

Security / Cybersecurity



Side Event

Cybersecurity

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Strategic direction

Cybersecurity – one of the top priorities of the ITU

- ❑ WSIS Action Line C5, *Building confidence and security in use of ICTs*
- ❑ Plenipotentiary Resolution 130 (2006), *Strengthening the role of ITU in building confidence and security in the use of information and communication technologies* – Instructs Director of TSB to intensify work in study groups, address threats & vulnerabilities, collaborate, and share information
- ❑ Plenipotentiary Resolution 149 (2006), *Study of definitions and terminology relating to building confidence and security in the use of information and communication technologies* - Instructs Council to study terminology



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Strategic Direction II

- ❑ WTSA-04 Resolution 50, **Cybersecurity** – Instructs Director of TSB to develop a plan to undertake evaluations of ITU-T “existing and evolving Recommendations, and especially signalling and communications protocol Recommendations with respect to their robustness of design and potential for exploitation by malicious parties to interfere destructively with their deployment”
- ❑ WTSA-04 Resolution 51, **Combating spam** – Instructs Director of TSB to “prepare urgently a report to the Council on relevant ITU and other international initiatives for countering spam, and to propose possible follow-up actions”
- ❑ WTSA-04 Resolution 52, **Countering spam by technical means** – Instructs relevant study groups “to develop, as a matter of urgency, technical Recommendations, including required definitions, on countering spam”



Initiatives

□ ITU Global Cybersecurity Agenda (GCA)

- A Framework for international cooperation on cybersecurity
- ITU response to its role as sole Facilitator for WSIS Action Line C5
- Five key work areas: **Legal Measures, Technical and Procedural Measures, Organizational Structures, Capacity Building, International Cooperation**
- World renowned Group of High-Level Experts (HLEG)
 - Report of the chairman of the HLEG to ITU Secretary-General contains recommendations in each of the five work areas

□ ITU-D Work on Cybersecurity

- ITU-D Study Group 1 Question 22/1: *Securing information and communication networks: Best practices for developing a culture of cybersecurity*
- ITU-D Programme 3 *ITU Cybersecurity Work Programme to Assist Developing Countries*



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Coordination

□ ISO/IEC/ITU-T Strategic Advisory Group Security

- Oversees standardization activities in ISO, IEC and ITU-T relevant to security; provides advice and guidance relative to coordination of security work; and, in particular, identifies areas where new standardization initiatives may be warranted.
 - Portal established
 - Workshops conducted

□ Global Standards Collaboration

- ITU and participating standards organizations exchange information on the progress of standards development in the different regions and collaborate in planning future standards development to gain synergy and to reduce duplication. GSC-13 resolutions concerning security include:
 - **GSC-13/11 – Cybersecurity**
 - **GSC-13/04 – Identity Management**
 - **GSC-13/03 – Network aspects of identification systems**
 - **GSC-13/25 – Personally Identifiable Information Protection**



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ITU-T security activities

- ❑ Study Group 17 is the lead study group in the ITU-T for security – responsible for:
 - Coordination of security work
 - Development of core Recommendations
- ❑ Most of the other study groups have responsibilities for standardizing security aspects specific to their technologies, e.g.,
 - SG 4 for TMN security
 - SG 9 for IPCablecom security
 - SG 13 for NGN security
 - SG 16 for Multimedia security



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SG 17 Security Project

(Major focus is on coordination and outreach)

❑ Security Coordination

- Within SG 17, with ITU-T SGs, with ITU-D and externally
- Kept others informed - TSAG, IGF, ISO/IEC/ITU-T SAG-S...
- Made presentations to workshops/seminars and to GSC
- Maintained reference information on LSG security webpage

❑ Security Compendium

- Includes catalogs of approved security-related Recommendations and security definitions extracted from approved Recommendations

❑ Security Standards Roadmap

- Includes searchable database of approved ICT security standards from ITU-T and others (e.g., ISO/IEC, IETF, ETSI, IEEE, ATIS)

❑ ITU-T Security Manual – assisted in its development



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Survey of developing countries ICT security needs

❑ Questionnaire initiated May 2008

❑ Key Results

- The overall level of concern about cyber security is high
- There is a high level of interest in the possibility of obtaining advice and/or assistance on ICT security from the ITU
- The ITU needs to do better in promoting its ICT security products

❑ Details of analysis at:

http://www.itu.int/dms_pub/itu-t/oth/0A/0D/T0A0D0000180001PDFE.pdf



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Core Security Recommendations

- ❑ **Strong ramp-up on developing core security Recommendations in SG 17**
 - 14 approved in 2007
 - 18 approved so far in 2008
 - 9 consented or determined September 2008
 - 44 under development for approval next study period
- ❑ **Subjects include:**
 - Frameworks
 - ISMS
 - Home networks
 - Secure applications
 - Countering spam
 - Cybersecurity
 - Risk management
 - IPTV
 - Web services
 - Identity management
 - Incident management
 - Mobile security
 - Telebiometrics
- ❑ **Ramping up on:**
 - Multicast
 - Traceback
 - Ubiquitous sensor networks
- ❑ **Collaboration with others on many items**



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Identity Management

- ❑ Managing digital identities and personally identifiable information key aspect for improving security of networks and cyberspace
- ❑ Effort **jump started by IdM Focus Group** which produced 6 substantial reports (265 pages) in 9 months
- ❑ **JCA-IdM and IdM-GSI** established by TSAG in December 2007
 - Main work is in SGs 17 and 13
- ❑ Intense work program, difficult
- ❑ **First IdM Recommendations** determined under TAP:
 - **X.1250**, *Capabilities for global identity management trust and interoperability*
 - **X.1251**, *A framework for user control of digital identity*
 - **Y.2720**, *NGN identity management framework*
- ❑ Many additional IdM Recommendations are under development
- ❑ Working collaboratively with other key bodies including:
ISO/IEC JTC 1/SC 27, Liberty Alliance, FIDIS, OASIS



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Challenges

Addressing security to enhance trust and confidence of users in networks, applications and services

- ❑ With global cyberspace, what are the security priorities for the ITU with its government / private sector partnership?
- ❑ Balance between centralized and distributed efforts on developing security standards
- ❑ Legal and regulatory aspects of cybersecurity, spam, identity/privacy
- ❑ Address full cycle – vulnerabilities, threats and risk analysis; prevention; detection; response and mitigation; forensics; learning
- ❑ Uniform definitions of cybersecurity terms and definitions
- ❑ Effective cooperation and collaboration across the many bodies doing cybersecurity work – within the ITU and with external organizations
- ❑ Keeping ICT security database up-to-date



There is no “silver bullet” for cybersecurity

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Some useful web resources

- ❑ ITU Global Cybersecurity Agenda (GCA)
<http://www.itu.int/osg/csd/cybersecurity/gca/>
- ❑ ITU-T Home page <http://www.itu.int/ITU-T/>
- ❑ Study Group 17
e-mail: tsbsg17@itu.int
<http://www.itu.int/ITU-T/studygroups/com17/index.asp>
- ❑ LSG on Security <http://www.itu.int/ITU-T/studygroups/com17/tel-security.html>
- ❑ Security Roadmap <http://www.itu.int/ITU-T/studygroups/com17/ict/index.html>
- ❑ Security Manual <http://www.itu.int/publ/T-HDB-SEC.03-2006/en>
- ❑ Cybersecurity Portal <http://www.itu.int/cybersecurity/>
- ❑ Cybersecurity Gateway <http://www.itu.int/cybersecurity/gateway/index.html>
- ❑ ITU-T Recommendations <http://www.itu.int/ITU-T/publications/recs.html>
- ❑ ITU-T Lighthouse <http://www.itu.int/ITU-T/lighthouse/index.phtml>
- ❑ ITU-T Workshops <http://www.itu.int/ITU-T/worksem/index.html>



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