

# Director's Update

**Visiting Committee on Advanced Technology  
February 6-7, 2013**

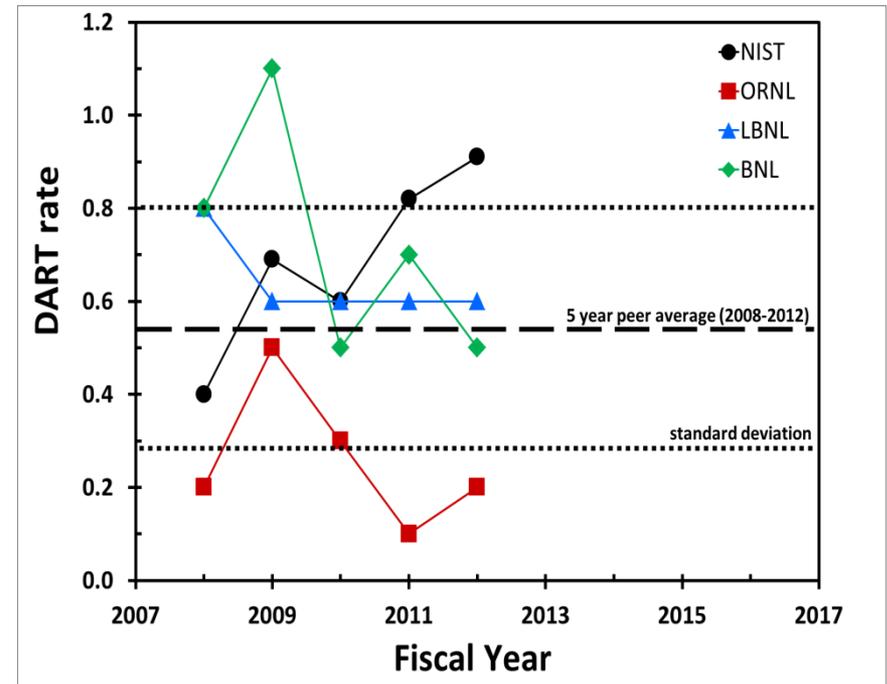
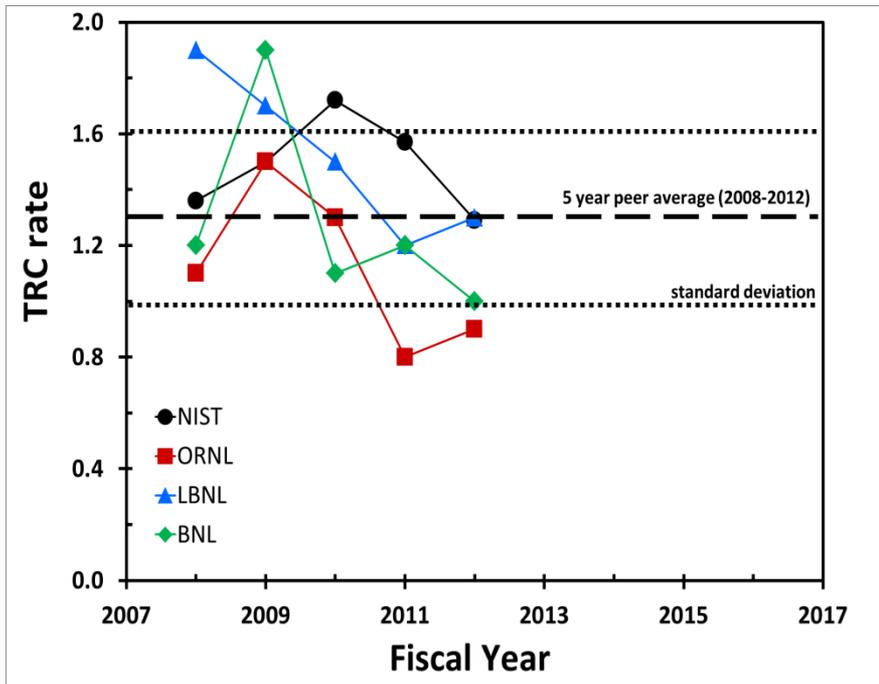
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**Dr. Patrick Gallagher**

**Under Secretary of Commerce for Standards and Technology and  
NIST Director**

# TRC and DART Rate Peer Comparisons

## Total Recordable Case (TRC) rates for FY2008 – FY2012



# Injury Data for FY 2012 and FY 2013 Q1

OU's with atleast one injury report in IRIS	Number of "injury" incidents reported in IRIS	Number of "injury" incidents reported in IRIS which are OSHA recordables	% of "injury" incidents reported in IRIS which are OSHA recordables	% of all OSHA recordables by the OU
00 - DO	2	1	50%	3%
13 - MR	3	3	100%	9%
15 - OSHE	4	1	25%	3%
16 - OFRM	2	1	50%	3%
17 - OWM	3	1	33%	3%
18 - OISM	1	0	0%	0%
19 - OFPM	32	16	50%	47%
48 - HMEPP	2	0	0%	0%
60 - LP	1	1	100%	3%
61 - NCNR	11	3	27%	9%
62 - CNST	1	0	0%	0%
63 - MML	12	2	17%	6%
68 - PML	11	3	27%	9%
73 - EL	8	0	0%	0%
77 - ITL	4	2	50%	6%
<b>Totals</b>	<b>97</b>	<b>34</b>	<b>35%</b>	

## Laboratory Programs (LP)

- 49% of injury incidents
- 32% of OSHA recordables

## Management Resources (MR)

- 46% of injury incidents
- 65% of OSHA recordables

# Welcome to New VCAT Member

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**John J. Tracy** 

*Chief Technology Officer*

*The Boeing Company*

*Senior Vice President*

*Engineering, Operations & Technology*



Credit: Boeing

- Joined McDonnell Douglas in 1981
- Previous positions include VP of Engineering and Mission Assurance for Boeing Integrated Defense Systems, and VP of Structural Technologies, Prototyping, and Quality for the Boeing Phantom Works advanced R&D unit
- Fellow of the American Society of Mechanical Engineers (ASME) and past chair of ASME's Aerospace Division
- Fellow of the American Institute of Aeronautics and Astronautics
- Fellow of the Royal Aeronautical Society

# THANK YOU to Departing VCAT Members

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Credit: NIST

## Shaygan Kheradpir

Term: April 1, 2010–March 31, 2013

- Member of the VCAT Subcommittee on Public Safety Networks, 2011
- Continued VCAT service when he moved to the UK in Dec. 2010



Credit: Google/  
Weinberg-Clark

## Vinton Cerf

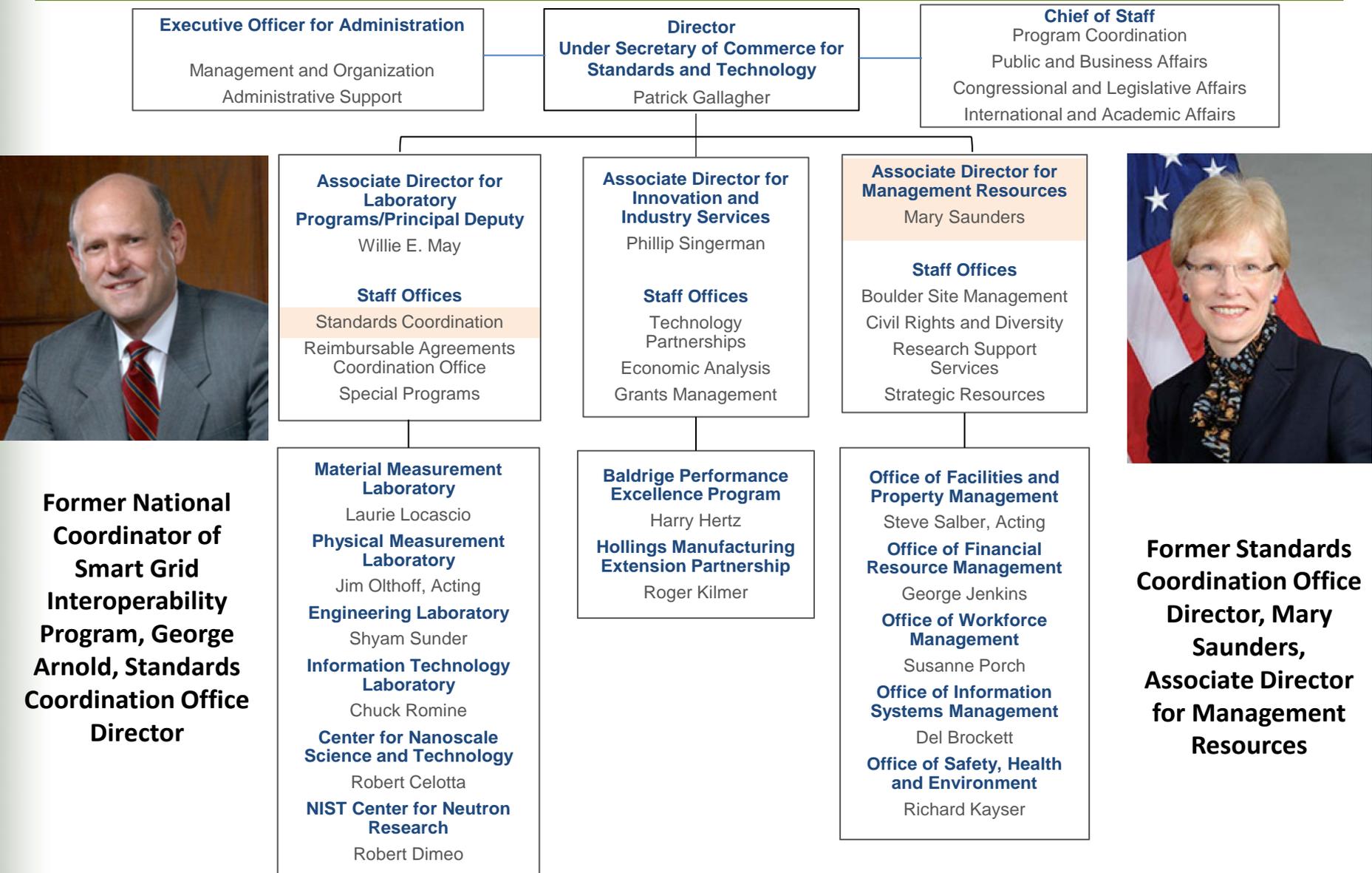
Term: Feb. 1, 2007–March 31, 2013

- VCAT Chair: March 5, 2010–March 31, 2013
- VCAT Vice Chair: Feb. 6, 2008–March 4, 2010
- Member of the VCAT Subcommittee on Safety, 2012–2013
- Chair of the VCAT Subcommittee on Public Safety Networks, 2011
- Member of VCAT Subcommittee on Information Technology, 2007

# A SMALL TOKEN OF OUR APPRECIATION



# Organization



**Former National Coordinator of Smart Grid Interoperability Program, George Arnold, Standards Coordination Office Director**



**Former Standards Coordination Office Director, Mary Saunders, Associate Director for Management Resources**

# Budget Update

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## FY 2013 Request

- Currently on a Continuing Resolution through March 27

## FY 2014 Request

- Submission pending

## FY 2015 Request

- Internal planning processes begun

# OMB Guidance on Sequestration

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- Use available flexibility to reduce operational risks/minimize impacts on the agency's core mission in service of the American people;
- Review grants/contracts to determine where cost savings may be achieved in a manner that is consistent with the applicable terms and conditions;
- Operational challenges that could potentially have a significant deleterious effect on the agency's mission or otherwise raise life, safety, or health concerns;
- Take into account funding flexibilities, including the availability of reprogramming and transfer authority;
- Identify the most appropriate means to reduce civilian workforce costs where necessary; may include:
  - imposing hiring freezes,
  - releasing temporary employees or not renewing term or contract hires,
  - authorizing voluntary separation incentives and voluntary early retirements, and
  - implementing administrative furloughs

# Planning Framework

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Planning framework has three perspectives:

- Long-term evolution and capacity building
  - Alignment with critical needs
  - Internal goals and process improvements
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- Each perspective is defined by different planning processes and interactions with different stakeholders
  - Objective is to support strategic decision-making.

# Program Planning

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*How does our mission contribute to national priorities?*

- *relevance*
- *impact*



## Examples:

- Cybersecurity;
- Advanced Manufacturing;
- Nanotechnology Safety, Environment, Health;
- First responder communications;
- Smart Grid

# Capacity Planning



*What capabilities does NIST need in order to carry out its mission effectively?*

- *Positioning*
- *Science & technology drivers*

## **Examples:**

- Biology and biotechnology;
- Systems engineering;
- Quantum-based measurement;
- IT and Communication, IT and control convergences

# Internal Improvement Planning

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*What processes do we have to improve to make us more effective at our mission?*

- *Continuous improvement*
- *Key barriers/opportunities*

## Examples:

- Safety;
- “Business of NIST” (those activities involving management of money)
  - Acquisition
  - Agreements
  - Grants

# Program Update: National Cybersecurity Center of Excellence (NCCoE)

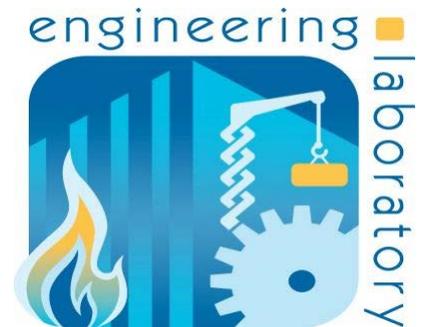
- Center is undertaking carefully developed use cases to resolve cybersecurity challenges through teams of public and private sector experts.
  - Federal Register Notice for partners for first use case (Health IT) published in January
  - Second use case FRN planned for end of March.
- Signing National Cybersecurity Excellence Partners (NCEP) in progress. Intel has signed, five other major IT vendors are in the final stages of review.
- In process of setting up FFRDC as governance structure. Due to procurement cycle, contract likely won't be let until FY14.
- In collaboration with Intel and EMC/RSA, the NCCoE built a demonstration of trusted geolocation in the cloud. In conjunction with the NIST cloud conference, the NCCoE hosted a workshop and presentation attended by >70 industry, academia, and government participants on the trusted geolocation architecture.



# Program Update: Smart Grid

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- Starting January 1<sup>st</sup>, Smart Grid Interoperability Panel (SGIP) became fully private entity referred to as “SGIP 2.0”
- Smart Grid Interop 2012
  - Last board meeting of SGIP 1.0, first of SGIP 2.0
  - NIST and SGIP 2.0 Inc signed MoU
- Smart Grid Federal Advisory Committee met in December, plan to provide input on research portfolio
- NIST announced FFO for Smart Grid Interoperability Standards Cooperative Agreement Program, for \$750k FY13 and \$1,000k FY14-15, expects to sign Cooperative Agreement in March
- George Arnold will remain principal NIST representative to SGIP and member of its Board of Directors throughout 2013



# Program Update: Public Safety Communications

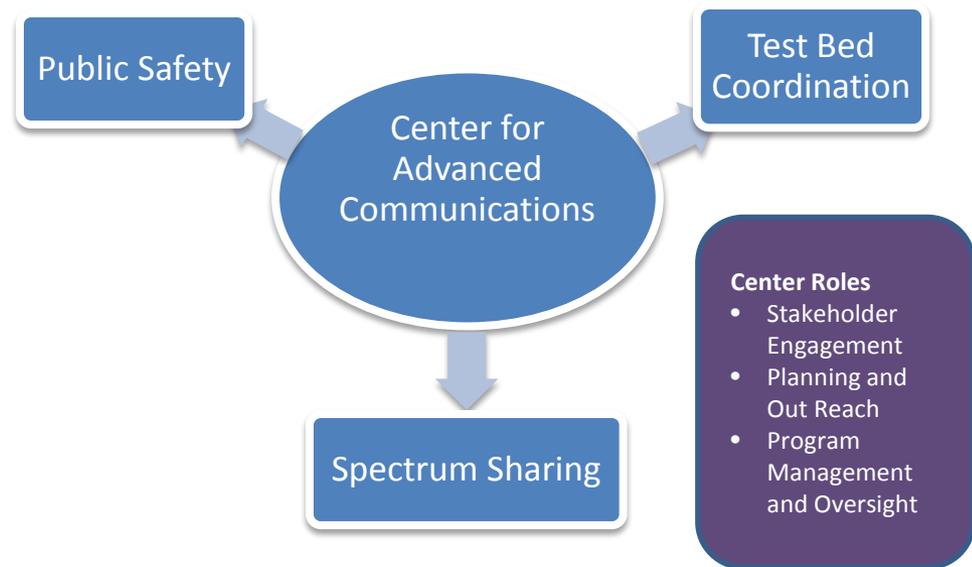
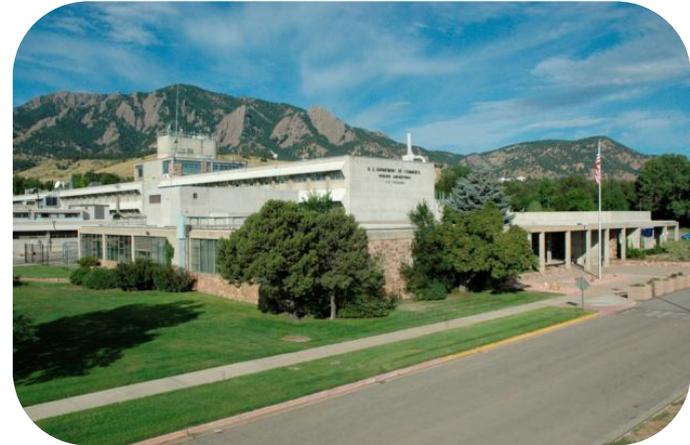
- On August 20, 2012 the Department of Commerce announced the FirstNet Board of Directors
- FirstNet is responsible for the design, deployment, and operation of a nationwide public safety broadband network
- NIST and NTIA, through the PSCR in Boulder, CO is providing technical expertise to FirstNet in the following areas:
  - Requirements Gathering
    - Network Launch Requirements
  - Standards Development
    - First responder-specific needs for LTE technology
  - Research, Development, Testing, & Evaluation
    - 700 MHz Public Safety Broadband Demonstration Network
  - Network Modeling & Simulation
    - Nationwide network modeling



# Program Update: Advanced Communications

## Planned Center for Advanced Communications

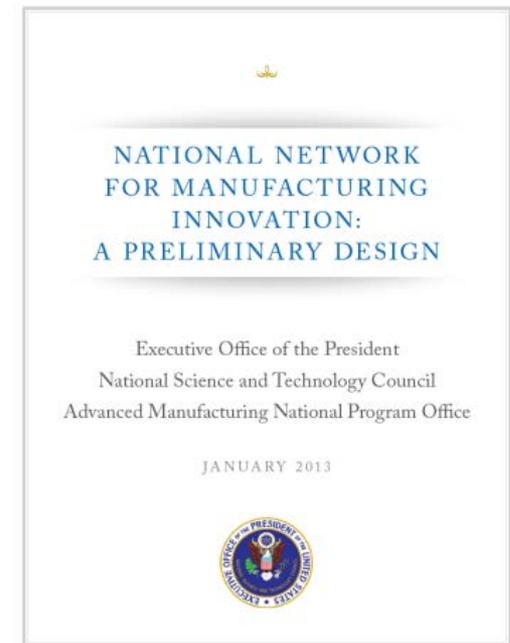
- OU level organization HQ in Boulder
- Partnership with NTIA -- Critical Mass or R&D with Testing Engineering capability
- Focal point for Firstnet R&D
- Focal point for engagement with Industry and Government
- Discussions underway with DOD to coordinate Federal spectrum testing needs and access to existing test-range capabilities



# Program Update: The National Network for Manufacturing Innovation

January 16, 2013 **Blueprint for Action: Workshop on the Design of the National Network for Manufacturing Innovation** in Huntsville, AL

- NASA and DOD sponsored event
- Over 350 participants, majority were industry leaders
- Public release of NSTC Report *National Network for Manufacturing Innovation: A Preliminary Design*
  - Presents an overview of the program, drafted by interagency team led by the AMNPO
  - Based on input from 4 workshops and Request for Information – nearly 900 stakeholders in total

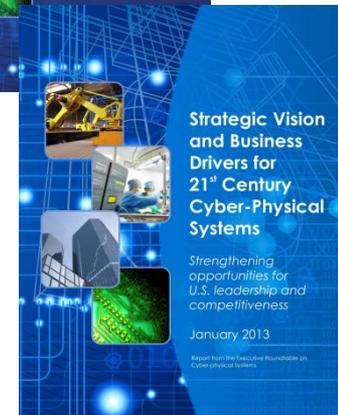
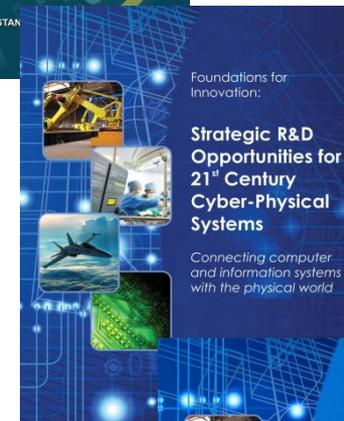
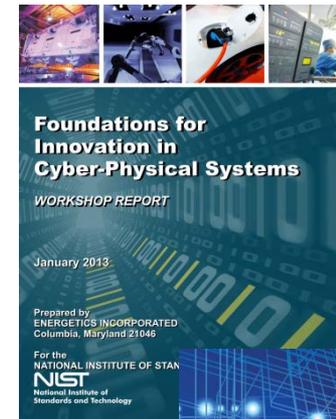


Planned: Washington DC Blueprint for Action workshop, hosted at the National Academy of Sciences



# New Issue: Cyber-Physical Systems (CPS)

- Hybrid networked cyber and engineered physical elements co-designed to create adaptive and predictive systems
- Standards for interoperability, cybersecurity, and data-centric analytics could enable integrated CPS platform architectures
- Common CPS platform “stack” characteristics:
  - Sensing and Control layer: distributed real-time feedback loops
  - Network layer: multiple topologies, functional relationships, scales
  - Data layer: big data and cloud-based
- CPS form core of related initiatives: Industrial Internet, Smarter Planet, Smart Systems, Machine to Machine, and Internet of Things.
- NIST held executive roundtable on potential R&D opportunities for CPS, produced report in Jan 2012

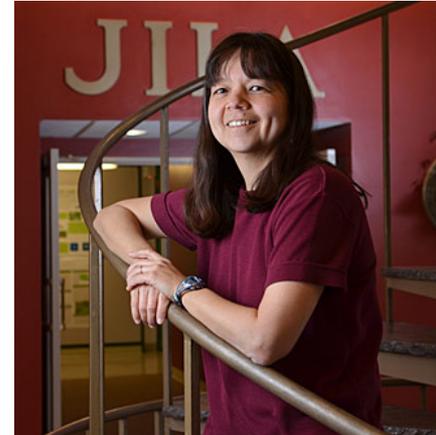


# Awards

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NIST Fellow **Deborah Jin** has been awarded the 2013 L’Oreal-UNESCO Award for Women in Science, representing North America.

This award, established in 1998, is selected by an international jury, with winners selected for each of five geographic regions.



**Deborah Jin**

Credit: University of Colorado Boulder

In addition, NIST Senior Advisor on Cybersecurity Policy **Jon Boyens**, NIST Senior Executive Advisor for Identity Management **Jeremy Grant**, and NIST Senior Information Technology Policy Advisor **Adam Sedgwick** won the 2012 Fed 100.

The Federal 100 Awards recognize government and industry leaders who have played pivotal roles in the federal government IT.

# VCAT Meeting Agenda Review

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## Day 1

- **Call to Order, Announcements, VCAT Elections**  
Vinton Cerf, VCAT Chair
- **Agenda Review and NIST Update**  
Pat Gallagher, Under Secretary of Commerce for Science and Technology and NIST Director
- **Example of the NIST Role in International Metrology**
  - **International Metrology and the Redefinition of the Kilogram**  
James Olthoff, Acting Director, Physical Measurement Laboratory
  - **Laboratory Tour – from Mass Standards to the Electronic Kilogram: A Redefinition of the Metric System**  
Carl Williams, Chief, Quantum Measurement Division, Physical Measurement Laboratory
- **Panel and Discussion on the Evolution of the Manufacturing Extension Partnership (MEP): The New Strategy**
  - **MEP Program Perspective**  
Roger Kilmer, Director, MEP
  - **MEP Center Perspective**  
Michael Coast, President and CEO, Michigan Manufacturing Technology Center
  - **MEP Advisory Board Perspective**  
Mark Rice, President, Maritime Applied Physics Corporation and Former Chair, MEP Advisory Board
- **Baldrige Performance Excellence Program Transition from Federal Funding**  
Harry Hertz, Director, Baldrige Performance Excellence Program

# VCAT Meeting Agenda Review

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## Day 2

- **Safety**
  - **NIST Safety Metrics**  
Richard Kayser, Chief Safety Officer
  - **VCAT Subcommittee on Safety Recommendations and VCAT Deliberations**  
Tony Haymet, Chair, VCAT Subcommittee on Safety
- **VCAT Recommendations and 2013 Charge**
  - **Presentation of Initial Observations, Findings, and Recommendations for 2012 VCAT Annual Report to the NIST Director**  
Vint Cerf, VCAT Chair
  - **Set VCAT Charge for 2013**  
Patrick Gallagher, Under Secretary of Commerce for Standards and Technology and NIST Director