NIST
The Information Technology Laboratory
Cita M. Furlani, Director

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"Computer science is largely concerned with an understanding of how low-level details make it possible to achieve high-level goals."

—Don Knuth, Turing Award Winner.

NIST MISSION

To promote U.S. innovation and industrial competitiveness by advancing

- measurement science,
- standards, and
- technology
- in ways that enhance economic security and improve our quality of life
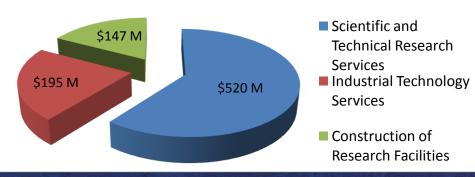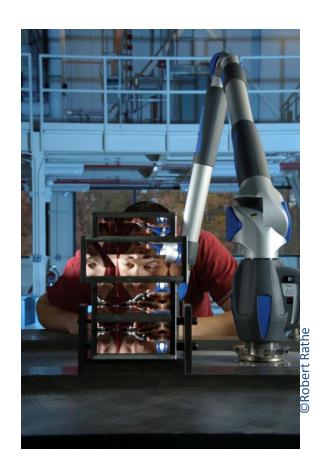
NIST: Basic Stats and Facts

Major asset

- ~ 2800 federal employees

- ~ 2600 associates and facilities users/year

- ~ 1600 field staff in partner organizations
(Manufacturing Extension Partnership)

- Two main locations, MD and CO

- Four collaborative Institutes (basic physics, biotech, quantum, marine)

FY 2010 Appropriations $862 M

- $147 M
- $195 M
- $520 M

- Scientific and Technical Research Services
- Industrial Technology Services
- Construction of Research Facilities

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ITL Mission

To promote U.S. innovation and industrial competitiveness by advancing

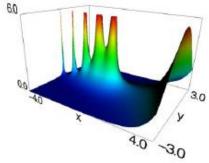*measurement science,*
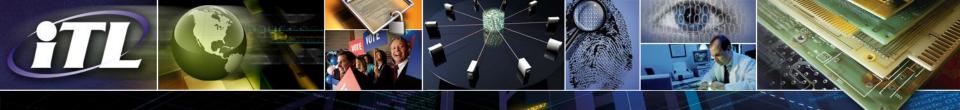
standards, and

technology

through research and

development in

information technology,
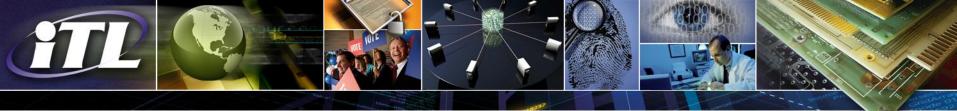
mathematics, and

statistics.

ITL Strategic Goals

- Accelerate, through standards, tests and metrics, the development, deployment and use of secure, usable, interoperable and reliable information systems that make American businesses more innovative and more competitive.

- Enable world-class measurement and testing through research innovations in the areas of computer science and systems engineering, mathematics and statistics.
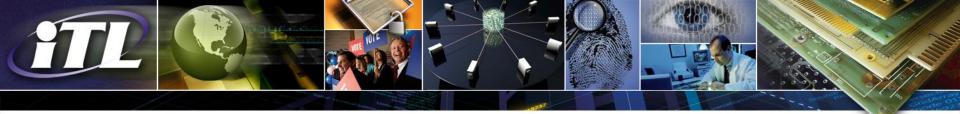
Strategic/Exploratory

- Complex Systems

- Pervasive IT

- Virtual Measurements
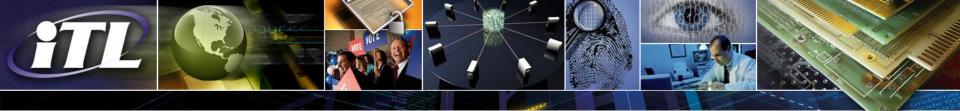
- Shape Metrology

National Priorities in Information Technology

- Cloud Computing

- Health IT

- Identity Management

- National Initiative for Cybersecurity Education

- National Strategy for Trusted Identities in Cyberspace—National Program Office

- Security Automation

- Supply Chain—Cyber

- Voting Standards

National Priorities with Critical IT Aspects

- Biosciences And Bioimaging
- Cyber Physical Systems
- Forensics
- Greenhouse Gas Measurement
- Optical Medical Imaging
- Public Safety Communications
- Quantum Information
- Smart Grid
- Trusted Networking (Ipv6, DNSsec)

Emerging Growth Areas

- FY2012 Initiatives (http://www.nist.gov/public_affairs/releases/budget_2012.cfm)
  - Ensuring a Secure and Robust Cyber Infrastructure
    - NICE
    - NSTIC
    - Scalable Cybersecurity for Emerging Technologies and Threats
  - Interoperability Standards for Emerging Technologies
    - Cloud Computing
    - Health IT
    - Smart Grid
  - Advanced Materials for Industry
    - IT Aspects of Advanced Materials for Industry
  - Public Safety Innovation Fund: Research to Revolutionize Public Safety Communications
    - Public Safety Broadband Network
- Other Strategic Opportunities
  - Cybersecurity Center of Excellence
  - **Data/Information/Knowledge (Ontologies, Analysis, Visualization, etc.)**
  - Materials by Design
  - Broadband Interoperability
  - Risk: Measurement and Management
  - Technology Mediated Social Participation