

ITU Telecom World 2009 Forum  
SEC.2 : The real costs of cybersecurity

# Panel Opening Points

Cristine Hoepers

Computer Emergency Response Team – CERT.br

Network Information Center – NIC.br

Brazilian Internet Steering Committee – CGI.br

# Background

- I work with Incident Management, Incident Handling and Incident Response at CERT.br for 10 years
- Work daily with organizations and individuals affected by Internet Security Incidents and Cyber Crime

# The Real Cost

- People losing trust in the Internet
- Are getting afraid to go online and use
  - e-government
  - e-commerce
  - and other important services

# Next Generation of Threats

- The threats are coming from **cyber crime**
- They will continue to come from **cyber crime**

# Criminals are exploiting

- Software weaknesses
- A huge base of unpatched and vulnerable software, specially in developing countries
- People's trust and lack of knowledge
  - people don't understand the technology itself – the tchnology is too complex for general users
  - then, in turn, it is hard to undertand how to remain secure

# Where to invest

- More important than how much, is **where to invest**
- Morris Worm, 20 years ago, led to the creation of the 1<sup>st</sup> CERT
- Today, bots and other malware are exploiting software with vulnerabilities similar to the ones exploited 20 years ago

# Where to Apply Resources

- If we don't change the way
  - universities teach
  - and software companies develop software

I don't think we will be any better in 20 years
- The improvement will not come from the adoption of security tools
- It will come with software development maturity ("Secure Software Engineering")

# Where to Apply Resources (2)

- Software developers are coming unprepared to the market
- Security need to be a key concept in all disciplines
  - need to be integrated in all phases of the software development life cycle
- The same apply to groups that define standards
  - security needs to be addressed from the start
  - but we can't forget that if the implementation is poorly done, it will be vulnerable