Maintaining a Safe IT Environment --

When Your Child Knows More About Technology Than You Do

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Overview of Presentation

- The (ISC)^2 Organization
- The current threat environment for children
- The technologies that are being used by children and young adults
- The vulnerabilities of these technologies
- Suggestions for reducing the risks

About (ISC)²

- Established in 1989 as a non-profit consortium of information security industry luminaries
- Global leader in certifying and educating information security professionals
  - More than 60,000 certified professionals in over 135 countries
- Board of Directors - Top information security professionals worldwide
- All of our credentials are accredited to ANSI/ISO/IEC Standard 17024
  - CISSP was the first technology-related credential to receive this accreditation

Did You Know?

Fastest growing group of Internet Users is

2 – 5 year olds!

Did You Know 4 - Durangowrangler

Did You Know?

230,000 new MySpace pages today

If MySpace were a country, it would be

the 8th largest!

Did You Know 4 - Durangowrangler

Keeping Kids Safe on Line

No Boundaries

So Many Strangers

User Anonymity vs. Public Information

Electronic Copies

Once info is posted – it's there forever; Can't remove it; Can't take it back

Your Child Knows More About Technology Than You Do

What are We Protecting Against?

- **Inappropriate Contact**
  - Stay away from strangers
  - Kids must know how to recognize and protect themselves against cyber-bullies, hackers, phishers, and predators
  - People aren't always who they say they are
  - ***The Internet is a place to enhance existing relationships, not a place to meet new people***
- **Inappropriate Content**
  - Download and upload
  - The Internet is *forever*: everything online is tracked and stored and will follow them to future job interviews and college entrance interviews
- **Inappropriate Conduct**
  - The web environment can feel anonymous
  - Some become uninhibited

www.ikeepsafe.org

Approach

Treat as a classic IT security problem

1. Identify the threats
2. Review the vulnerabilities
3. Prioritize the exposures
4. Identify possible countermeasures
5. Perform informal cost versus benefit analysis
6. Implement countermeasures that make sense
7. Perform continuous monitoring

Threats to You from Child's Activities

- Inappropriate Downloads
  - Are easily done
  - Traceable
  - You could be liable for something your child does, on purpose or unwittingly
- Deleting files
- Exposing personal information

The Threats to the Child

- Bullies
- Identify Thieves
- Criminals
- Sexual Predators
- Classmates or Friends
- Nosy Neighbors
- Relatives
- Strangers

Motives

Threats want to

- Develop a relationship outside of the family
- Harass your child - electronic aggression
- Obtain sensitive personal information about the child or the family
- Obtain financial information – e.g. credit card numbers (social engineering)
- Provide/sell pornographic, and other salacious materials

Means

- Internet
- Social Networking Sites
- Chat Rooms
- Email and Text Messaging
- Personal Devices - iPod, iPhone, etc.
- Game Devices – Wii, DS, etc.

Impact of These Technologies

- Affect the way that young people interact, socialize and work … and think!
- Online dependency, verging on addiction
- Blurring between reality and virtual reality
- Loss of privacy - permanent
- New avenues for aggression/expression

Vulnerabilities

- Lack of identification/authentication on the Internet - (no one knows you are a dog)
- Always on, virtually invisible, connection
- Worldwide access to information
- Failure to properly secure systems exposes information to hackers, predators or criminals

Prioritize Exposures

- Need to focus on each technology being used
- Assume the issue is a desktop or laptop
  - Computing environment
  - Communications environment
  - Applications environment
  - User awareness
  - Continuity of Operations/data backup

Security Measures

- Administrative
  - Cyber Security Awareness
  - Rules of Behavior/Usage policy
  - Degree of parental involvement
  - Different accounts
- Physical
  - Inventory of computing devices child uses and where
  - Placement of computing device
  - Hours of Use
- Technical

Technical Controls

- Parental Controls
  - In Browser, from ISP, sold separately
- Strong password/Stronger authentication
- Anti-virus/Anti-Spyware – keep up-to-date
- Security network controls - firewall
- Web-site blocking software
- Monitoring software (email and web traffic)
- Wireless connection - encryption

Counter Measures

- **Free Security Check-Up**

- Periodic security reviews
- Backup of data and applications
- Risk assessment of new technologies e.g. introduction of web camera, new game

Cost Benefit-Analysis

- Positives of Internet are compelling
  - Information, collaboration, connectedness
- Costs when something goes wrong can be enormous
- Weigh benefits of security measure vs. its cost and cost of not implementing
- Dollar costs
- Other costs
  - Emotional, Privacy/Independence, Ease of Use

Games vs. Learning

- Learning can be fun
- Learning is achieved through games
  - Study Island
  - Spelling City
  - My Spanish Coach
- Must be prepared to be citizens of the cyber community

Costs of Incident

- Cost to Repair/Replace Computer
- Cost (time and money) of Identity Theft
- Family Embarrassment/Loss of Reputation
- Lost Opportunity Cost
  - Future Employment
- Ruined Lives

Implement Selected Controls

- Minimize, protect and backup personal info
- Cyber Security Awareness
- Terms of Use
- Physical and Parental Controls
- Anti-virus and Firewalls
- Controls that are effective and reasonably priced

Key Protective Measure - Trust

Strong Relationship

- Play games
- Show interest
- Don't judge
- Don't be intimidated
- Ask for their help
- Know their online friends

Build a foundation so child will tell you about problems

Continuous Monitoring

- Trust but verify
- Know child's password
- Google child's name and online names
- Perform Random Audits

Adequate Security

- There's no such thing as Absolute Security
- Accept some amount of risk
- Compensate with training, oversight and discussion

Stay Vigilant

- **Keep Current with technology** You don't have to be an expert, but a little understanding goes a long way. Get basic technical training and learn about new products as they're released.
- **Keep Communicating with your children** about everything they experience on the Internet. Know their lingo, and ask when you don't understand something. Work to keep communication lines open.
- **Keep Checking your children's Internet activity** Know where they go online. Let them know that you'll keep checking because you want them to understand that the Internet is a public forum and never truly private.

http://www.ikeepsafe.org/

If there's a problem

- Visit www.getnetwise.org for information on what to do if you think your child is in danger
- If you know of a child in immediate risk or danger, call law enforcement immediately
- Report instances of online child exploitation to the National Center For Missing and Exploited Children's Cyber Tipline

On-line Resources

- http://www.staysafeonline.org/
- http://www.ikeepsafe.org/
- http://www.netday.org/cyber_security_kit.htm
- http://www.getnetwise.org/
- http://nsbf.org/safe-smart/full-reprt.htm

OCTOBER is NATIONAL CYBER SECURITY AWARENESS Month

Summary

- Technology is moving faster than our ability to understand vulnerabilities and issues
- Most children are ahead of the adult population in using digital technology
- Cyber security is receiving much more attention from vendor community, government and law enforcement
- Need to maintain constant dialogue and vigilance

Their World is Different

Web 2.0 Technologies

Collaboration without borders

Socializing on Internet

Constant change

One in 8 couples married in 2005 met on the Internet