



COMMITTEE ON
SCIENCE, SPACE, & TECHNOLOGY
Lamar Smith, Chairman

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Statement from Chairwoman Barbara Comstock (R-Va.)
American Leadership in Quantum Technology

Chairwoman Comstock: Good morning. I want to welcome everyone here today. The topic of this morning's hearing, American Leadership in Quantum Technology, is important to our national security, global competitiveness and technological innovation.

This hearing will provide us with a view of U.S. and other nations' research and development efforts to develop quantum computing and related technology. It will also identify what, if more, can be done to boost efforts within the United States.

R&D in information technology provides a greater understanding of how to protect essential systems and networks that support fundamental sectors of our economy, from emergency communications and power grids to air-traffic control networks and national defense systems.

This kind of R&D works to prevent or minimize disruptions to critical information infrastructure, to protect public and private services, to detect and respond to threats while mitigating the severity of and assisting in the recovery from those threats, in an effort to support a more stable and secure nation.

As technology rapidly advances, the need for research and development continues to evolve. At the same time, I am hoping that we are preventing any duplicative and overlapping R&D efforts, thereby enabling more efficient use of government resources and taxpayer dollars.

Considering the significant increase in global interconnectedness enabled by the Internet, and with it, increased cybersecurity attacks, the potential security and offensive advantage that quantum computing and quantum encryption may provide is more essential than ever.

Research in advanced materials and computer science continues to push the envelope of classical computing power and speed. Developments in quantum information science have raised the prospects of a new computing architecture – quantum computing. I am looking forward to our witnesses explaining more about this architecture, including superposition and interconnectivity.

As difficult as the underlying science is for many people to understand, it is easier to understand how quantum computing can change the world by revolutionizing the encoding of electronic information and supporting data analytics powerful enough to solve currently complicated or inexplicable problems.

I am excited for today's hearing, and I hope we are able to learn more about how quantum technology will revolutionize computing and how to promote continued technological leadership in the United States. I am also looking forward to learning how industry and others are engaged. As noted in a 2015 PCAST report, "Today's advances rest on a strong base of research and development created over many years of government and private investment. Because of these investments, the United States has a vibrant academia-industry-government ecosystem to support research and innovation in IT and to bring the results into practical use."

It is clear that focusing our investments on information technology research and development is important to our nation for a variety of reasons, including economic prosperity, national security, U.S. competitiveness, and quality of life. I look forward to hearing from each of our witnesses on this important topic. Thank you for being here.

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