Challenges from Living with ICTs: Strategy for Mitigation, Protection and Prevention

Session 1: Setting The Stage — Towards an Integrated Approach for Cyber security and Critical Information Infrastructure Protection (CIIP)

2009 ITU Regional Cyber Security Forum for Africa and Arab States

“Connecting the World Responsibly”

Agenda

- Living with ICTs in 21st Century
- Interaction with Youth and Vulnerable
- Emerging Risks and Dangers
- Challenges
- Mitigation, Protection and Prevention
- Q&A Session
Living with ICTs in 21st Century

Background – World

Internet Users Growth in the World Between 2000 and 2008

Note: World Internet Users estimates as 1.055 billion for GI 2000

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Background – World

INTERNET USAGE BY LANGUAGE 2007 & GROWTH, 2000-2007

- Arabic 3.3% growth 1373.5%
- Korean 2.7% growth 80.8%
- Japanese 6.9% growth 85.9%
- German 4.9% growth 125.5%
- Italian 2.6% growth 111.1%
- English 30.1% growth 167.3%
- Portuguese 4.0% growth 370.0%
- Chinese 14.7% growth 472.4%
- French 5.1% growth 422.7%
- Spanish 9.0% growth 350.7%
- Others 16.3% growth 334.8%

Total Internet Users
1,262,032,697
Source: www.internetworldstats.com
Graph by Spikez.org blog. Usjournal.com

Interaction with Youth and Vulnerable

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Interaction with Youth and Vulnerable

1. e-Schools
2. Media and Interactive TV
3. Entertainment
4. Social Networking
   - My Space
   - Face book
   - Bibo
   - Orkut
5. Social Benefits from Governments
6. Online Shopping
7. eHealth

Emerging Risks and Dangers
The most recent report of the U.S.-based Internet Crime Complaint Centre showed that Nigerian e-mail fraud resulted in an average (median) loss suffered by victims of $5,100. In total Nigerian e-mail fraud generated $3.3 million in reported losses over the course of one year in the United States (IC3, 2006).

- **54 Million** Attacks on Government Agencies.
- **36 Million** Attacks on Manufacturing Agencies.
- **34 Millions** Attacks on Financial Services.
- **17 Million** Attacks on Health Care.


More than **4 Million people** worldwide are victims of Human Trafficking every year

Source: www.radio.cz/en/article/60695

**18,000 to 20,000** Persons are Trafficked into US Annually

Source: www.blackwell-synergy.com

**Human Trafficking is a $32 billion Industry**

Worldwide Trends
Crimes in Cyber Cafes

Multiple Layers of Vulnerability – Cyber Crime

- Economic Front
  - Economic Fraud
  - Stock Market Loss
- Entertainment
  - Pornography
  - Pedophiles
  - Human Trafficking
  - Prostitution
- Financial market
  - Bank Frauds
- Personal Identity
  - Credit Cards Thefts
  - Identity Card Thefts
  - VIP – Movies Stores
  - Harassment
- Infrastructure
  - Botnet
  - Denial Of Service attack – DOS
- Terrorism
  - Online Radicalization
  - Content
- Industry
  - Airline Reservation
  - Net Extortion
- Piracy
  - Internet Piracy
  - Software Piracy

Challenges

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Challenges

Child
- Disclosure of Personal Information
- Curiosity
- Security

Family
- Disclosure of Identity
- Critical Information
- Security

Stakeholders
- Infrastructure
- Security/ Theft
- Reliability

State
- Critical Information
- Virus Dissemination
- Security and Reliability

Mitigation, Protection and Prevention

Strategy

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Approach toward Cyber Security

Integrated Approach

- Policy and Procedures
- Assessments and Monitoring
- Educational Training
- Technology and Infrastructure
- Information and Knowledge
- Awareness and Communication

Mitigation, Protection and Prevention

Plan of Attack
Child Perspective

- Awareness
- Training
- Role Play
- Exercises
- Guideline / Booklets

Family Perspective

- Awareness
- Training
- Role Play
- Exercises
- Parental Controls
  - Technology Products for Safety Controls
  - Website Blockage

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**Stakeholders Perspective**

- Awareness
- Policy
- Training
- Surveillance
- Framework of Cyber Policing
- Booklets for Citizens
- Best Practices
- Alerts / Help Lines
- Networking / Support Structures

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**State Perspective**

- Policy
- Surveillance
- Monitoring Systems
- Taskforce
- Framework of Cyber Policing
- Best Practices
- Alerts / Help Lines
- Networking / Support Structures
- Steering Committees
  - International Level
  - National Level
  - Community Level
Q & A Session