

NEWS RELEASE

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Information Technologies Promise to Make Government More Efficient and Responsive -- Enormous and Wide-Ranging Research Challenges Remain

Albany, NY - The "digital revolution" has equipped New York City police officers with access to precinct-by-precinct information on crime. Advanced technologies allow the state of Texas to use "neural nets" to detect patterns of potential fraud in Medicaid data. The Internal Revenue Service's "e-file" and "Telefile" permit taxpayers to file returns electronically, using only a telephone or a modem.

The potential for information technologies to make governments at all levels more efficient and more responsive to citizens already has been demonstrated. But enormous research challenges in a host of fields - from telecommunications to political science - remain to be met if the lessons of small-scale "digital government" projects are to be widely applied, according to *Some Assembly Required: Building a Digital Government for the 21st Century*, a report funded by the National Science Foundation (NSF).

"We can already see the transformational potential of digital communications and other advanced technologies in relatively rare government applications," said Sharon S. Dawes, director of the Center for Technology in Government (CTG) at the University at Albany/State University of New York and the report's lead author. But, she added that "advanced computing and communications make programs like these technically feasible, but alone they are insufficient for achieving the kinds of services that the public demands and deserves." The Center works with government, corporate, and academic partners to pursue new ways of applying computing and communications technologies to the practical problems of information management and service delivery in the public sector.

Lawrence E. Brandt, who oversees the new Digital Government Program in NSF's Computer and Information Sciences and Engineering directorate, said the report provides a perspective on the kinds of research that will need to be carried out to harness digital technologies to serve the complex web of federal, state, and local agencies, public-private partnerships, and private sector companies that serve citizens.

The report reflects the advice of dozens of researchers in the fields of information, social, behavioral, and computer science who attended a CTG workshop last fall. "This was an interesting mix of consumers and creators of these technologies," Brandt noted. The diversity of disciplines reflects the complex nature of the problems that will have to be overcome to make government databases operate together to be useful to a broad range of users, which is only one challenge of creating an effective "digital government." Such undertakings require expertise in fields as different as the mathematics of database management, the psychology of computer-interface design, and the politics of interorganizational collaboration.

As part of its Information Technology for the Twenty-First Century (IT2) Initiative, the Clinton Administration has asked the Congress to allow NSF to spend \$146 million in fiscal 2000 to conduct fundamental technology research. Some fraction of that money would be spent on multidisciplinary research in areas such as digital government. The six major recommendations contained in the report, Brandt said, will help NSF to devise criteria for judging which proposals have high research merit and are most likely to help improve the efficiency and responsiveness of governments from local city halls to Washington D.C.

The "Some Assembly Required: Building a Digital Government for the 21st Century" report urges NSF to:

1. support research at all levels of government and between the public and private sectors,
2. investigate issues of governance and democratic processes in the digital age,
3. develop methods that address service integration and environmental complexity,
4. seek innovative funding models for Digital Government initiatives,
5. link research and practice to unite academic and government innovations projects, and
6. include government program managers in the research selection process through a practitioner advisory group and roles on review panels.

