# ANSI/NIST Standard Update

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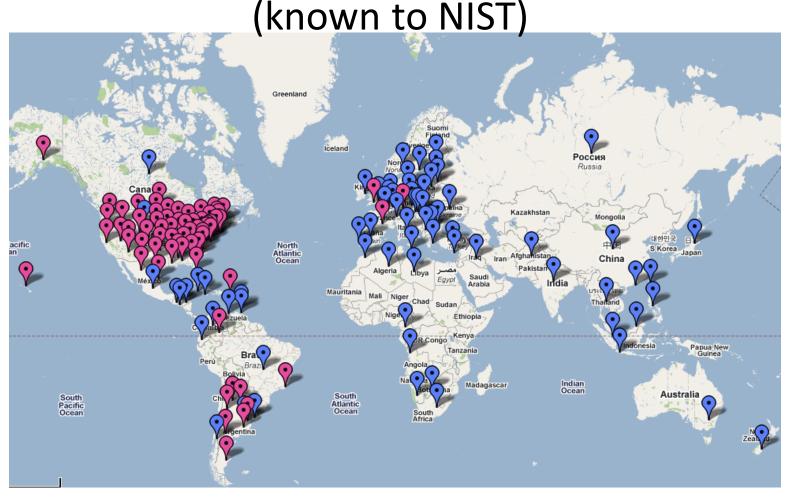National Institute of Standards and Technology

# Why use Standards?

- Ensure consistency in data definition
  - Meaning of the data
  - Usefulness of the data
- Transfer relevant information with the biometric sample(s)
- Enable data to be collected and used by different types of systems using systems from multiple vendors (facilitate interoperability)

# An Example: The ANSI/NIST-ITL Standard

Focused on law Enforcement, Military, Intelligence, Border Management and Homeland Security applications

# Locations of systems with the ANSI/NIST-ITL standard installed for data transfer (known to NIST)



Blue: National and International System Use
Red: State / Provincial / Local System Use

# The Existing ANSI/NIST-ITL Standard

- 1986, 1993, 1997 versions obsolete
- 2000 version (Traditional format) still used in some applications: fingerprints & palm prints (images and minutiae), face images, scar-mark-tattoo images
- 2007 version (Traditional format) added iris and some new fingerprint minutiae fields
- 2008 version (XML format) – same content as 2007 version

# ANSI/NIST-ITL 1-2011

- New (General):
  - modalities and data formats : DNA, Plantar (footprint), Iris compact formats, Images of additional body parts (besides face)
  - data: geo-positioning location; information assurance features; associated contextual images, audio or visual clips, and data
  - logs: data handling logs and original representation, audio or visual clips, electropherograms and data (used to prepare the biometric samples)

# ANSI/NIST-ITL 1-2011

- Forensics:
  - Latent friction ridge print Extended Feature Set markups
    - cores, deltas, distinctive characteristics, minutiae, dots, incipient ridges, creases & linear distortions, ridge edge features, pores & ridge edge
  - Universal latent workstation automated annotation
  - Images of the body (beyond face, iris and friction ridges)
  - 3D anthropomorphic facial image markup fields

# New projects in ANSI/NIST-ITL for later addition to the standard

- Voice Biometrics
- Dental Forensics
- Conformance Testing

# Voice

- Working Group chaired by Alvin Martin of NIST
- First Draft of proposed Record Layout being reviewed by Working Group
- Goal is to create Record Type 11 as a supplement to ANSI/NIST-ITL 1-2011
- For more information, listen to the talk presented by Mark Przybocki immediately following this presentation

# Dental Forensics
# Slide 1

- Used to identify bodies
  - Disaster Victim Identification
  - Murder Victims / Missing Persons
- Several Techniques
  - Ante mortem / postmortem x-ray comparison
  - Analysis of pictures (with smiles showing the upper teeth)
  - Bite marks / molds of the teeth

# Dental Forensics
# Slide 2

- Need to transmit information in a standard way that is understood by odontologists

- American Dental Association developed the Forensic Dental Data Set (ANSI/ADA 1058)

- Scientific Working Group for Disaster Victim Identification is developing guidelines for handling bodies at disaster scenes

- INTERPOL has a working group

# Dental Forensics
## Slide 3

- ANSI/NIST-ITL Working Group bringing together specialists

- Meeting Scheduled to coincide with the February meeting of the American Academy of Forensic Science

- Membership open to all interested parties

- Goal is to create a new record type for inclusion in ANSI/NIST-ITL (Record Type-12)

# Conformance to ANSI/NIST-ITL

- Covered by Presentation by Fernando Podio and Dylan Yaga on Tuesday

- Working Group established and initial test assertion list consturcted for selected Record Types.

- Goal: Incorporate as a supplemental  Annex in ANSI/NIST-ITL 1-2011

# Contact Information

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Standard Homepage:
http://www.nist.gov/itl/iad/ig/ansi_standard.cfm