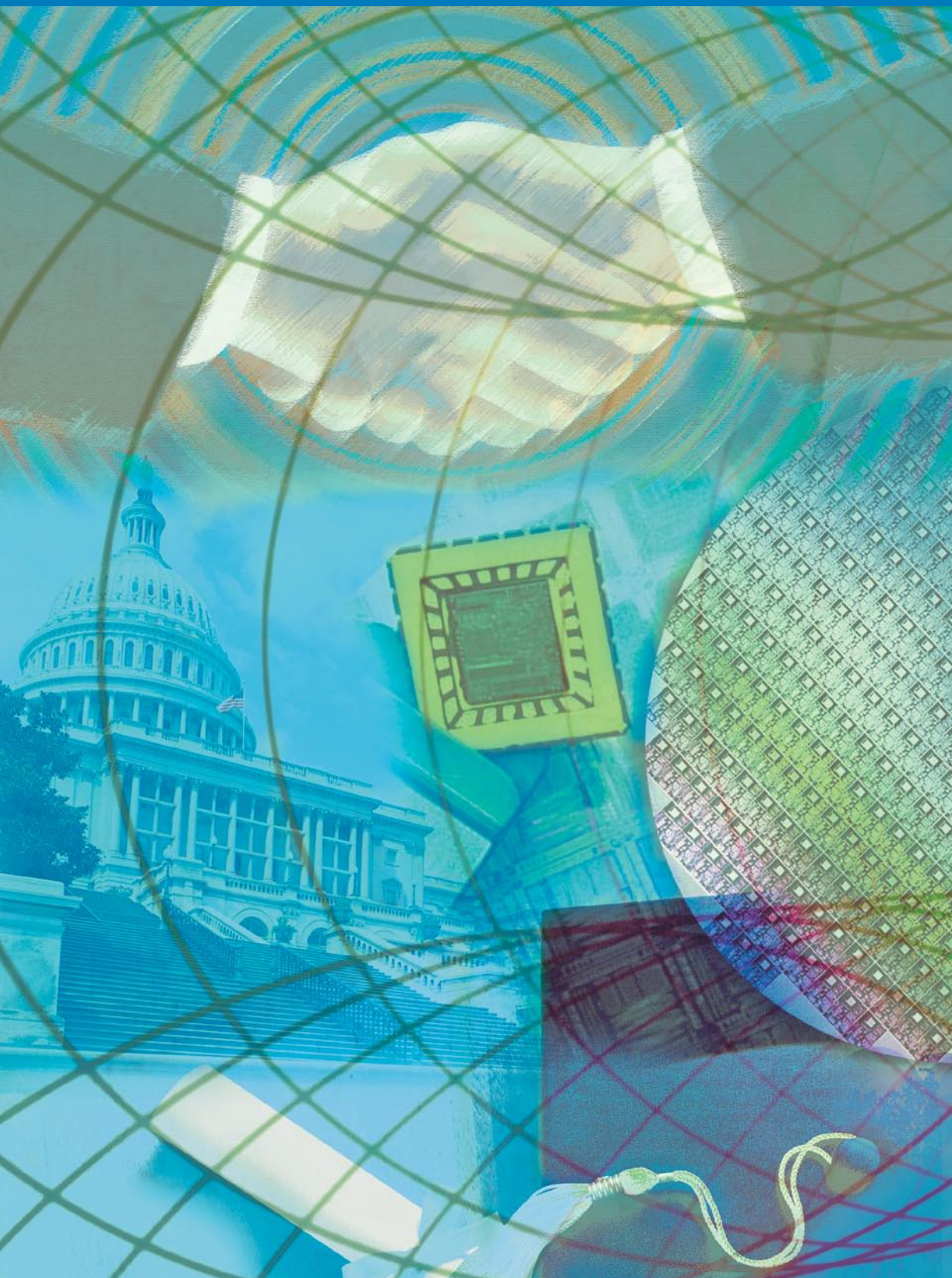
THE GOVERNMENT-UNIVERSITY-INDUSTRY
RESEARCH ROUNDTABLE

NATIONAL ACADEMY OF SCIENCES
NATIONAL ACADEMY OF ENGINEERING
INSTITUTE OF MEDICINE

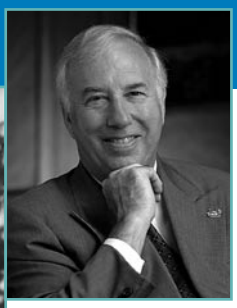
500 FIFTH STREET, N.W., WASHINGTON, DC 20001

ANNUAL REPORT 2008



MESSAGE FROM THE CO-CHAIRS

Lydia Thomas



C.D. (Dan) Mote, Jr.

The Government-University-Industry Research Roundtable (GUIRR) was created in 1984 "to convene senior-most representatives from government, universities and industry to define and explore critical issues related to the national and global science and technology agenda." Within GUIRR representatives from government, universities and industry organize themselves into flexible action-oriented teams that can quickly catalyze high level Government-University-Industry cooperation on issues of national importance. GUIIRR holds three formal meetings each year and working groups on crosscutting national issues to identify action for members of the Roundtable.

Two semi-autonomous organizations operate under the GUIRR umbrella: the University-Industry Demonstration Partnership (UIDP) and the Federal Demonstration Partnership (FDP). The UIDP works to improve the institutional environment for collaborative research between universities and industry. The FDP, through partnerships between federal agencies, universities, and other research institutions, helps to reduce administrative burdens associated with federal research grants and contracts.

GUIRR activities in 2008 focused on a few key areas where science and technology impact the future of the U.S. at national and international levels. GUIRR created a new initiative to promote more effective international research collaborations and took steps to bolster research in Emerging Research Institutions. GUIRR has also made significant contributions where national science and technology needs intersect with economic and national security concerns, most recently on visa-related issues. GUIRR is currently reviewing areas such as international food security — the focal topic of its fall meeting — for potential GUIRR involvement.

Because of GUIRR's broad-based collaborative structure, high level members, access to key decision makers and experts in government and the private sector, GUIRR is well-positioned to play a significant role in improving the health of the U.S. science and technology enterprise. A November 2008 report of the President's Council of Advisors on Science and Technology took specific note of GUIRR and UIDP as examples of "existing frameworks of successful university, government and private initiatives to enhance research partnerships." It recommended that the U.S. government consider building upon these types of organizations.

The continuing impact of GUIRR reflects the sustained commitment and initiative of its government, academic and industry members. Through cross-sector collaboration GUIRR continues to improve the performance of U.S. science and technology in a globalized world.

C.D. (Dan) Mote, Jr.
Co-Chair

Lydia Waters Thomas
Co-Chair

GUIRR ACTIVITIES IN 2008

INTERNATIONAL RESEARCH COLLABORATIONS

The pronounced increase in globalization in recent years has brought with it an increase in international research collaborations. As institutions of higher learning, industry, and governments at the international level enter into partnership arrangements, they have found they must address a variety of issues that are integral to the success of the collaboration. These issues include intellectual property, liability and insurance, research integrity, safety and security, along with differing views concerning financial administration and export controls. To respond to international needs and developments, a new GUIRR Ad Hoc Group on International Research Collaborations has been formed to facilitate, along with other stakeholders, a more structured approach to international research collaborations, the goal being to increase their effectiveness.

MARKETING SCIENCE AND ENGINEERING (S&E) CAREERS

The relatively low numbers of U.S. undergraduates choosing careers in the physical sciences and engineering will inevitably have a long-term impact on the health of the U.S. S&E enterprise, and ultimately on U.S. competitiveness. To help support current marketing-oriented efforts in other organizations, this GUIRR working group is seeking to (1) identify current efforts to stimulate the interest of Americans in S&E careers, and (2) develop a new web portal where representatives from academia, industry and government can post, view, characterize and compare successful practices and ideally scale up their impact.

Mark Wrighton, Washington University in St. Louis

PARTNERSHIPS FOR EMERGING RESEARCH INSTITUTIONS (ERIs)

Constituting one-third of all U.S. institutions of higher education, emerging research institutions (ERIs) are crucial to sustaining the nation's technological competitiveness through innovation and workforce development. Many, however, are not fully engaged in sustained sponsored research. The major barriers facing ERIs include high teaching loads, lack of centralized institutional support services, and inadequate faculty rewards. A workshop held in 2007 addressed the issues and presented solutions for overcoming barriers facing these institutions, such as optimizing faculty time and strategic partnering with larger research universities for economies of scale. The workshop included a roadmapping session to help ERIs to develop their individual strategies for increasing administrative and other support for research. The workshop report was finalized for release in December 2008.

OVERCOMING THE TECHNICAL AND POLICY CONSTRAINTS THAT LIMIT LARGE SCALE DATA INTEGRATION

Large-scale data integration refers to the effective assimilation, integration and use of the very rapidly growing volume of distributed, heterogeneous data in a wide-ranging variety of disciplines. This GUIRR-incubated "data overload" effort is currently a joint project between GUIRR and the National Academies' Board on Mathematical Sciences and Their Applications (BMSTA). Federal sponsors include NIH, NIST and DOD. Project leaders are putting together a workshop planned for spring 2009 that is designed to explore alternative visions for achieving large-scale data integration in fields of importance to the federal government. Collaboration with a wide variety of organizations is a major factor in GUIRR's continuing success in facilitating policy actions at a national level. This project provides another example of that collaborative process.

THE UNIVERSITY-INDUSTRY DEMONSTRATION PARTNERSHIP (UIDP)

The University-Industry Demonstration Partnership (UIDP), now in its third year as a semi-autonomous organization under the GUIRR umbrella, began in 2003 as a GUIRR-led working group to address intellectual property (IP) issues between U.S. universities and industry. From this modest beginning, UIDP was formed in 2006 by a strategic coalition of representatives from university and government as a more formal organization with the broader mission of improving the health of research partnerships between universities and industry, thereby improving U.S. competitiveness. The official members now include more than 90 academic institutions and companies, along with attendees from government. Reflecting the continuing interests of its members and the success of the UIDP as a "networking " center for universities and industry on issues of joint interest, the UIDP has chosen to continue as an organization past its original sunset date in July 2009.

The UIDP is addressing a number of areas affecting university-industry (U-I) research relations:

- Foster U-I networks to improve U-I cooperation over the long term.
- Achieve consensus on guiding principles for U-I collaborations.
- Disseminate "best practices" for U-I partnering.
- Develop and test tools to streamline U-I agreements.
- Challenge long-held opinions with data.

UIDP is continuing its efforts to establish a process where U-I negotiators can quickly craft a unique collaborative research agreement that meets the needs of both parties. One UIDP deliverable will be a structured process using interview questions to help U-I negotiators rapidly focus on areas of potential major mismatch in assumptions and expectations, determine whether an agreement is feasible, and if feasible, to identify potential clauses in such a collaborative agreement. The process is being captured in a software package called "TurboNegotiator". As currently envisaged, TurboNegotiator will be used not only as a negotiation tool, but also as an educational tool and as a way of stimulating discussions on "best practices" for U-I partnerships.

Three national meetings of the UIDP in 2008 provided a continued U-I networking center, and a forum for sharing experiences of UIDP members and guests on successful partnerships in various industry sectors. The UIDP also held several workshops, one on the Discovery to Innovation Process and another on Effective Strategies for Negotiating Agreements. This networking and interchange of ideas is already providing significant longer-term benefits in the form of more effective research collaborations for the UIDP members.

Susan Butts from Dow Chemical Company and Tim Mulcahy from the University of Minnesota served respectively as President and Vice President of the UIDP.

Sam Armstrong, National Aeronautics and Space Administration (Ret.), and Arthur Bienenstock, Stanford University

William Rees, Department of Defense, and C.D. (Dan) Mote, Jr., University of Maryland

THE FEDERAL DEMONSTRATION PARTNERSHIP (FDP)

The FDP is a unique forum enabling individuals from 120 universities and nonprofits to work collaboratively with officials from 10 federal agencies to improve the national research enterprise. At its regular meetings, FDP members hold spirited, frank discussions, identify problems, and develop action plans for change. Then these new ways of doing business are tested in the real world before putting them into effect.

The FDP officially kicked off Phase V of the organization at its September meeting in Florida. This meeting also celebrated 20 years of work by the FDP. The FDP reconstitutes itself every six years in order to reexamine its mission and organizational structure. Phase V will run from October 1, 2008 through September 30, 2014. The FDP increased the number of participating organizations by 22 percent in 2008.

The FDP held elections for its primary officers. Dr. Susan Wyatt Sedwick from the University of Texas at Austin was elected Chair and Dr. David Robinson from the Oregon Health and Science University was elected Vice-Chair. Their terms will run for three years.

FDP's accomplishments for 2008 and FDP impact on agency practices include the following:

1. *FDP Terms & Conditions Graduated to Federal Terms & Condition.* The special terms and conditions that the members of the FDP have enjoyed for several years for streamlining post award processes for government grants have been recommended for use by all federal agencies by the Office of Science and Technology Policy (OSTP).
2. *Use in DOD Contracting of FDP System for Documentation of Troublesome Clauses.* The information that was gathered by this system was used by the Department of Defense to revamp some of their contracting practices and ensure that the many arms of the DOD were conducting business in a like manner.
3. *Export Controls Workshop.* At the request of the State Department, the FDP hosted a second informational workshop on the topic of Export Controls in May 2008. This workshop was attended by over 125 people from the FDP and outside groups.
4. *Streamlining A-133 Audit Compliance.* This FDP project has continued to gather more participants and audit information. The FDP will look at this data in depth during 2009 to see where improvements in the process can be made.
5. *Continued Work with Grants.gov.* The FDP has been working with Grants.gov very closely to help them and the grantees figure out how best to work with each other.
6. *Faculty Burden Survey.* A survey administered in 2007 by the FDP to assess administrative burden on practicing scientists continued to garner interest, leading to an editorial in the December 2008 issue of *Science* magazine.

FINANCIAL SUPPORT OF GUIRR "CORE" ACTIVITIES

FEDERAL AGENCIES

Federal R&D agencies provide essential core funding for GUIRR. This support is often vital in enabling GUIRR to quickly evaluate and take on projects of its members' choosing, rather than wait for a specific contract or grant to cover an activity. These federal agencies are:

- Department of Defense
- Department of Homeland Security
- National Institutes of Health
- National Institute of Standards and Technology
- Department of Agriculture

Panelists at October 2008 Meeting on "Food Security – Global Challenges and Directions"

2008 UNIVERSITY-INDUSTRY (U-I) PARTNERS

The University-Industry Partners are an important part of GUIRR's membership and funding base. These Partners ground GUIRR's policy discussions with their first-hand experience. As geographically dispersed leaders in their sectors, the U-I Partners serve as GUIRR's antennae for new trends in, and pressures on, the national research enterprise. The U-I Partners provide indispensible expertise on GUIRR working groups and play a key role in suggesting new GUIRR initiatives. These partners (industry and university pairs) are:

Battelle	The Ohio State University
Boeing Company	Georgia Institute of Technology
Corning, Inc.	Pennsylvania State University
General Electric Company	University of Wisconsin-Madison
Hewlett-Packard Company	University of California, Los Angeles
IBM T.J. Watson Research Center	Stanford University
Intel Corporation	University of California, Berkeley
Deere & Company	Iowa State University
Lockheed Martin Corporation	University of Maryland
Mars, Inc.	University of California, Davis
Northrop Grumman Corporation	California Institute of Technology
Northrop Grumman Electronic Systems	Massachusetts Institute of Technology
Pacific Northwest National Laboratory	Washington State University
Raytheon Integrated Defense Systems	University of Massachusetts
Semiconductor Research Corporation (SRC)	University of Texas at Austin
Telos Corporation	George Washington University

FINANCIAL SUPPORT OF THE FEDERAL DEMONSTRATION PARTNERSHIP (FDP)

Along with the contribution of their employees' time and expertise, the following federal R&D agencies have contributed financially towards FDP's mission to reduce the administrative burdens associated with federal research grants and contracts. These contributions result in substantial national benefits in increasing the nation's productivity per taxpayer dollar. These federal agencies are:

- Department of Defense
- Department of Homeland Security
- National Institutes of Health
- National Science Foundation
- Department of Agriculture
- Environmental Protection Agency

FINANCIAL SUPPORT OF THE UNIVERSITY-INDUSTRY DEMONSTRATION PARTNERSHIP (UIDP)

Funding of the inaugural three-year period of UIDP was made possible by the following companies, universities, foundations and federal agencies, who contributed $50,000 or more to the UIDP: Ex One, Hewlett-Packard, Ewing Marion Kauffman Foundation, National Science Foundation, Pfizer, The Boeing Company, University of California, Los Angeles, and University of Illinois at Urbana-Champaign. Additional funding in 2008 was individually provided ($4,000 annually) by the university and industry members of UIDP.

GUIRR COUNCIL MEMBERS (2008)

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University of Maryland at College Park

Lydia W. Thomas, Co-Chair
President and Chief Executive Officer (ret.)
Noblis

Norris Alderson, Ex-Officio
Associate Commissioner for Science
U.S. Food and Drug Administration

Gen. Sam Armstrong (ret.)
Former Senior Advisor to the Administrator
National Aeronautics and Space Administration

Wanda M. Austin
President and CEO
The Aerospace Corporation

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George Reynolds, Northrop Grumman Electronic Systems, and Kelly Sullivan, Pacific Northwest National Laboratory

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For more information about GUIRR and GUIRR membership
visit our web site at **http://www.national-academies.org/guirr**

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