NVLAP Overview
and
Accreditation Process

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National Voluntary Laboratory Accreditation Program

Jeffrey Horlick, Guest Researcher
National Institute of Standards and Technology
National Voluntary Laboratory Accreditation Program
(NIST / NVLAP)
Building 820 Room 287
100 Bureau Drive Stop 2140
Gaithersburg, MD 20899-2140

Phone: 301.975.4020
Fax: 301.926.2884
E-mail: jeffrey.horlick@nist.gov
URL: http://www.nist.gov/nvlap

NIST National Institute of Standards and Technology • Technology Administration • U.S. Department of Commerce
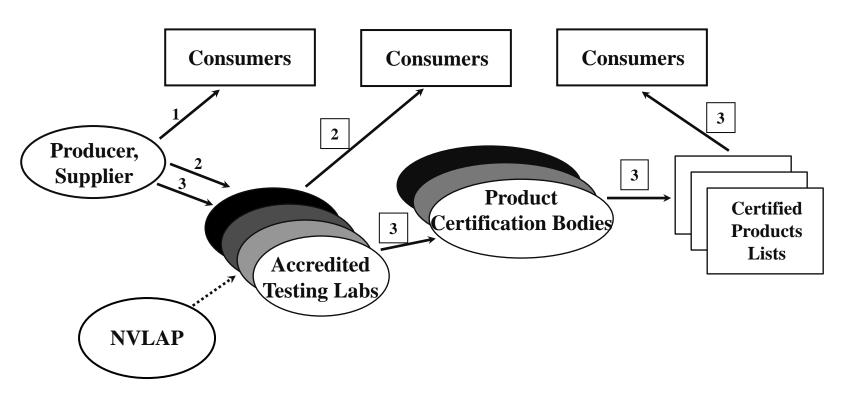
Why Laboratory Accreditation?

- So you don't have to worry.

  - Confidence - it has been done right
  - Competence - get the right answer
  - Equivalence - get the same answer
  - Independence - nothing else is going on
  - Appropriateness - fit for purpose
  - Repeatability - get the same answer twice
  - Reproducibility - others get same answer

Why Harmonized Standards?

- So you can talk to each other

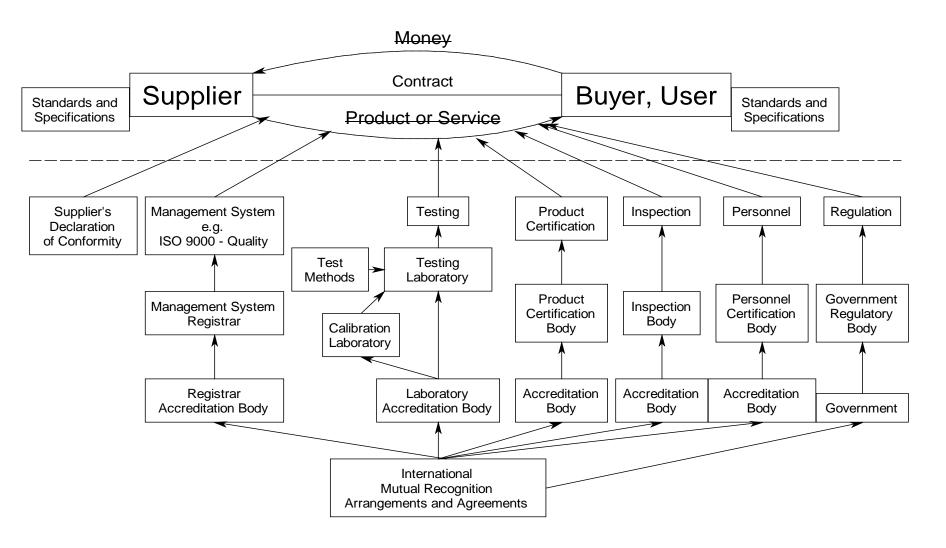- So you can do business with each other

Paths to Consumer

Path 1: Declaration of Conformity
Path 2: Conformance demonstrated by testing in accredited laboratory
Path 3: Conformance demonstrated by testing and product certification

DOMESTIC AND INTERNATIONAL TRADE

Money

Supplier

Contract

Buyer, User

Product or Service

Standards and Specifications

Standards and Specifications

Supplier's Declaration of Conformity

Management System e.g. ISO 9000 - Quality

Testing

Product Certification

Inspection

Personnel

Regulation

Test Methods

Testing Laboratory

Management System Registrar

Product Certification Body

Inspection Body

Personnel Certification Body

Government Regulatory Body

Calibration Laboratory

Registrar Accreditation Body

Laboratory Accreditation Body

Accreditation Body

Accreditation Body

Accreditation Body

Government

International Mutual Recognition Arrangements and Agreements

CONFORMITY ASSESSMENT

jh-20031218

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NVLAP Programs (LAPS) for Information Technology Security Testing

- NVLAP accredits laboratories for testing to:

    - Federal Information Processing Standard (FIPS) 140-2 for cryptographic modules
    details: http://www.nist.gov/cmvp

    - ISO/IEC 15408 Common Criteria
    details: http://niap.nist.gov/cc-scheme/ and
                  http://niap.nist.gov/index.html

NVLAP Programs (LAPS) for Information Technology Security Testing

- NVLAP is adding a program for NPIVP

  details: http://www.nist.gov/npivp

- for the Scope of PIV Card Application and Middleware Interface Testing per FIPS 201

Program Specific Requirements for the NPIVP LAP

- NIST Handbook 150 *NVLAP Procedures and General Requirements* (contains ISO/IEC 17025) - 2006 revision coming soon

- All requirements of the NPIVP

- NIST Handbook 150-xx for NPVIP which extends and defines Handbook 150 specifically for this program

- Proficiency Testing is designed specifically for this program

- Technical experts are trained in the NVLAP methodology and to assess to ISO/IEC 17025

Accreditation to ISO/IEC 17025

- Review of quality system: Quality Manual, Procedures, Instructions, Records
- On-site assessment by a team of peer technical experts
- Participation in proficiency testing
- Evaluation of the above by NVLAP team
- Feedback to the laboratory
- Corrective action by the laboratory

Proficiency Testing

- An integral part of the accreditation process - customized for field

- A means of periodically checking laboratory performance and ability

- Required for initial and/or continuing accreditation

ISO 17025 - Management Requirements (Section 4 of NIST Handbook 150)

- Organization
- Quality system
- Document control
- Review of requests, tenders and contracts
- Subcontracting of tests and calibrations
- Purchasing services and supplies
- Service to the client
- Complaints

ISO 17025 - Management Requirements cont'd

- Control of nonconforming testing and/or calibration work

- Corrective action

- Preventive action

- Control of records

- Internal audits

- Management reviews

ISO/IEC 17025 -Technical Requirements (Section 5 of NIST Handbook 150)

- General - factor contributing to correctness and reliability

- Personnel

- Accommodation and environmental conditions

- Test and calibration methods and method validation

- Equipment

ISO/IEC 17025 -Technical Requirements cont'd

- Measurement traceability
- Sampling
- Handling of test and calibration items
- Assuring the quality of test and calibration results
- Reporting the results

Additional NVLAP requirements

- Referencing NVLAP accreditation (use of logo and "NVLAP")

- Implementation of traceability policy

- Approved Signatory

- Authorized Representative(s)

Applicants for Accreditation

- Send application to NVLAP including:
  - General Application Forms
  - Program Specific Application Form
  - Fees
  - Quality Manual
- Quality documentation review by assessors
- Proficiency testing of artifact
- On-site Assessment with Round Table Quiz
- Resolution of all non-conformances
- NVLAP review and grant of accreditation

NVLAP Application Fees

- Administration/Technical Support Fee $4190
- Discount of $2600 for labs in ITST LAPs
- 1st-time laboratory fee $500
- Proficiency Testing $0 at this time
- On-site Assessment Fee $5040

- Total for 1st time laboratory $9730
- Total lab adding NPIVP $6630

- See NVLAP web site for General Application and description of fee structure

Typical On-site Visit - conducted every other year (after initial two)

- Team of two assessors for 1 1/2 days
- Entry meeting with lab management
- Review quality system documentation including, records, personnel folders, technical documentation, internal audits, management reviews
- Examine facilities, hardware, software,..
- Staff interviews on all aspects of standards and testing with appropriate demonstrations

Typical On-site Visit - conducted every other year - cont'd

- Proficiency testing
- Exit meeting
  - On-Site Assessment Report given to lab
  - Required written responses to NVLAP are discussed

Quality System documentation includes (but is not limited to)

- Quality manual
- Policies, objectives, commitments
- Procedures - management and technical
- Instructions - management and technical
- Records - management and technical
- Roles and responsibilities
- Organization charts - inside laboratory boundary and laboratory's place in larger organization
- Complaints log

Proficiency Testing

- Before the on-site visit
  - Conduct of a test using the NIST-provided test tool and NIST provided artifact(s)
  - Test report reviewed
  - Feedback to laboratory

Granting Accreditation

- NVLAP reviews all information with input from assessor team

- All non-compliances must be resolved

- NVLAP grants accreditation for one year

- Renewal each year with on-site every-other year (after initial and first-year onsite assessments)