

# Subcommittee on Research and Technology Hearing – A Review of the Networking and Information Technology Research and Development (NITRD) Program

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<https://science.house.gov/legislation/hearings/subcommittee-research-and-technology-hearing-review-networking-and-information>

# NITRD Review: Context

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- Cochair (with Susan Graham) of NITRD review
  - Biannual examination of coordination program spanning computing research across 18 Federal agencies
- Several recommendations related to reorganization as well as highlighting the evolution of the field
- Testimony to the Research and Technology subcommittee of the Space, Science, and Technology committee

# R&T Subcommittee

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- Subcommittee of Science, Space, and Technology
- The Subcommittee on Research and Technology has legislative jurisdiction and general oversight and investigative authority on all matters relating to science policy and science education
  - **Intergovernmental mechanisms for research**
  - National Science Foundation
  - NIST
  - DoT R&T
  - DHS R&T
  - ....

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## Opening Statements

**Chairman Lamar Smith (R-Texas)**

**Research & Technology Chairwoman Barbara Comstock (R-Va.)**

## Witnesses

**Dr. Keith Marzullo**

Director, National Coordination Office, The Networking and Information Technology Research and Development Program (NITRD)

[Truth in Testimony]

**Dr. Gregory D. Hager**

Mandell Bellmore Professor, Department of Computer Science, Johns Hopkins University; Co-Chair, NITRD Working Group, The President's Council of Advisors on Science and Technology

[Truth in Testimony]

**Dr. Edward Seidel**

Director, National Center for Supercomputing Applications, University of Illinois at Urbana-Champaign

[Truth in Testimony]

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# More Context

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- The “Truthy” incident in CISE; SBE under siege



Representatives Eddie Bernice Johnson (D-TX) and Lamar Smith (R-TX)

HOUSE COMMITTEE ON SCIENCE, SPACE, AND TECHNOLOGY

Battle between NSF and House science committee escalates: How did it get this bad?

By Jeffrey Mervis | Oct. 2, 2014 , 7:15 PM

**Science, Oct 2014**

# More Context

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- The “Truthy” incident in CISE; SBE under siege
- Prior reports went relatively unnoticed – a chance to make the case for computing
- Keith Marzulo in NCO – more effective at implementing recommendations
- Siedel --- unknown to me, but in the HPC world which ties to history of NITRD
- No industry person on the panel.

# The Game Plan

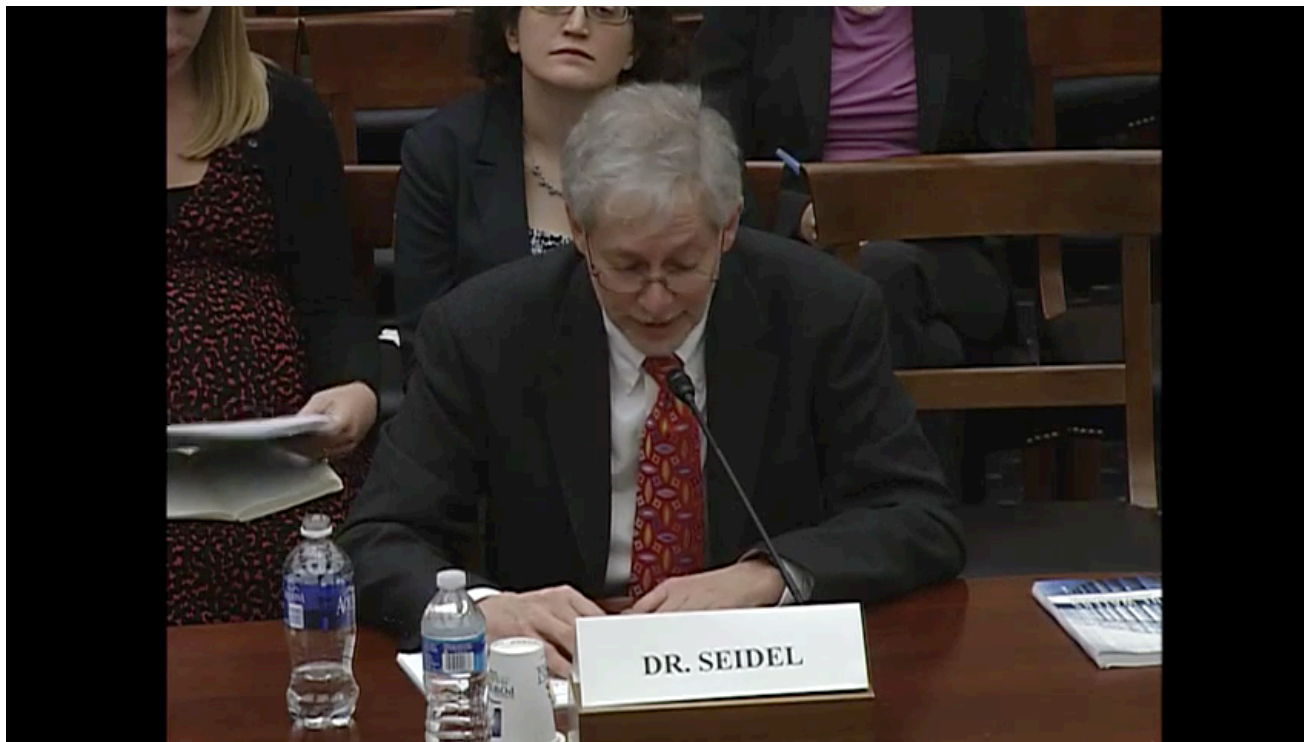
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- Highlight the importance of an expansive view of Computing Research and its ties to national priorities
    - Cybersecurity
    - IT & Health
    - IT & the Physical World (Robotics, IoT)
    - Cyber-human Systems
    - Privacy
    - High-Capability Computing
    - Big-Data & Data Intensive Computing
    - Foundational IT Research
    - Education and Training
  - Argue for reorganizing NITRD to better reflect these priorities
  - Hope it's a friendly hearing that doesn't include Lamar Smith
- My remarks tended to emphasize the value of SBE collaboration

# Hearing Day!

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- Surprise 1: Lamar Smith is there!
- Surprise 2: Ed Seidel says this:

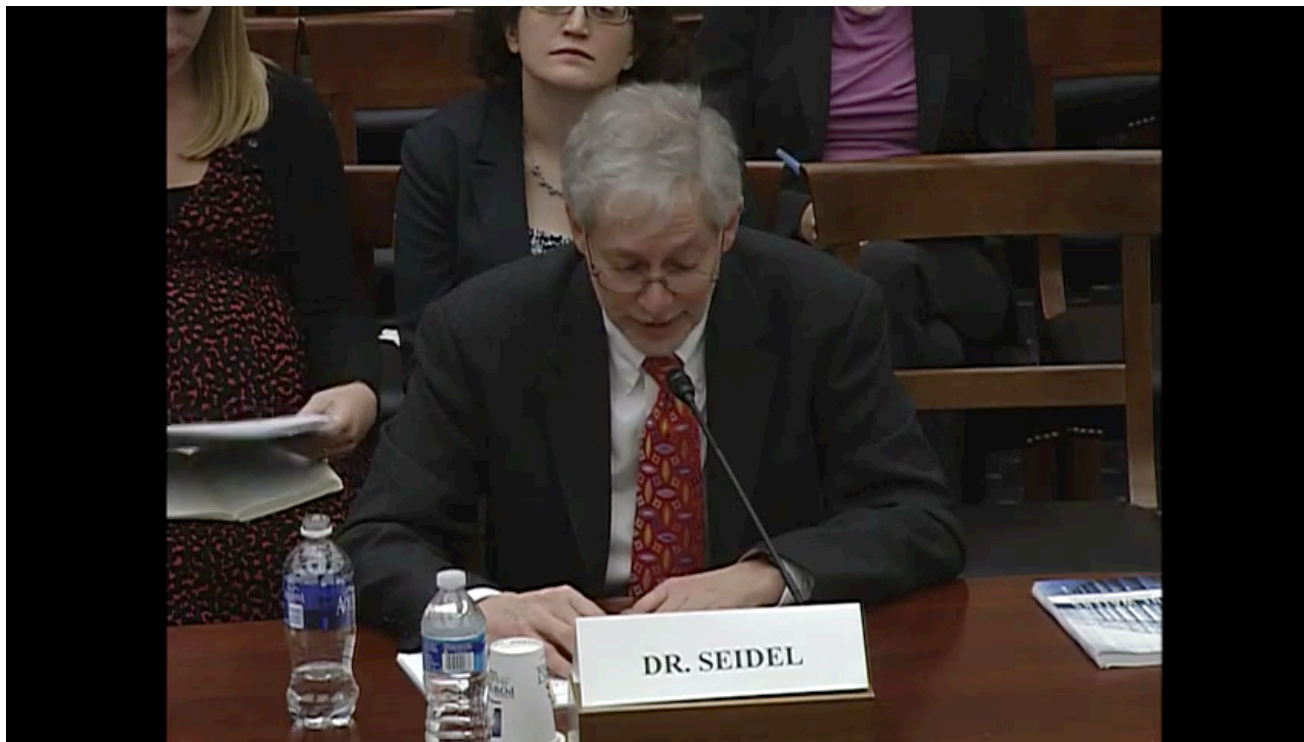




# Hearing Day!

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# Hearing Day: Back and Forth

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- Two examples Q&A with video –



- Interesting chit-chat afterwards with the subcommittee co-chairs

# Post Hearing Day: Questions

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- Hultgren
  - How can we improve the effectiveness of NITRD?
- Lipinski
  - Siedel: More coordination between NITRD and Committee on Science?
  - Should we broaden the notion of infrastructure? To what?
  - Can/should NITRD be more strategically oriented?
- Esty
  - How can we better grow the K-12 pipeline; how are your recommendations different?

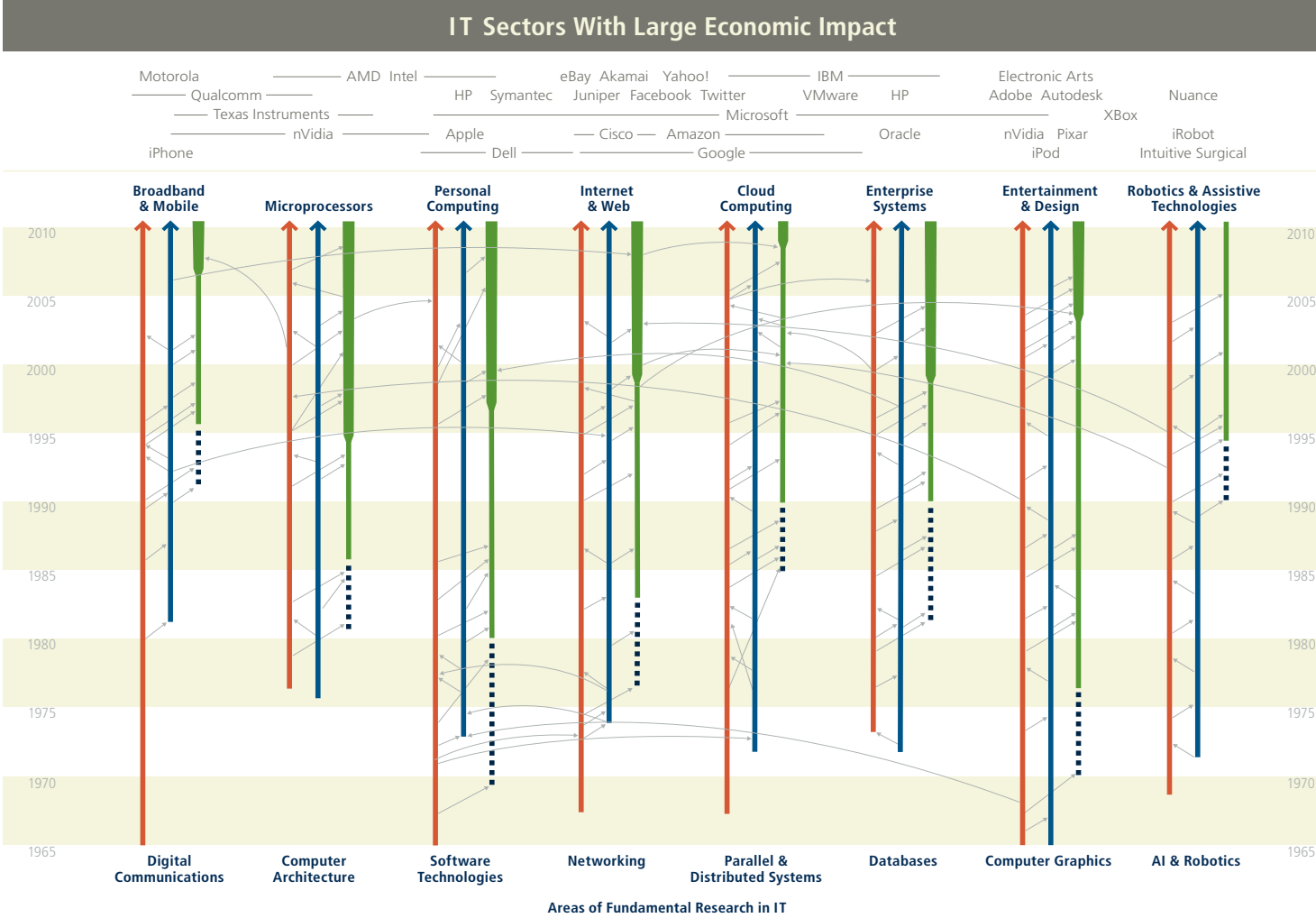
# Post Hearing Day: Questions

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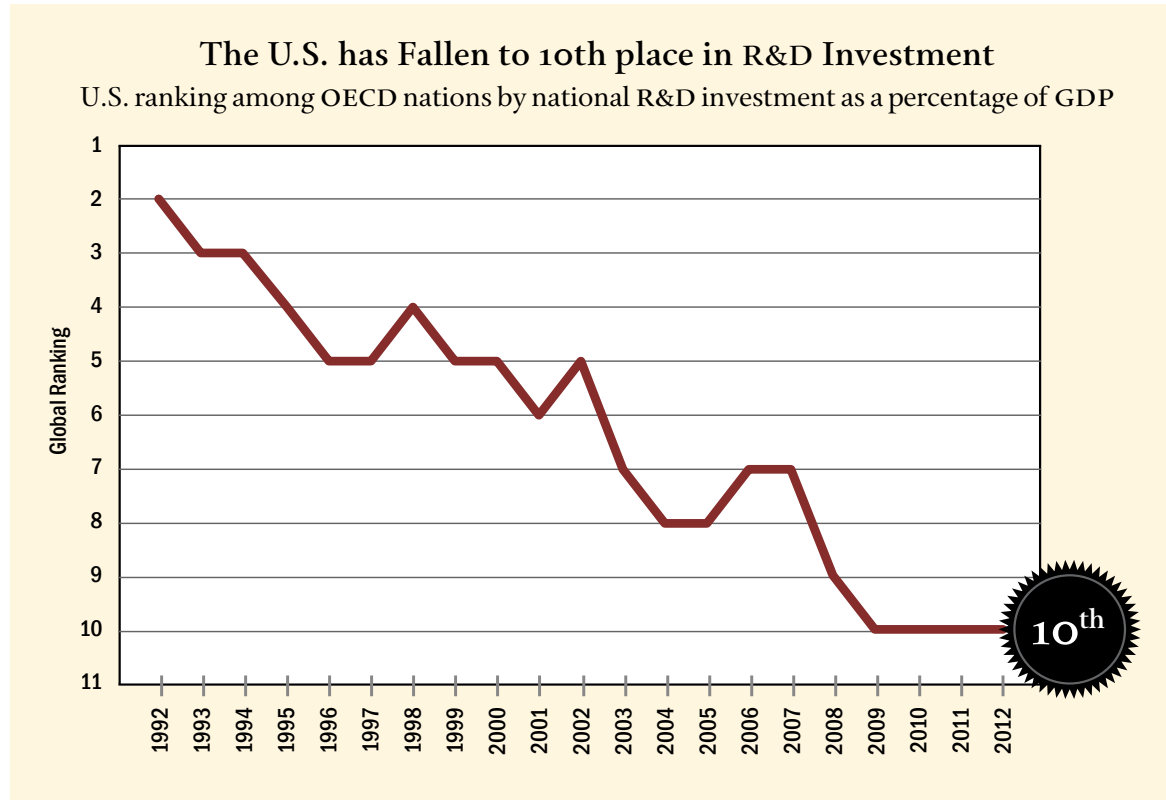
- Comstock

- How do you choose the areas?
- What is most important?
- How can NITRD improve cybersecurity?
- Are agencies responding to cybersecurity needs?
- Is there more they can do?
- How does NITRD support supercomputing research efforts like COMET?
- **Why is investing in NITRD activities important?**
- **Where can we save money?**
- How can we grow the student pipeline?
- How does NITRD enhance national security and competitiveness?
- Should industry be involved?
- Explain end-to-end security
- **What are the important areas for research in the future?**

# Why is investing in NITRD activities important?



## Where should Congress focus its federal IT R&D investments when it faces tough budget and deficit decisions and why?



... I would strongly advocate that Congress, rather than mandating where funding is spent, allow the NITRD agencies to set their own priorities to ensure they maintain a robust and broad-based program, and one which encourages the most creative and enterprising researchers to pursue their ideas.

# What are the important areas for research in the future?

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Information technology evolves continuously and rapidly. As our Working Group noted in the report, our choices today are governed by the evolution of technology itself, the implications of that technology for society, and the influence of society on technology needs. The research questions of the future will be necessarily different from the issues of the present and are difficult to predict. Indeed, this is why continuous review of our research investments in IT R&D is important -- to keep identifying the important topics of the time in order to maintain the lead that the U.S. has enjoyed so far.

# The final result:

The screenshot displays the CONGRESS.GOV website interface. At the top, there is a navigation bar with links for Legislation, Congressional Record, Committees, and Members, along with a Sign In button. Below this is a search bar with options for Quick, Advanced, and Browse searches, and a search input field containing the text "Examples: hr5, sres9, 'health care'".

The main content area shows the path: Home > Legislation > 114th Congress > S.3084. The title of the bill is "S.3084 - American Innovation and Competitiveness Act" for the 114th Congress (2015-2016). A "LAW" badge is present, indicating the bill's status. The "Tracker" section shows a progress bar with five stages: Introduced, Passed Senate, Passed House, To President, and Became Law. The "Latest Action" is dated 01/06/2017, stating it became Public Law No. 114-329.

Additional information includes the sponsor, Sen. Gardner, Cory [R-CO], and the committee, Senate - Commerce, Science, and Transportation. A "More on This Bill" section links to CBO Cost Estimates [1]. The subject area is identified as Science, Technology, Communications.

At the bottom, there is a summary section for S.3084 with a "Summary (3)" button and a "Text (5)" button. A "Related Bills (8)" button is also visible. The page footer includes a link for "All Information (Except Text)".