Asia-Pacific
Economic Cooperation

2006/SOM1/ECSG/SYM/014
Agenda Item: 11

Information Privacy Protection – The Role of Technology

Purpose: Information
Submitted by: Microsoft

APEC Symposium on Information Privacy Protection in E-Government and E-Commerce
Ha Noi, Viet Nam
20-22 February 2006

Information Privacy Protection

The Role of Technology

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APEC Symposium on Information Privacy Protection in E-Government and E-Commerce
February 20-22, 2006
Horison Hotel, Hanoi, Vietnam

Microsoft
Trustworthy Computing

Privacy Invading Technology

- There are often legitimate needs for identifying, tracking, and monitoring capabilities, e.g., safety, security audit, automation, management, which can be misused or abused
- PIT is becoming pervasive
  - Exploiting technology capability
    - "Knowledge is Power"
    - Financial opportunities
  - Exploiting vulnerabilities
    - Financial gains
  - Business/individuals laxes
    - Ignorance or over-enthusiasm (CRM, safety/security concerns)
    - Simply bad practices
- Many forms of PIT
  - User devices (installed software, active contents, browser extensions, toolbars)
  - On the Internet (Internet gateways, email servers, proxies, web sites)

- Some recent cases:

DoubleClick Click

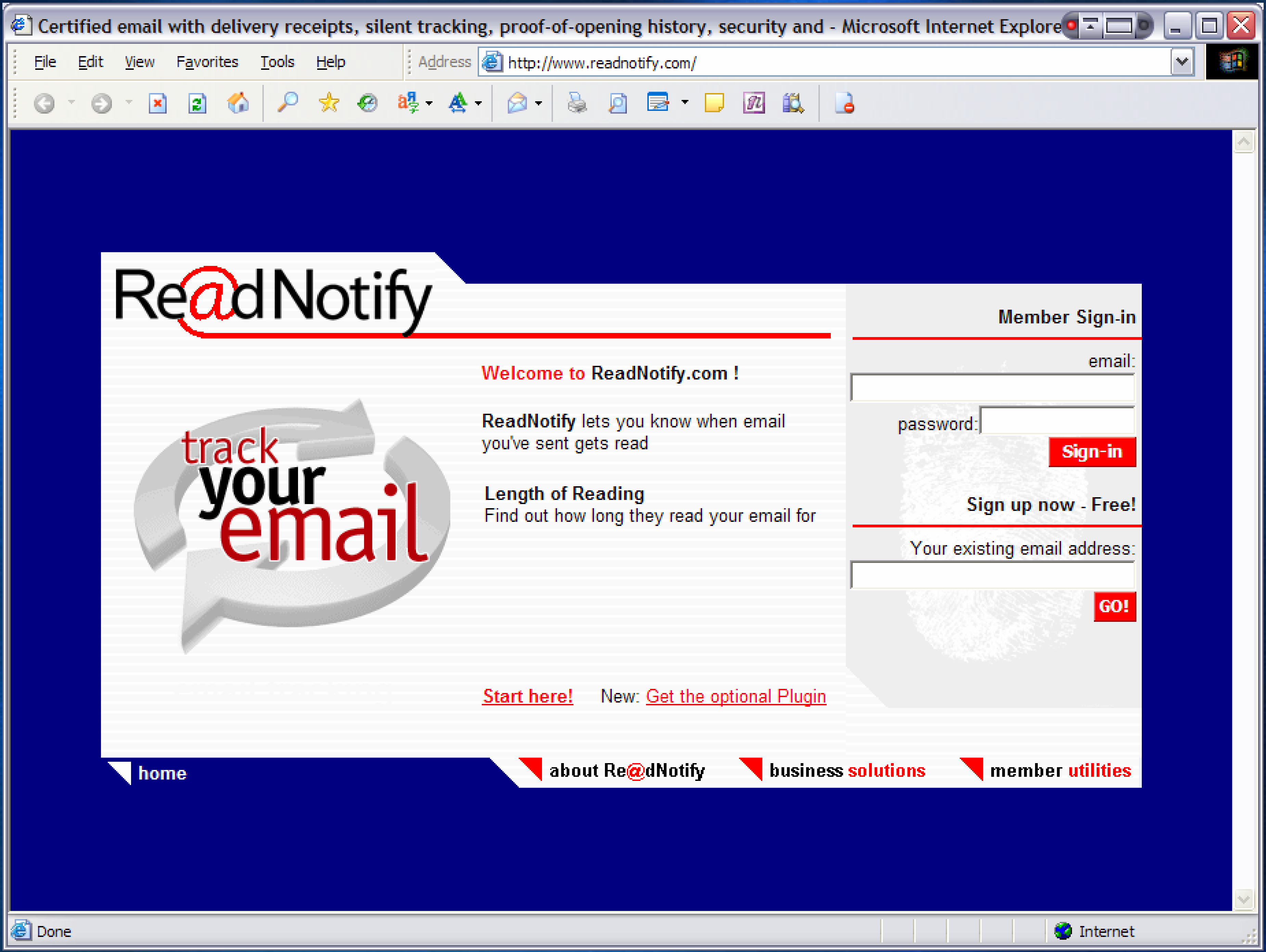
- Tracked behavior across sites
- Stored personal information and sold it to various third parties

real

- RealJukebox unique identifier
- Info on every track ripped or played was returned to RealNetworks along with the ID

a Alexa

- Toolbar purports to enhance searching and purchasing experiences
- Tracks sites, full URLs, IP addresses, emails, search results, products explored



Certified email with delivery receipts, silent tracking, proof-of-opening history, security and - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Address http://www.readnotify.com/
Re@dNotify
track your email

Member Sign-in

email:

password:

Sign-in

Sign up now - Free!

Your existing email address:

GO!

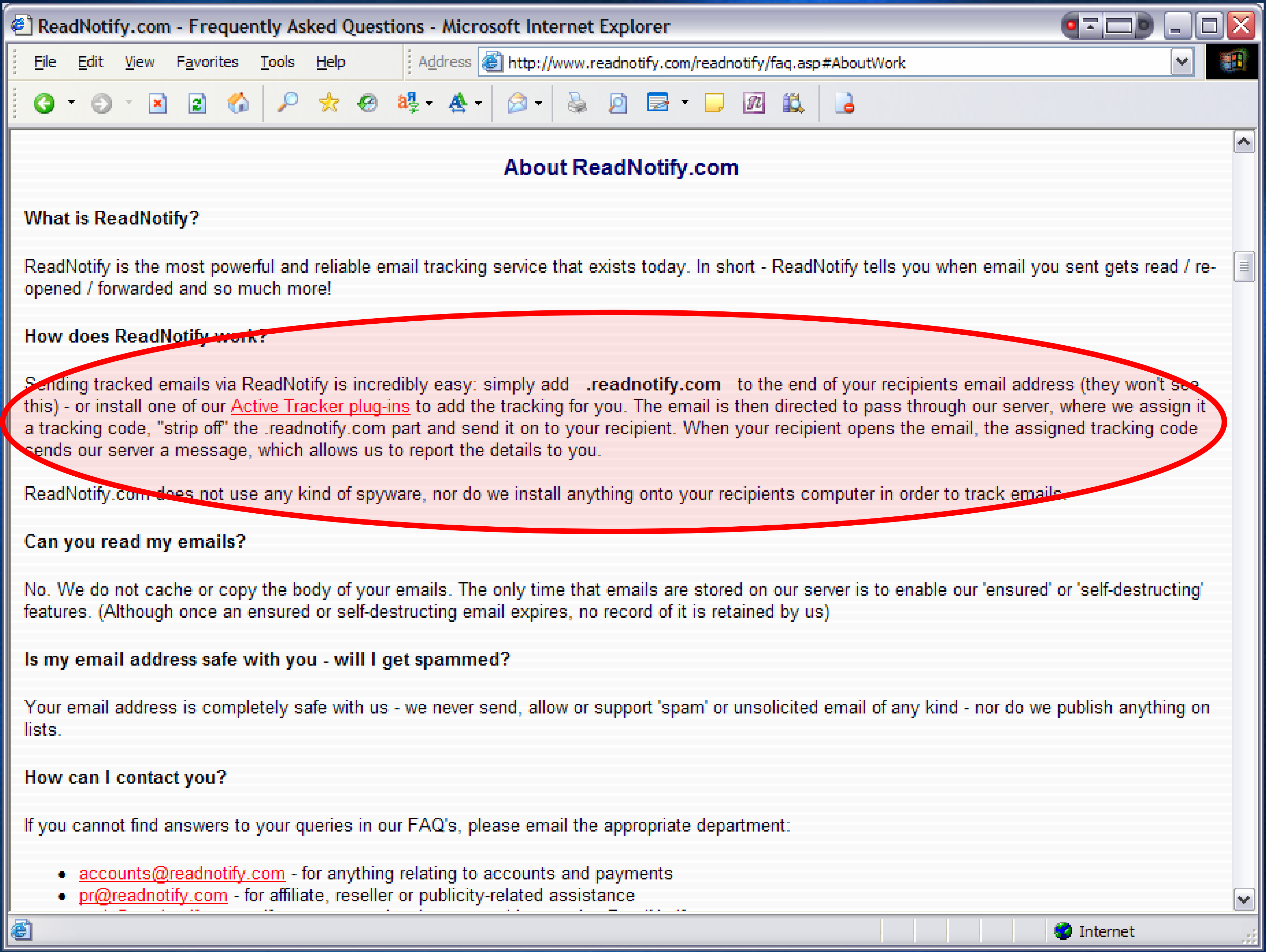
Welcome to ReadNotify.com !

ReadNotify lets you know when email you've sent gets read

Length of Reading
Find out how long they read your email for

Start here! New: Get the optional Plugin

home
about Re@dNotify
business solutions
member utilities
Done
Internet


ReadNotify.com - Frequently Asked Questions - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Address
http://www.readnotify.com/readnotify/faq.asp#AboutWork
Internet

About ReadNotify.com

What is ReadNotify?

ReadNotify is the most powerful and reliable email tracking service that exists today. In short - ReadNotify tells you when email you sent gets read / re-opened / forwarded and so much more!

How does ReadNotify work?

Sending tracked emails via ReadNotify is incredibly easy: simply add **.readnotify.com** to the end of your recipients email address (they won't see this) - or install one of our Active Tracker plug-ins to add the tracking for you. The email is then directed to pass through our server, where we assign it a tracking code, "strip off" the .readnotify.com part and send it on to your recipient. When your recipient opens the email, the assigned tracking code sends our server a message, which allows us to report the details to you.

ReadNotify.com does not use any kind of spyware, nor do we install anything onto your recipients computer in order to track emails.

Can you read my emails?

No. We do not cache or copy the body of your emails. The only time that emails are stored on our server is to enable our 'ensured' or 'self-destructing' features. (Although once an ensured or self-destructing email expires, no record of it is retained by us)

Is my email address safe with you - will I get spammed?

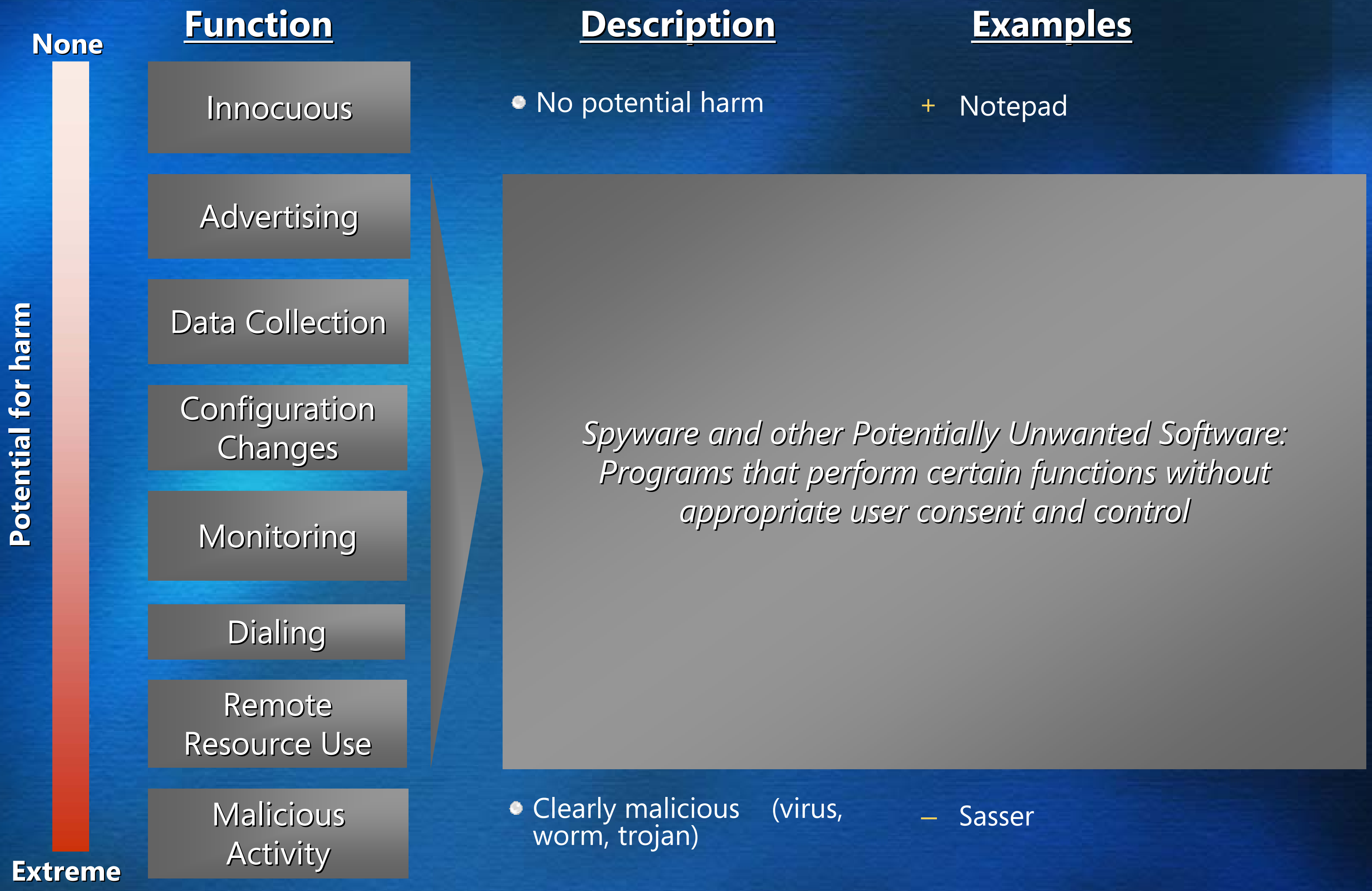
Your email address is completely safe with us - we never send, allow or support 'spam' or unsolicited email of any kind - nor do we publish anything on lists.

How can I contact you?

If you cannot find answers to your queries in our FAQ's, please email the appropriate department:

- accounts@readnotify.com - for anything relating to accounts and payments
- pr@readnotify.com - for affiliate, reseller or publicity-related assistance

Deceptive Software - Spyware



None

Potential for harm

Extreme

Function

- Innocuous
- Advertising
- Data Collection
- Configuration Changes
- Monitoring
- Dialing
- Remote Resource Use
- Malicious Activity

Description

- No potential harm

Spyware and other Potentially Unwanted Software: Programs that perform certain functions without appropriate user consent and control

- Clearly malicious (virus, worm, trojan)

Examples

+ Notepad

– Sasser

Strider HoneyMonkey (MSR)

- Exploit Data Analysis – Suspicious List (May~June 2005)
  - Gathered 16,190 suspicious URLs through Web search and exploit neighborhood crawling
  - Identified 288 of them as exploit URLs → 1.28%
  - Expanded into 752 exploit URLs after auto-visit URL analysis → 263% expansion

	# Exploit URLs	# Exploit Sites
Total	752	288
WinXP SP1-UP	688	268
WinXP SP2-UP	204	115
WinXP SP2-PP	17	10
WinXP SP2-FP	0	0

Evolving Landscape

Past

Broadcast attacks

- Networks worms
- Denial of Service

Present

Financially motivated attacks

- Phishing / Social Engineering
- Botnets
- Rootkits

Future

Specific target attacks

- Technically-oriented social engineering attacks
- Cross-device attacks

- Identity Theft
- Data Leakage/Theft
- DDoS Extortion
- Frauds
- Software Piracy
- Illegal Downloads
- Child Exploitations
- Others

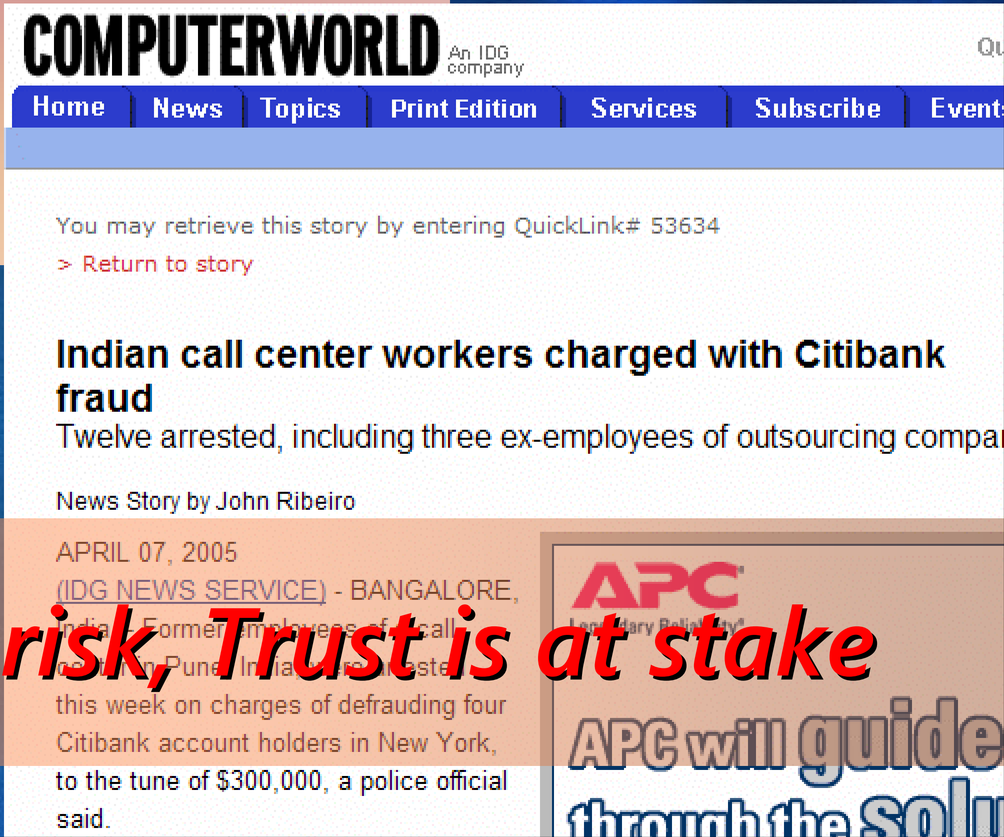
Recent losses of data

	When	What	How
ChoicePoint	2/15/2005	145,000 addresses and SSNs	Bought data posing as legitimate customers
Bank of America Higher Standards	2/25/2005	1,200,000 SSNs	Computer backup tapes were lost.
DSW	3/8/2005	1,400,000 credit and debit cards	Hackers stole data from a database from 108 stores
LexisNexis	3/9/2005	310,000 SSNs and driver's licenses	Unauthorized use of customer logins
Boston College	3/17/2005	120,000 addresses and SSNs	Intruder hacked into a school computer
POLO.COM RALPH LAUREN	4/14/2005	180,000 credit cards	Employees
AMERITRADE	4/19/2005	200,000 items	Backup computer tape was lost in shipping
TimeWarner	5/2/2005	600,000 SSNs	Backup computer tape was lost in shipping

When Security slacks, Privacy is at Risk

Expanding threat boundary

- Mphasis Call Center (India)
  - Four bank accounts, defrauding up to US$300,000/- by three BPO's employees
  - Implication extended beyond security and privacy of outsourcing providers
  - Cost and challenges of restoring trust (many entities)



You may retrieve this story by entering QuickLink# 53634

> Return to story

Indian call center workers charged with Citibank fraud

Twelve arrested, including three ex-employees of outsourcing compa

News Story by John Ribeiro

APRIL 07, 2005

(IDG NEWS SERVICE) - BANGALORE, India - Former employees of a call center in Pune, India, were arrested this week on charges of defrauding four Citibank account holders in New York, to the tune of $300,000, a police official said.

When Privacy is risk, Trust is at stake

Privacy Is Only As Strong As The Weakest Link

- Technology is neither the whole problem nor the whole solution
- Privacy enhanced systems depend upon Technology, Processes (including Policies) and People (including Organization)

Processes
Technology
People

Privacy enhancing technologies and features

- Privacy statement (short notices)
- Platform for Privacy Protection (P3P) integration
- Privacy settings and centralized management
- Ability to see what's being transmitted
- Ability to clear tracks and stored information
- Documentation of privacy-related data
- Unsubscribe feature
- Access control
- Encryption
- Anonymizer - proxy
- Mix
  - Anonymous communications
  - Unlink, or remove correspondences between in incoming and outgoing messages
  - Mix unrelated messages to remove linkages
- … see www.petworshop.org and www.cfp.org

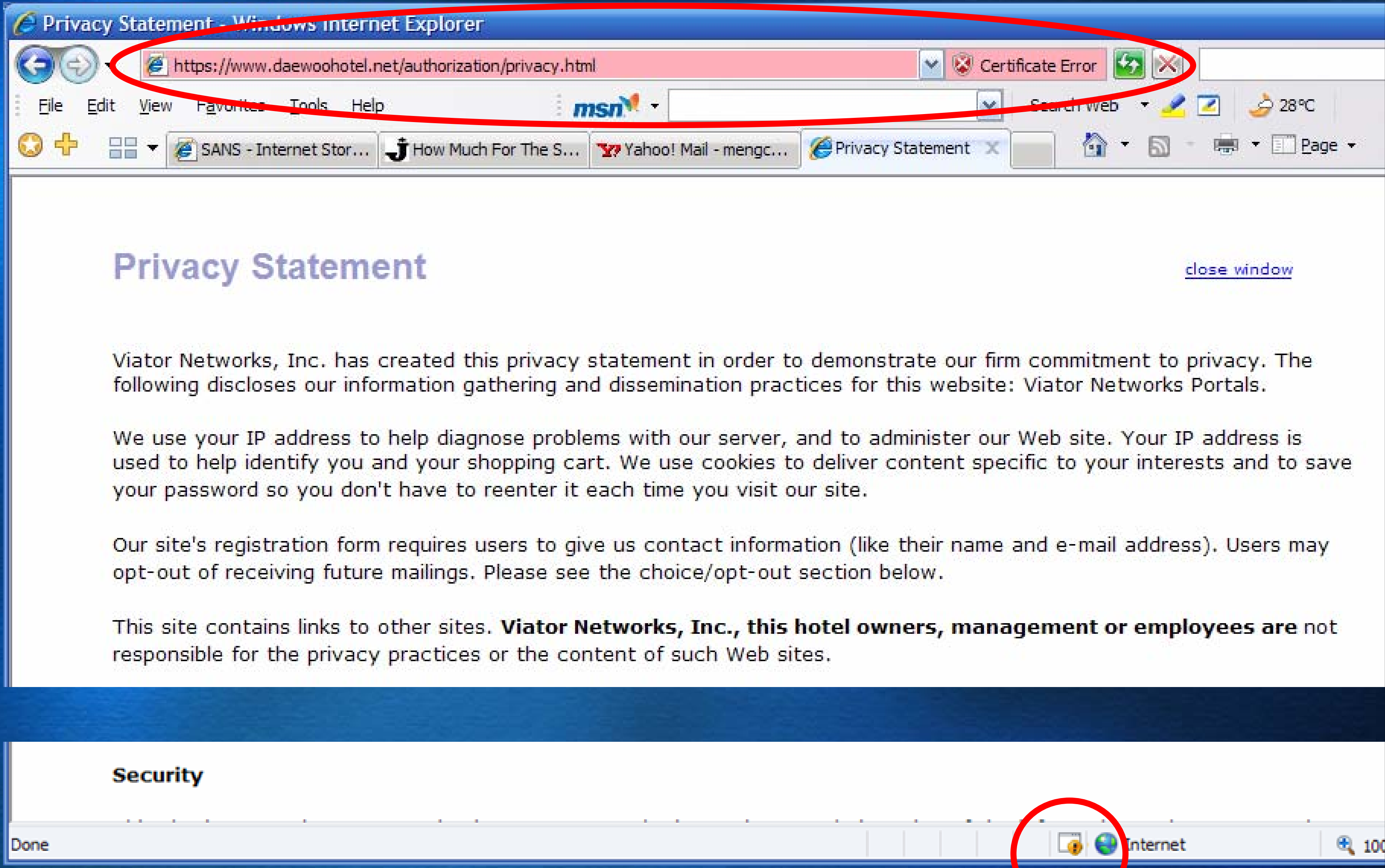
Privacy enhancing technologies

- History-clearing tools
  - `http://www.historykill.com`
- Popup blockers
- Anti-spam, anti-phishing
- Anti-spyware
  - `www.spychecker.com/software/antispy.html`
  - `www.microsoft.com/antispyware`
- Cookie managers
- Secure file deletion
  - `cipher.exe /w:`*`directory`*
- Online privacy protection suites
  - `http://www.junkbusters.com`
  - `http://www.synomos.com` (enterprise)

Microsoft PETs

BizTalk HIPPA Accelerator	Permits BizTalk users to protect medical information included in transactions
CryptoAPI	Data encryption APIs in VisualStudio.NET
EFS	Protects confidential files at the operating system level
Internet Explorer popup blocker	Blocks ads and other privacy-invading devices on web sites Anti-Phishing Toolbar & integration (IE7)
RMS and IRM	Protect and restrict documents (Office 2003)
Internet Explorer	P3P integration helps for managing cookies
MS-CRM	Email privacy settings
MSN	Parental controls; spam protection; email certification and sealing (beta); popup “pusher”; anti-spyware (MSN Premium); Sender-ID
Outlook	Anti-spam; support for IRM; Secure remote access
Office hidden data removal tool	Removes metadata from Word, Excel, and PowerPoint documents
Windows Messenger	Control visibility of state and who can send you messages

Anti-Phishing in IE7



Privacy Statement

close window

Viator Networks, Inc. has created this privacy statement in order to demonstrate our firm commitment to privacy. The following discloses our information gathering and dissemination practices for this website: Viator Networks Portals.

We use your IP address to help diagnose problems with our server, and to administer our Web site. Your IP address is used to help identify you and your shopping cart. We use cookies to deliver content specific to your interests and to save your password so you don't have to reenter it each time you visit our site.

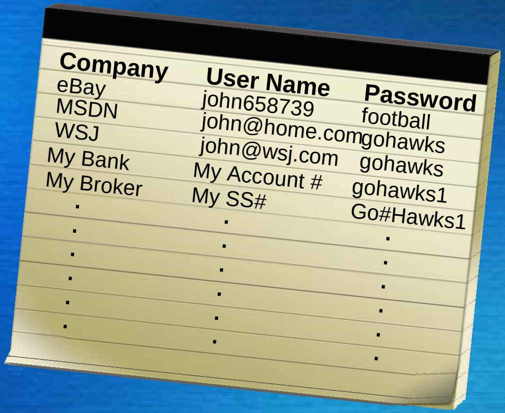
Our site's registration form requires users to give us contact information (like their name and e-mail address). Users may opt-out of receiving future mailings. Please see the choice/opt-out section below.

This site contains links to other sites. **Viator Networks, Inc., this hotel owners, management or employees are** not responsible for the privacy practices or the content of such Web sites.

Security

Key Trends in Digital Identity…

Number of Passwords Growing



Company	User Name	Password
eBay	john658739	football
MSDN	john@home.com	gohawks
WSJ	john@wsj.com	gohawks
My Bank	My Account #	gohawks1
My Broker	My SS#	Go#Hawks1
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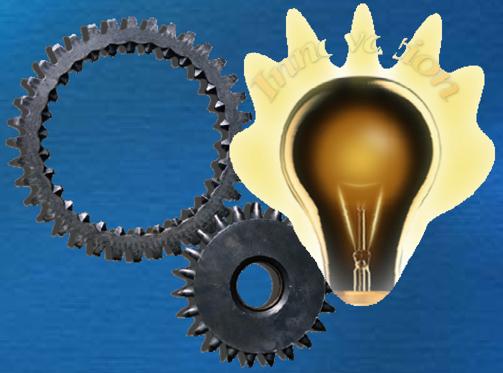
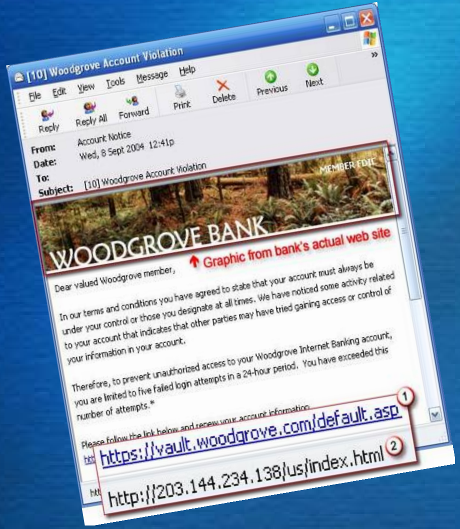
Mobile Identities On the Rise

Is the Industry Finished Innovating?





From: Account Notice
Date: Wed, 8 Sept 2004 12:41p
To:
Subject: [10] Woodgrove Account Violation

↑ Graphic from bank's actual web site

Dear valued Woodgrove member,

In our terms and conditions you have agreed to state that your account must always be under your control or those you designate at all times. We have noticed some activity related to your account that indicates that other parties may have tried gaining access or control of your information in your account.

Therefore, to prevent unauthorized access to your Woodgrove Internet Banking account, you are limited to five failed login attempts in a 24-hour period. You have exceeded this number of attempts.*

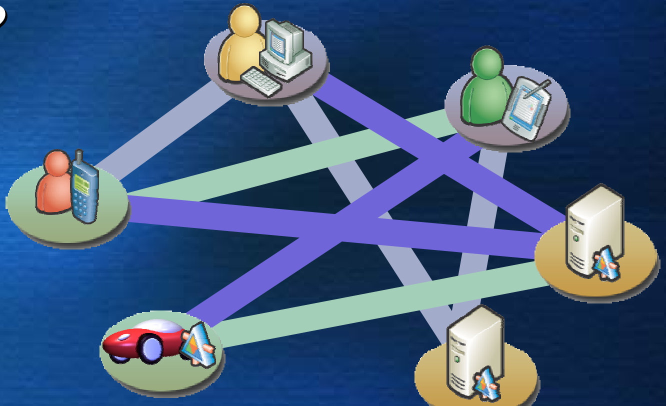
Please follow the link below and renew your account information.

https://vault.woodgrove.com/default.asp (1)

https://vault.woodgrove.com/us/index.html (2)

http://203.144.234.138/us/index.html

New Threats Emerging



Applications Increasingly Connected

Lessons from Passport & others

- Passport designed to solve two problems
  - Identity provider for MSN
    - 250M+ users, 1 billion logons per day
  - Identity provider for the Internet
    - Unsuccessful
- Identity efforts succeed and fail for reasons both technological and sociological
- Solution must move beyond single technology and single provider
- Solution must withstand the tests of a set of fundamental principles or propositions, i.e., the Laws of Identity.

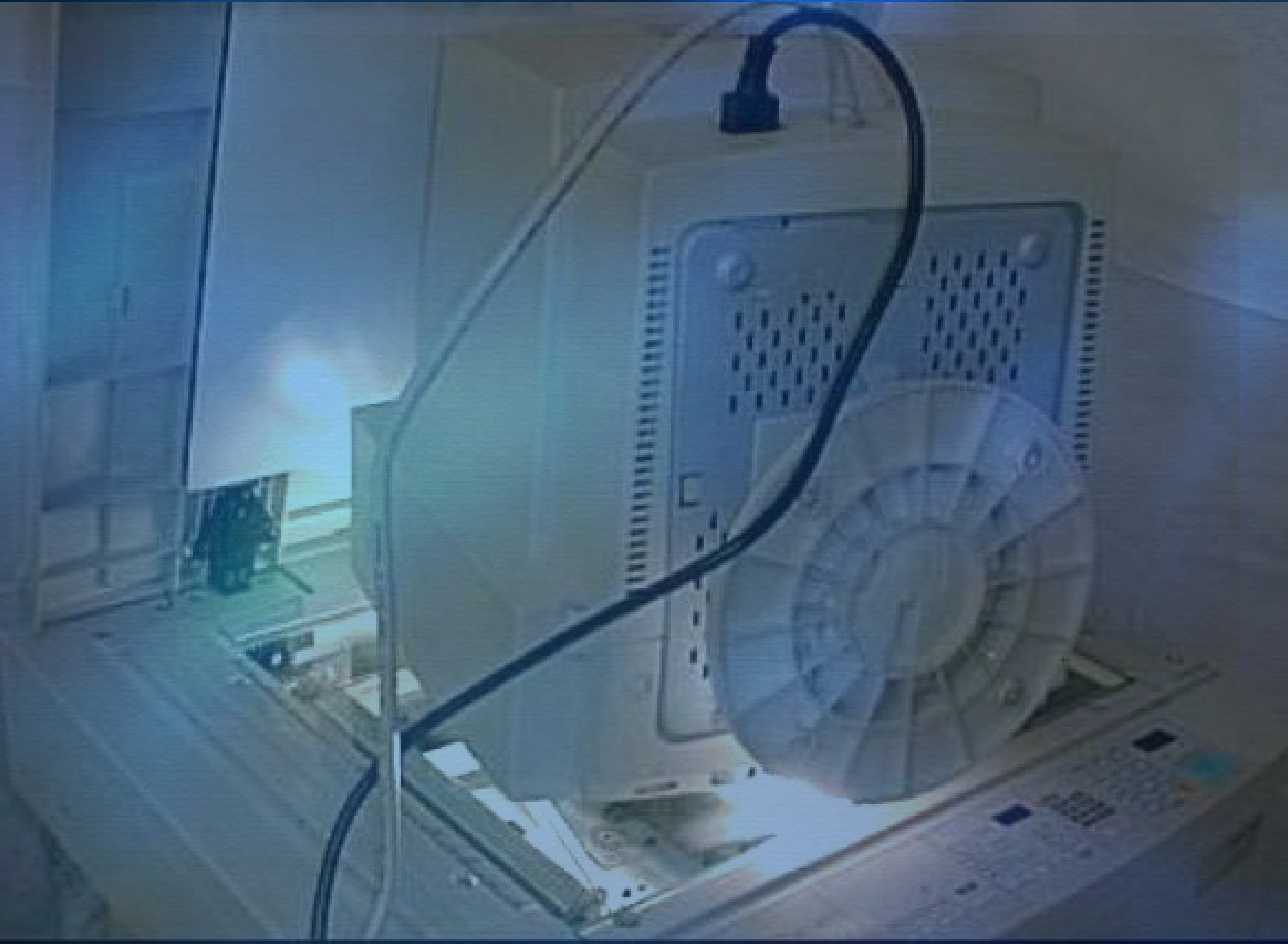
The Laws of Identity

Established Through Industry Dialogue

1. User control and consent
2. Minimal disclosure for a defined use
3. Justifiable parties
4. Directional identity (public versus private identity)
5. Pluralism of operators and technologies
6. Human integration
7. Consistent experience across contexts

Join the discussion at www.identityblog.com

Identity Metasystem whitepaper - http://msdn.microsoft.com/webservices/webservices/understanding/advancedwebservices/default.aspx?pull=/library/en-us/dnwebsrv/html/identitymetasystem.asp



Trustworthy Computing

Security

- Resilient to attack
- Protects confidentiality, integrity, availability of data and systems

Privacy

- Individual control of personal data
- Products, online services adhere to fair information principles
- Protects right to be left alone

Reliability

- Engineering Excellence
- Dependable, performs at expected levels
- Available when needed

Business Integrity

- Open, transparent interaction with customers
- Address issues with products and services
- Help customers find appropriate solutions

Aspirations for the Industry

Support the **Trust Ecosystem** through accountable identities

Engineering for Security

Embrace secure coding practices incorporating TwC D3+C

Drive for **Simplicity**

Fundamentally Secure Platforms

Develop products, services, and platforms using standards and best practices

Microsoft®

Your potential. Our passion.™

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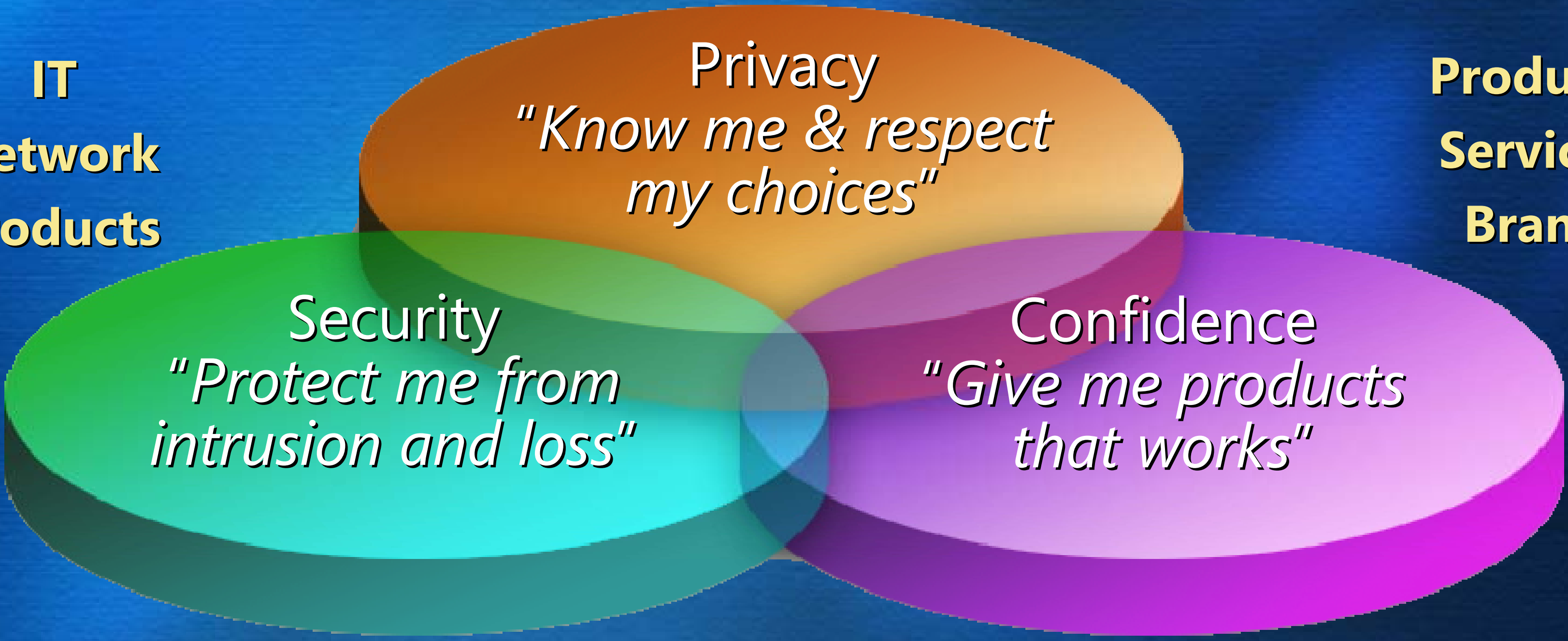
Customer Trust

Satisfaction
Loyalty
Leadership

IT
Network
Products

Products
Services
Brand



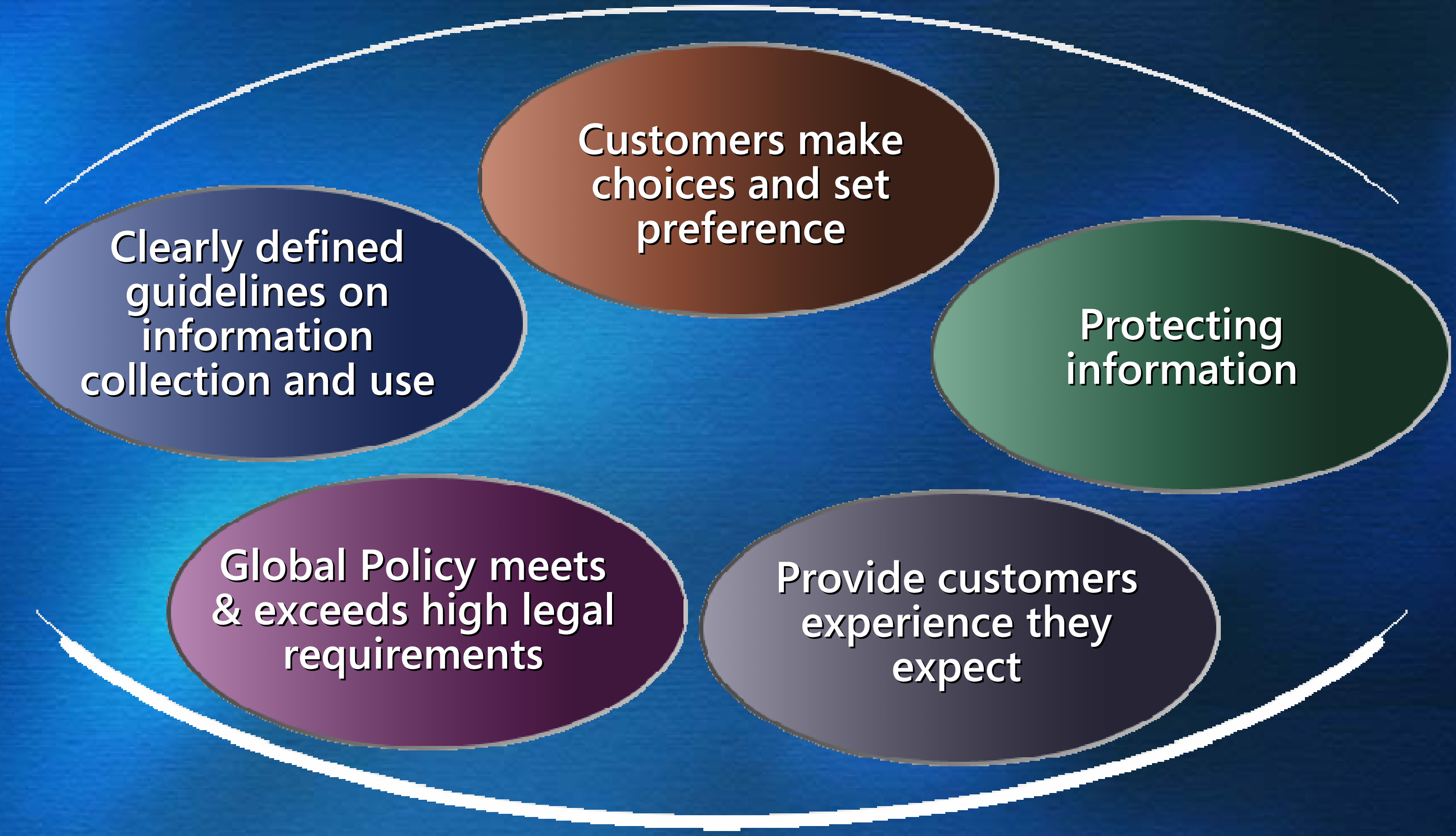
Privacy
"Know me & respect my choices"

Security
"Protect me from intrusion and loss"

Confidence
"Give me products that works"

Help realize the potential of Technology

Microsoft's Approach to Privacy



Customers make choices and set preference

Clearly defined guidelines on information collection and use

Protecting information

Global Policy meets & exceeds high legal requirements

Provide customers experience they expect

Putting Customers in Control of their Information

PD3+C Privacy Framework

PD^3 + Communications

Privacy in Design

- Put users in charge of their information
- Address needs of enterprises and parents
- Comply with corporate policies

Privacy by Default

- Collect only data that is required
- Get appropriate consent
- Protect the storage and transfer of data

Privacy in Deployment

- Privacy deployment guidelines for users
- Offer comprehensive privacy options
- Privacy response team for all products

Communications

- Analyst reviews and white papers
- Content on MS.com, MSN.com privacy sites
- Participation in privacy & tech conferences