

**VISITING COMMITTEE ON ADVANCED TECHNOLOGY (VCAT)
MINUTES OF THE FEBRUARY 8, 2017 WEBINAR/VIRTUAL MEETING
GAITHERSBURG, MD**

ATTENDANCE:

**Visiting Committee
Members Attending**

Adler, Allen*
Brooks, Rodney*
Colwell, Rita*
Folena-Wasserman, Gail
Garvey, Michael*
Holt, William*
Ishak, Waguih*
Kerr, Karen*
Padovani, Roberto*
Prafullchandra, Hemma*
Sizer, Theodore*
Vasko, Dave

Designated Federal Officer

Stephanie Shaw

NIST Leadership Board

Boehm, Jason
Brockett, Del
Celotta, Robert
Dimeo, Robert
Fangmeyer, Robert
Fasolka, Michael
Harary, Howard
Jenkins, George
Kayser, Richard
Locascio, Laurie
Molnar, Michael
Olthoff, James*
Orr, Dereck*
Porch, Susanne
Rochford, Kent
Romine, Charles
Royster, Cecelia
Schiller, Susannah
Singerman, Phil
Thomas, Carroll
Vaughn, Robert
Wixon, Henry

NIST Staff and Associates

Acierto, Linda
Butters, Rolf
Currens, Chris
Davis, Rick
Evans, Heather
Gayle, Frank
Hanna, Nancy
Henry, Akeem
Hooker, Stephanie
Ivy, Nahla
Jillavenkatesa, Ajit
Martinez, Serena
Miner, Laurel
Ng, Lisa
Pei, ZJ
Robinson, Crissy
Schwarz, Katie
St. Pierre, Jim
Szakal, Christopher
Thorne, Roger
Vinson, John
Waltermire, Karen
Williams, Carl

Others

Naomi Webber- Lewis Burke
Associates, LLC

*Participated Remotely

Call to Order - Dr. Rita Colwell, VCAT Chair

Dr. Colwell called the virtual meeting to order at 1:30 p.m. The Chair thanked Drs. Karen Kerr and Roberto Padovani for their service, time and effort and welcomed Dr. Gail Folena-Wasserman and Mr. David Vasko as the two newest members to join the VCAT.

OVERVIEW AND SAFETY UPDATE

NIST Update and Agenda Review – Dr. Kent Rochford, Acting Under Secretary of Commerce for Standards and Technology and Acting NIST Director

Dr. Rochford began his update by also thanking both Dr. Karen Kerr and Dr. Roberto Padovani for their membership and welcomed the two newest members Dr. Gail Folena-Wasserman from MedImmune and Mr. David Vasko from Rockwell Automation to the Committee. Since former NIST Director Dr. Willie May retired in January, Dr. Rochford will serve as the Acting Under Secretary of Commerce for Standards and Technology and Acting NIST Director until a new one is appointed. During that time, Dr. Laurie Locascio will take on the roles and responsibilities of the Acting Associate Director for Laboratory Programs. At the end of February, Ms. Mary Saunders resigned as the Associate Director of Management Resources. Mr. Delwin Brockett will assume the roles and responsibilities of the Acting Associate Director of Management Resources until the position can be permanently filled. Dr. Rochford also introduced Mr. Robert “Skip” Vaughn, who joined NIST as the Chief Facilities Management Officer in November 2016.

Dr. Rochford then informed the VCAT of the steps NIST is taking to balance needed improvements to our security posture with other operational and cultural requirements for successful NIST mission delivery. Dr. Rochford has tasked Dr. Rich Kayser, NIST’s Chief Safety Officer, with conducting a 30-day sprint to prioritize NIST’s security issues, concerns, and threats and what our countermeasures should be.

Dr. Rochford also described to the VCAT a significant scientific breakthrough made by NIST researchers in January. NIST used squeezed microwave photons to cool a mechanical object below the quantum limit. This was the coldest mechanical object demonstrated to date.

Dr. Rochford updated the VCAT on the recently enacted American Innovation and Competitiveness Act, which reauthorizes NIST. Some key changes to NIST’s authority provided by the legislation include: the establishment of the NIST Director as the President’s principal advisor on standards policy which enhances our position in standards policy; second, cost share for the Hollings Manufacturing Extension Partnership (MEP) program was changed from 2:1 to 1:1, which will help MEP serve the needs of small, rural companies in a more robust manner; third, the Act requires NIST to develop a strategic plan that expands on interactions with academia, international researchers, and industry, as well as our commercial and industrial applications; and, fourth, the Act provides NIST additional flexibilities in hosting scientific conferences and meetings.

Dr. Rochford updated the VCAT on the Manufacturing USA program that in December of 2016 its first manufacturing institute, the National Institute for Innovation in Manufacturing Biopharmaceuticals (NIIMBL) was awarded. This was the first institute whose topic was proposed by industry. NIIMBL’s mission is to accelerate biopharmaceutical manufacturing innovation, support the development of standards that enable more efficient and rapid manufacturing capabilities, and educate and train a world-leading biopharmaceutical manufacturing workforce, fundamentally advancing U.S. competitiveness in this industry. The NIIMBL national footprint includes planned headquarters at the Delaware Biotechnology Institute, and a network of five regional hubs. The consortium has over 150 members, including large biopharma, small biotechs, academia (including community colleges), non-profits, and Manufacturing Extension Partnership (MEP) centers across 25 states. The Institute is supported with \$70 million of federal money over 5 years, \$100 million of non-federal money, and an additional \$80 million in-kind. Along with NIIMBL, the Departments of Defense and Energy established four other institutes since the last VCAT meeting. This achieved 14 Manufacturing USA Institutes established before the end of the Obama Administration, one short of the goal.

Also in December 2016, the President's Commission on Enhancing National Cybersecurity released their final [Report on Securing and Growing the Digital Economy](#). NIST provided expert data and information. In summary, the report's recommendations asked for NIST to continue its current mode of operation, and expand efforts in certain areas.

The VCAT was also briefed on the National Advanced Spectrum and Communications Test Network (NASTCN), a partnership with National Telecommunications and Information Administration (NTIA) to address complex and controversial measurements related to spectrum sharing. NASTCN's first project was prompted by Ligado Networks to measure and report the effect of Long-Term Evolution signals on Global Positioning System receivers operating in an adjacent frequency band. The preliminary briefings of the data show uncertainties instead of just numbers, teaching the community the difference metrology can make in very difficult spectrum measurements.

Finally, Dr. Rochford shared with the VCAT NIST's efforts over the past year to update its core values, which are:

- Perseverance: We take the long view, planning the future with scientific knowledge and imagination to ensure continued impact and relevance for our stakeholders.
- Integrity: We are ethical, honest, independent, and provide an objective perspective.
- Inclusivity: We work collaboratively to harness the diversity of people and ideas, both inside and outside of NIST, to attain the best solutions to multidisciplinary challenges.
- Excellence: We apply rigor and critical thinking to achieve world-class results and continuous improvement in everything we do.

For more information, see Dr. Rochford's [presentation](#).

Safety Update – Dr. Richard Kayser, Chief Safety Officer

Dr. Kayser provided an update on the latest safety metrics and outlined our safety improvement efforts: safety incidents, continual improvement, and actions taken. In the first four months of fiscal year 2017, there have been 13 OSHA recordable incidents, 42% being slips, trips, and falls. The conclusion of a preliminary analysis on causes and patterns will be discussed at the June 2017 meeting. Two actions NIST undertook based on VCAT recommendations include a second Safety Climate Assessment in 2017 and the development of enhanced workplace inspections. Dr. Kayser also updated the VCAT on actions taken since NIST conducted the 2014 Safety Climate Assessment. These include safety leadership training for over 700, enhanced reporting of safety concerns, better communication on safety rights and responsibilities including an all-staff message and posters, an increased emphasis on speaking up and reporting unsafe conditions, and a new website for shared standard of safety performance.

For more information, see Dr. Kayser's [presentation](#).

Administration and Congressional Landscape – Dr. Jason Boehm, Director, Program Coordination Office and Ms. Linda Acierto, Acting Director, Congressional and Legislative Affairs Office

Dr. Boehm provided the VCAT with an update on the transition to the new administration and the potential timelines for the identification of new political leadership for NIST.

Dr. Boehm also reviewed several executive actions that affect NIST including a 90 day hiring freeze for federal employees and two presidential memoranda that directly affect the Department and the Secretary of

Commerce: the *Presidential Memorandum Regarding Construction of American Pipelines* and the *Presidential Memorandum Streamlining Permitting and Reducing Regulatory Burdens for Domestic Manufacturing*. Depending on how the Department moves forward, our Manufacturing Extension Program (MEP) could potentially provide support in both areas.

Ms. Acierto, highlighted changes in the legislative branch after the November election and the potential impacts that those changes could have on NIST.

Ms. Acierto also highlighted some of the bills introduced by Congress people that relate to NIST on topics including cybersecurity, voting, creating a new lab in plumbing research, and issues around fuel pump labeling.

To educate their members, the Senate Commerce Committee has established the “101 Education” program. NIST has already spoken to about 35 staffers about what we do in cybersecurity and will continue to educate throughout the year. NIST will hopefully participate in panels to educate on new areas of interest such as quantum information and forensic science. In January, 60 welcome letters were sent out to new members of Congress resulting in numerous requests for NIST 101 overviews. Other areas of interest are in the Public Safety Communications Research Program, facial recognition technology, cybersecurity and password security, protecting small businesses from cyber-attacks, gene editing and artificial intelligence.

Discussion:

The group discussed the following topics:

- Where does Congress stand on autonomous cars in regards to technologies, regulations, and standards and how NIST will coordinate with the Department of Transportation?
- The broad range of new potential areas for growth and how that fits within the current sphere of work.
- The support given in regards to the on-going issue of voting security.
- Dr. Colwell, VCAT Chair, would like to be kept abreast on what transpires between now and the June meeting in regards to the Hill and actions taken and the budget guidance for FY18.

For more information, see Dr. Boehm’s and Ms. Acierto’s [presentation](#).

Discussion/Approval of the 2016 VCAT Annual Report – Dr. Rita Colwell, VCAT Chair

Dr. Colwell, the VCAT Chair, took a formal vote from the VCAT to approve the 2016 VCAT Annual Report. The VCAT unanimously voted to approve the report.

VCAT Focus for 2017 – Dr. Rita Colwell, VCAT Chair

Dr. Colwell, the VCAT Chair, led a discussion and asked for suggestions on what VCAT should start to focus on in the coming year. The VCAT members were supplied with [some background on their responsibilities and items of committee focus](#). Two areas that continue to be in focus are cybersecurity and forensic science. The VCAT also emphasized the importance of NIST providing guidance on its core values. The VCAT expressed desire to proactively form subcommittees on areas such as advanced manufacturing, privacy, cybersecurity, and other areas of interest.

Administrative Business

Dr. Colwell recommended a conference call in a month to pick up on the discussion of the VCAT focus once NIST has a clearer perspective on its priorities.

There were no public comments offered.

Adjournment

The meeting was adjourned at 3:35 PM.

I hereby certify that to the best of my knowledge, the forgoing minutes are accurate and complete.

Stephanie Shaw, Designated Federal Officer, NIST Visiting Committee on Advanced Technology

Dr. Rita Colwell, Chair, NIST Visiting Committee on Advanced Technology