VeriSign®

A Layered Approach to Online Identity Protection

Kevin Trilli

Director, Product Management

Authentication Services

Where it all comes together.™

Nothing Quite New Under The Sun

+ ID Theft is an Old Problem
  - The death in a Paris prison of the Dauphin Louis, son of Louis XVI, resulted in over thirty self-proclaimed Louis XVIIs

+ ID Theft is Effective (Sometimes surprisingly so)
  - This included one impostor who was implausibly black and frizzy-haired

+ The Drivers Are Simple ($)
  - Ex-forger Karl Wilhelm Naundorff, undeterred by an inability to speak French, convinced enough true believers to fund his 'court' in Brussels until 1845

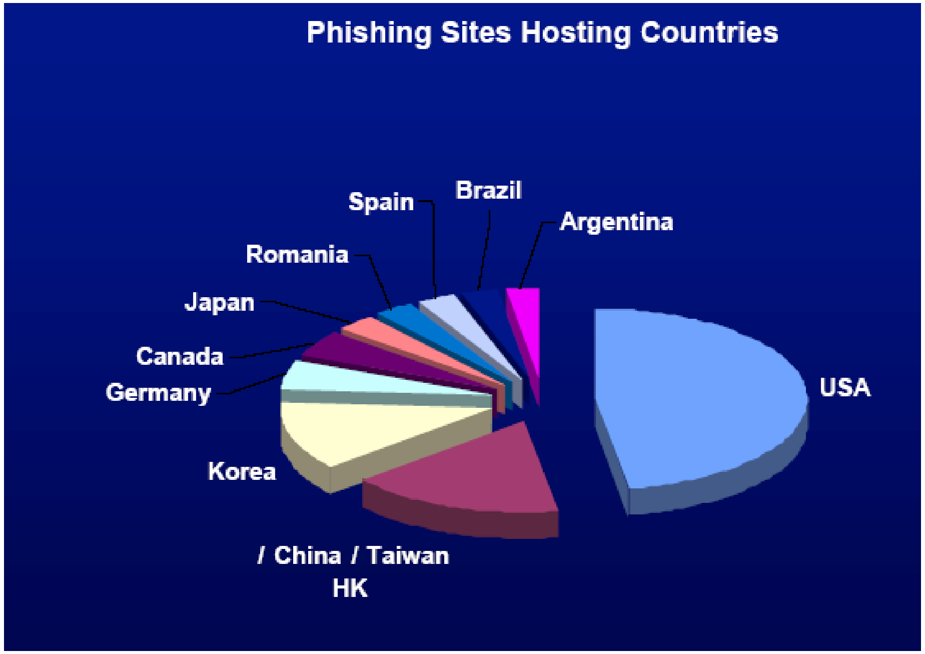
Two Hundred Years Later…

- FTC – 2004 Consumer Fraud & ID Theft Report
  - Consumers reported losses of over $547 millions
  - 40% of all complaints were ID theft related.
- The Bad Guys Are Going Digital
  - Internet-related = 57% of all fraud complaints
  - Email = 35% and Web = 22%
- 2005 March Madness
  - ChoicePoint
  - LexisNexis
  - T-Mobile Paris Hilton

Identity thieves in jail

The Internet Only Compounds the Issue

- Low-Cost
  - Free phishing tools!
- Anonymous
  - Zombies
- Effective
  - Up to 6% success rate
- Scalable
  - Global
  - Attacks from anywhere at any time
  - Organized Crime network
- Lucrative
  - Think of it as the new network viruses with a clear economic driver



Source: Anti-Phishing Working Group, 2005

Why Should You Care: The Fear Factor

- Risk Management / Liability
  - Direct costs = $1B+
  - Indirect costs = brand tarnishing
- Consumer Confidence Erosion
  - 60% of online consumers are "extremely concerned" about security when banking online
- Regulation
  - US example, 18 federal and 30 state cybersecurity bills

Source: advfn.com, 2005

Why Should You Care: Strategic Advantage

+ **Differentiation**
  - Trust is a competitive advantage
  - Trust is “sticky”
+ **New Services**
  - Stronger IDs enable the introduction of higher value transactional services
+ **New Technologies**
  - RFID
  - Web Services

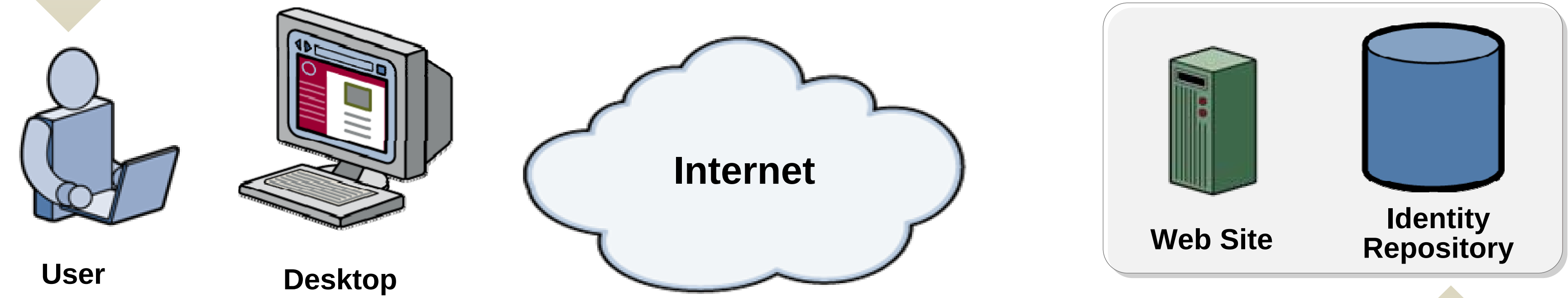
Jupiter Research Finds Banks Should Promote Online Security as a Competitive Differentiator

Jupiter Research – April 12, 2005

What We See: Global, Multi-Faceted & Scalable Attacks

Australia Nov 04 - Commonwealth Bank of Australia capture user accounts’ names and passwords

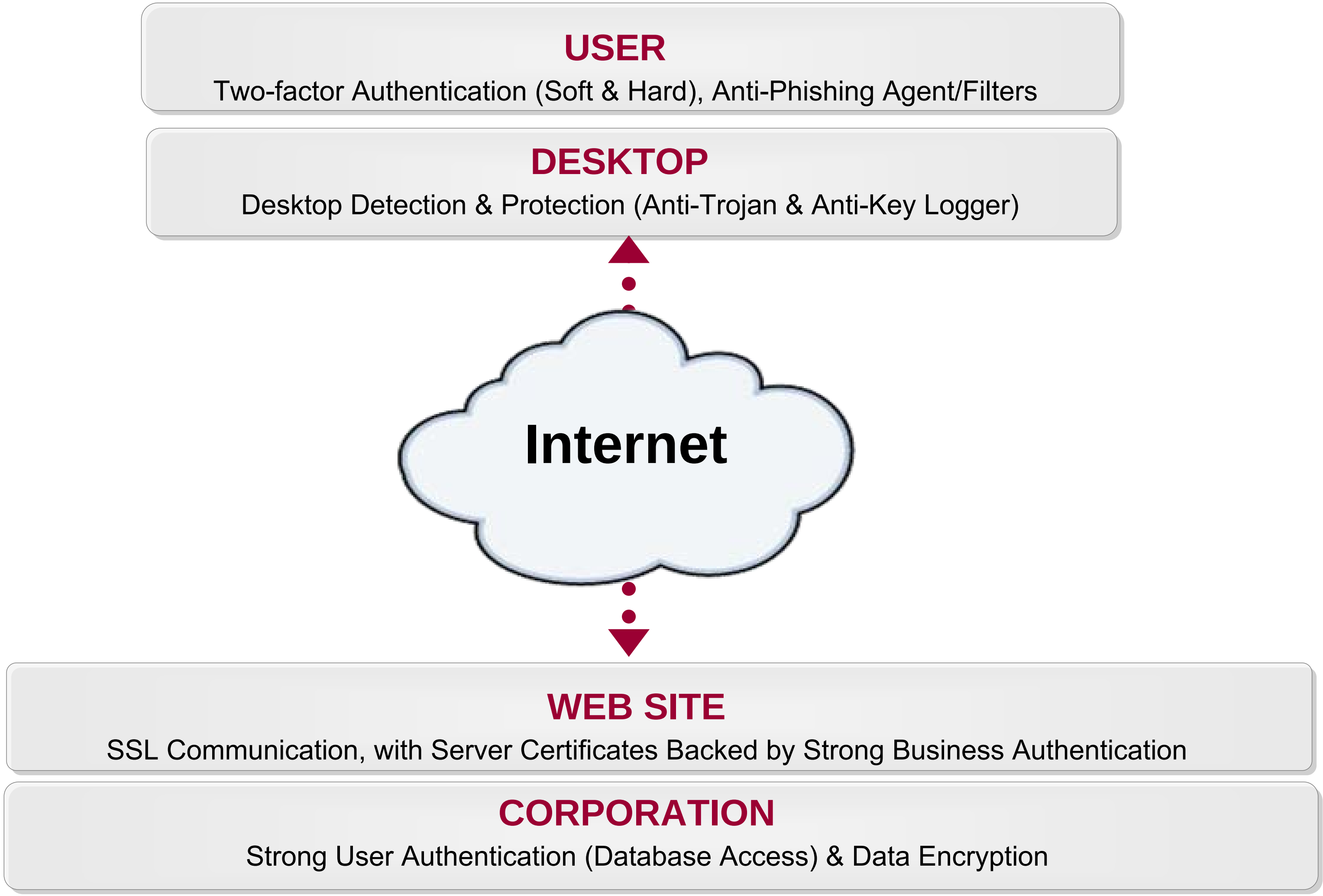
Korea 04 -Fraudster poses as PayPal official web site.



Brazil March 05 - Paulo de Almeida sends 3 million emails with a Trojan, collecting between $20 - $40M

US March 05 - LexisNexis and stole personal information on approx. 320,000 U.S. citizens

Multi-Faceted Attacks Mandate a Layered Defense



USER

Two-factor Authentication (Soft & Hard), Anti-Phishing Agent/Filters

DESKTOP

Desktop Detection & Protection (Anti-Trojan & Anti-Key Logger)

Internet

WEB SITE

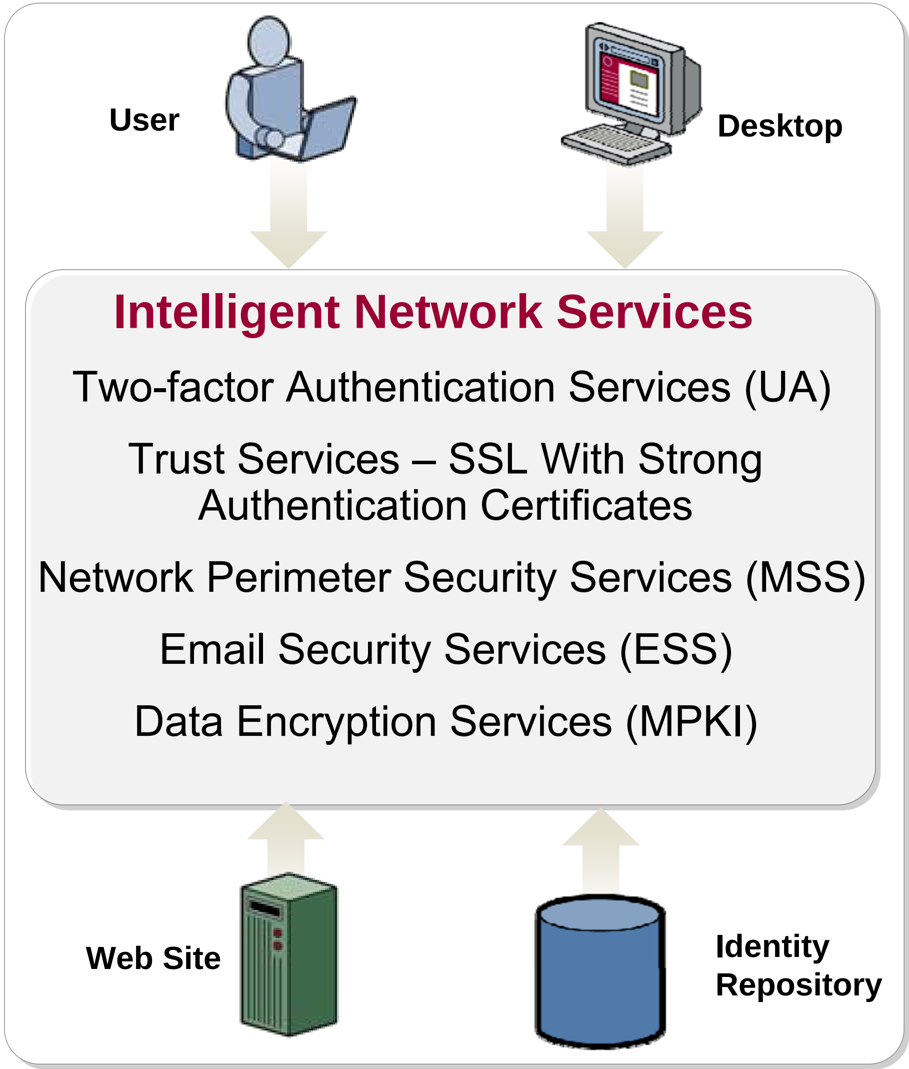
SSL Communication, with Server Certificates Backed by Strong Business Authentication

CORPORATION

Strong User Authentication (Database Access) & Data Encryption

Best Delivered Through Intelligent Network Services

- **Cost**
  - Common infrastructure creates economy of scale (ala Visa)
- **Complexity**
  - Service model simplifies the aggregation and deployment of all necessary security technologies
- **Intelligence**
  - Each protected node (user, Web site) contributes to overall threat intelligence.



Intelligent Network Services

Two-factor Authentication Services (UA)

Trust Services – SSL With Strong Authentication Certificates

Network Perimeter Security Services (MSS)

Email Security Services (ESS)

Data Encryption Services (MPKI)

Strong Authentication is Essential

#1 COST-EFFECTIVENESS

- Must drastically reduce hardware, infrastructure & support costs

#2 FLEXIBILITY

- Devices must be flexible, not disruptive (consumers always privilege convenience over security)

#4 COMMUNITY

- Many strong auth-enabled services but ONE token to carry

#3 EMBEDDING

- Ubiquitous strong Internet Authentication must be built into familiar “mobile devices” and everyday applications

FOUR fundamental elements to drive strong authentication

1. Open Standards To Reduce Costs

What It Is About

1. Competition – lower costs
2. Innovation – increased flexibility

True Measure of Success:

1. IP-Free specifications
2. Interoperable technology
3. Cost-effective choice of hardware, software and service providers

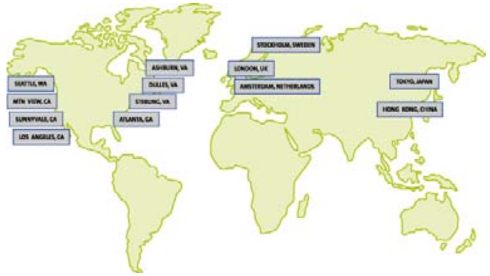
oath

initiative for open authentication

LIBERTY ALLIANCE PROJECT

2. Network Services to Increase Flexibility

+ **VeriSign Consumer Authentication Services**
  - Broad range of tokens (soft & hard)
  - 2nd factor validation only (OTP, certificates)
  - Token distribution to consumers
  - 2nd line support and training



+ **VeriSign Trust Services**
  - Business authentication service
  - Class 3 SSL issuance & validation

Certificate Information

This certificate is intended for the following purpose(s):
- Protects e-mail messages
- Proves your identity to a remote computer
- 2.16.840.1.113733.1.7.1.1

* Refer to the certification authority's statement for details.

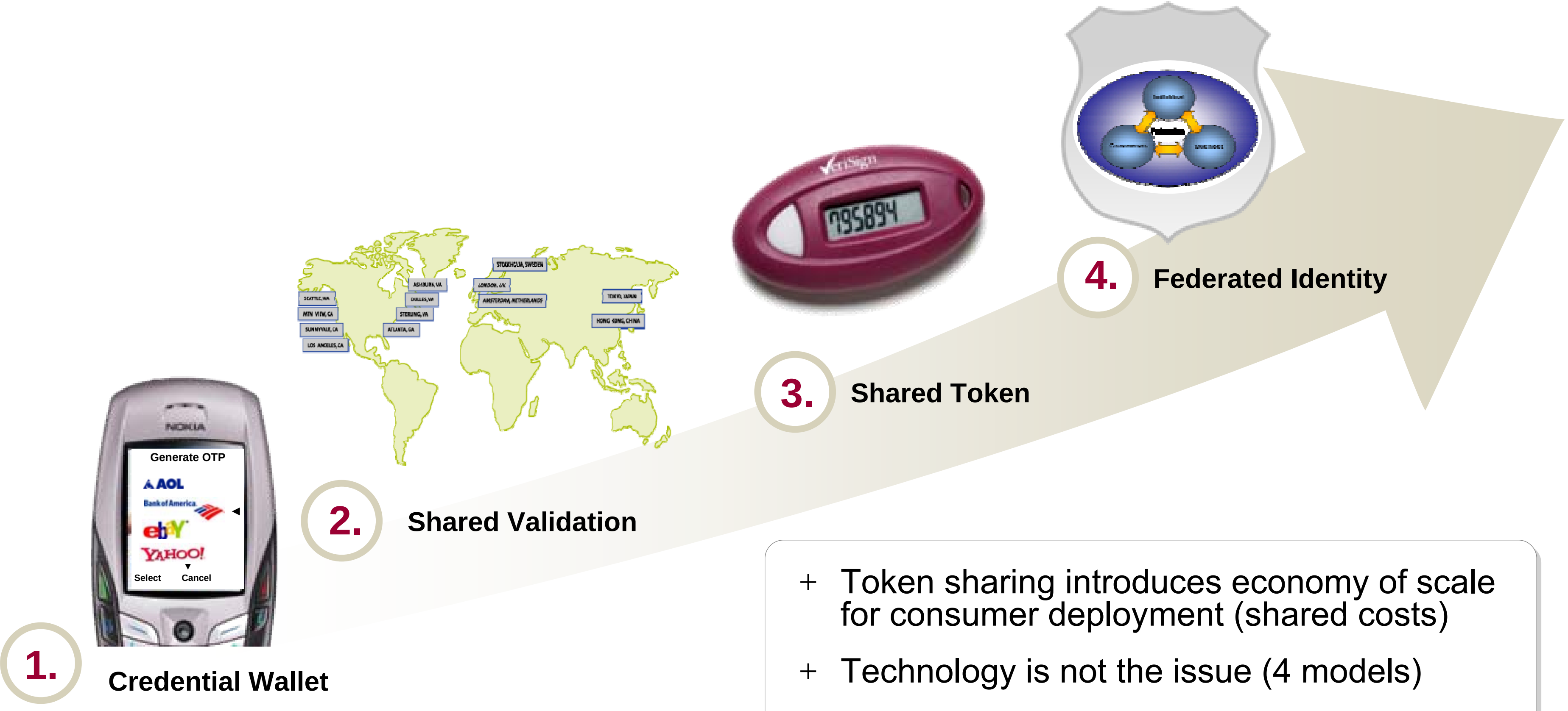
Issued to: [illegible]

Issued by: VeriSign Class 2 Employee CA

Valid from [illegible] **to** [illegible]

You have a private key that corresponds to this certificate.

3. Models to Drive Credentials Sharing (Community)



1. Credential Wallet

2. Shared Validation

3. Shared Token

4. Federated Identity

- Token sharing introduces economy of scale for consumer deployment (shared costs)
- Technology is not the issue (4 models)
- Trust is the hard part (admissible liability & SLA for relying party)

4. Embedded in Consumer-Friendly Device

Strong authentication WILL exist in our familiar and mobile “devices”

So, Get Ready for the Future!

- To be effective, Identity Protection on the Internet requires a more holistic approach: a layered defense to Identity Theft

- Such comprehensive defense is best delivered through the network. Intelligent Identity Protection Network Services are therefore likely to emerge

- Strong authentication for consumers is an essential element of a layered defense.

- As an established critical network infrastructure provider, VeriSign will be an important part of this transformation

VeriSign®

Thank You!

Where it all comes together.™