NIST ... An Update

Hratch Semerjian
NIST Acting Director

ATP Advisory Committee
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NIST enables the future...

by strengthening the innovation infrastructure to:

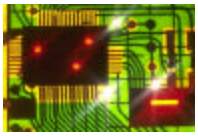
- **advance manufacturing and services**
- **facilitate trade**
- **enhance public safety & security**
- **improve quality of life**

…and create jobs

... through effective partnerships with industry, academia, and other government agencies.

NIST strengthens the innovation infrastructure to…

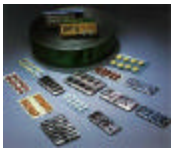
...advance manufacturing and services



semiconductor electronics

"lean manufacturing" of plastics

automobile manufacturing interoperability



pharmaceuticals

chemicals

fuel cell technology

healthcare

NIST strengthens the innovation infrastructure to…

...facilitate trade

secure automated banking

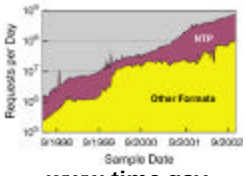
volume and flow standards

electric power metering

ISO International Organization for Standardization

SIM SISTEMA INTERAMERICANO DE METROLOGIA

international standards to counteract TBTs



www.time.gov
billions of hits daily

CE

EU directive on in vitro diagnostic standards

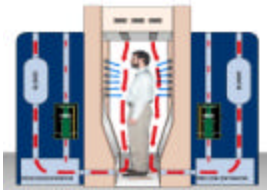
NIST strengthens the innovation infrastructure to…

...improve public safety and security

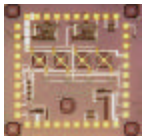
metal detectors

wireless interoperability among first responders

smoke detectors



Trace explosives detection



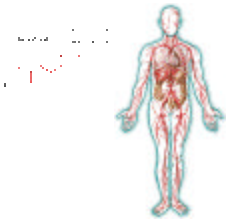
novel sensors to detect gases

altimeter calibration

standards for body armor

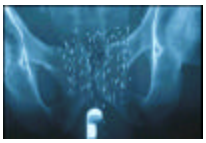
NIST strengthens the innovation infrastructure to…

… improve quality of life

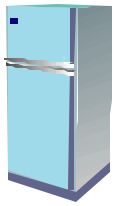


Improved clinical measurements

drinking water quality



prostate and breast-cancer treatment



database and measurements for alternative refrigerants

standards for sulfur in fossil fuels

NIST serves a broad customer base…

Environmental Technologies


Manufacturing

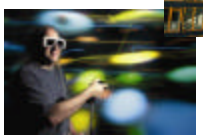

Food and nutrition


Transportation


Pharmaceuticals


Law enforcement


Biotechnology


Computer software and equipment


Construction


Microelectronics

NIST has… ...strong partnerships

Partnerships with industry, academia, and other government agencies have been an integral part of NIST culture since 1901.

ILLINOIS

JILA NIST|CU
University of Colorado

CARB UNIVERSITY OF MARYLAND

WISCONSIN

AdvaMed

Penn

AIAG

ASTM INTERNATIONAL

ITRS
INTERNATIONAL TECHNOLOGY ROADMAP FOR SEMICONDUCTORS

USCAR

ADA

AIGER

NIST has… ... strong partnerships

NIST FY 2006 Budget Request ($M)

Appropriation:	FY 2004 Enacted	FY 2005 Enacted	FY 2006 Request
Scientific & Technical Research & Services (STRS):			
NIST Laboratories	335.1*	373.4 *	420.6
Baldrige National Quality Program	5.6	5.4	5.7
Subtotal, STRS	340.7	378.8	426.3
Industrial Technology Services (ITS):			
Advanced Technology Program	177.3	140.4	0.0
Hollings Manufacturing Ext. Partnership	39.2	107.5	46.8
Subtotal, ITS	216.5	247.9	46.8
Construction of Research Facilities (CRF):			
Construction and Major Renovations	20.9	6.9	23.9
Modifications and Improvements	22.6	22.7	35.0
Directed Grants	20.8	42.9	0.0
Subtotal, CRF	64.3	72.5	58.9
Total	621.5	699.2	532.0

FY 2004 and FY 2005 amounts do not reflect rescissions of unobligated balances.

**Congressionally -directed STRS grants included: $13.8M STRS in 2004; $8.8M in 2005.*

FY 2006 STRS Initiatives ($K)

Advances in Manufacturing	**[19,600]**
National Nanomanufacturing and Nanometrology Facility	10,000
Nanomanufacturing Research	4,000
Measurements and Standards for International Trade	4,000
Manufacturing Enterprise Integration	1,600
Measurements and Standards for Homeland Security	**[3,000]**
Standards, Technology, and Practices for Buildings & First Responders	2,000
Standards for Biometric Identification	1,000
New Measurement Horizons for the U.S. Economy and Science	**[17,195]**
Building Competence for Advanced Measurements Program	4,000
Biosystems and Health	7,195
Interoperability and Security for Complex Scientific Systems	2,000
Quantum Computing	4,000
STRS Initiative Total	**$39,795**

Driving Innovation in America: Ensuring the U.S. Measures Up

- NIST will be leading a public-private initiative to ensure that the U.S. measurement system is robust and sustains the U.S. economy and citizens at world-class levels in the 21st century

The USMS is …

- Part of the national infrastructure, underpinning
  - Fundamental research and technological innovation
  - National security and defense
  - Manufacturing
  - Commerce and trade
  - Effective regulation of health, safety, and the environment
- A component of an international measurement system of great and growing importance
- A critical element of the strategic environment in which we all operate

ATP Staff and USMS

- Accelerate broad discussion with USMS customers and stakeholders:
  - Industry, other agencies, academia
- ATP staff will facilitate workshops leading to white papers on long-term measurement and standards needs in important sectors and emerging technology areas.