DigitalPersona

Case Study: Department of Defense
U.S. Department of Defense

Background:

• Began migration to smart cards
• Experienced skyrocketing password reset costs
• Needed immediate NIAP/NIST compliant solution

Using DigitalPersona Pro, The Office of the Secretary of Defense:

• Enjoyed COTS, out-of-the-box integration with Microsoft Active Directory
• Accelerated their pursuit of multi-factor authentication
• Reduced related help desk calls – report 90% reduction
• 1300+ desktops since September of 2003, further deployments underway
DigitalPersona - The Company

- Founded in 1996 by former Logitech Executives and MIT/Caltech Graduates.
- Privately held Venture backed
  - Intel, IDG Ventures, Kensington, VantagePoint Ventures.
  - $12M round in January
- Employees – 85
- Headquartered in Redwood City, CA
- Strategic Partnerships
  - Microsoft
  - Intel Development Partner
  - Verisign
  - Channel partners, Dell, HP, Gateway, GTSI.
# User Authentication

<table>
<thead>
<tr>
<th>Something You Know</th>
<th>Something You Have</th>
<th>Something You Are</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Chosen by user</td>
<td>• Requires PKI infrastructure</td>
<td>• Trust is based on securing match process</td>
</tr>
<tr>
<td>• Most can be cracked from hash</td>
<td>• Software modification</td>
<td>• Biometrics are not a secret themselves, but instead provide access control to a secret</td>
</tr>
<tr>
<td>• Typically written down</td>
<td>• Need to carry something</td>
<td>Security not dependent on user</td>
</tr>
<tr>
<td>• Policies breed confusion</td>
<td>• Costly to maintain</td>
<td></td>
</tr>
<tr>
<td>• Entered via untrusted device</td>
<td>• Cannot ensure access isn’t from malicious code</td>
<td></td>
</tr>
<tr>
<td>• Typically cached on local PC</td>
<td>• Still requires a PIN</td>
<td></td>
</tr>
</tbody>
</table>

*Can be easily changed*

*Strong cryptography*

*No security approach is a magic bullet – each addresses a different type of threat.*
Conventional Security
-Profiling the Risks & Costs-

• **Four out 5 workers will disclose their passwords to someone in the company, when asked**
  PentaSafe Security Technologies; Cnet News, 2002

• **Employees pose 2x greater threat to a company’s technology infrastructure than external, non-employees**
  CSO Magazine Survey, 2002; CXO Media Inc.

• **71% of computer fraud is due to unauthorized inside activity**
  CSO Magazine Survey, 2002; CXO Media Inc.

• **$328k is the average loss attributable to a security breach/fraud**
  2003 CSI/FBI Computer Crime Survey

• **Password support costs average $150 per user per year**
Practical Security Pyramid

Security Driven

Users who control corporate systems or access the most sensitive data

**Solution Today:** Token + Password
**Proposed Solution:** Multifactor (recommend fingerprint + password)

Specialized Staff

Remote Users

Users who access information from outside the firewall

**Solution today:** Token + Password
**Proposed solution:** Fingerprint

General User Population

Users who access information from within the firewall

**Solution Today:** Passwords
**Proposed Solution:** Fingerprint

Convenience & Cost Driven
Another looming problem, Gates said, is the password. "People hate changing their password," Gates said. "They pick very guessable passwords." The industry will have to move to smart cards or some kind of biometric recognition for authentication. "It will take five or six years," he said. "There's no doubt that has to come."

- Bill Gates, September 24, 2004

"The biggest threat to the security of a company is not a computer virus, an unpatched hole in a key program or a badly installed firewall...

The weakest link in the chain is the people"

- Kevin Mitnick; Oct 2002, BBC Interview
DigitalPersona Pro for Active Directory

- DigitalPersona Pro’s innovative approach to Biometric Enterprise Authentication uses fingerprint recognition technology to:
  - **Reduces Costs** - Eliminate password related help desk overhead
  - **Increases Security** - Address “Inside the firewall” security vulnerabilities
  - **Increases Convenience** - Added convenience automatically creates end-user secure behavior
  - **Enhances Compliance** - Address major security/privacy regulations

Biometric Enterprise Authentication = Single-Sign On that works -
DigitalPersona Pro 3.0: Architecture

1. Authentication Policies
   - GPO
   - User record
   - Active Directory

2. Pro Workstation Software
   - Pro Server Software
   - Intelligent Authentication Agent

3. Intelligent Authentication Agent
   - Peoplesoft
   - Sales Dbase
   - SAP App
   - Portal
   - FP Template

4. Identity Lockbox
   - Peoplesoft
   - Sales Dbase
   - SAP App
   - Portal
   - FP Template

5. Windows Logon
6. Peoplesoft Logon
7. SAP Logon
Microsoft and DigitalPersona Will Collaborate on Biometric Solutions

Companies Team Up to Offer Technology in Select Future Products

REDMOND, Wash., and REDWOOD CITY, Calif. -- Feb. 17, 2004 -- Microsoft Corp. and DigitalPersona Inc. today announced that DigitalPersona has been selected as a preferred supplier for integrating biometric technology in select future product offerings from Microsoft.

"We are proud to help Microsoft serve its customers better by offering this technology," said Fabio Righi, CEO of DigitalPersona. "By working together, we can help make biometric products more convenient and available for users."

Specific product details will be made available later this year.
Optical Fingerprint Capture

- Optimal accuracy. Captures large area of fingerprint which provides more data for high accuracy and ease of use.

- URU4000 Fingerprint Capture Area
  18.16 mm x 14.6 mm (on centerlines)
  512 dpi, avg.

- Competition’s Silicon Sensor Capture Area
  6.5 mm x 6.5 mm
  500 dpi
Recognition Accuracy

• Standard setting:
  <0.001% False Accept Rate
  <1.4% False Reject Rate (single try)
  Those figures based on U.are.U 4000, an adult office population, verification over 6 weeks, and tested in accordance with ‘Best Biometric Testing Practices’ Prof. Wyman (SJSU, NIST)

• Zero errors in International Biometrics Group comparison testing.
  First visit results with wide demographic sample. Please purchase test report for full comparison.
Example DigitalPersona Deployments

- **Charles Schwab & Co**, 14,000 seats deployed
- **Rite-Aid**, 10,000 seats deployed
- **TelMex**, 16,000 seats deployed
- **U.S. Dept. of Defense**, 3,000-5,000 seats deployed
- **potential in the Millions of seats**
- **Albertsons**, 15,000 seats to be deployed
- **Sutter Health Hospitals**, 5,000 seats deployed
- **Italy Ministry of Finance**, potential 20,000 seats
- **Hospital Drug Dispensing Application**, >45,000 units
- **Banco Azteca (Mexico)**, 4,500,000 users