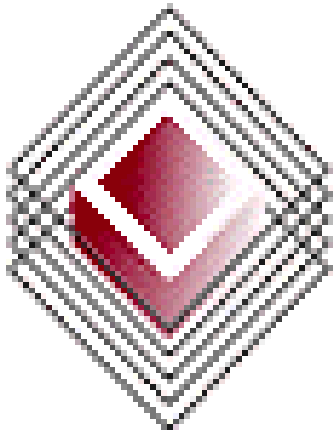
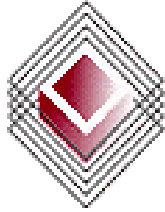


# **Center for Technology in Government**



**1995 Annual Report  
Partnership for Results**



# Center for Technology in Government

The Center for Technology in Government (CTG) was founded on the premise that the public, private, and academic sectors together can achieve an improvement in government programs that none of them could achieve alone. In the past year, this partnership for innovation has reached a level of performance and maturity beyond our expectations. Over thirty state and local agencies were involved in the Center's program. They were joined by nearly forty corporate contributors, faculty and students from six academic units at the University at Albany, plus researchers from other institutions of higher education. Together, our partners have more than tripled the dollar value of the Center's direct state appropriation. But more important, they have enhanced the quality and multiplied the learning value of every CTG project.

Each project partnership strives to improve the way government serves the public. Our projects analyze program goals, clients, and processes; produce first-hand knowledge of how technology can improve operations; and identify the organizational, policy, and technical factors that will spell the difference between success and failure.

In this year's project portfolio, you will find valuable lessons about customer service, process improvements, cost and performance measures, technology choices-and partnerships. We are proud of our achievements, our partners, and our results and invite you to join us in the year ahead.

Sharon S. Dawes  
Director  
June 1995

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*The past year brought new and strengthened partnerships to the Center. Our focus on mission-critical public problems generated results that will improve specific services and general lessons that can be used throughout the government.*

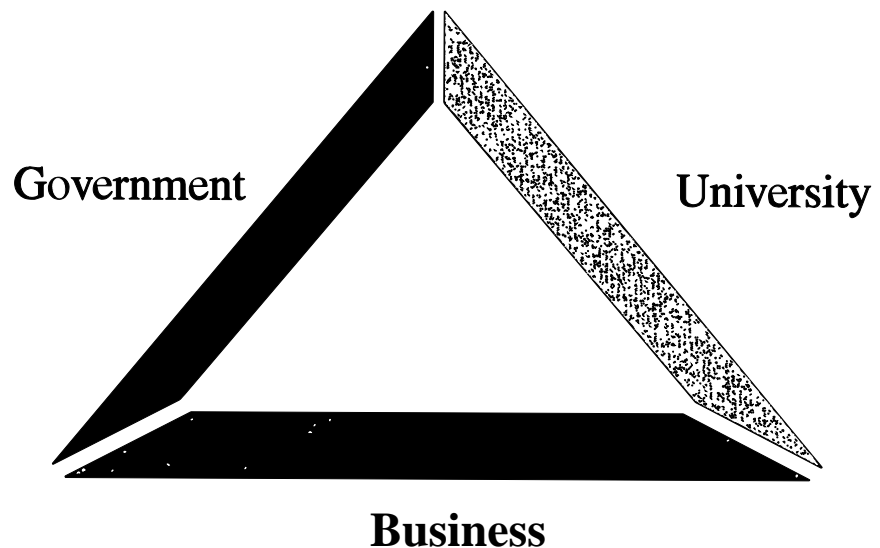
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## *Building Partnerships . . .*

New corporate, agency, and academic partners increased the variety, value, and versatility of the Center's human and technical resources. During 1994-95, twelve new corporate partners joined the two dozen technology companies already on our roster. New partners included: Allied Telesyn, Applied GIS, Aule-Tek Inc., Blue Moon Training, Documentation Strategies, Environmental Systems Research Institute, Excalibur Technologies Corporation, Executive Systems Planning, Full Circle Communications, Oracle Corporation, RealTech and Xyplex. In addition, many existing partners extended or expanded their contributions to our projects and laboratory.

We began working with new agencies this year, including the Department of Environmental Conservation, the State Archives and Records Administration, the Erie County Water Authority, and several other local governments.

University at Albany faculty and students have been key players since the beginning. They were joined this year by researchers from the National Center for Geographic Information and Analysis at the University at Buffalo and advisors from several other institutions of higher learning.



## *... Solving Problems ...*

At its heart, CTG is about solving important public problems. Our projects this year produced valuable results for business entrepreneurs, land owners and developers, users and producers of spatial data, citizens corresponding with government agencies, and agencies themselves.

Our project with the Business Permits Program, for example, is supporting major reforms in the way New York State deals with the business community.

The Adirondack Park Agency project showed how response time to most customer inquiries can be reduced from weeks to hours.

Our GIS Cooperative project is paving the way for agencies, businesses and individuals to share valuable (and expensive) land-related information.



## *... Sharing Results*

Communicating the progress and results of our projects increases understanding of how computer and communications technology can improve service to the public. The Center sponsored or participated in a wide variety of events in 1994-95 designed to share the knowledge gained through our work. More than 300 people representing over 120 agencies, associations, and private companies attended CTG prototype demonstrations. Our project reports, evaluation studies and other working papers were shared with over 2,000 readers around the country.

The Center also sponsored two formal seminars focused on Information Technology (M use in the public sector. The first, called "Information, Technology & Government," gave our corporate partners an opportunity to explore the demands, limitations, and processes which characterize public information management. The second, "Making Smart IT Choices' " reviewed our emerging research and evaluation strategies and the lessons they have taught us about making effective IT business decisions in the public sector.

We also presented CTG projects at the National Governors' Association Annual Meeting in Boston, at Interchange '94/GovCom in Washington, and at national conferences in San Francisco, Austin, and Albany.

# Solving Mission-Critical Public Problems

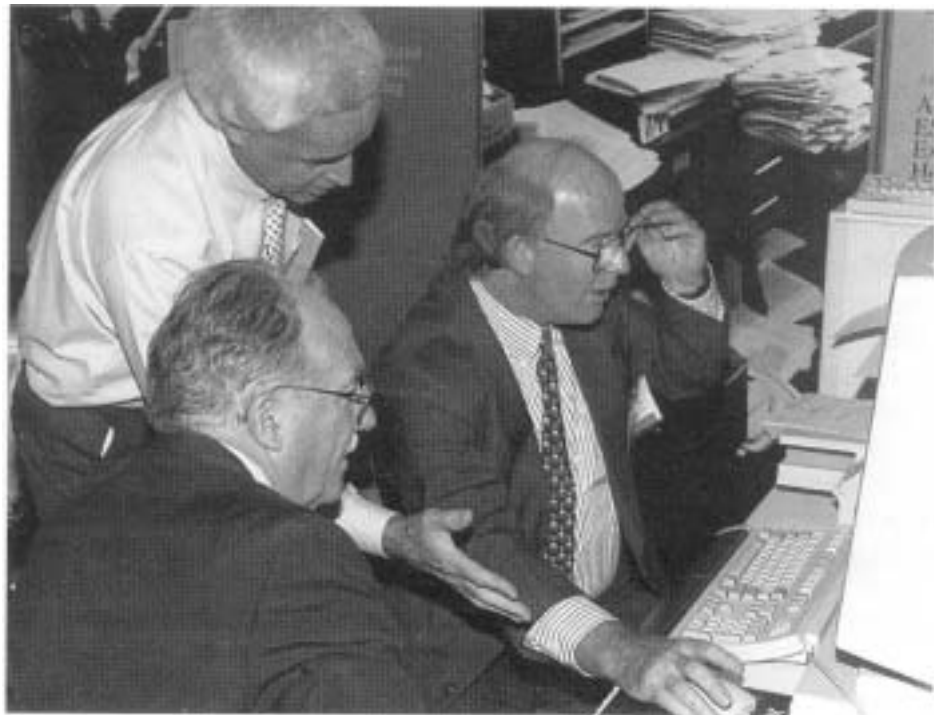
## **Adirondack Park Agency:**

### **Balancing Economic Vitality and Environmental Quality**

Managing environmental data and land records for the state's six million acre Adirondack Park is a huge undertaking for a small agency. Yet, every day staff at the Adirondack Park Agency (A.P.A) weigh into thousands of maps, photographs, and legal documents relating to real property in order to act on requests for land use and development in the Park. Seeking to improve customer service and reduce costs, APA worked with the Center, several corporations, and University at Albany professors and students to design and build a prototype rapid document and map retrieval system.

Using a Geographic Information System and document imaging technologies, the project partners created an "electronic reference desk" that combined map, document, and database information in an easy to use integrated system.

The project evaluation included on-site use of the prototype followed by user surveys, interviews, and a cost-performance modeling conference. The evaluation showed how a new integrated system and revised work processes could reduce response time by 95% for nearly three quarters of APA's customer inquiries. The project helped the agency devise a cost---\_ effective data development strategy that will make best use of existing records and it enhanced APA's data-sharing and working relationships with the local governments which share responsibility for land use in the park. The project also produced general lessons about spatial data modelling, converting document and microform data into digital form, and using prototypes as education and design tools.



#### **Project Partners**

##### **Corporations**

Computer Sciences  
Corporation  
Hewlett-Packard  
Environmental Systems  
Research Institute  
Excalibur, Inc.  
NYNEX  
Xyplex

##### **Academic Programs**

Computer Science  
Geography & Planning  
Information Science  
Public Administration &  
Policy

## **Office for Regulatory and Management Assistance: Help With Business Permits**

Since its inception, the Permit Assistance Program at the Governor's Office for Regulatory Reform (formerly the Office for Regulatory and Management Assistance, ORNLA) has responded to more than a quarter million inquiries about the wide array of permits required to conduct business in New York State. Two years ago, faced with increasing demand and decreasing funding, ORMA turned to the Center for help in finding a solution which would



improve customer service. Within CTG, project partners investigated the range of available advanced voice information and response technologies and prototyped an integrated voice response solution that would offer customers faster and more consistent service.

During the project, agency staff learned how to achieve a higher return on investment by automating only the most routine and most numerous inquiries. They also developed an appreciation for the complicated dynamic links among call volume, lines, ports, staff, and software that will continue to shape their ability to deliver high quality services. Working with corporate partner Precision Systems, Inc., agency staff also learned how advanced software development tools can help reduce labor costs associated with modifying the application to accommodate frequent changes in regulatory content.

The voice response technologies demonstrated through this project showed how the Business Permits Program can increase customer contacts, provide faster responses, offer greater availability of services, improve client satisfaction, lower operating costs, and provide a higher and more consistent quality of service. The project also produced indicators of interest to state policy makers as they seek to make New York State a more hospitable environment for business. These indicators suggested ways to create customized services and opportunities to redesign separate regulatory requirements into more efficient, customer-oriented one-stop services.

**Project Partners**  
**Corporations**  
Precision Systems, Inc.  
**Academic Programs**  
Public Administration &  
Policy  
Information Science

**Project Partners**  
Corporations  
Executive Systems  
Planning, Inc.  
Lotus Development  
Corporation  
WordPerfect  
Corporation  
  
Academic Programs  
Information Science  
Public Administration &  
Policy  
University of Budapest

## **Groupware Testbed: Technologies to Support Work Flow, Meetings, and Collaboration**

In recent years, both government and business have been adopting team-based organizations and making work assignments organized around complete service or administrative processes. Since nearly every service follows an implicit order of action steps and information flow, government agencies have become increasingly interested in technologies to support group functioning and process-oriented operations. The Center's Groupware Testbed investigated several new technologies that support work groups and teams.

Two prototype applications were completed, one to manage executive correspondence at the Office of the State Comptroller (OSC) and another to assist collaborative work between the Center and the Forum for Information Resource Management. The OSC project produced a prototype application after less than a month of design work and only two weeks of development. Two months later, the agency fully implemented a new correspondence tracking system - nine months ahead of schedule. A third project, with the NYS Thruway Authority, completed all design work for a system to support customer services in its MIS division and prepared the agency to begin system development on its own. The Center also tested a network-based "anytime, anyplace" meeting support tool developed at the University of Budapest. The test demonstrated how such software can be used to reduce the cost and improve the outcome of certain kinds of meetings

Groupware as a category of technology covers a broad range of tools and uses. Some groupware tools are far more sophisticated than others. Some work well within a narrow range of applications like an organizational meeting, others are designed to support organization-wide computing. The Testbed showed that effective use of any particular tool requires a full understanding of the capabilities and limitations of the product, the organizational needs it will address, and the degree of organizational and technical support which is required to use it effectively. Most importantly, the project showed the critical link between organizational processes and the introduction of groupware technology. Project participants learned that groupware demands changes in the way individuals work and careful analysis of the business processes that link different parts of an organization.





## *Building Lasting Knowledge From Project Results*

The Center operates in an open, public environment, so that government as a whole can benefit from the activities of small project teams. Every project is fully documented in working papers, technical notes, and formal reports, all disseminated widely and readily available to any interested organization or individual. The Center's Internet site provides users with national and international access to our work products. Public demonstrations present the results of every project to large groups of public officials, nonprofit agencies, and private sector companies. Moreover, since projects are selected partly because they represent "classes" of issues, results can be generalized beyond the specifics of a given situation. The formal evaluation which is a part of every project therefore contributes to more general frameworks and guidelines for applying information technology to other significant public problems.

This past year the Center released three final project reports and associated research papers, sponsored two public demonstrations of prototype systems, and conducted two educational seminars on IT management and evaluation.

### ***Project Reports***

- Title Imaging at DMV
- Groupware Technology Testbed
- Voice Response System for Business Permits

### ***Public Demonstrations***

- Business Permits Voice Response System
- Document & Map Retrieval System

### ***Executive Seminars***

- "Information, Technology & Government"
- "Making Smart IT Choices"

### ***Internet Access***

- Email- [info@ctg.albany.edu](mailto:info@ctg.albany.edu)
- World Wide Web - <http://www.ctg.albany.edu>



## *Work in Progress*

### **Psychiatric Assessments in Emergency Rooms**

The Center is working on a computer-assisted decision model for psychiatric assessments in emergency rooms. This project is linked to ongoing efforts to improve psychiatric care in New York State. Over 100,000 people receive emergency psychiatric services in the state each year, yet research shows substantial variability of decisions to refer patients for full psychiatric assessment, admit them to inpatient care, or release them to the community. The NYS Office of Mental Health, the University's Center for Policy Research, and a panel of expert clinicians are working with CTG to develop and test a prototype decision model to help general hospital emergency personnel collect the key information needed to avoid inappropriate admissions and discharges, reduce errors, and improve the use of hospital resources.

### **Statewide GIS Cooperative**

The Center is working with the NYS Department of Environmental Conservation and a variety of other agencies in a collaborative effort to design, develop, use, and evaluate a prototype geospatial data resource for New York State. The project involves state agencies, local governments including the Erie County Water Authority, private and non-profit corporations, and several universities including the National Center for Geographic Information and Analysis at the University at Buffalo.

Nearly every state agency and all local governments rely on spatial data to support at least a portion of their public service programs. Since the single largest cost of geographic information systems is the collection and creation of digital spatial data, and since many spatial data sets can be used by many different applications, this project focuses on tools and policies for information sharing. The project will produce a prototype metadata repository accessible over the Internet, an inventory of spatial data resources around the state, and a set of policy and management recommendations for an ongoing data cooperative.

### **Small Business Assistance**

Improving the business climate in New York State is a top gubernatorial priority. Our newest project, developed at the request of the Governor, has two main goals: to identify and link a wide range of existing and new on-line information services that can support the needs of small businesses, and to empower business operators and new entrepreneurs with both easy access to these resources and with education in their effective use. In order to achieve these goals, the project will design, prototype, and evaluate telecommunications and information services to assist small businesses through a variety of access channels, including public libraries, community colleges, and network service providers. A formal evaluation will address the policy, management, cost, customer service, and technology deployment issues which will circumscribe eventual statewide implementation.

### **Internet Testbed**

CTG's second technology testbed is focused on Internet-based public services. The Internet has become an increasingly important means of communication, both as a way to disseminate information and as a vehicle for conducting business transactions. Several New York agencies have used the Internet for years, but for most it is a new and unexplored technology. This four-part testbed project involves a variety of government agencies and their customers. The project is exploring network service design decisions, tools for designing and accessing network-based services, prototypes of one-way information dissemination applications, and prototypes of interactive applications.<sup>8</sup>

## Technology Resources in the Solutions Laboratory

With the help of our corporate partners, the Center continued to expand the variety of technologies available in the Solutions Laboratory. These include additional hardware and software options for developing prototype systems. In addition, reflecting the fact that many projects involve partners that are geographically dispersed, the communications facilities in the laboratory have enabled us to create "virtual laboratories" so that project participants can contribute to project activities from their home locations. For example, communications equipment provided by the University, NYNEX, and Xyplex Corporation enabled partners at the Adirondack Park Agency in Ray Brook, NY and Computer Sciences Corporation in Rockville, MD to join with CTG staff in developing the prototype in the APA project.

The Solutions Laboratory has grown with several major equipment additions over the past year. An AT&T University Equipment Donation award, received in June, will allow us to devote a complete server to project development activities. This will give us more flexibility to configure environments for specific projects, and will shelter our administrative network from the workload generated in the laboratory. Additional UNIX equipment from Hewlett-Packard and Sun Microsystems has expanded our ability to support client-server projects.

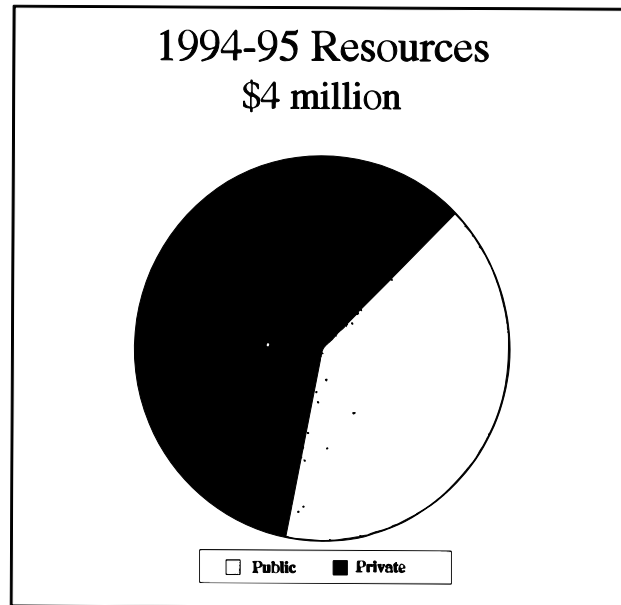


Reflecting increased government interest in the Internet, we have also expanded our network communications and server capabilities. Microsoft, Novell and others have equipped the laboratory with a full range of local area network and office automation tools. In addition, we have acquired a complete UNIX-based multi-media development environment that will support both CTG's network-based publications as well as Internet-related projects planned for the coming year.

With "this year's corporate contributions, the Solutions Laboratory has developed into a robust development environment with the solid ability to support a variety of upcoming projects.

## Partnership for Results

A combination of public, private, and university resources multiplies the value of direct state investment in CTG. The Center's state appropriation was significantly expanded by in-kind contributions from university, agency and corporate partners. Between July 1994 and June 1995, CTG spent about \$1.2 million in direct state funding, the University at Albany contributed support worth \$114,000, agencies committed more than \$315,000 in in-kind effort, and corporate sponsors contributed nearly \$2.4 million in products and services.



Within the University at Albany, faculty and students from eight different graduate programs participated in CTG projects this year: the Information Science Doctoral Program, the Departments of Political Science and Public Administration & Policy, and the Center for Policy Research (all within the Rockefeller College of Public Affairs and Policy); the Departments of Computer Science and Geography & Planning (both part of the College of Arts and Sciences); the Department of Educational Administration & Policy Studies (within the School of Education); and the Department of Management Science & Information Systems (in the School of Business). Nationally known researchers from the University at Buffalo are working with us on the GIS Cooperative Project. In addition, we have benefited from the advice and support of the SUNY College of Environmental Science and Forestry at Syracuse, Hunter College of CLTNY, and Hudson Valley Community College.

Corporate contributions of hardware, software, and consulting services have continued to give our projects the benefit of state-of-the-art technologies. The value of these resources more than matches the dollar value of total state spending on CTG.

## Value of In-Kind Corporate Contributions July 1993 to June 1995

Corporate Partner	Fiscal Year 93-94	Fiscal Year 94-95	TOTAL
Allied Telesyn International .....	\$ 2,915	\$ 2,915	\$ 2,915
Anixter .....	\$ 3,832	\$ 3,832	\$ 3,832
Applied GIS, Inc .....	\$ 7,200	\$ 7,200	\$ 7,200
AT&T .....	\$ 115,100	\$ 115,100	\$ 115,000
Aule-Tek, Inc.....	\$ 600	\$ 600	\$ 600
Blue Moon Training Systems .....	\$ 3,200	\$ 3,200	\$ 3,200
Borland .....	\$ 8,335	\$ 8,335	\$ 8,335
Computer Sciences Corp .....	\$ 52,500	\$ 32,000	\$ 84,500
Digital Equipment Corp.....	\$ 75,500	\$ 26,340	\$ 101,840
Documentation Strategies.....	\$ 2,800	\$ 2,800	\$ 2,800
Environmental Systems			
Research Institute.....	\$ 2,990	\$ 2,990	\$ 2,990
Excalibur Technologies Corp .....	\$ 44,750	\$ 44,750	\$ 44,750
Executive Systems Planning.....	\$ 3,820	\$ 3,820	\$ 3,820
Full Circle Communications.....	\$ 1,800	\$ 1,800	\$ 1,800
Hewlett-Packard .....	\$ 215,258	\$ 35,000	\$ 250,258
IBM.....	\$ 29,000	\$ 29,000	\$ 29,000
Kirby Marketing .....	\$ 1,550	\$ 1,550	\$ 1,550
Lotus Development Corp.....	\$ 7,035	\$ 9,000	\$ 16,035
Microsoft Corp .....	\$ 29,190	\$ 1,822,100	\$ 1,851,290
Novell, Inc .....	\$ 51,126	\$ 7,000	\$ 58,126
NYNEX .....	\$ 839	\$ 3,000	\$ 3,839
Oracle .....	\$ 39,400	\$ 39,400	\$ 39,400
Panduit Sales Corp .....	\$ 450	\$ 450	\$ 450
Precision Systems .....	\$ 99,666	\$ 90,406	\$ 190,072
RealTech.....	\$ 240	\$ 240	\$ 240
Silicon Graphics .....	2,463	2,463	\$ 2,463
Sun Microsystems .....	\$ 15,000	\$ 114,320	\$ 129,320
SynOptics .....	\$ 56,725	\$ 56,725	\$ 56,725
WordPerfect Corp.....	\$ 21,355	\$ 21,355	\$ 21,355
Xerox .....	\$ 16,055	\$ 16,055	\$ 16,055
Xyplex .....	\$ 11,880	\$ 11,880	\$ 11,880
<b>Total.....</b>	<b>\$ 683,416</b>	<b>\$ 2,375,761</b>	<b>\$ 3,059,177</b>

## Awards and Recognition

### **National Association of State Information Resource Executives**

In September 1994, the Center was named the top information policy and management initiative in the 50 states by the National Association of State Information Resource Executives. The selection was made by a committee of state executives on the basis of four criteria: significant improvement in government operations; benefits to clients, taxpayers, agency or state; return on investment; and feasibility of use by other governments.

### **Interchange '94**

The Adirondack Park Agency project was selected by Interchange '94, a federal-state-local consortium, as one of ten national prototypes which represent the customer focus, quality management, and intergovernmental cooperation principles of the National Performance Review.

### **AT&T University Equipment Donation**

In the Spring of 1995, the Center was awarded a \$ 1 00,000 AT&T University Equipment Donation Program grant that includes a server, 20 multi-media workstations, network equipment and associated software. This competitive program is designed to support the best application of AT&T technology in higher education.

### **Public Recognition**

The Center was also chosen as one of thirty finalists for an *Innovations '95* award, co-sponsored by the Ford Foundation and the John E Kennedy School of Government of Harvard University. CTG was cited in *American City & County*, *Approved Rural Features*, *Empire State Report*, *Governing*, *Government Technology* and other national publications.



# Center for Technology in Government

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Sharon Dawes

## Team Leaders

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Sally Goodall, Operations

Theresa Pardo, Innovations Projects

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Rebecca Tants

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Salvatore Belardo, *Management Science & Information Systems*

Anthony Cresswell, *Educational Administration & Policy Studies*

Jeryl Mumpower, *Center for Policy Research*

John Rohrbaugh, *Public Administration & Policy*

Sandor Schuman, *Public Administration & Policy*

Thomas Stewart, *Center for Policy Research*

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David Filbert, *Political Science*

Robert Dean, *Center for Policy Research*

Mark Giguere, *Information Science*

Maurice Green, *Information Science*

Antoine Hanison, *Information Science*

Stephen Hyde, *Public Administration & Policy*

Paul Husek, *Computer Science*

Fazal Eahi, *Computer Science*

Soonhee Kim, *Public Administration & Policy*

Denise Miceli, *Business Administration*

Anne Miller, *Geography & Planning*

Tiara Miller, *African Studies*

Mohammad Mojtahedzadeh, *Public Administration & Policy*

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Mark Nelson, *Information Science*

Eliot Rich, *Information Science*

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