

Presented by:



Understanding the Successes of Identity-Based Encryption

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Agenda

- ▶ Current adoption of IBE
- ▶ Customers of IBE
- ▶ Benefits and advantages of IBE

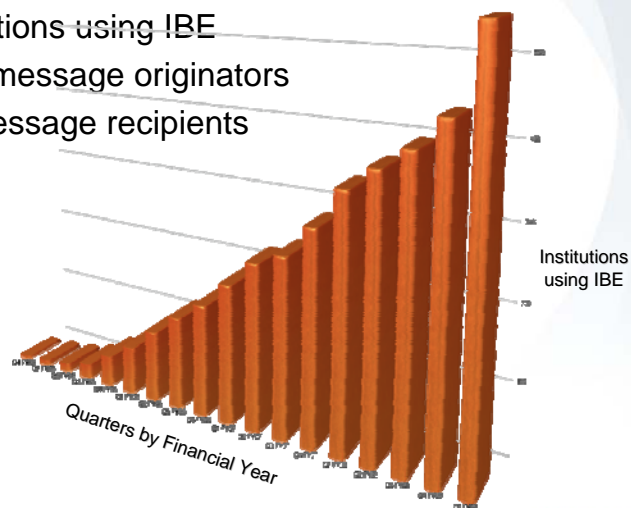
Background

- ▶ Headquartered: Silicon Valley - Palo Alto, CA
- ▶ Founded out of Stanford to bring IBE based solutions to market
- ▶ IBE product lines
 - Voltage SecureMail – policy-based email encryption
 - Voltage SecureFile – protection of files, documents and portals
 - Voltage Security Network – Managed Service for protecting email and documents
 - Voltage SecureData – securing and masking data in databases and applications
- ▶ Companies implementing IBE based email: Microsoft, IBM, McAfee, Symantec, Secure Computing, Proofpoint, NTT Communications, BearingPoint, Mphasis/EDS, KPMG, Trend Micro
- ▶ Active standards activity IEEE 1363.3, IETF S-MIME

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IBE Adoption Rate (last 4 years)

- ▶ Over 545 institutions using IBE
- ▶ Over 1.7M IBE message originators
- ▶ Over 6M IBE message recipients



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IBE in the marketplace



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On demand IBE available from the following providers

- ▶ Canon
<http://canon-its.jp/product/vt/index.html>
- ▶ Microsoft – Exchange Hosted Encryption
<http://www.microsoft.com/exchange/services/encryption.msp#EOC>
- ▶ Network Solutions – MessageGuard
<http://www.networksolutions.com/email-account/email-security.isp>
- ▶ NTT Communications
<http://www.ocn.ne.jp/business/security/encryption/>
- ▶ Sprint
http://www.sprint.com/business/products/products/encryptedEmail_tabC.html
- ▶ Trend Micro
<http://www.privatepost.com/download/>
- ▶ Voltage Security Network
www.voltage.com/vsn

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A Selection of Institutional IBE Users



Texas

New York



Organizational Challenges

- ▶ Regulations
 - HIPAA, GLBA, SEC 17a4, PCI DSS
 - eDiscovery and supervision
- ▶ Need to send more ad hoc content securely
 - Medical information, financial statements, transactions
- ▶ Need to leverage groups/roles
 - Protection of group mailboxes, protection of information on internal portals, separation of duties
- ▶ Mobile devices
- ▶ Trends are driving global requirement for cost effective scalability

IBE Advantages

- ▶ Offline encryption improves scalability
- ▶ No pre-enrollment requirements deliver support for dynamic coalitions and ad hoc messages
- ▶ Use of identity drives support for groups, organizational mailboxes and protection of portal content
- ▶ IBE stateless key management reduces management overhead and facilitates disaster recovery
- ▶ IBE's inherent key recovery

*** Confidential and Proprietary ***

IBE Government Trials

- ▶ US NORTHCOM
 - Using Voltage Security platform for secure electronic communication between agencies and first responders
 - UDO04 – Unified Defense '04
 - FEMA, Texas National Guard, JTF Civilian Support, JTF Consequence Management West
 - CWID – Coalition Warrior Interoperability Demonstration (formerly JWID)
- ▶ US DHS and Canadian Department of National Defense
 - Securing Blackberry's to facilitate secure cross-border communication
- ▶ Cyber Storm II
 - Protecting cyberspace communication



IBE Use Case #1 – Communication between State/Local Health Agencies



- ▶ Largest Californian State Department with over 60 field offices throughout California
 - Interfaces with Medicare, Medicaid and Patient payments kept private and secure
 - ePHI communicated securely – previously via fax, phone and FedEx
- ▶ IBE Benefits:
 - Efficiency of communication
 - Ease of use for non-technical users
 - Ease of use for administrators

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IBE Use Case #1 (cont.)



- ▶ \$4.3 billion corporation that operates eleven acute care hospitals, four skilled nursing facilities, six diagnostic and treatment centers and over 100 community-health centers throughout the five boroughs of Manhattan
 - Communication of medical information between departments and HIPAA entities
- ▶ IBE benefits
 - Ease of use for non-technical users
 - Ease of use for administrators

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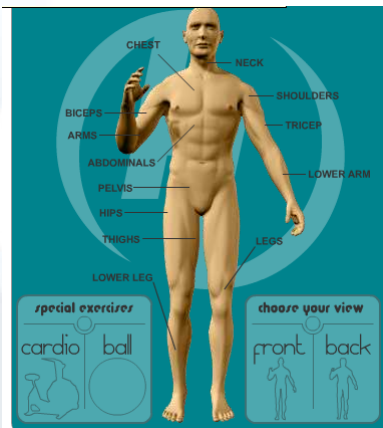
IBE Use Case #2 – Communication between healthcare entities



- ▶ The largest HMO in North America
 - HIPAA communication between healthcare entities (B2B) and members (B2C)
 - Protocols: S/MIME, OpenPGP too complex for average user
 - 160,000 Internal Users
 - Millions of External Members
- ▶ IBE Benefits
 - No storage infrastructure required – stateless key management
 - High usability minimizes support costs

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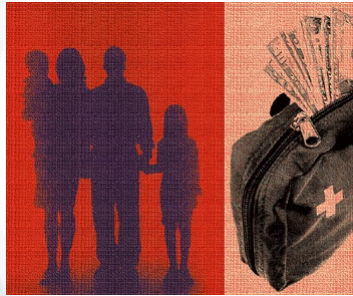
IBE Use Case #2 – Communication between healthcare entities



- ▶ One of the nation's largest providers of outpatient surgery, diagnostic imaging and rehabilitative healthcare services, operating facilities nationwide
 - HIPAA communication between healthcare entities (B2B) and members (B2C)
 - Deployed to over 20,000 internal users
- ▶ IBE solution provides best TCO
 - Low overhead stateless servers

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IBE Use Case #3 Communication of Healthcare Policy



- ▶ Number 2 North American insurance company with over 10,000 brokers
 - Trusted communication of consumer financial and healthcare information between broker/dealers and HQ
- ▶ IBE benefits
 - Easy to use system eliminated high help-desk call costs of other systems

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IBE Use Case #4 Communication between Broker/Dealers



- ▶ Largest Property and Casualty Insurance Provider in Canada
 - ▶ Securing communications internally and with brokers
 - Easy to use, trusted communications
- ▶ IBE Benefits
 - Easiest for users with the lowest cost of support
 - Lowest analyzed 5 year TCO

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IBE provides unique benefits

- ▶ **Unique functionality**
 - Off-line usage
 - Support for eDiscovery, content scanning, archive
 - Dynamic Groups/Roles
- ▶ **Improved ease of use over traditional PKI**
 - Transparent to end users
 - Significant reduction in help desk calls
- ▶ **Lower TCO than traditional PKI**
 - No certificates or other heavy infrastructure
 - Virtually no operational overhead required post setup
- ▶ **Proven rapid deployment timelines**
 - Use of existing policy, authentication, DLP infrastructure
 - Typical deployments 2-4 days per data center
- ▶ **Proven scalability**
 - Stateless key management is most scalable, lowest TCO
 - Production proven with hundreds of customers

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Ease of Use - Boston Medical Center

"We looked at a variety of the solutions that are available on the market today and the management overhead and usability issues did not fit within our strategy for lowering costs of compliance as well as making it as easy to use as possible for our staff"

Brad Blake,
Director of information technology
Boston Medical Center

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Lowest Total Cost of Ownership - ING

*“The technology is the **easiest to maintain**. The **total cost of ownership** in our case over five years was the **lowest**.”*

Minaz Sarangi,
Global Chief Architect,
ING Group

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IBE Benefits Drive Lowest TCO 3-5x Cost Savings



Source: Ferris Research, IBE/PKI TCO Comparison, April 2006

- ▶ Demonstrable TCO reduction
 - Architecture: reduced administration/management overhead
 - Usability: reduced user training & education

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Conclusion

- ▶ IBE delivers necessary scale and cost efficiencies required by healthcare, financial, retail and government organizations
- ▶ IBE adoption is accelerating and benefits from network effect
- ▶ IBE can unlock the full potential of federal PKI efforts

THANK YOU