

Genesis, Evolution, and Status of the U.S. Personal Identity Verification (PIV) Program

William C. Barker
NIST

Key Questions

- **What is Personal Identity Verification?**
- **What is the status of PIV?**
- **What impediments were encountered by the program?**
- **Where is the horizon?**

How PIV began

HSPD-12, 2004AUG27

Goal: "...to enhance security, increase Government efficiency, reduce identity fraud, and protect personal privacy by establishing a mandatory, Government-wide standard for secure and reliable forms of identification issued by the Federal Government to its employees and contractors"

Means: "...identification that

- (a) is issued based on sound criteria for verifying an individual employee's identity;
- (b) is strongly resistant to identity fraud, tampering, counterfeiting, and terrorist exploitation;
- (c) can be rapidly authenticated electronically; and
- (d) is issued only by providers whose reliability has been established by an official accreditation process."

How PIV is named

Personal Identity Verification (PIV), as in

The PIV Card, an identity credential

The PIV System, an identity infrastructure

Note:

The PIV System excludes client physical and logical access control systems

The PIV System excludes authorization decisions based on PIV-based identification and authentication

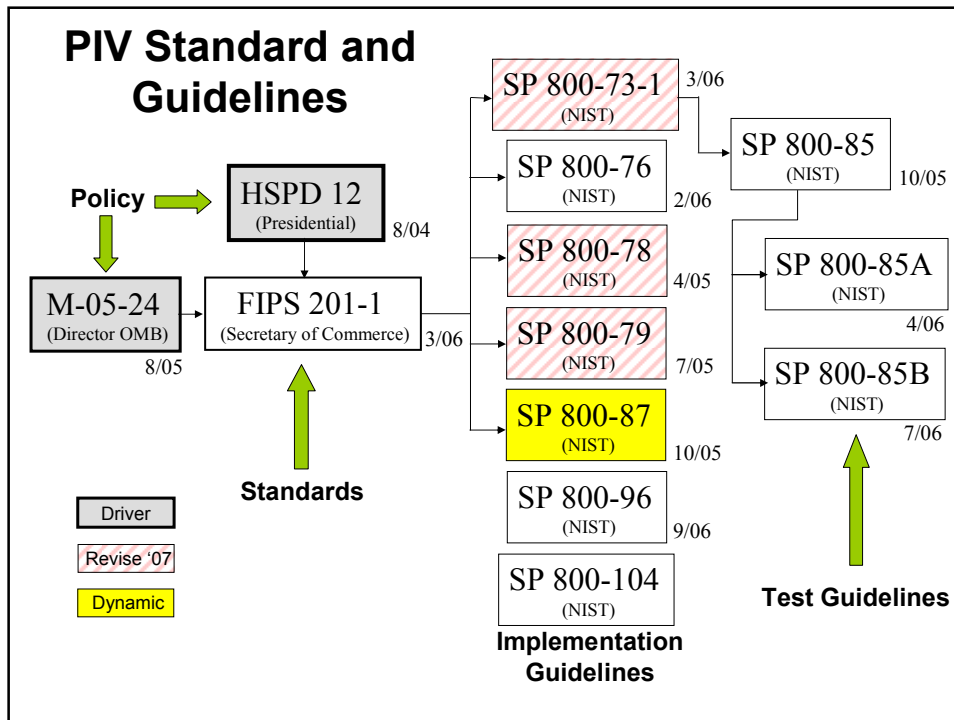
How NIST contributed

FY 2006 activities

1. Delivered Standard and implementing guideline documents
2. Engaged industry (50 suppliers participated in capabilities demonstration event)
3. Developed test methods, toolkits, & validation program
4. Supported General Service Administration's HSPD-12 product Evaluation Program
5. Conducting Standard and guidelines revision activities as necessary.

NIST Standard and Guidelines

Federal Information Processing Standard 201 (FIPS 201), <i>Personal Identity Verification (PIV) of Federal Employees and Contractors</i>	SP 800-79, <i>Guidelines for the Certification and Accreditation of PIV Card Issuing Organizations</i>
Special Publication 800-73 (SP 800-73), <i>Interfaces for Personal Identity Verification</i>	SP 800-85A, <i>PIV Card Application and Middleware Interface Test Guidelines</i>
SP 800-76, <i>Biometric Data Specification for Personal Identity Verification</i>	SP 800-85B, <i>PIV Data Model Conformance Test Guidelines</i>
SP 800-78, <i>Cryptographic Algorithms and Key Sizes for Personal Identity Verification</i>	SP 800-87, <i>Codes for the Identification of Federal and Federally-Assisted Organizations</i>
	SP 800-96, <i>PIV Card / Reader Interoperability Guidelines</i>
	Draft SP 800-104, <i>A Scheme for PIV Visual Card Topography</i>

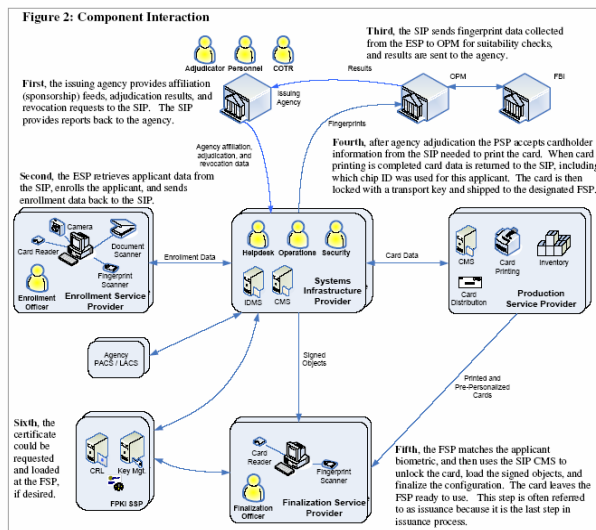


How PIV is used

FIPS 201-1, Section 6.2

1. VIS visual credentials
2. CHUID card holder unique identifier
3. BIO unattended biometric
4. BIO-A attended biometric
5. PKI by either a person or a card

How PIV is structured



What is the PIV System status?

Passed October 27, 2006 start-of-issuance milestone
 ...with heroic effort
 ...and with some component conformance issues

Process integration is improving, conformance test results are closely monitored

Agencies have low volume issuance capability now, high volume enrollment system to deploy in 2007

Impediments Encountered

- Schedule
- Large and mutually non-interoperable installed base
- Business models predicated on proprietary discriminators
- Privacy interests and concerns
- Biometric interoperability issues
- Varied Use cases

Where is the horizon?

FY 2007 activities

1. Respond to critical needs
2. Provide application examples & advice
3. Complete revisions already committed
 - SP800-76-1 editorial improvements
 - SP800-78-1 and SP800-73-2 changes
 - SP800-104 PIV Card color coding
4. Transfer PIV technical knowledge

Where is the horizon?

A strategic perspective

- Technical exchange with other USG initiatives
 - e-Authentication (federation)
 - Identification for emergency response
 - Critical infrastructure protection initiatives
 - Border crossing initiatives
- Test Secure Biometric Match-On-Card
 - Authenticate the person, propagate the assertion
 - Leverage interoperable templates & secure protocols
- Position for future ISO and ANSI standards
 - ISO 24727 becomes PIV middleware?
 - ANSI/INCITS B10 project becomes “PIV platform”?

Thanks for listening!

william.barker@nist.gov