Express, December 1996, page 2.
7. *Ibid.*, Program description for Export Express, December 1996.

A11: USE ELECTRONIC COMMERCE TO STREAMLINE GOVERNMENT BUSINESS PROCESSES

Imagine this: Jane Sawyer, a Forest Ranger in Oregon, needs 75 shovels delivered before fire season. Through the Internet, she accesses a central electronic catalog system available on the Acquisition Reform Network (ARNet). After filling in ARNet's electronic form, she clicks her mouse on the "Start Search" icon to check multiple federal agency catalogs. Because several agency and vendor catalogs carry shovels, Jane uses ARNet's sorting capability to find the least expensive ones, including freight costs.

Jane electronically places her order. After her computer's card reader scans her smart card, her identification information is forwarded to verify that she is an authorized buyer. The purchase card and transaction information are also sent. The system then electronically transfers the purchase order to the vendor, and the shovels arrive within a week.

Today, it is possible to perform some of these transactions on the Internet. Over the next several years, the government should be able to purchase and pay for

most of its goods and services electronically. The September 1993 National Performance Review report specifically identified achievable savings from the systematic reform of the federal government's business processes. Electronic commerce facilitates that reform, generating benefits to business, government, and taxpayers. Electronic commerce allows the government to make more informed procurement decisions quicker and cheaper.

Business benefits through better information about government requirements, more opportunities to sell to the government, and a more accurate and efficient electronic payment process. Taxpayers benefit from lower government operating costs. The federal government's implementation of electronic commerce has these key objectives:

- Use commercial products and practices as much as possible; and

- Use electronic commerce to eliminate unnecessary business processes and to reengineer and automate remaining business processes.

The last four years have produced numerous actions:

- In 1993, the President issued milestones for federal agencies to establish electronic commerce capabilities.
- In 1993, the Office of Management and Budget created the federal Electronic Benefits Transfer Task Force to transform the paper-based benefit delivery system to an electronic benefit delivery system. In 1994, the task force began a federal-state partnership to create a smart card that would deliver a wide range of benefits.
- In 1993, the General Services Administration (GSA) and the Department of Defense jointly established the Electronic Commerce Acquisition Program Management Office to implement a governmentwide electronic commerce implementation plan.
- In 1994, Congress passed the Federal Acquisition Streamlining Act. In 1995, Congress passed the Federal Acquisition Reform Act. Those Acts established the Federal Acquisition Computer Network (FACNet) and made it easier to use purchase cards and to purchase commercial products.
- In 1996, Congress passed the Debt Collection Improvement Act, which requires the delivery of all federal payments and benefits using electronic funds transfer by January 1, 1999.

As a result of those actions, the introduction and use of new technology, and major reductions in agency acquisition and finance personnel, federal agencies are starting to buy and pay for goods and services in new ways:

- **Automate purchasing and finance functions through electronic data interchange (EDI).**

EDI is used to send out public requests for quotation, purchase orders, invoices, and payment order/remittance advice. The major supply agencies – Defense Logistics Agency, GSA, and the Department of Veterans Affairs – have begun using EDI to create a full electronic procurement cycle. A governmentwide committee is helping to coordinate federal adoption of national and international EDI standards.

- **Advertise government procurement opportunities on the Internet.**

Today, many agencies post solicitations on their Web sites. In 1997, the Department of Commerce posted the *Commerce Business Daily* on the Internet (<http://cbd.savvy.com>). Increasingly, vendors have real-time access to helpful information for doing business with the government.

- **Post electronic catalogs.**

During the past few years, several federal agencies have posted their electronic catalogs on the Internet, allowing agency buyers to browse

USE ELECTRONIC COMMERCE TO STREAMLINE GOVERNMENT BUSINESS PROCESSES

items, compare prices, and place an order using a government purchase card. For example, the General Services Administration provides on-line access to GSA Advantage, an electronic catalog that lists 145,000 products (<http://www.fss.gsa.gov/cgi-bins/advwel>). By October 1997, this catalog will list all of the 4 to 5 million items originally found in GSA's Federal Supply Schedules.

- **Increase the use of purchase cards.**

In less than a decade, the government has significantly changed its purchasing habits through the use of the purchase card. For example, in Fiscal Year (FY) 1989, the government purchased less than \$1 million in goods and services using purchase cards, while in FY 1996, the government purchased more than \$3 *billion* using purchase cards.

- **Automate the federal grants process.**

In FY 1996, the federal government provided approximately \$300 billion in grants to governments, universities, tribal governments, non-profit organizations, and individuals. The grants process can be improved and speeded up using electronic commerce, and ten federal agencies have joined together to form the U.S. Electronic Grant Project. This will provide a "one-stop shop" for federal grant applications using World Wide Web and EDI technologies; users will be able to choose which safe secure method they want to use.

NEED FOR CHANGE

Notwithstanding considerable progress, more improvements are needed. As implementation continues, there are several specific areas that should be addressed:

- **Improve coordination among government electronic commerce programs.**

More coordination is required across program areas, e.g., electronic benefits transfer, information technology organizations, logistics, acquisition, grants, and finance.

- **Improve coordination of procurement and payment functions.**

The federal government spends more than \$1.7 trillion annually. Additionally, the government transfers more than \$400 billion between government agencies.

Payment processing involves many parties. The process includes obligating funds, conducting reconciliations, and providing accurate, timely reporting of payment information to the core financial system. In parallel, during the acquisition process, payment and procurement systems interact to check the availability of funds, record obligations, and report acceptance of goods and services.

- **Improve electronic commerce security.**

It is essential that Internet transactions be secure. Digital signatures can ensure that transactions and communications between parties are authenticated and have not been altered during their transmission across open networks. A functional public key infrastructure would provide the means for verifying digital signatures.

ACTIONS

1. *Develop standard trading partner data.*

The President's Management Council has created the Electronic Processes Initiatives Committee. An early task for that Committee should be to develop a minimum set of trading partner data to enable the agencies to conduct electronic commerce at minimal cost and burden. This data set should be established by November 1997.

2. *Update the Electronic Commerce action plan.*

At the same time, the Committee, in conjunction with the Government Information Technology Services (GITS) Board, should review the status of electronic commerce and its continued implementation. The review should determine how to ensure that the latest developments in electronic benefits transfer and smart card technologies are integrated in the overall electronic commerce management plan. The Committee should work closely with private sector organizations such as

CommerceNet to ensure that the government is adopting the best practices.

3. *Continue the momentum in procurement and payments.*

Initially, the Electronic Processes Initiatives Committee should focus primarily on procurement and payment functions. Each year, the federal procurement system conducts about 20 million transactions amounting to around \$200 billion. The Federal Acquisition Computer Network has made substantial progress linking procurement and payment functions. The Committee should ensure that procurement and payment functions are integrated into all governmentwide electronic commerce initiatives.

4. *Build a consolidated electronic federal grants application system.*

Many of the current "electronic grant" initiatives are developed for specific agencies, programs, or activities, and are based on federal forms which vary from agency to agency. Additionally, most of these electronic applications apply to partial steps of a process without a comprehensive plan for implementing modules to manage the entire process electronically.

By April 1997, the GITS Board should establish an interagency working group to expand the U.S. Electronic Grant Project into a comprehensive system and business model for streamlining grant processes, improving efficiency, and cutting long-term costs for federal agencies and grant customers. The working group should include the

USE ELECTRONIC COMMERCE TO STREAMLINE GOVERNMENT BUSINESS PROCESSES

existing Electronic Grants Intergovernmental Partnership (the Departments of Transportation, Energy, and Education, the U.S. Coast Guard, the Environmental Protection Agency, the Small Business Administration, and the General Services Administration), the Department of Health and Human Services, the Department of Agriculture, the Department of Education as well as other interested parties.

A comprehensive grants system will require the development and implementation of administrative modules which, through partnership, will

enable agencies and customers to manage the entire grant business process. This process includes steps for grant solicitation, application, and award. The modules should integrate key "electronic grants" approaches currently under development into a governmentwide grants business model that will provide a common interface for customers. Specifically, ties are needed to the payment reengineering efforts underway at the Department of Treasury.

The application module should be available for testing by October 1998.



A12:

EXPAND THE INTERGOVERNMENTAL INFORMATION ENTERPRISE

FEDERAL, STATE, AND LOCAL GOVERNMENTS WORKING TOGETHER AS ONE

***Imagine this:** A single mother visits a welfare office in Atlanta to determine eligibility for assistance. A state government worker enters her identification into a computer and immediately receives details of her employment history in several other states and counties, records of her three dependent children, and verification that she is currently unemployed. She applies for other entitlements, a job which matches her skills, and school assistance programs for her children.*

Since our country was founded, the relationships among federal, state, and local governments have preoccupied politicians, scholars, lawyers, and citizens. Today, the roles of the three levels of government are being reexamined with renewed energy. Budgetary pressures and rapid changes in human services, education, training, economic development, communications, and criminal justice are causing each

level of government to reexamine its roles and relationships with each other. A new form of governance is emerging.

As relationships between each level of government change, so do the public's expectations. Citizens expect to receive higher levels of service and reductions in the cost of government. Many citizens view the three levels of government as a single entity. Their primary experiences are with state and local governments, not the federal government. When dealing with government, citizens want benefits or services delivered quickly and efficiently — it matters little to them whether a federal, state, or local government agency is providing the service. For example, following a major snowstorm, citizens don't care if the federal highways are opened quickly if the state and local access roads are not plowed for several more days. Homeowners want and expect federal, state, and local responses in a coordinated manner.

At the same time that intergovernmental relationships, ideas, and methods for providing services are changing,

information technology is creating important opportunities and new methods for governments to work together to improve citizen services. Information technology, through capabilities such as facsimile, electronic mail, and the Internet, is also providing the opportunity for governments and citizens to communicate more effectively.

NEED FOR CHANGE

During its examination of government operations, the National Performance Review noted that a lack of coordination exists among federal departments and among federal, state, and local governments. Because of budget realities, priorities for using resources are changing and agencies can no longer afford duplication of efforts. The various levels of government must work cooperatively and use information technology to facilitate information sharing partnerships. The traditional stovepipe model for government operations and service delivery, with each level of government initiating, implementing, and managing programs and services within its own framework and culture, is no longer appropriate.

To facilitate the establishment and growth of partnerships, the Government Information Technology Services (GITS) Working Group created the Intergovernmental Enterprise Panel to work with state and local governments and industry to promote cooperation and information sharing. The Panel is composed of information technology professionals from all levels of government and from industry.¹ Federal, state, and local government co-chairs coordinate the Panel's activities. Today,

the Intergovernmental Enterprise Panel is working to promote and sponsor intergovernmental cooperation and service delivery systems that use information technology to share information rapidly and effectively.

The Intergovernmental Enterprise Panel has identified and recognized 14 state and local government systems for excellence in information sharing between at least two levels of government.² These "best practices" are a step in the right direction but represent only a small fraction of the potential benefits of coordinated intergovernmental initiatives.

The results will begin to be more visible as federal, state, and local governments continue the process of learning to work together. The successes of the intergovernmental efforts in the past few years, illustrated by the awardees and other projects, clearly demonstrate the need to capitalize on the opportunities for intergovernmental program coordination made possible by information technology.

ACTIONS

1. *Coordinate intergovernmental efforts to prepare information technology systems to operate in the Year 2000.*

The Year 2000 problem looms large and becomes more critical as the century change draws near. The Chief Information Officer (CIO) Council and the Office of Management and Budget (OMB) are working effectively to address the Year 2000 problem in federal information technology systems. Efforts

to share federal Year 2000 information and resources with the states are not as far along. Federal and state systems must interact successfully to assure continued operation of federal benefits programs administered by states. The Year 2000 Interagency Committee of the CIO Council should cooperate with the Intergovernmental Enterprise Panel (IEP) and the National Association of State Information Resource Executives (NASIRE) to prepare an action plan that would ensure a smooth transition.

The IEP should identify key groups at the various levels of government that are currently working on the Year 2000 problem. The IEP should become an entity to coordinate those efforts, such as sharing information using a Year 2000 home page on the Internet. The IEP should work with the General Services Administration to provide schedules that contain Year 2000 compliant information technology products and open them for state and local government use. This project should be included in the priority projects identified by the IEP.

2. Establish a strategic plan with specific actions to develop additional intergovernmental information technology opportunities further.

By July 1997, the IEP should prepare a plan that outlines strategies to sustain efforts among principal policy, administrative, and technology leaders in the three levels of government. The IEP needs to establish the goals and objectives that intergovernmental information technology programs should meet and the functional areas and types of participating agencies that should participate in those programs. The IEP

must identify individuals/groups that are empowered to represent the various levels of government. For example, the National Governors Association and the NASIRE are but two of the many groups that are working on coordinated initiatives. The IEP should identify and seek endorsement of the plan from these groups to ensure long-term support commitments and stakeholder buy-in.

3. Obtain action plan buy-in from the three levels of government.

The action plan should be signed by representatives of the three levels of government and the IEP should present the action plan to the Government Information Technology Services (GITS) Board by August 1997.

4. Prioritize projects and identify barriers that must be overcome to ensure success.

By October 1997, the IEP should prioritize the projects identified in its action plan and identify barriers and obstacles that must be overcome to achieve success. Knowledgeable individuals at each level of government should be interviewed to identify obstacles. These obstacles may be legislative, regulatory, institutional, or financial in nature or they could be caused by process or human resources problems. A list of the top intergovernmental information technology barriers that the IEP believes must be addressed, along with recommended actions to eliminate them, should be compiled and presented in the report.

ENDNOTES

1. GITS Working Group Charter, The Panel for Federal, State, and Local Coordinated Use of Intergovernmental Information Resources and Management – The Intergovernmental Enterprise, 1993.
2. The IEP awardees for “Streamlined Service Delivery” include:
 - Oregon “Pathways” Project
 - Merced Automated Global Information Control System (MAGIC)
 - Web Interactive Network of Government Services (WINGS)
 - Re-engineering Survey Data Collection at the Bureau of Labor Statistics
 - Massachusetts Access to Government Network (MAGNet)
 - “For You Chicago” Kiosk Pilot Program
 - Georgia Common Access

The IEP awardees for “Knowledge/Technology Transfer” include:

- Smart State Alabama
- Maryland Electronic Capitol
- Association of Bay Area Governments (ABAG)
- Northwest States Regional Environmental Information System
- Native American Public Broadcasting Corporation
- Smart Valley
- Orange County Florida/U.S. Army Plowshares Program

A13:

IMPROVE THE SHARING OF INFORMATION TECHNOLOGY EXPERIENCE WORLDWIDE

GOVERNMENTS HELPING EACH OTHER

Imagine this: One national government is considering investing in new technology to provide better weather information to its citizens. Through a cooperatively operated focal point it easily connects with experts in other governments who have substantial experience in weather information systems. These other governments have learned that there are dangers ahead for the government about to invest scarce resources. Some roads will lead to problems and unexpected expense. Others can lead to success while reducing costs. The governments share this information and a wiser information technology investment is made.

The proliferation of information technology (IT) and communications is shrinking the globe. Economic and political issues no longer confine themselves within national borders. Governments face common challenges. As in the U.S., information technology can help address many of those

challenges. An active exchange of information about sound practice and lessons learned can help improve service to the citizens worldwide.

Several nations have provided the U.S. federal government information and examples of how to use information technology. The United Kingdom government has shared its customer service standards that were suggested by citizens. The government of New Zealand has provided data about how to organize and operate performance-based organizations. The European Community initiatives to implement smart card technology have provided valuable information and lessons learned.

The Maltese Government recently requested information about a U.S. agricultural system that records data about farmers' production and marketing practices. Maltese officials connected with the U.S. Department of Agriculture and the California Department of Food and Agriculture, who provided test information about seed germination and purity.

Danish officials met with Massachusetts officials to learn more about the Massachusetts Access to Government Network (MAGNet). MAGNet, a high-speed communications infrastructure, will enable a "self service" government that citizens can use through home computers, the Internet, and other access methods.

To promote this kind of information sharing, the U.S. government is active in three international programs: the G7 Government On-Line (GOL) program; the International Council for Information Technology in Government Administration (ICA); and the Public Management program of the Organization for Economic Cooperation and Development (OECD).

The G7 Government On-Line program emphasizes innovation to provide better service to the citizens. Seven nations currently participate in the GOL project: the United States, Canada, France, Germany, Italy, Japan, and United Kingdom. The U.S. has created the *International Government IT Directory* to accelerate the sharing of information technology management experience among leading IT officials in all countries in the world.

The ICA is a 30-year old organization with membership from 25 nations. This organization emphasizes improving IT management and direction in national governments. Recently, the ICA has emphasized the establishment and use of electronic government programs. To contribute, the U.S. has shared its experiences with the use of credit and smart cards and the results of Vice President Gore's National Performance Review.

The OECD, comprised of the major industrialized nations, is undertaking a study on the impact of information technology on policy formulation and decision making in democratic governments. The study focuses on the experiences of OECD nations in the use of Internet technology to disseminate government information and to promote citizen interaction with government. U.S. initiatives are being tested throughout the OECD and lessons learned are being shared.

NEED FOR CHANGE

Private sector companies measure their programs, in part, by comparing themselves to leaders in their industry. Similarly, national governments need to be able to evaluate the performance of their programs. To do so, they must find a way to share experiences.

Although much successful ad hoc sharing is underway, greater focus is needed. In addition, experience has shown that the practices of U.S. state governments are easily as helpful as U.S. national examples.

ACTIONS

1. *Provide a focal point for intergovernmental sharing.*

The General Services Administration (GSA), through its Office of Intergovernmental Solutions, should serve as a focal point to facilitate sharing of information technology experience across national boundaries. Such facilitation should include:

IMPROVE THE SHARING OF INFORMATION TECHNOLOGY EXPERIENCE WORLDWIDE

- Publishing, in cooperation with other governments, an on-line "Intergovernmental Solutions Newsletter" at least three times a year beginning in June 1997. The newsletter should identify trends and successes in managing information technology around the world and provide highlights from federal, state, local and international governments;
- Publishing, in October 1997, a new International Government IT Directory to include non-government organizations interested in information technology activities;
- Working with Canada to plan the second US/Canada Day (to be held in September 1997) to exchange ideas on developing and managing information technology in the future; and
- Responding to specialized requests from foreign governments for visits or information.

2. *Support the activities of the G7.*

Through their role as the U.S. representatives to the G7, GSA should

work as a catalyst with other organizations within the U.S. government to ensure that the G7 GOL project is successful. Support should be provided in the following areas:

- Outsourcing/privatization;
- Year 2000 conversion tools and practices;
- Traffic management at the municipal level;
- Electronic delivery of government information;
- Locating government information electronically; and
- Charging for government services.

By December 1997, the GSA Office of Intergovernmental Solutions should identify and share best practices in federal, state, and local governments, the international community, and private industry for dissemination and application within the G7.

**SUPPORT MECHANISMS -
“THE TOOLS TO OPERATE AN
ELECTRONIC GOVERNMENT”**



A14:

GUARANTEE PRIVACY AND SECURITY

CUSTOMERS DESERVE INTEGRITY, AVAILABILITY, AND CONFIDENTIALITY IN ALL ELECTRONIC TRANSACTIONS WITH THE FEDERAL GOVERNMENT

Imagine this: A senior citizen, using a personal computer at a public library, can look up current, accurate information on his social security benefits.

A businesswoman sends wage information to the government for tax and social security purposes. She can do so using a desktop computer without risking her employees' or company's privacy.

A small business owner applies for a federal loan over the company's office automation system using the Internet. The integrity of the loan application is maintained by digital authentication, and its confidentiality, by scrambling the information while it is being transmitted.

Interconnecting computers and databases – integral to many of the Access America

initiatives – increases the need for privacy and security safeguards. Public confidence in the security of the government's electronic information and information technology is essential to creating government services that are more accessible, efficient, and easy to use. Electronic commerce, electronic mail, and electronic benefits transfer share sensitive information within government, between the government and private industry or individuals, and among governments. These electronic systems must protect the information's confidentiality, assure that the information is not altered in an unauthorized way, and be available when they are needed. A corresponding policy and management structure must support those protections. These systems must also be able to support the government's responsibilities to provide for national security, support law enforcement, enhance global competitiveness and productivity for U.S. business and industry, and protect privacy and civil liberties. All this must be done in a flexible, cost-effective manner, through a collaboration among the public, industry, academia, and the government.

This challenge was recognized in the September 1993 Report of the National Performance Review, which set out a series of actions to address it.¹ A great deal of progress has been made.

Information Privacy

One of the Nation's most important values is individual privacy. As with all areas of technology use, the challenges are not solely or even primarily technical ones. A policy and management infrastructure is needed.

In response to growing public concern, the Administration's Information Infrastructure Task Force (IITF) published Privacy Principles in June 1995 to guide future Administration privacy efforts.² Developed with extensive consultation with the private sector, these principles were immediately endorsed by the private sector U.S. Advisory Council on the National Information Infrastructure.

Information Security

Many of the specific actions in the September 1993 Report involved information security. Progress on these actions includes:

- To enhance the performance of government and industry computer security incident response teams, the National Institute of Science and Technology (NIST) established the Computer Security Resource Clearinghouse to provide alert databases, and industry software patch and other technical information.
- To assist federal agencies in handling computer security incidents, NIST established the Federal Computer Incident Response Capability (FedCIRC) program to provide proactive and reactive computer security services.
- To promote security on the Internet, the Federal Networking Council published the first volume of the Draft Internet Security Plan in late 1995. Based on the findings of a May 1996 workshop, the second volume will be released in early 1997.³
- To promote computer security in federal agencies, OMB and NIST provided improved technical and policy guidance to federal agencies.⁴
- To foster an industry-government partnership for improving services and security in public telecommunications, the National Communications System, working closely with industry through the National Security Telecommunications Advisory Committee, drafted proposed legislation designed to improve public switched network (PSN) security, sponsored joint public-private fora for the exchange of network security information, and published studies in the areas of network analysis and threats to the PSN.
- To respond to changes brought about by the end of the cold war, Presidential Decision Directive 29, Security Policy Coordination (September 16, 1994), established the

interagency Security Policy Board to formulate and oversee security policy for the protection of classified national security information. Executive Order 12958, "Classified National Security Information" (April 17, 1995), recast the classification system for national security information to be consistent with the new international environment.

- To ensure the protection and reduce the costs of classified information held by U.S. industry, the Information Security Oversight Office established the National Industrial Security Program. In October 1994, the Secretary of Defense issued the National Industrial Security Program Operating Manual that provides uniform security guidance and procedures to all agencies and their contractors.
- To coordinate security research and development, the Federal Networking Council established testbeds at several federal agencies that are coordinating research in such areas as public key infrastructures, advanced authentication, incident response, and secure Web technologies.

NEED FOR CHANGE

Although much has been accomplished, the dynamic changes in technology and its uses, the political and social climate, and potential threats to information systems only increase the urgency. The systems that support the initiatives in this report must be sufficiently reliable and trustworthy to gain the public's

confidence. Without substantial progress on the security and privacy fronts, many of the initiatives will not realize their full potential of improving service to the public.

Particular attention is needed to protecting information privacy, and to making further progress in the use of cryptography to ensure the integrity and authentication of information.

ACTIONS

1. Create a privacy "champion" within the Government Information Technology Services (GITS) Board.

Given the importance of information privacy to the ideas in this report, the GITS Board should immediately add a member who has responsibility for ensuring that privacy issues are considered and addressed in all governmentwide information technology initiatives.

2. Complete the privacy work of the IITF.

By May 1997, the Information Policy Committee of the Information Infrastructure Task Force should publish for comment a discussion of the pros and cons of creating a permanent entity within the federal government that would focus on resolving privacy issues. The Committee should also determine how the Privacy Principles can be further publicized and formalized.

3. *Accelerate work on digital signatures and encryption.*

The Federal Public Key Infrastructure Steering Committee, under the direction of the Interagency Working Group on Cryptography Policy (IWG), should expand its demonstrations of the practicability of a key management infrastructure that supports the use of digital signatures and, for confidentiality keys, the use of key recovery. The demonstration should include the core set of electronic self-service transactions identified by the GITS Board. (See Action A01.1.) The IWG should provide a progress report on the demonstration projects by December 1997.

ENDNOTES

¹ That Report stated that in order to have trustworthy, readily available information, and computer systems that are user-friendly, secure, and protective of individual privacy, those systems must: safeguard information, facilities, information systems, and networks against illegal or unauthorized access, modification, or disclosure; balance access to agency information and records with appropriate privacy controls; respect private ownership of information and comply with policies and disclosure procedures for government use of individual information; and incorporate privacy and security safeguards early in the design of the system. "Reengineering Through Information Technology," Accompanying Report of the National Performance Review, September 1993.

2. PRINCIPLES FOR PROVIDING AND USING PERSONAL INFORMATION

National Information Infrastructure Task Force, June 1995

General Principles for All National Information Infrastructure Participants

Personal information should be acquired, disclosed, and used only in ways that respect an individual's privacy.

Personal information should not be improperly altered or destroyed.

Personal information should be accurate, timely, complete, and relevant for the purpose for which it is provided and used.

Principles for Users of Personal Information

Information users should:

- assess the impact on privacy in deciding whether to acquire, disclose, or use personal information.
- acquire and keep only information reasonably expected to support current or planned activities.

Information users who collect personal information directly from the individual should provide adequate, relevant information about:

- why they are collecting the information;
- what the information is expected to be used for;
- what steps will be taken to protect its confidentiality, integrity, and quality;
- the consequences of providing or withholding information; and
- any rights of redress.

Information users should use appropriate technical and managerial controls to protect the confidentiality and integrity of personal information.

Information users should not use personal information in ways that are incompatible with

GUARANTEE PRIVACY AND SECURITY

the individual's understanding of how it will be used, unless there is a compelling public interest for such use.

Information users should educate themselves and the public about how information privacy can be maintained.

Principles for Individuals Who Provide Personal Information

Individuals should obtain adequate, relevant information about:

- why the information is being collected;
- what the information is expected to be used for;
- what steps will be taken to protect its confidentiality, integrity, and quality;
- the consequences of providing or withholding information; and
- any rights of redress.

Individuals should be able to safeguard their own privacy by having:

- a means to obtain their personal information;
- a means to correct their personal information that lacks sufficient quality to ensure fairness in its use;
- the opportunity to use appropriate technical controls, such as encryption, to protect the confidentiality and integrity of communications and transactions; and
- the opportunity to remain anonymous when appropriate.

Individuals should, as appropriate, have a means of redress if harmed by an improper disclosure or use of personal information.

^{3.} The plans are accessible on the Federal Networking Council's home page at <http://www.fnc.gov>.

^{4.} OMB revised Appendix III, Security of Federal Automated Information, of OMB Circular A-130, "Management of Federal Information Resources," February 1996. The new Appendix: (1) requires agencies to include information security as part of each agency's strategic IT plan; (2) includes computer security issues as a material weakness in the Federal Managers Financial Integrity Act report; (3) requires employees and contractors to complete awareness training; (4) improves planning for contingencies; and (5) establishes and employs formal emergency response capabilities.

NIST published Special Publication 800-14, "Generally Accepted Principles and Practices for Securing Information Technology Systems" in September 1996. In the encryption area, NIST developed, and the Secretary of Commerce approved and issued, the Secure Hash (FIPS 180) and Digital Signature (FIPS 186) Standards, the Data Encryption Standard (FIPS 46) and the Key Escrow Standard (FIPS 185).

These documents and other information security reference materials can be found on the Computer Security Resource Clearinghouse World Wide Web site at <http://www.csrc.nist.gov>.



A15:

INTEGRATE THE GOVERNMENT SERVICES INFORMATION INFRASTRUCTURE

***Imagine this:** An individual walks into a government agency. The government worker at the computer terminal answers the individual's request for college loan applications and small business opportunities. While there, the individual also applies for a state fishing license and a non-resident hunting license in another part of the country for an upcoming trip. This individual just completed in minutes what now takes hours of traveling to different offices and filling out redundant forms. This is all made possible because an interoperable, secure, information infrastructure exists that allows government workers to access all the information required to service customer requests. The data flows smoothly across the many links of the nation's information infrastructure, just as easily as vehicles can traverse the many links and portions of the nation's transportation infrastructure.*

Over the years, many federal agencies have implemented information systems and supporting infrastructures to deliver their services to the public. These systems and infrastructures have become increasingly complex. Today, a disabled

veteran may receive services and benefits from two totally different information and service delivery systems. In the past, this may have been necessary, but today's networking technologies have advanced to the point where these services do not need separate delivery points. Through systems integration, the cost, efficiency, and quality of service can improve.

In 1993, Vice President Gore's National Performance Review (NPR) launched the development of a government services information infrastructure to support electronic government applications. Through the NPR efforts, much progress has been made to implement governmentwide electronic mail, consolidate and modernize government data processing centers, integrate federal government private networks, and establish wireless telecommunications services and procurement vehicles. These efforts are being undertaken to make the government's large and inherently distributed infrastructure work better and cost less.

The Government Information Technology Services (GITS) Working Group developed a concept for the portion of the National Information Infrastructure (NII) used to link people to government and its services. GITS defined this concept as the Government Services Information Infrastructure (GSII). This infrastructure allows agencies working on common functional services to connect workers and let them work together electronically. The GSII also protects privacy, and supports emergency preparedness. GITS developed a paper entitled "Gluing Together the Government Services Information Infrastructure,"¹ which discusses how this can be made real and the benefits it can achieve. These so-called "glue" functions and services are the basis for piecing together the various agencies' information technology activities into a seamless information infrastructure.

One of the major benefits of developing the GSII is the ability to recognize and eliminate duplication. The Office of Management and Budget (OMB) issued Bulletin No. 96-02, "Consolidation of Agency Data Centers," on October 4, 1995, which provided the guidelines for reducing the number of agency data centers and reducing the total cost of data center operations. In a similar project, an interagency group developed an inventory of the private telecommunications networks in use within the federal government. Consolidating transmission service circuits within agencies will provide a potential savings of over \$20 million per year by the federal government.² The General Services Administration (GSA) is defining a program to assist agencies in further circuit aggregation activities.

In an effort to share resources when supporting similar requirements for multiple agencies, GITS also endorsed a National Telecommunications and Information Administration (NTIA) proposal to conduct a nationwide cellular acquisition. The General Services Administration awarded the Federal Wireless Telecommunications Service (FWTS) contract on November 8, 1996. The contract is the first of its kind to provide nationwide wireless service and equipment to all federal agencies and authorized users. Prices provided in this contract are 20 to 60 percent below commercial rates.³

These efforts have put in place the pieces to make dramatic improvements in the way the government acquires and delivers services. It is time to pull the pieces together into the GSII.

NEED FOR CHANGE

Coordination of the government's existing information infrastructure must be improved. Enhanced coordination will integrate the infrastructure pieces to provide "one-stop" electronic access to government services.

An integrated infrastructure will reduce the overall cost of government services delivery by allowing more resource sharing support across government information services providers. For instance, a federal agency which decides to deploy new information services would not acquire facilities that duplicate existing ones; instead the agency would use the existing infrastructure.

Achieving such integration, however, is not easy. It will require much closer

INTEGRATE THE GOVERNMENT SERVICES INFORMATION INFRASTRUCTURE

coordination among all federal, state, and local agencies. But the results will be well worth the effort since this integrated infrastructure provides the basis for realizing the electronic government applications discussed in this report.

ACTIONS

1. *Establish a Government Services Information Infrastructure Coordination Office.*

Making the information infrastructure's many components work together requires firm agreements among agencies operating standards. The Government Information Technology Services (GITS) Board, in concert with the Chief Information Officer (CIO) Council, should establish an interagency task force for the government services information infrastructure by July 1997. The task force should serve as the Coordination Office for the information infrastructure and define the functional requirements for the integrated infrastructure by November 1997.

2. *Create agreements among agencies to establish an interoperable information infrastructure.*

The task force should identify individual agency responsibilities for achieving an integrated infrastructure. Memoranda describing these responsibilities should be signed by the responsible agencies by December 1997.

3. *Implement a comprehensive, distributed directory structure.*

By December 1997, the task force should complete requirements for a governmentwide electronic directory.

The recently completed Blue Pages project, championed by Vice President Al Gore and implemented by the GSA E-mail Program Management Office, has already improved the public's access to the federal government and served as a significant start toward accomplishing this requirement. The task force should continue this work, and leverage development efforts of other organizations, to implement and integrate a comprehensive and distributed directory structure for the GSII. This directory structure should be completed and operational by July 1998.

4. *Define "peering points" for the different federal, state, and local infrastructures to interconnect and interoperate.*

An integrated infrastructure requires a set of well defined "peering points," as they are termed within the Internet community, where the many components of the infrastructure and its partner networks and services can interconnect. As part of this effort, the task force will jointly identify security and privacy requirements with the GITS Board Security and Privacy Champions. An initial set of peering points for the GSII should be defined by the task force by December 1997.

5. *Improve the coordination of information technology research and development activities with the work of the GITS Board.*

The GITS Board should work jointly with the National Science and Technology Council's (NSTC) Applications Group to bring representatives of various information technology research and development (R&D) communities together. This joint effort will investigate ways to coordinate R&D efforts with GITS Board programs to build an integrated infrastructure for the government. Including promising new developments, such as Next Generation Internet technologies, should be part of these discussions. By March 1997, an individual should be named to serve on both the GITS Board and the National Science and Technology Council Applications Group. The

representative will work with the GITS Board and Applications Group members to identify and define the specific research and development projects that will help turn the recommendations in this "Access America" report into reality.

ENDNOTES

1. GITS Working Group, "Gluing Together the Government Services Information Infrastructure," February 16, 1996.
2. Integrated Services Panel, "Inventory of Private Telecommunications Networks Within the Federal Government," September 1995.
3. GSA News Release, "GSA Awards Federal Wireless Telecommunications Services Contract to GTE," GSA#9360, November 12, 1996.



A16:

IMPROVE INFORMATION TECHNOLOGY ACQUISITION

CONTINUING THE REVOLUTION: INFORMATION TECHNOLOGY ACQUISITION REFORM

Imagine this: After revolutionary changes in federal acquisition and information management processes, federal managers can acquire and use commercial-off-the-shelf (COTS) items and make information technology acquisitions with efficiencies comparable to those in the private sector.

The Federal Acquisition Streamlining Act of 1994 and the Federal Acquisition Reform Act of 1995 removed many of the statutory and paperwork requirements associated with buying commercial items. But for many information technology (IT) system components, acquisition policies and procedures remained time- and manpower-intensive.

The Information Technology Management Reform Act of 1996, which along with the Federal Acquisition Reform Act is known as the Clinger-Cohen Act of 1996, specifically addressed information technology

acquisition reforms. These reforms included abolishing the General Services Administration Delegation of Procurement Authority and eliminating the General Services Board of Contract Appeals hearings on protests of information technology procurements. The Act also provided federal agencies with the flexibility to acquire information technology components quickly and tailor the acquisitions to meet specific requirements.

Many agencies prefer COTS equipment used by the private sector, rather than asking for specially designed components. To further enhance the government's ability to acquire commercial items economically and effectively, the Clinger-Cohen Act authorized a three-year test of simplified procedures for purchasing commercial items up to \$5 million.

Even with all these reforms and changes, continuing information technology acquisition reform is essential. The Under Secretary of Defense (Acquisition and Technology) has described the changes and improvements achieved to

date as the "end of the beginning" of acquisition reform.¹

NEED FOR CHANGE

No one believes that the reform mission has been completed. Processes for acquiring COTS equipment and for evaluating contractor past performance need to be analyzed and streamlined.

The purchase of commercial items has already produced savings. However, the integration of COTS components poses management and technical challenges. The Federal Aviation Administration (FAA) recently made several recommendations to help manage these challenges.

One of the major recommendations recognized that "systems composed of commercial-off-the-shelf components will be in a continual state of enhancement because of the commercial market pressures that vendors face to improve product functionality and performance."² This continuous state of improvement needs to be recognized. Federal approval, testing, and certification practices must be improved to deal with frequent system changes in a timely manner. The Information Technology Management Reform Act requires that each agency analyze the actual costs and the benefits achieved by the system. This means that agencies must understand how continued improvements to system components will benefit the agencies, and incorporate those benefits in their analyses. These changes will enable the agencies to take advantage of product improvements and advances in technology.

Three specific approaches can enhance

the government's ability to acquire commercial information technology products and services. All three move the government toward using commercial acquisition practices. Commercial firms follow the "buy a little, test a little, fix a little" approach, bringing in nine to eighteen month increments of technology which make measurable contributions to bottom line business processes. They test commercial products once to ensure their suitability and compliance with organization-wide technical standards. This compliance testing is known as "benchmarking." Finally, they consider past performance of suppliers in awarding contracts. The statutory changes of the last several years have made it possible for the government to follow these practices. The challenge now is moving forward on and reaping the benefits of implementation.

ACTIONS

1. *Develop best practices for modular acquisition of standards-based open system technologies.*

By July 1997, the Government Information Technology Services (GITS) Board should identify a working group to develop best practices for modular acquisitions. The group should include representatives from the procurement, standards, and technology communities.

2. *Establish a "benchmark once" approach for COTS products.*

By October 1997, the Chief Information Officer (CIO) Council should examine agency processes for benchmarking COTS products once and making the results available to all agencies. This

IMPROVE INFORMATION TECHNOLOGY ACQUISITION

could include the designation of particular agencies as "executive agents" for benchmarking certain categories of products.

3. Identify and publicize best practices for evaluating vendor past performance.

By April 1997, OMB's Office of Federal Procurement Policy (OFPP) should publish a guide to best practices in evaluating vendor past performance. OFPP should consult with the agencies and industry in developing the guide.

ENDNOTES

1. Dr. Paul G. Kaminski, "Acquisition Reform Acceleration Day," Speech, May 31, 1996.
2. "Use of COTS/NDI In Safety-Critical Systems," Report of the Challenge 2000 Subcommittee of the FAA Research, Engineering and Development Advisory Committee, February 14, 1996, p.1xv.



A17:

INCREASE THE PRODUCTIVITY OF FEDERAL EMPLOYEES

FEDERAL AGENCIES AS CUSTOMERS OF FEDERAL SERVICES

Imagine this: A snowstorm is predicted for the Washington, DC area and federal employees are instructed to use alternative work sites for the day. The employees are given the flexibility to decide what would be most beneficial to their customers. Some decide to go to the customers' workplaces, some work at home, some work at a telecommuting site, while others work from a library. Some employees arrange to take their children to school and use laptop computers at the school media center to be available to drive their children home if schools close early due to weather. Hours of commute time delays are avoided and all government services are available as usual.

In the private sector today, a "virtual" office concept is evolving rapidly across the country as businesses capitalize on their use of information technology to redefine the workplace. Existing technology makes the virtual office

possible, a work situation where mobile access to computer systems, e-mail, desktop video, telecommunications, faxes, and services are all available.

Employees are being equipped with mobile workstations to provide direct customer service while traveling, as a telecommuter, from the home, from a customer location, or from an official work site. With the advent of advanced wireless technologies, connectivity will soon be available anywhere, anytime. The federal government must evolve with this technology and redefine its concept of the "workplace."

Employees need convenient and timely access to services and information to perform their jobs. Creating a government that works better and costs less requires improving the use of government information resources across and within agencies, and especially among federal employees. It requires empowering employees to use information technology tools to streamline work processes and eliminate unnecessary paperwork and manual procedures.

Although some progress is being made, much remains to be done. Federal agencies need to evaluate how they conduct their business processes and reengineer them before they apply information technology solutions. Far too many administrative processes that are redundant across government agencies and rely on manual activities still exist.

NEED FOR CHANGE

The federal government must find better ways of providing service to its most valuable internal customers – the employees. Information technology is being used extensively to redefine the workplace. Physical locations are slowly becoming less relevant as modern networks allow work to be performed from homes, telecommuting centers, libraries, schools, and anywhere connectivity is available. In addition to the obvious savings such as space and commuting costs, other significant benefits result from employees serving customers with increased efficiency. Examples abound in business, where it is commonplace today to see package delivery workers carrying wireless mobile terminals to enter real time information about the packages being delivered. Customers can get status information about their deliveries in minutes.

Government has many opportunities to realize these same benefits. For example, while visiting a military hospital, a case worker could access a veteran's medical record and provide immediate answers about benefits to a veteran, or a family member. The many government workers who interview

customers to perform their jobs could enter information directly into computer systems rather than taking pencil notes to be keyed at a later time. In short, like the private sector, the government should move the workforce to the customer rather than relying on the customer to come to the government location.

Reengineering is a trend across the United States where businesses are gaining significant results by improving internal processes. It requires rethinking basic work flows and utilizing technologies such as the Internet and "intranets." Many businesses use these internal networks to redefine their administrative work flows. In government there are numerous administrative functions that should be redefined to make greater use of technology. The government should identify a target work process that can become a "proof-of-concept" to demonstrate improvements in work flows. For example, the Official Personnel File is an extremely important document for each federal employee. It is the only repository that contains an employee's work history, pay, performance, beneficiaries, health benefits, and other data. The information maintained is critical in determining a number of important issues involving the employee, such as retirement pay and death benefits. At present, these files are largely paper-based physical folders containing hundreds of pieces of paper that are manually filed by government personnel. Every personnel action usually requires filling out and mailing a form, pulling a physical personnel file, updating records, re-filing, and mailing back some kind of receipt to show the action as completed. Often times, phone

calls or facsimile messages are needed to clarify requests or obtain additional information. The files are subject to destruction from causes such as fire, water damage, or vehicular accidents while being transported between storage facilities in Pennsylvania and Washington, DC.

An electronic filing system would streamline this entire process, reduce the chances of total destruction and the number of misspellings in records, and decrease the amount of staff required to maintain the folders. An electronic system would also afford employees easy access to their records. Such a system could eliminate several manual steps inherent in today's system of manual record-keeping, improve accuracy, and assure integrity of employee information. Automating the processes associated with the Official Personnel File should be a target for demonstrating the opportunities to use information technology to reengineer internal administrative systems.

The following actions are required to move the government towards a "virtual office" environment and to initiate a program to reengineer a common administrative system.

ACTIONS

1. *Develop an operational model of a mobile workplace.*

The General Services Administration, in conjunction with the Office of Personnel Management, should form a work group to identify the opportunities and barriers for a mobile workplace. The work group should examine models being used in the

private sector and define options available for the federal government. An operational model (or several models) should be presented to the Government Information Technology Services (GITS) Board and be ready for demonstration by September 1997.

2. *Develop an implementation plan and prototype for an electronic Official Personnel File system.*

The Office of Personnel Management should develop requirements for an electronic Official Personnel File system and produce an implementation plan that addresses the safeguards needed to protect the privacy and confidentiality of employee information. This plan should be completed by June 1998 and presented to the GITS Board. A prototype system should be available by December 1998 and a fully operational system should be on-line by June 1999.

3. *Identify and promote intranet technologies to perform administrative functions.*

The GITS Board should create an interagency task force to identify and promote intranet technologies to perform administrative functions. This task force should review government and industry intranet-based technologies used to perform travel management, personnel, property, contracting support, and other similar general administrative functions. The task force should publicize these technologies to government administrators through the use of workshops, forums, and conferences.



A18:

ENHANCE INFORMATION TECHNOLOGY LEARNING

***Imagine this:** A government where every employee is using technology to deliver the highest quality of service, and every manager includes information technology as part of every business function. Imagine a time when federal employees accomplish each agency's mission by making full and appropriate use of every information technology tool.*

The U.S. Internal Revenue Service (IRS) is using technology to serve taxpayers. Through touch tone phones, taxpayers can access answers to the most common tax questions. Through computers and modems, taxpayers can access volumes of tax information and the forms they will need to prepare tax returns. Taxpayers also can file their returns electronically. Finally, IRS employees, linked to computers across the country, use technology to answer taxpayer questions, and adjust taxpayer records.

As the twentieth century comes to a close, almost every federal employee has access to some computer capability. Additionally, the government's customers are increasingly able to utilize information technology, through the

Internet and high speed telecommunications systems, to find the answers they need.

The government has many opportunities to use information technology more effectively. Applying these technologies instead of paper-based processes, senior government managers will be able to accomplish their agency missions more effectively. To get these results, however, all employees need to understand the advantages of information technology and how applying it can continually improve performance. This understanding is practically impossible to gain without some first-hand experience using these new tools. Even though the technology today is arguably simple to use, getting started requires some basic level of training. It's true at the front line and at the top.

Leadership by example from senior executives is critical in persuading employees to use new technology. E-mail, now an accepted communications tool in most organizations, was a novelty not long ago. But even after the novelty had worn off in most circles, within the

Army the senior leadership preferred phone tag and handwritten or neatly typed buck slips, or placing conference phone calls, in which only a limited number users could participate. A major change took place when a new Army Vice Chief of Staff was appointed, one who not only believed in the personal computer revolution, but practiced it by using electronic mail as his preferred method of communication. The Vice Chief of Staff's use of technology made it necessary for the senior staff to follow his lead and within weeks personal computers sat on the desk of each Deputy Chief of Staff, connecting the Deputies to the Vice Chief of Staff and each other.

NEED FOR CHANGE

As the number of government employees declines, the people who remain will need technology to leverage their efforts. In the past, large numbers of government employees provided information directly to the public; now, smaller numbers of employees rely on such technologies as touch tone phones, computer kiosks, and Internet sites to serve the public. This trend will continue.

Managers and executives have two sets of learning needs. Like other employees, managers and executives need to understand the potential uses of information technology and be able to apply them. In addition, they also must be able to help other employees to access, learn, and use appropriate information technology.

Learning and applying information technology becomes more critical as the workplace becomes more complex and

the public's demand for service grows. Downsizing in the work force has also increased the need for government employees to learn about and apply information technology. Workers can use more sophisticated electronic tools to improve productivity and better utilize their skills.

The government can train employees using distance learning and network delivery of educational courses. Those information technology applications would lower travel costs and reduce the time employees would spend away from their work sites. Distance learning, by way of video-based conferences and computer networks, has already proved highly successful in many Department of Defense components as well as in such organizations as the Social Security Administration, the Internal Revenue Service, and the Federal Aviation Administration.

ACTIONS

1. *Ensure a basic level of computer competence for all government employees.*

The Government Information Technology Services (GITS) Board should coordinate the development of a computer literacy program to ensure all employees have fundamental skills such as computer terminology, functions, and security. The computer literacy program should help employees learn how to use electronic mail, perform word processing, and conduct Internet and intranet searches.

The GITS Board should assure that computer-based tutorials on these

subjects are available to government employees through the Internet and agency intranet systems. By July 1997, the GITS Board should identify topics and learning objectives for these computer-based tutorials. By December 1997, the GITS Board should arrange for the development of these tutorials and their Internet/intranet availability.

2. *Ensure that agencies have personnel with the ability to design and deploy advanced Internet/intranet applications.*

Many of the recommendations of Access America will require agencies to design, deploy, and maintain advanced Internet applications, including secure authenticated transactions; "one-stop" searching of multiple agency databases; Internet-based groupware to support virtual agencies; directories of government employees; applications based on emerging object technologies; selective dissemination of information; and design of Web-based applications for easy navigation and access by persons with disabilities.

Currently, leading IT firms and high-tech start-up businesses are making major investments to develop new Internet-based applications, and to ensure that applications developed for client-server and legacy environments are accessible on the Internet. Moreover, an increasing number of Americans have Internet access at home or work, and telecommunications companies are gradually making the investments in infrastructure that will enable higher-speed Internet access. All this suggests that the opportunities and payoff for creative government use of the Internet will expand dramatically in the months and years ahead.

A working group established by the GITS Board should develop a strategy for substantially expanding the number of agency personnel with these skills by June 1997. The working group should consider measures such as sponsorship of workshops, joint agency purchases of computer-based training, and incentives and professional recognition for agency personnel who acquire advanced Internet development skills.



APPENDIX A:
EXECUTIVE ORDER 13011,
FEDERAL INFORMATION TECHNOLOGY

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Presidential Documents

Title 3—

Executive Order 13011 of July 16, 1996

The President

Federal Information Technology

A Government that works better and costs less requires efficient and effective information systems. The Paperwork Reduction Act of 1995 and the Information Technology Management Reform Act of 1996 provide the opportunity to improve significantly the way the Federal Government acquires and manages information technology. Agencies now have the clear authority and responsibility to make measurable improvements in mission performance and service delivery to the public through the strategic application of information technology. A coordinated approach that builds on existing structures and successful practices is needed to provide maximum benefit across the Federal Government from this technology.

Accordingly, by the authority vested in me as President by the Constitution and the laws of the United States of America, it is hereby ordered as follows:

Section 1. *Policy.* It shall be the policy of the United States Government that executive agencies shall: (a) significantly improve the management of their information systems, including the acquisition of information technology, by implementing the relevant provisions of the Paperwork Reduction Act of 1995 (Public Law 104-13), the Information Technology Management Reform Act of 1996 (Division E of Public Law 104-106) ("Information Technology Act"), and the Government Performance and Results Act of 1993 (Public Law 103-62);

(b) refocus information technology management to support directly their strategic missions, implement an investment review process that drives budget formulation and execution for information systems, and rethink and restructure the way they perform their functions before investing in information technology to support that work;

(c) establish clear accountability for information resources management activities by creating agency Chief Information Officers (CIOs) with the visibility and management responsibilities necessary to advise the agency head on the design, development, and implementation of those information systems. These responsibilities include: (1) participating in the investment review process for information systems; (2) monitoring and evaluating the performance of those information systems on the basis of applicable performance measures; and, (3) as necessary, advising the agency head to modify or terminate those systems;

(d) cooperate in the use of information technology to improve the productivity of Federal programs and to promote a coordinated, interoperable, secure, and shared Governmentwide infrastructure that is provided and supported by a diversity of private sector suppliers and a well-trained corps of information technology professionals; and

(e) establish an interagency support structure that builds on existing successful interagency efforts and shall provide expertise and advice to agencies; expand the skill and career development opportunities of information technology professionals; improve the management and use of information technology within and among agencies by developing information technology procedures and standards and by identifying and sharing experiences, ideas, and promising practices; and provide innovative, multi-disciplinary, project-specific support to agencies to enhance interoperability, minimize unnecessary duplication of effort, and capitalize on agency successes.

Sec. 2. *Responsibilities of Agency Heads.* The head of each executive agency shall: (a) effectively use information technology to improve mission performance and service to the public;

(b) strengthen the quality of decisions about the employment of information resources to meet mission needs through integrated analysis, planning, budgeting, and evaluation processes, including:

(1) determining, before making investments in new information systems, whether the Government should be performing the function, if the private sector or another agency should support the function, and if the function needs to be or has been appropriately redesigned to improve its efficiency;

(2) establishing mission-based performance measures for information systems investments, aligned with agency performance plans prepared pursuant to the Government Performance and Results Act of 1993 (Public Law 103-62);

(3) establishing agency-wide and project-level management structures and processes responsible and accountable for managing, selecting, controlling, and evaluating investments in information systems, with authority for terminating information systems when appropriate;

(4) supporting appropriate training of personnel; and

(5) seeking the advice of, participating in, and supporting the interagency support structure set forth in this order;

(c) select CIOs with the experience and skills necessary to accomplish the duties set out in law and policy, including this order, and involve the CIO at the highest level of the agency in the processes and decisions set out in this section;

(d) ensure that the information security policies, procedures, and practices of the executive agency are adequate;

(e) where appropriate, and in accordance with the Federal Acquisition Regulation and guidance to be issued by the Office of Management and Budget (OMB), structure major information systems investments into manageable projects as narrow in scope and brief in duration as practicable, consistent with the Information Technology Act, to reduce risk, promote flexibility and interoperability, increase accountability, and better correlate mission need with current technology and market conditions; and

(f) to the extent permitted by law, enter into a contract that provides for multiagency acquisitions of information technology as an executive agent for the Government, if and in the manner that the Director of OMB considers it advantageous to do so.

Sec. 3. *Chief Information Officers Council.* (a) *Purpose and Functions.* A Chief Information Officers Council ("CIO Council") is established as the principal interagency forum to improve agency practices on such matters as the design, modernization, use, sharing, and performance of agency information resources. The Council shall:

(1) develop recommendations for overall Federal information technology management policy, procedures, and standards;

(2) share experiences, ideas, and promising practices, including work process redesign and the development of performance measures, to improve the management of information resources;

(3) identify opportunities, make recommendations for, and sponsor cooperation in using information resources;

(4) assess and address the hiring, training, classification, and professional development needs of the Federal Government with respect to information resources management;

(5) make recommendations and provide advice to appropriate executive agencies and organizations, including advice to OMB on the Governmentwide strategic plan required by the Paperwork Reduction Act of 1995; and

(6) seek the views of the Chief Financial Officers Council, Government Information Technology Services Board, Information Technology Resources Board, Federal Procurement Council, industry, academia, and State and local governments on matters of concern to the Council as appropriate.

(b) *Membership.* The CIO Council shall be composed of the CIOs and Deputy CIOs of the following executive agencies plus two representatives from other agencies:

1. Department of State;
2. Department of the Treasury;
3. Department of Defense;
4. Department of Justice;
5. Department of the Interior;
6. Department of Agriculture;
7. Department of Commerce;
8. Department of Labor;
9. Department of Health and Human Services;
10. Department of Housing and Urban Development;
11. Department of Transportation;
12. Department of Energy;
13. Department of Education;
14. Department of Veterans Affairs;
15. Environmental Protection Agency;
16. Federal Emergency Management Agency;
17. Central Intelligence Agency;
18. Small Business Administration;
19. Social Security Administration;
20. Department of the Army;
21. Department of the Navy;
22. Department of the Air Force;
23. National Aeronautics and Space Administration;
24. Agency for International Development;
25. General Services Administration;
26. National Science Foundation;
27. Nuclear Regulatory Commission; and
28. Office of Personnel Management.

The Administrator of the Office of Information and Regulatory Affairs of OMB, the Controller of the Office of Federal Financial Management of OMB, the Administrator of the Office of Federal Procurement Policy of OMB, a Senior Representative of the Office of Science and Technology Policy, the Chair of the Government Information Technology Services Board, and the Chair of the Information Technology Resources Board shall also be members. The CIO Council shall be chaired by the Deputy Director for Management of OMB. The Vice Chair, elected by the CIO Council on a rotating basis, shall be an agency CIO.

Sec. 4. Government Information Technology Services Board.

(a) *Purpose and Functions.* A Government Information Technology Services Board ("Services Board") is established to ensure continued implementation of the information technology recommendations of the National Performance

Review and to identify and promote the development of innovative technologies, standards, and practices among agencies and State and local governments and the private sector. It shall seek the views of experts from industry, academia, and State and local governments on matters of concern to the Services Board as appropriate. The Services Board shall also make recommendations to the agencies, the CIO Council, OMB, and others as appropriate, and assist in the following:

(1) creating opportunities for cross-agency cooperation and intergovernmental approaches in using information resources to support common operational areas and to develop and provide shared governmentwide infrastructure services;

(2) developing shared governmentwide information infrastructure services to be used for innovative, multiagency information technology projects;

(3) creating and utilizing affinity groups for particular business or technology areas; and

(4) developing with the National Institute of Standards and Technology and with established standards bodies, standards and guidelines pertaining to Federal information systems, consistent with the limitations contained in the Computer Security Act of 1987 (40 U.S.C. 759 note), as amended by the Information Technology Act.

(b) *Membership.* The Services Board shall be composed of individuals from agencies based on their proven expertise or accomplishments in fields necessary to achieve its goals. Major government mission areas such as electronic benefits, electronic commerce, law enforcement, environmental protection, national defense, and health care may be represented on the Services Board to provide a program operations perspective. Initial selection of members will be made by OMB in consultation with other agencies as appropriate. The CIO Council may nominate two members. The Services Board shall recommend new members to OMB for consideration. The Chair will be elected by the Services Board.

Sec. 5. *Information Technology Resources Board.*

(a) *Purpose and Functions.* An Information Technology Resources Board ("Resources Board") is established to provide independent assessments to assist in the development, acquisition, and management of selected major information systems and to provide recommendations to agency heads and OMB as appropriate. The Resources Board shall:

(1) review, at the request of an agency and OMB, specific information systems proposed or under development and make recommendations to the agency and OMB regarding the status of systems or next steps;

(2) publicize lessons learned and promising practices based on information systems reviewed by the Board; and

(3) seek the views of experts from industry, academia, and State and local governments on matters of concern to the Resources Board, as appropriate.

(b) *Membership.* The Resources Board shall be composed of individuals from executive branch agencies based on their knowledge of information technology, program, or acquisition management within Federal agencies. Selection of members shall be made by OMB in consultation with other agencies as appropriate. The Chair will be elected by the Resources Board. The Resources Board may call upon the department or agency whose project is being reviewed, or any other department or agency to provide knowledgeable representative(s) to the Board whose guidance and expertise will assist in focusing on the primary issue(s) presented by a specific system.

Sec. 6. *Office of Management and Budget.* The Director of OMB shall:

(1) evaluate agency information resources management practices and, as part of the budget process, analyze, track and evaluate the risks and results of all major capital investments for information systems;

(2) notify an agency if it believes that a major information system requires outside assistance;

(3) provide guidance on the implementation of this order and on the management of information resources to the executive agencies and to the Boards established by this order; and

(4) evaluate the effectiveness of the management structure set out in this order after 3 years and make recommendations for any appropriate changes.

Sec. 7. *General Services Administration.* Under the direction of OMB, the Administrator of General Services shall:

(1) continue to manage the FTS2000 program and coordinate the follow-on to that program, on behalf of and with the advice of customer agencies;

(2) develop, maintain, and disseminate for the use of the Federal community, as requested by OMB or the agencies, recommended methods and strategies for the development and acquisition of information technology;

(3) conduct and manage outreach programs in cooperation with agency managers;

(4) be a focal point for liaison on information resources management, including Federal information technology, with State and local governments, and with nongovernmental international organizations subject to prior consultation with the Secretary of State to ensure such liaison would be consistent with and support overall United States foreign policy objectives;

(5) support the activities of the Secretary of State for liaison, consultation, and negotiation with intergovernmental organizations in information resources management matters;

(6) assist OMB, as requested, in evaluating agencies' performance-based management tracking systems and agencies' achievement of cost, schedule, and performance goals; and

(7) provide support and assistance to the interagency groups established in this order.

Sec. 8. *Department of Commerce.* The Secretary of Commerce shall carry out the standards responsibilities under the Computer Security Act of 1987, as amended by the Information Technology Act, taking into consideration the recommendations of the agencies, the CIO Council, and the Services Board.

Sec. 9. *Department of State.* (a) The Secretary of State shall be responsible for liaison, consultation, and negotiation with foreign governments and intergovernmental organizations on all matters related to information resources management, including Federal information technology. The Secretary shall further ensure, in consultation with the Secretary of Commerce, that the United States is represented in the development of international standards and recommendations affecting information technology. In the exercise of these responsibilities, the Secretary shall consult, as appropriate, with affected domestic agencies, organizations, and other members of the public.

(b) The Secretary of State shall advise the Director on the development of United States positions and policies on international information policy and technology issues affecting Federal Government activities and the development of international information technology standards.

Sec. 10. *Definitions.* (a) "Executive agency" has the meaning given to that term in section 4(1) of the Office of Federal Procurement Policy Act (41 U.S.C. 403(1)).

(b) "Information Technology" has the meaning given that term in section 5002 of the Information Technology Act.

(c) "Information resources" has the meaning given that term in section 3502(6) of title 44, United States Code.

(d) "Information resources management" has the meaning given that term in section 3502(7) of title 44, United States Code.

(e) "Information system" has the meaning given that term in section 3502(8) of title 44, United States Code.

(f) "Affinity group" means any interagency group focussed on a business or technology area with common information technology or customer requirements. The functions of an affinity group can include identifying common program goals and requirements; identifying opportunities for sharing information to improve quality and effectiveness; reducing costs and burden on the public; and recommending protocols and other standards, including security standards, to the National Institute of Standards and Technology for Governmentwide applicability, for action in accordance with the Computer Security Act of 1987, as amended by the Information Technology Act.

(g) "National security system" means any telecommunications or information system operated by the United States Government, the function, operation, or use of which (1) involves intelligence activities; (2) involves cryptologic activities related to national security; (3) involves command and control of military forces; (4) involves equipment that is an integral part of a weapon or weapons system; or (5) is critical to the direct fulfillment of military or intelligence missions, but excluding any system that is to be used for routine administrative and business applications (including payroll, finance, logistics, and personnel management applications).

Sec. 11. Applicability to National Security Systems.

The heads of executive agencies shall apply the policies and procedures established in this order to national security systems in a manner consistent with the applicability and related limitations regarding such systems set out in the Information Technology Act.

Sec. 12. Judicial Review. Nothing in this Executive order shall affect any otherwise available judicial review of agency action. This Executive order is intended only to improve the internal management of the executive branch and does not create any right or benefit, substantive or procedural, enforceable at law or equity by a party against the United States, its agencies or instrumentalities, its officers or employees, or any other person.



THE WHITE HOUSE,
July 16, 1996.



APPENDIX B:

SUMMARY OF ACTION ITEMS

ACTION ITEM	DATE	AGENCY
A01: Improve The Public's Access to Government Services		
A01.1 Identify a candidate set of government services suitable for electronic self-service	May 1997	GITSB
A01.1A Complete an action plan for developing, testing, and deploying these services	September 1997	GITSB
A01.1B Conduct pilot projects	January 1998	----
A01.1C Provide electronic services	January 2000	----
A01.2 Incorporate technology that will assure the public of security and privacy in their transactions	----	GITSB
A01.3 Greatly expand the locations where the public can access information technology	----	GITSB
A01.3A Identify locations for public access information systems providing common services	May 1997	GITSB
A01.3B Begin services at new locations	January 1999	----
A01.4 Establish truck-based and other service delivery capabilities to serve remote and underserved areas	----	GITSB
A01.4A Establish an interagency working group	April 1997	GITSB
A01.4B Develop and test a prototype system	December 1997	Working Group
A01.4C Make implementation decision	May 1998	Working Group
A01.5 Develop interagency information exchanges to reduce paperwork burden on the public	----	GITSB, CIO Council
A01.5A Identify interagency information exchange pilot projects	May 1997	GITSB, CIO Council

ACCESS AMERICA

A01.5B Complete pilot projects	December 1997	----
A01.5C Complete pilot project evaluations	March 1998	----
A01.6 Coordinate and demonstrate direct access to medical records for agency personnel who make medical determination for disability programs	----	GITSB
A01.6A Establish an interagency working group to develop a national policy and guideline	----	GITSB, DHHS
A01.7 Develop partnerships with the private sector to offer related services	----	GITSB
A01.7A Identify partnerships	August 1997	GITSB
A01.7B Implement partnerships	January 1998	----
A01.8 Create a plan to modernize BIA schools	----	----
A01.8A Develop the action plan	April 1997	DOI
A01.8B Complete system installation	December 1999	DOI
A02: Implement Nationwide, Integrated Electronic Benefits Transfer		
A02.1 Encourage EBT development and implementation consistent with the national EBT model for all states	----	GITSB
A02.1A Monitor EBT progress	----	OMB, Agencies
A02.1B Develop action plans for the implementation of EBT systems	March 1997	USDA, Treasury
A02.1C Assess and determine obstacles to full EBT implementation	March 1997	GSA
A02.2 Conduct requirements analyses and develop EBT specifications for tier two programs for EBT systems integration	December 1997	GSA
A02.3 Demonstrate improved service delivery through enhanced card services	September 1997	GITSB
A03 Provide All Federal Payments Using Electronic Funds Transfer by 1999		
A03.1 Establish focus groups and conduct seminars and workshops with federal agencies	July 1997	Treasury
A03.2 Create alternative mechanisms	September 1997	Treasury
A04 Bring Environmental Information To The Public		
A04.1 Establish a federal interagency working group to coordinate the continued development of the National Biological Information Infrastructure	April 1997	GITSB, CENR, USGS
A04.2 Implement national-level standards needed to support greater sharing and use of biological information	June 1997	ITIS

A04.3	Expand the existing federal standard for describing geospatial data to include elements for describing biological information	January 1998	FGDC
A04.4	Initiate a broad effort to develop an "electronic national natural history museum"	----	NBII work group
A04.5	Promote the development and partnerships for the National Environment Data Index (NEDI)	----	DMWG
A04.6	Develop and maintain a National Atlas of the United States	January 1999	GITSB, USGS
A05: Build An Electronic Environment, Safety, And Health Assistance Resource For Business			
A05.1	Build an electronic environment, safety, and health assistance resource for the Internet	----	----
A05.1A	Establish an interagency task force to design an electronic environment, safety, and health assistance resource	March 1997	GITSB
A05.1B	Implement the electronic environment, safety, and health assistance resource	December 1997	GITSB
A06: Establish The Intergovernmental Wireless Public Safety Network			
A06.1	Improve the coordination of public safety wireless communications	----	GITSB
A06.1A	Issue an Executive Order	July 1997	President
A06.2	Provide adequate radio frequency spectrum for public safety agencies	----	GITSB
A06.2A	Outline options to balance spectrum needs of public safety agencies with other users	September 1997	GITSB, NTIA
A06.2B	Develop a plan to implement the PSWAC recommendations	December 1997	FLEWUG
A06.3	Support the development of technical standards for public safety wireless communications systems	----	GITSB
A06.3A	Define and develop the consolidated federal position on standards for public safety wireless radio systems	June 1997	PSWN PMO
A06.4	Include security in all public safety land mobile radio systems	----	GITSB
A06.4A	Coordinate design assistance from government systems security experts	April 1997	GITSB

ACCESS AMERICA

A06.5	Establish an alternative funding mechanism for federal, state, and local public safety officials to improve their wireless communications systems	----	GITSB
A06.5A	Establish an interagency working group to develop alternative funding mechanisms recommendations	May 1997	FLEWUG, DOJ, Treasury, DOC
A06.5B	Present recommendations to OMB	September 1997	FLEWUG
A07: Address The Information Technology Needs Of Our Nation's Criminal Justice Community			
A07.1	Define the criminal justice community information requirements	----	DOJ
A07.1A	Establish a joint federal, state, and local government advisory group to define the Global Criminal Justice Information Network core requirements	May 1997	DOJ
A07.1B	Identify obstacles to implementation	September 1997	DOJ
A07.2	Test core requirements	December 1997	DOJ
A07.3	Establish a joint-government-private sector Global Criminal Justice Information Network Advisory Group	June 1997	DOJ
A07.4	Prepare Global Criminal Justice Information Network plans	June 1998	DOJ
A08: Provide Simplified Employer Tax Filing And Reporting			
A08.1	Simplify filing of employers' quarterly paper returns	----	GITSB, STAWRS ESC
A081A	Expand the STAWRS partnerships to five additional states	October 1998	STAWRS ESC
A08.2	Simplify the requirements using the Harmonized Wage Code Blueprint as a foundation	October 1998	STAWRS ESC
A08.3	Simplify Form W-2 reporting	August 1997	IRS, SSA
A08.4	Increase cost effective electronic transmission of Forms W-2	----	STAWRS ESC
A084A	Add ten employers to the Electronic Data Interchange pilot project	February 1998	STAWRS ESC
A08.5	Provide for single point electronic filing of forms	Tax Year 2000	STAWRS ESC, GITSB
A09: Support International Trade With Better Data, Available Faster			
A09.1	Use the North American Trade Automation Pilot to validate the International Trade Data System concept	September 1997	International Trade Data System Board of Directors

APPENDIX B

A09.2 Eliminate unnecessary reporting	----	----
A09.2A Determine federal governmentwide international trade data requirements	June 1997	International Trade Data System Board of Directors
A09.3 Develop and execute an implementation plan	June 1998	International Trade Data System Board of Directors
A10: Create Electronic Export Assistance Centers		
A10.1 Build a Virtual Export Assistance Center	----	----
A10.1A Establish an interagency team to design and implement the technical architecture for the International Trade Toolkit	March 1997	GITSB
A10.2 Develop a tool to increase access to trade finance information and services, as part of the International Trade Toolkit	----	Development Team
A10.3 Establish a test plan and a nationwide rollout schedule for the International Trade Toolkit	----	----
A10.3A Establish a test plan and rollout schedule	April 1997	Development Team
A10.3B Develop and demonstrate a prototype system	July 1997	Development Team
A11: Use Electronic Commerce To Streamline Government Business Processes		
A11.1 Develop standard trading partner data	November 1997	Electronic Processes Initiatives Committee
A11.2 Update the Electronic Commerce action plan	November 1997	Electronic Processes Initiatives Committee
A11.3 Continue the momentum in procurement and payments	----	Electronic Processes Initiatives Committee
A11.4 Build a consolidated electronic federal grants application system	----	----
A11.4A Establish an interagency working group to expand the U.S. Electronic Grant Project	April 1997	GITSB
A11.4B Make the application module available for testing	October 1998	----

ACCESS AMERICA

A12: Expand The Intergovernmental Information Enterprise		
A12.1 Coordinate intergovernmental efforts to prepare information technology systems to operate in the Year 2000	----	----
A12.1A Prepare an intergovernmental action plan	----	CIO Council, IEP, NASIRE
A12.1B Share information on the Year 2000 home page with state and local agencies	----	IEP
A12.1C Make schedules of Year 2000 compliant products available for state and local government use	----	IEP, GSA
A12.2 Establish a strategic plan with specific actions to develop additional intergovernmental information technology opportunities further	July 1997	IEP
A12.3 Obtain action plan buy-in from the three levels of government	August 1997	IEP
A12.4 Prioritize projects and identify barriers that must be overcome to ensure success	October 1997	IEP
A13: Improve the Sharing of Information Technology Experience Worldwide		
A13.1 Provide a focal point for intergovernmental information sharing	----	----
A13.1A Publish an "Intergovernmental Solutions Newsletter"	June 1997	GSA
A13.1B Publish an "Intergovernmental IT Directory"	October 1997	GSA
A13.1C Plan and conduct U.S./Canada Day events	September 1997	GSA
A13.1D Respond to requests for specialized visits or information from foreign governments	----	GSA
A13.2 Support activities of the G7	----	----
A13.2A Serve as a catalyst for G7 initiatives that support the G7 Government On Line program	----	GSA
A13.2B Identify and share best practices in the federal, state, and local governments, private industry, and the international community with the G7 nations	December 1997	GSA
A14: Guarantee Privacy and Security		
A14.1 Create a privacy "champion" within the GITSB	Immediately	GITSB

A14.2 Complete the privacy work of the IITF	May 1997	IITF Information Policy Committee
A14.3 Accelerate work on digital signatures and encryption	December 1997	Federal PKI Steering Committee, IWG
A15: Integrate The Government Services Information Infrastructure		
A15.1 Establish a Government Services Information Infrastructure Coordination Office	----	----
A15.1A Establish the Coordination Office	July 1997	GITSB, CIO Council
A15.1B Define the infrastructure functional requirements	November 1997	Task Force
A15.2 Create agreements among agencies to establish an interoperable information infrastructure	December 1997	Task Force
A15.3 Implement a comprehensive, distributed directory structure	----	----
A15.3A Define requirements for a governmentwide directory	December 1997	Task Force
A15.3B Implement the governmentwide directory	July 1998	Task Force
A15.4 Define "peering points" for the different federal, state, and local infrastructures to interconnect and interoperate	December 1997	Task Force
A15.5 Improve coordination of information technology research and development activities with the work of the GITSB	March 1997	GITSB, NSTC
A16: Improve Information Technology Acquisition		
A16.1 Develop best practices for modular acquisition of standards-based open system technologies	July 1997	GITSB
A16.2 Establish a "benchmark once" approach for commercial-off-the-shelf products	October 1997	CIO Council
A16.3 Identify and publicize best practices for evaluating vendor past performance	April 1997	OFPP
A17: Increase The Productivity of Federal Employees		
A17.1 Develop an operational model of a mobile workplace	September 1997	GSA, OPM
A17.2 Develop an implementation plan and prototype for an electronic Official Personnel File system	----	----

ACCESS AMERICA

A17.2A Develop requirements for an electronic Official Personnel File system	June 1998	OPM
A17.2B Conduct a prototype test	December 1998	OPM
A17.2C Implement a fully operational electronic Official Personnel File system	June 1999	OPM
A17.3 Identify and promote intranet technologies to perform administrative functions	----	GITSB
A18: Enhance Information Technology Learning		
A18.1 Ensure a basic level of computer competence for all government employees	----	----
A18.1A Identify topics and learning objectives for computer-based tutorials	July 1997	GITSB
A18.1B Arrange for development of tutorials based on Internet/intranet technology	December 1997	GITSB
A18.2 Ensure that agencies have personnel with the ability to design and deploy advanced Internet/intranet applications	June 1997	GITSB



APPENDIX C:

STATUS OF ORIGINAL NPR INFORMATION TECHNOLOGY REENGINEERING RECOMMENDATIONS

The National Performance Review's (NPR) Reengineering Through Information Technology, September 1993 accompanying report contained 13 major recommendations. These recommendations, which are discussed in more detail in that accompanying report, consist of 47 specific action items. Of these action items, the Government Information Technology Services (GITS) Board reports that 62 percent are complete, and the other 38 percent are in progress. Following are highlights of information technology reinvention activities.

STRENGTHEN LEADERSHIP IN INFORMATION TECHNOLOGY

NPR RECOMMENDATION

IT01 PROVIDE CLEAR, STRONG LEADERSHIP TO INTEGRATE INFORMATION TECHNOLOGY INTO THE BUSINESS OF GOVERNMENT

Progress to Date

The Government Information Technology Services (GITS) Working Group was created on October 27, 1993 to implement the accompanying report recommendations. A governmentwide information technology strategic vision document was released September 1994. Executive Order 13011 was signed by President Clinton on July 16, 1996 that codified the accomplishments of the GITS Working Group and established the GITS Board to continue NPR information technology implementation and promote information technology innovation. The GITS Board has been meeting monthly since September 1996. Since its inception, GITS has been recognized as providing an environment where information resources across government can be shared, and has accelerated the development and implementation of an information technology infrastructure to make "electronic government" a reality.

ACCESS AMERICA

IMPLEMENT ELECTRONIC GOVERNMENT

NPR RECOMMENDATIONS

- IT02 IMPLEMENT NATIONWIDE, INTEGRATED ELECTRONIC BENEFIT TRANSFER
- IT03 DEVELOP INTEGRATED ELECTRONIC ACCESS TO GOVERNMENT INFORMATION AND SERVICES
- IT04 ESTABLISH A NATIONAL LAW ENFORCEMENT/PUBLIC SAFETY NETWORK
- IT05 PROVIDE INTERGOVERNMENTAL TAX FILING, REPORTING, AND PAYMENTS PROCESSING
- IT06 ESTABLISH AN INTERNATIONAL TRADE DATA SYSTEM
- IT07 CREATE A NATIONAL ENVIRONMENTAL DATA INDEX
- IT08 PLAN, DEMONSTRATE, AND PROVIDE GOVERNMENTWIDE ELECTRONIC MAIL

Progress to Date

In May 1994, Vice President Gore approved the Electronic Benefits Transfer (EBT) Task Force's report *From Paper to Electronics: Creating a Benefit Delivery System That Works Better & Costs Less — An Implementation Plan for Nationwide EBT*. The EBT Task Force report set the goal of national EBT operations by 1999. As a first step in the implementation of nationwide EBT, the EBT Task Force served as a catalyst to reinvent the way in which federal and state agencies work together in building EBT payment systems. In 1994, the Southern Alliance of States and the federal government jointly developed the requirements and core specifications of the prototype for national EBT operations. Subsequently, other multi-state alliances were formed in the Northeast, mid-Atlantic, mid-West, Mountain Plains, and Western regions, comprising more than 40 states. To date, 43 states are either operating EBT systems or have made request for proposal (RFP)/contract awards with a service vendor. The remaining states are involved in planning for EBT implementation. This will convert \$120 billion annually in paper-based benefit issuance — checks, vouchers, food stamps — to secure, streamlined electronic benefit delivery. In April 1996, the EBT Council approved the QUEST EBT Operating Rules, laying the foundation for a national, commercially compatible EBT program for all private sector participants.

The Customer Service Improvement Team (CSIT) was established by GITS in April 1994. The CSIT worked with federal government organizations to raise awareness about the advantages of using information technology to improve the provision of citizen services and to identify agency opportunities for making operational improvements by using information technology. The CSIT formed a team to identify a federal applications suite appropriate for kiosks. The U.S. Postal Service studied ways to develop and market-test an integrated electronic government service delivery kiosk system, and work is presently underway with the American Library Association to

use member libraries as pilot locations for kiosks. Separately, several "one-stop shop" government prototypes have been implemented, e.g. the Web Interactive Network of Government Services (<http://www.wings.gov>), the U.S. Business Advisor (<http://www.business.gov>), and the White House home page (<http://www.whitehouse.gov>). Additionally, the Federal Information Center (FIC) program was established to provide answers to customers' questions about the federal government. The FIC has since expanded its service to all 50 states via a single, toll-free number (1-800-688-9889). GITS has encouraged federal agencies to use FedWorld, an information service operated by the National Technical Information Service, as a distribution point for their information as a means to improve public access to information. FedWorld now disseminates information for all the Cabinet agencies and a host of other federal agencies. In addition to its normal services, FedWorld activated a Web server (<http://www.fedworld.gov>) in June 1994 that provides a government home page, with hypertext links to all known federal Web services and access to more than 400 other government databases.

In April 1994, the Secretary of Treasury and the Attorney General signed an agreement establishing the Federal Law Enforcement Wireless Users Group (FLEWUG), making it responsible for the development of a nationwide wireless telecommunications network for use by federal, state, and local law enforcement officials. A Management Plan was developed and used to obtain Congressional support and funding for the program. Funding subsequently became available in FY 1996 and the FLEWUG opened the Public Safety Wireless Network Program Management Office (PSWN-PMO). FLEWUG co-chairs and members actively participate on the governmentwide Public Safety Wireless Advisory Committee. The PSWN-PMO has also established a working relationship with the state of Iowa for the purpose of establishing a Public Safety Wireless test-bed, with other test-beds planned.

On June 9, 1995, President Bill Clinton endorsed the Simplified Tax and Wage Reporting System (STAWRS) in a ceremony at the Department of the Treasury. The Treasury Department, Internal Revenue Service (IRS), Department of Labor (DOL), and Social Security Administration (SSA), have joined as partners in this effort. Additional partnerships have been established with the states of Montana and Oregon. The Harmonized Wage Code (HWC) initiative was begun as a long-term plan that required major restructuring within the wage and unemployment insurance environment. The HWC initiative was discussed at a STAWRS Stakeholder Conference in September 1996. The Single Point Filing concept for both federal and state wage and tax information (IRS Forms W-2 and W-3, Transmittals of Income Tax Statements) has been developed. Starting in 1994, SSA began capturing certain data fields from scannable paper Forms W-2, and passing the data to the IRS, who added address information to the Form W-2 records. The records were then sorted and distributed to the Project's participating states. For Tax Year 1996, this involved approximately 49 million records to 36 participating states. The Electronic Data Interchange (EDI) Pilot Project for Form W-2 is being conducted to evaluate the technical feasibility and economic merits to both employers and government of using EDI for the electronic transmission of Form W-2, Wage and Tax Statements, to the SSA. In July 1996, STAWRS conducted its first operational field test for single point electronic filing of Form 941 (Employer's Quarterly Federal Tax Return) in the EDI format.

ACCESS AMERICA

GITS established a working group to identify the issues that must be resolved in order to provide improved database access for international trade. The working group identified the legal and statutory issues that may impede the exchange and sharing of information among agencies, the need to develop standard information for international trade, and an inventory of current automated systems in use or under development by federal trade agencies. A Board of Directors was appointed and the International Trade Data System project office was established in September 1995 by Presidential letter. The North American Trade Automation Prototype (NATAP) is a demonstration project of how the North American trade processes and systems of Mexico, the United States, and Canada could function more effectively through the use of common data elements, documents, and processes for commercial customs clearance. This system is currently being field tested in Otay Mesa, CA, with the NATAP scheduled for implementation in six U.S. sites altogether.

In response to the NPR information technology initiative that requires the federal government to "Create a National Environmental Data Index," GITS empowered a working group to identify the agencies with relevant data and to create a prototype of the National Environmental Data Index (NEDI). The prototype of the NEDI was demonstrated using the Web (<http://www.nedi.gov>) and established a distributed system which links users to agency databases, provides a high level view of the available data, and shows users what information exists.

To further a GITS initiative, the Office of Management and Budget (OMB) established an E-Mail Task Force to study the issues associated with implementing governmentwide e-mail. The task force completed its final report on April 1, 1994, presenting nine recommendations for further implementation. GSA established the E-Mail Program Management Office in September 1994, to implement the task force recommendations. GITS provided oversight of the E-Mail Program Management Office through the GITS Electronic Mail Steering Subcommittee (GEMSS), which monitors the Program Management Office activities and recommends approval of the governmentwide e-mail projects to GITS. A two-year plan was issued in March 1995.

ESTABLISH SUPPORT MECHANISMS FOR ELECTRONIC GOVERNMENT

NPR RECOMMENDATIONS

- IT09 IMPROVE GOVERNMENT'S INFORMATION INFRASTRUCTURE
- IT10 DEVELOP SYSTEMS AND MECHANISMS TO ENSURE PRIVACY AND SECURITY
- IT11 IMPROVE METHODS OF INFORMATION TECHNOLOGY ACQUISITION
- IT12 PROVIDE INCENTIVES FOR INNOVATION
- IT13 PROVIDE TRAINING AND TECHNICAL ASSISTANCE IN INFORMATION TECHNOLOGY TO FEDERAL EMPLOYEES

Progress to Date

The Government Services Information Infrastructure (GSII) provides the fundamental information technology building blocks used to support government services. The GSII plan has been developed and is available on the Internet (<http://www.er.doe.gov/production/octr/mics/gsiiplan.html>). GITS coordinated the development of the GSII as a joint partnership between government, national laboratories, and universities in coordination with the information technology industry and the nation's broader research and development initiatives. A proposal for implementation of "glue" services or functions critical to infrastructure coordination, development, and operation was developed and distributed. GITS also established a Federal Data Center Consolidation Committee and issued a report in February 1995. OMB followed with a Bulletin directing implementation guidelines. The general data center consolidation completion target date is June 1998. Additionally, a consolidation and integration of federal government private networks empowerment letter was issued in August 1994. GITS finished compiling a list of agency private networks in September 1995. In a further effort to reengineer basic systems for improved delivery of government services, GITS and the NPR sponsored a series of intranet workshops that were held between June and August of 1996.

A GITS-sponsored interagency working group was created and produced uniform privacy protection practices and generally acceptable implementation methods for information systems. After conducting two public hearings, a final privacy protection practices and methods report was published in June 1995. The National Institute of Standards and Technology (NIST) has developed digital signature and encryption capabilities. NIST distributed the Secure Hash (FIPS 180) and Digital Signature (FIPS 186) Standards, the Data Encryption Standard (FIPS 46), and the Key Escrow Standard (FIPS 185), which were approved by the Secretary of Commerce. Additionally, NIST drafted generally accepted principles and practices for information security. The final document was published as NIST Special Publication 800-14, "Generally Accepted Principles and Practices for Securing Information Technology Systems" in September 1996 and is available on the Internet at the Computer Security Resource Clearinghouse that was sponsored by GITS and contains alert databases, industry software patch information, technical journals, advisories, and general reference materials (<http://www.csrc.nist.gov>).

Consistent with the original NPR recommendation, OMB Circular A-130, Appendix III entitled "*Security of Federal Automated Information*" was published in final form on February 20, 1996. The new Appendix III addresses information security in strategic planning, Federal Managers Financial Integrity Act reporting, awareness training, contingency planning, and emergency response capabilities. The Director of the National Security Agency has evaluated classification and safeguard practices for the purposes of improving security within rapidly changing technological and threat environments. The National Communications System, working with the National Security Telecommunications Advisory Committee, drafted proposed amendments to current telecommunications legislation designed to improve public switched network (PSN) security, sponsored numerous forums for the exchange of network security information, and published studies in the areas of network analysis and threats to the PSN. The Information Security Oversight Office established the National Industry Security Program Policy Advisory Committee to examine cost reduction and redundant requirements in the protection of classified information. In addition, the Deputy Secretary of Defense approved the National Industrial

ACCESS AMERICA

Security Program Operating Manual in October 1994, that outlines procedures used to protect classified special access program information and activities.

GITS established a computer and network security research and development coordination team under the Federal Networking Council in June 1994. Referred to as the Collaborations in Internet Security (CIS), the CIS has established testbeds at several federal agencies that address public key infrastructures, Kerberos, advanced authentication, incident response, Fortezza, National Voluntary Laboratories, digital signatures, privacy, secure Web technologies, and secure messaging. The Federal Networking Council released the first volume of the Draft Internet Security Plan in the latter part of 1995. A workshop was held in May 1996, to coordinate and obtain information for the second volume of the Internet Security Plan. The plan is available on the Internet (<http://www.fnc.gov>).

The delegation of authority level for purchases by federal agencies was increased in June 1995. Interim rules were revised to further increase delegation thresholds with the passage of the Information Technology Management Reform Act of 1996. The heads of ten major agencies have signed pledges to expand use of commercial credit cards. The GSA Advantage! electronic ordering and payment system has been implemented and is accepting payment via IMPAC. Agency heads have directed the use of IMPAC for small purchases. The burdensome Maximum Order Limitations have been removed. Now agency orders under \$2,500 can be placed with the vendor of choice. The Electronic Commerce Acquisition Program Management Office was established and reports of its activities were issued. The Federal Acquisition Computer Network (FACNet) became operational January 1995, with Central Contractor Registration system capability available the fall of 1995.

The FY 1996 budget guidance from the OMB addressed performance measures to identify agency information technology savings for reinvestment. A new section 15.2(a) (5) in the FY 1996 version of OMB Circular A-11 addresses information technology driven savings from reengineering. In May 1994, the Office of Federal Procurement Policy initiated a governmentwide pilot project concerning performance-based service contracting. GSA has signed a pledge to conduct performance-based service contracting for information technology. Work at OMB is ongoing with agencies to prepare and justify multi-year funding for information technology projects, with OMB Circular A-11 including supporting language. Major agency bureaus that have multi-year funding include the Internal Revenue Service, Department of Veterans Affairs, and the Federal Aviation Administration. Lastly, the Interagency Management Council for FTS2000 and GITS are co-sponsors of a pilot program to seed innovative multi-agency information technology projects. Ongoing funding for these projects is being provided from the current Information Technology fund. In FY 1995, there was one call for proposals in October 1994, with 13 projects selected for funding at a total of \$5,015,000. In FY 1996, there were two calls for proposals, in October 1995 and March 1996, with 11 projects selected for funding at a total of \$6,215,000.

A study including participant interviews was conducted to determine the training needs of non-technical senior political appointees and career senior executives. A paper covering the findings of the study has been published. An education workshop was held at the National Institute of Standards and Technology March 25-26, 1995. The Office of Personnel Management has

published new Executive Core Qualifications that reflect information technology requirements. A draft *Guide to SES Qualifications* has been written containing information technology competencies. Resource requirements to establish an Information Resources Management Institute based on the concept of a virtual university have been identified. A guidance document for information technology training, *IT Training — Vital for Enhanced Productivity and Quality Services to the Public*, was published in October 1994. Further, agencies have been advised to include information technology training components in all information technology contracts.

APPENDIX D: ABBREVIATIONS

ABAG	Association of Bay Area Governments
ACH	Automated Clearing House
AI	Artificial Intelligence
ARPA	Advanced Research Projects Agency
ATM	Automated Teller Machine
AZ	Arizona
BEA	Bureau of Economic Analysis
BIA	Bureau of Indian Affairs
CA	California
CENR	Committee on Environment and Natural Resources
CIO	Chief Information Officer
COE	Common Operating Environment
COTS	Commercial-off-the-shelf
DC	District of Columbia
DCL	Dedicated Commuter Lane
DEA	Drug Enforcement Agency
DHHS	Department of Health and Human Services
DOD	Department of Defense
EBT	Electronic Benefits Transfer
EC	Electronic Commerce
ECQ	Executive Core Qualifications
EDI	Electronic Data Interchange
EFT	Electronic Funds Transfer
EPA	Environmental Protection Agency
ESC	Executive Steering Committee
FAA	Federal Aviation Administration
FACNet	Federal Acquisition Computer Network
FAFSA	Free Application for Federal Student Aid
FBI	Federal Bureau of Investigation
FEB	Federal Executive Board
FedCIRC	Federal Computer Incident Response Capability
FEMA	Federal Emergency Management Agency
FGDC	Federal Geographic Data Committee

ACCESS AMERICA

FinCEN	Financial Crimes Enforcement Network
FIPS	Federal Information Processing Standard
FLEWUG	Federal Law Enforcement Wireless Users Group
FMS	Financial Management Service
FNC	Federal Networking Council
FTS2000	Federal Telecommunications Service 2000
FWTS	Federal Wireless Telecommunications Service
FY	Fiscal Year
GII	Global Information Infrastructure
GILS	Government Information Locator Service
GITS	Government Information Technology Services
GITSB	Government Information Technology Services Board
GOL	Government On-line
GSA	General Services Administration
GSII	Government Services Information Infrastructure
HUD	Department of Housing and Urban Development
HWG	Harmonized Wage Code
IEP	Intergovernmental Enterprise Panel
IITF	Information Infrastructure Task Force
IRM	Information Resources Management
IRS	Internal Revenue Service
IT	Information Technology
ITIS	Interagency Taxonomic Information System
ITMRA	Information Technology Management Reform Act
IWG	Interagency Working Group
MAGIC	Merced Automated Global Information System
MAGNet	Massachusetts Access to Government Network
MI	Michigan
NAFTA	North American Free Trade Agreement
NASIRE	National Association of State Information Resource Executives
NATAP	North American Trade Automation Prototype
NBII	National Biological Information Infrastructure
NCIC	National Crime Information Center
NCS	National Communications System
NEDI	National Environmental Data Index
NII	National Information Infrastructure
NIST	National Institute of Science and Technology
NLETS	National Law Enforcement Telecommunications System
NPR	National Performance Review
NPS	National Park Service
NSA	National Security Agency
NSC	National Security Council
NSDI	National Spatial Data Infrastructure
NSTC	National Science and Technology Council
NTIA	National Telecommunications and Information Administration

NTIS	National Technical Information Service
NY	New York
OCC	Office of the Comptroller of the Currency
OECD	Organization for Economic Cooperation and Development
OMB	Office of Management and Budget
OPM	Office of Personnel Management
OSTP	Office of Science and Technology Policy
PC	Personal Computer
PEBES	Personal Earnings and Benefit Estimate Statement
PKI	Public Key Infrastructure
PMC	President's Management Council
PMO	Program Management Office
PSN	Public Switched Network
PSWAC	Public Safety Wireless Advisory Committee
R&D	Research and Development
RFP	Request for Proposal
SARS	Suspicious Activity Reporting System
SBA	Small Business Administration
SES	Senior Executive Service
SPF	Single Point of Filing
SSA	Social Security Administration
STAWRS	Simplified Tax and Wage Reporting System
TX	Texas
US	United States
USAID	United States Agency for International Development
USBA	United States Business Advisor
USDA	United States Department of Agriculture
USEAC	United States Export Assistance Center
USGS	United States Geological Survey
USPS	United States Postal Service
VA	Department of Veterans Affairs
WIC	Women, Infants, and Children
WINGS	Web Interactive Network of Government Services
WWW	World Wide Web