WELCOME
NI ST/ Information Technology Laboratory (ITL)
ANSI/NIST FINGERPRINT STANDARDS WORKSHOP

Dr. Shashi Phoha
Director, Information Technology Laboratory
sphoha@nist.gov
301-975-2900
26-28 April 2005
NIST enables the future...

by strengthening the innovation infrastructure through measurement, standards, and technology to:

- facilitate trade
- enhance public safety & security
- improve quality of life
  ...and create jobs

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

Support U.S. industry, government, and academia through measures and standards that
- enable new computational methods of scientific inquiry,
- assure IT innovations for maintaining global leadership,
- insertion advanced information technology in complex societal processes.

Information Interoperability Standards
• Software: XML
• Wireless: 802.11/Bluetooth
• Communications: Border Gateway Protocol

Healthcare IT
• HHS Network Architecture
• Electronic Patient Records
• Infrastructure interoperability

Critical Infrastructure Security
• Internet Security
• Computer Security Resource Center
• Cryptographic Module Validation Program
• Building Security
• Indoor Localization: First Responders

Information Access
• Text REtrieval Conference (TREC)
• Meeting Room Project
• Automatic Content Extraction
• Video Analysis and Content Exploitation (VACE)

Computer Forensics
• Computer Forensics Tool Testing (CFTT)
• National Software Reference Library (NSRL)

Computational Modeling of Physical Systems
• Measurable V&V
• Object Oriented Micro Magnetic Framework (OOMMF)
US VISIT: Biometrics

- Fingerprint Vendor Technology Evaluation (FpVTE) Report delivered to DOJ
- NISTIR on performance for US VISIT IDENT System
- NISTIR on Studies of Plain-to-Rolled Fingerprint Matching
- INCITS M1 standard on finger image-based data interchange formats
- Tested vendor fingerprint Software Development Kits (SDKs)
- Established new laboratory for multimodal biometrics accuracy research and data collection
PIV: Computer Security

- FIPS 201, Personal Identity Verification (PIV) of Federal Employees and Contractors, developed in response to Homeland Security Presidential Directive #12 (HSPD-12)

- Key management best practices for organizations

- Issued 500th crypto module validation certificate; Validated 325 crypto algorithm implementations in the year

Government, Economy, and Biometrics

- Critical Technology for Law Enforcement-AFIS
- Critical to Homeland Security-US Visit
- PIV
- Open Standards for industry
- Supports NIST Mission
  - facilitate trade
  - enhance public safety & security
  - improve quality of life
Electronic Voting System Standards

- First Symposium on Building Trust and Confidence in Voting Systems
- Report to Congress (via EAC): "Improving the Usability and Accessibility of Voting Systems and Products"
- Assisted in organization of the Technical Guidelines Development Committee and 29 Subcommittee Meetings
  - Core Requirements and Testing Subcommittee
  - Human Factor & Privacy Subcommittee
  - Security and Transparency Subcommittee
- Goals:
  - Initial set of recommendations (due April 2005)
  - Updated standards (due Jan 2006)
WORKSHOP GOALS

• Review and Upgrade ANSI/NIST-ITL 1-2000, *Data Format for the Interchange of Fingerprint, Facial and SMT Information*

• Technology Upgrades
  - XML
  - FASTER FINGERPRINT CAPTURE METHODS
  - ENCODING MINUTE DETAILS FROM FINGERPRINT IMAGES

• HARMONIZING WITH OTHER STANDARDS
How We Learn?

The Learning Pyramid

- Lecture: 5%
- Reading: 10%
- Audio-Visual: 20%
- Demonstration: 30%
- Discussion Group: 50%
- Practice by Doing: 75%
- Teach Others or Immediate Use of Learning: 90%

Average Retention Rates

- Making Connections
- Asking Questions
- Determining Importance
- Visualizing
- Inferring
- Synthesizing
- Repairing Comprehension: Fix-up Strategies

HAVE A SUCCESSFUL WORKSHOP

National Training Laboratories, Bethel, Maine