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Subcommittee on Technology, Information Policy, Intergovernmental Relations and the Census

Congressman Adam Putnam, Chairman



OVERSIGHT HEARING STATEMENT BY ADAM PUTNAM, CHAIRMAN

Hearing topic: *“Defining Federal Information Technology Research and Development: Who? Where? What? Why? and How Much?”*

Wednesday, July 7, 2004

1:30 p.m.

Room 2154, Rayburn House Office Building

OPENING STATEMENT

Good afternoon and welcome to the Subcommittee’s hearing on “Defining Federal Information Technology Research and Development: Who? Where? What? Why? and How Much?” The purpose of this hearing is to examine the extent of Federal funding *for* and leveraging *of* information technology (IT) research and development (R&D) across agencies, academia and industry.

By addressing the basic questions, this Subcommittee hopes to identify the following: how many different agencies of the Federal government are currently engaged in conducting or managing IT research and development activities; is there an overall strategic plan that provides an opportunity to leverage investments, both internally and externally, and to identify complimentary activities in an effort to avoid duplication; how much is being spent on an annualized basis on information technology R&D, where and how these investments are actually being made, what are the outcome measurements and

expectations associated with these investments; is there a defined set of goals and objectives or focus areas that are targeted by these efforts and what have been the recent results; what is the role of both the academic community and the private sector, and how are these partnerships created and maintained?

The Federal government funds research and development to meet the mission requirements of the departments and agencies. Advances in the uses of IT R&D are continuing to change the way that federal agencies communicate, use information, deliver services and conduct business. The technology and expertise generated by this endeavor may have applications beyond the immediate goals or intent of federally funded research and development. Federal support reflects a consensus that while basic research is the foundation for many innovations, the rate of return to society as a whole generated by investments in such work is significant.

The potential benefits of federally funded R&D related to information technology are endless. Federally funded programs have played a crucial role in supporting long-term research into fundamental aspects of computing. The unanticipated results of research are often as important as the anticipated results. The Internet, electronic mail and instant messaging, for instance, were by-products of government-funded research in the 1960s. Another aspect of government-funded IT R&D is that it often leads to open-standards, something that many perceive as beneficial, encouraging deployment and further investment.

Previous oversight hearings conducted by this Subcommittee have identified an important missing link in the cyber security arena that requires further attention in the research and development arena. We have learned that inadequate tools exist today to conduct necessary quality assurance testing of existing and emerging software and hardware products that could better identify flaws, defects and other potential vulnerabilities prior to deployment. With a renewed commitment on the part of software and hardware manufacturers to quality and security of the products they introduce into the marketplace, a collaborative approach to developing more mature testing tools are essential to the improved protection of computer networks and the information assets they contain.

The outcomes achieved through public and private funding programs create a synergistic environment in which both fundamental and application-driven research is conducted, benefiting government, industry, academia and the public. Government funding appears to have allowed research on a larger scale and with greater diversity, vision, and flexibility than would have been possible without government involvement.

It is important to recognize collaborative efforts across programs and agencies, and stress the importance of leveraging efforts with academia and the private sector. Universities, private companies, and federal laboratories are important partners in this endeavor. It will be productive to explore new methods to encourage increased activities by other parties in the innovation process, particularly if the goal is to continue the technological advancement, which has been so instrumental to this Nation's economic growth and high living standard.

Because investments in science and technology have resulted in unparalleled economic growth, as well as the standard of living and quality of life, we must emphasize the importance of supporting the efforts of IT R&D. Advances have been possible only with the support of both public and private investment in R&D, according to the President's budget. However, challenges continue. There are many R&D needs vying for a limited amount of R&D dollars. Federal R&D program managers face tough choices in deciding where the R&D money should go and how much is appropriate for information technology.

Furthermore, it is important to ensure that federal agencies are not pursuing conflicting R&D goals. It is essential that agencies, universities and industry move toward a more coordinated, unified goal. Multiple Federal agencies will need to coordinate their efforts to ensure that new understanding of information technology and network security is generated and that this knowledge is transitioned into useful products. Academia will have develop and expand degree programs to ensure that an adequate workforce exists to put the new tools and techniques into practice. The private sector has a critical role to play, as it will contain the developers and suppliers as well as the major purchasers of new information technologies and services.

Government sponsorship of research, especially in universities, helps develop the IT talent used by industry, universities and other parts of the economy. When companies create products using the ideas and workforce that results from federally sponsored research, they repay the nation in jobs, tax revenues, productivity increases and world leadership.

We need a strong strategic plan to ensure that IT R& D is being used to maximize improvement in mission goals and performance. Federally funded research and development are key endeavors within the respective agencies and in cooperation with academia and the private sector. It is essential to meet vital Federal needs and sustain U.S. global leadership in science and in the engineering of information technology.

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