



2008 ICT SUMMIT

Strategic Use of ICT for Communities

Securing your Information

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AGENDA

- What is Information Security
- Why is it important
- What are the Threats
- Guidelines for a good Security Program
- Challenges of Implementing Security
- Some Lessons Learned
- What about Your Computer at Home
- Internet Safety for Your Kids

What is Information Security

“Protecting information from unauthorized access, use, disruption, modification, or destruction.”

- Older than you think
 - Wax seals, Julius Caesar, World War II

- Confidentiality, Integrity, Availability (CIA triad)
 - **Confidentiality** - only those authorized to access, use, copy, or disclose
 - **Integrity** - accuracy is assured by authorized create, change or delete
 - **Availability** – information is available when needed

Why is it Important

- Hackers put pornographic material on government computers
 - British government lost personal information on 25m Britons
 - CIBC lost personal information on 470,000 clients
 - 45.7 million credit card account numbers lost in security breach
 - Cyber crime the fastest growing crime affecting Canada
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- Avoid Damage to Reputation
 - Avoid Financial losses
 - Protect confidential data (land research and land holdings, health records etc.)
 - Protect ourselves against Identity theft

What are the Threats

Technology

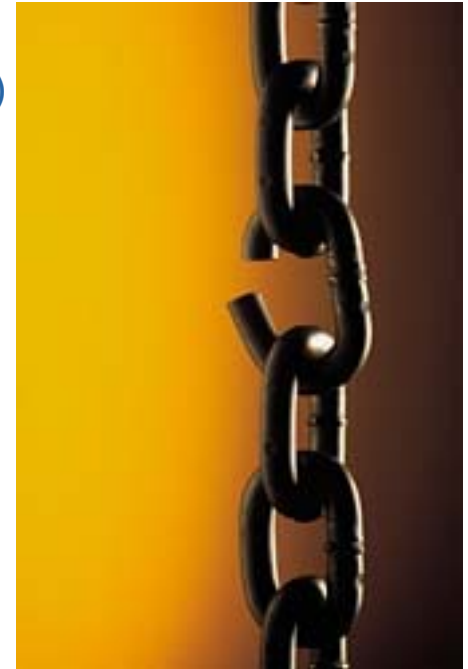
- Malicious code (virus, worms and trojans – 100's thousands)
- Equipment malfunction
- Unencrypted data

People

- Human error (malicious employee, untrained employee)
- Social engineering
- Dumpster divers
- Malicious Hackers

Physical

- Fire
- Water
- Power loss



Guidelines for a good Security Program

Start at the Top

- Leadership to set the tone
- Assign responsibility
- Request update on the security plan
- Understand the impacts (cost, inconvenience)
- Ask for periodic security risk assessment

Set the Direction (strategy)

- What needs to be protected
- Why does it need to be protected
- At what cost
- Can we accept the risk

Write it Up

- Policies and Procedures
- Complete and available

Guidelines for a good Security Program (continued)

Know what to Protect

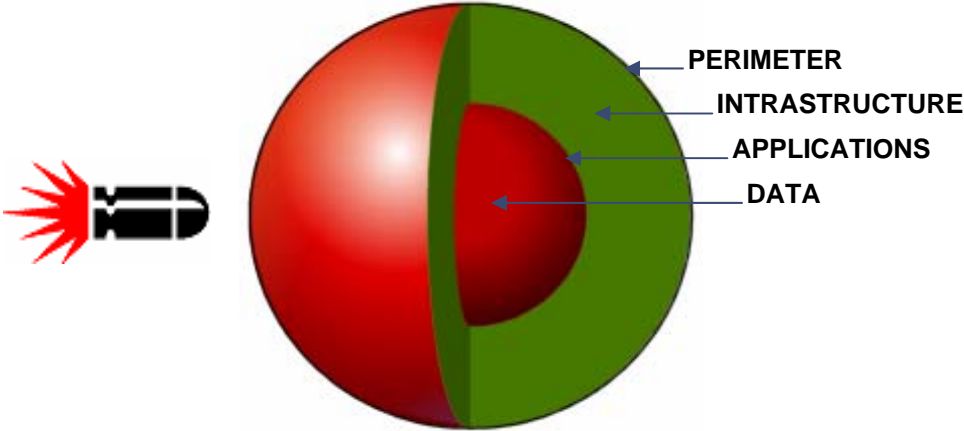
- Assess the risks
- Classify the data
- Protect accordingly

Defense in Depth

- Network
- Infrastructure
- Applications
- Data

Involve Everyone

- Everyone in community must be made aware
- Train and educate
- Measure effectiveness of training



Guidelines for a good Security Program (continued)

This leopard does change its spots

- Define security metrics
- Measure often
- Adapt to mitigate the new threats

Don't forget to lock the Doors

- Physical security
- Prevent and detect

Challenges of Implementing Security

1. The bad guy only needs to understand one vulnerability
You must secure all entry points
2. The bad guy has unlimited time
You have to consider time and costs
3. Secure systems are more difficult to use (complex passwords)
Users prefer simple passwords
4. Risks for the bad guy is low
Impact to you is high

Some Lessons Learned

The Worst Security Mistakes Leadership Makes

- Failing to realize the importance of security
- Failing to realize the impact to reputation, community and financial loss
- Assigning untrained people to maintain security
 - Inappropriate security technology and implementations
 - Assets not tracked
- Lack of measurable metrics and agreements
- Neglecting physical security
- Pretending the problem will go away if they ignore it

Some Lessons Learned

The Worst Security Mistakes Technology People Make

- Failing to document Security Policies
- Incorrect technology implementations
 - Failing to test backup systems
 - Implementing firewalls incorrectly
 - Connecting systems to the Internet before patching them
 - Connecting systems to the Internet with default accounts/passwords
 - Failing to update systems to patch security holes
 - Failing to implement or update virus detection software
- Failing to educate and train users
- Incomplete plans for addressing business interruptions

What about your Computer at Home

- Install anti-virus package
- Install a firewall
- Install patches for the software you use
- Do not open unexpected email attachments
- Back up your data and test your backups
- Use strong passwords
- Logoff when done
- Protect personal information
 - Name, address, phone number, DoB
 - Driver's license, bank and credit card information
 - SOCIAL INSURANCE NUMBER !

Internet Safety Guide For Parents

- Get involved; talk to your kids about sexual predators and potential online dangers.
- Keep the Internet-connected computer in a family room rather than the child's bedroom.
- Don't reveal personal information such as age, address, school. Use pseudo name.
- Young children should share the family e-mail address rather than have their own.
- Get to know the services your child uses. If you don't know get your child to show you.
- Never allow a child to arrange a face-to-face meeting without parental permission.
- Never respond to messages or bulletin board items that are suggestive or from strangers.
- Report suspicious or suggestive messages to your child to the local police or on www.cybertip.ca.
- Never accepts offers that involve someone visit your house.
- Set reasonable rules for computer use by your children and remember compliance.
- Find out what computer safeguards are used at school, library, friend's homes.
- If your kids do meet an online predator, don't blame them. The offender always bears full responsibility.

Internet Safety Guide Kids

- I will tell my parents right away if I come across any information that makes me feel uncomfortable.
- I will never agree to get together with someone I met online.
- I will never send a person my picture or anything personal without first checking with my parents.
- I will not respond to any messages that are mean or in any way make me feel uncomfortable.
- I will have rules for going online. We will decide upon the time of day that I can be online, the length of time I can be online, what sites I can visit etc.

Thank you.

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