



**world summit
on the information society**
Geneva 2003 - Tunis 2005

Helping the world communicate



Tutorial Session on Internet Governance

Geneva Diplomatic Community

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Introduction

- ITU Introduction
- WSIS Recap
- What is Internet Governance?
 - Definitional Approach
 - Topical Approach
- Relationships with Telecommunications Technologies and Policies
- Conclusions





Introduction: International Telecommunication Union

- International organization where governments and private sector coordinate global telecom networks and services
- Founded in 1865, it is the oldest specialized agency of the UN system
- 189 Member States, 650 Sector Members, 75 Sector Associates
- Headquarters Geneva, 11 regional offices, 790 staff / 83 nationalities





ITU Mission

- Maintain and extend international cooperation in telecommunications
- Technical and policy assistance to developing countries
- To harmonize actions of Member States and promote cooperation between Member States and Sector Members



ITU mission

- To promote at international level, the adoption of a broader approach to issues of telecommunications in the global information economy and society
- To extend the benefits of telecoms to all the world's inhabitants
- "Helping the world communicate"





WSIS Origins and Status

- WSIS originally proposed by ITU PP in 1998
- Formally endorsed by the UN in 2001
- Regional meetings, 2002 - 2003
- PrepCom process, started in July 2002
- First phase, Geneva 10-12 December 2003
- Second phase, Tunis, 16-18 November 2005



Geneva Summit: Outcomes

- Declaration and Plan of Action
 - Common vision and agenda for ICTs to achieve UN MDGs, including connecting all communities by 2015
- Agreement on many important issues
 - Cyber-security, freedom of expression, enabling environment, cultural diversity, local content and multilingualism
- Asked UN SG to look into unresolved issues
 - Internet Governance and Financing





Focus of Tunis Phase

- Follow-up and implementation of Declaration of Principles and Plan of Action
 - Including stocktaking activities
- Unresolved issues from Geneva phase
 - Consideration of UN SG reports on Financing and Internet governance and appropriate action
- Do not reopen Geneva documents





What is Internet Governance?

- Much debate as to what it *actually* means
- *Definitional* versus *topical* approach
- If topical approach, there are both *narrow* and *broad* definitions





A Definitional Approach

- “Internet Governance consists of the collective rules, procedures, processes, and related programs that shape social actors’ shared expectations, practices, and interactions and result in practices and operations that are consistent with the sovereign rights of states and the social and market interests of end-users and operators. It includes agreements about standards, policies, rules, and enforcement and dispute resolution procedures.”
 - Proposal of ITU-T Director, December 2004





Caveat

- There are many possible definitional approaches
- WSIS established Working Group on Internet Governance (WGIG) requested to “develop a *working* definition of Internet Governance”



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A Topical Approach

- Narrow definition
- Broad definition



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A Narrow Definition

- Management of Internet names and addresses
 - Internet domain names such as www.itu.int, www.ibm.com, www.ibm.ch, etc...
 - highly visible, brand names, linked with identity
 - Internet Protocol (IP) Addresses
 - End-point identifiers need to route Internet packets
 - mostly invisible, required to be “on the Internet”



A Broad Definition

- Administration of Internet names and IP addresses
- Administration of root server system
- Telecommunications infrastructure, broadband access, convergence with NGN
- Dispute resolution
- Affordable & universal access
- Internet leased line costs
- Peering and interconnection
- Competition policy, liberalization, privatization, regulations
- National policies & regulations
- Social dimensions and inclusion
- Consumer, user protection, privacy
- VoIP
- Spectrum policy
- Education, human capacity building
- Multilingualization of Internet naming systems, content
- National infrastructure development
- Developmental aspects
- Spam
- Cybersecurity, cybercrime
- Technical standards
- Security of network and information systems
- Electronic authentication
- Critical infrastructure protection
- Cultural and linguistic diversity
- Unlawful content & access protection
- Intellectual property rights
- Applicable jurisdiction, cross border coordination
- E-commerce
- Freedom of information and media
- Privacy
- Open-source and free software





Relationships with Telecommunications Technologies and Policies

- A Few Case Studies
 - Telecommunications infrastructure, broadband access, convergence with NGN
 - VoIP
 - Spam & Phishing
 - Cybersecurity
 - Emerging Regulatory Issues



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Telecommunications infrastructure, broadband access, convergence with NGN



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Telecommunications infrastructure, broadband access, convergence with NGN

- Development of national telecommunications infrastructures
 - Global shift from PSTN buildout to broadband “converged” platform buildout
 - Enabling platform for voice, video, data
- Broadband
 - New ITU standards (DSL, cable) have brought broadband access to over 100 million new users since 1999

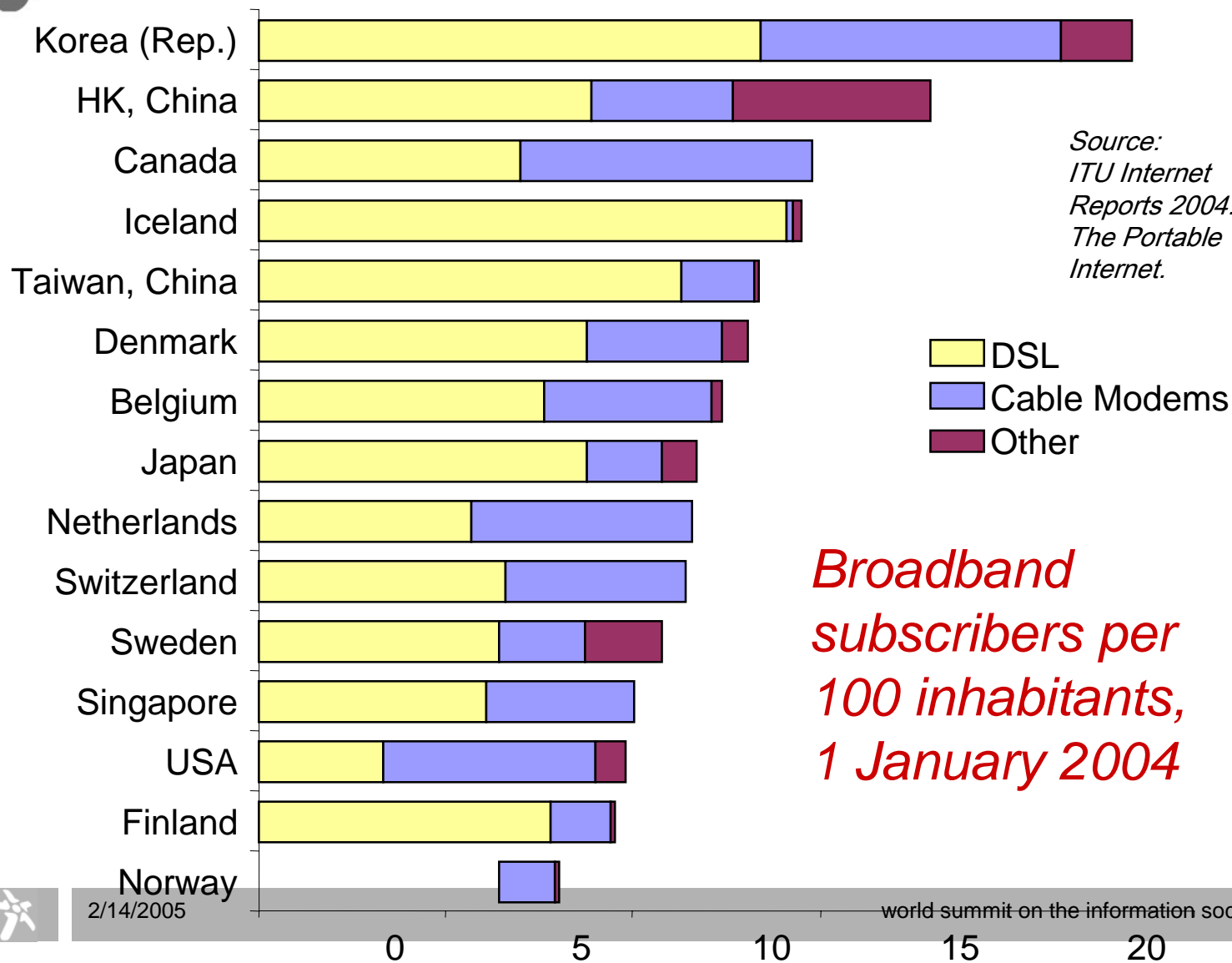




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Broadband subscribers per 100 inhabitants, 1 January 2004



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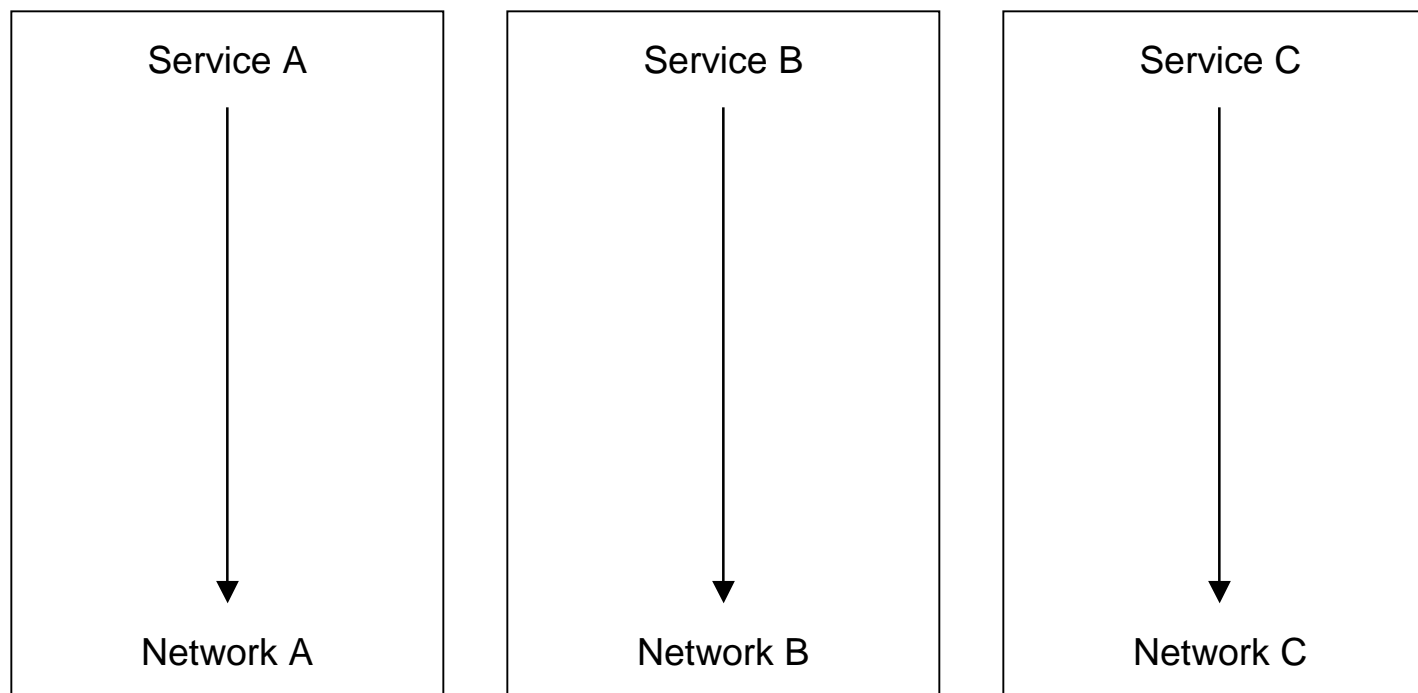
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Network Technology Paradigm Shift

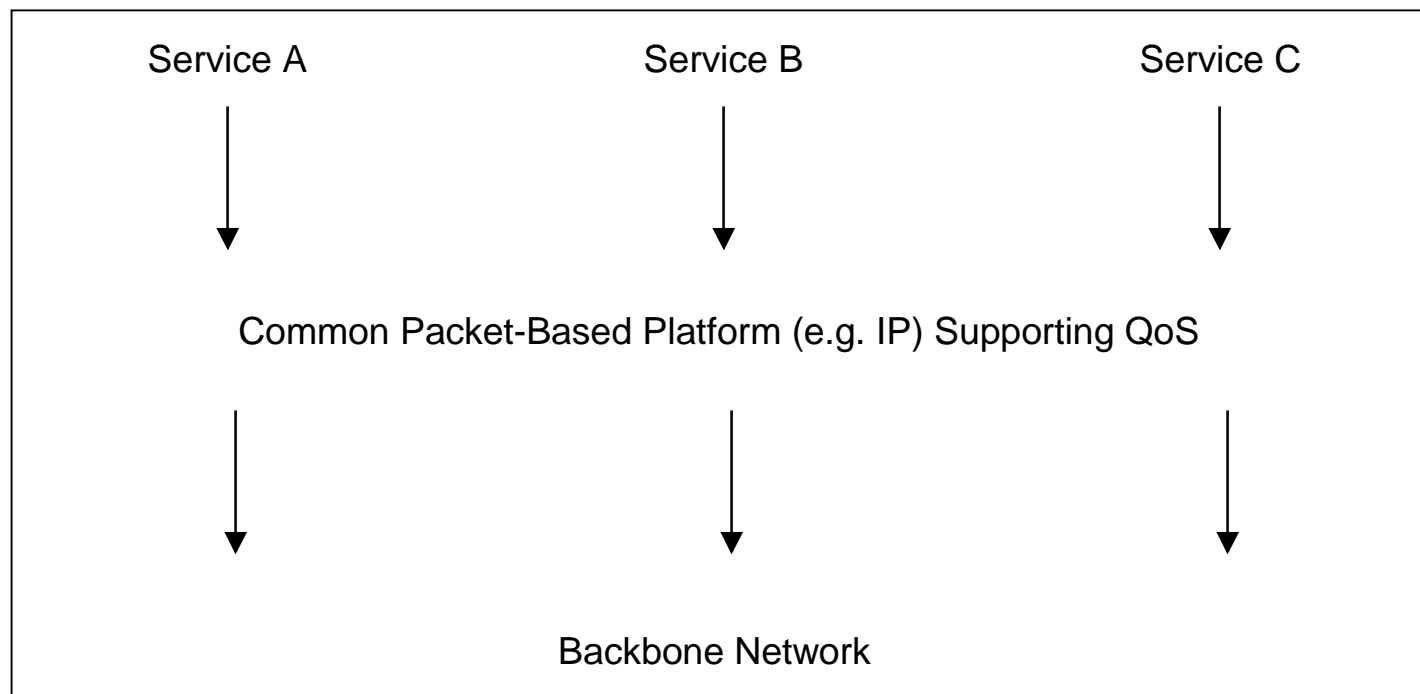
- Current scenario: services tied to specific technologies and networks





Network Technology Paradigm Shift

- Future scenario: shift from multiple service specific networks to multi-service NGN





ITU-T Definition of NGN (Feb 2004)

- “A **Next Generation Network (NGN)** is a packet-based network able to provide services including Telecommunication Services and able to make use of multiple broadband, QoS-enabled transport technologies and in which service-related functions are independent from underlying transport-related technologies. It offers unrestricted access by users to different service providers. It supports generalized mobility which will allow consistent and ubiquitous provision of services to users.”



Next Generation Networks

- Requires substantial:
 - standards work and resource investment by operators and equipment manufacturers
 - significant policy and regulatory review
- ITU under reorganization around NGN technical and regulatory frameworks
 - Recent WTSA-04 focus on NGN
 - Area of intensive standardization by operators and equipment manufacturers in ITU-T





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VoIP



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User dreams can be regulator's nightmares



Switzerland



USA

- USA phone number
- Rings in Switzerland
- Flat-rate monthly price (\$20-\$35) to and from the US
- Cheaper to call next door in CH from the US number than CH phone
- Requires broadband in CH and functions as fixed line





This is only the beginning

- Currently
 - Broadband allows access to other voice markets using VoIP
 - Users can avoid fixed-line and mobile carriers to make voice calls around the world
- Future
 - Indications that voice bundled in palette of multimedia services
 - Regulators need to rethink universal service requirements on voice carriers - possible move towards universal "ICT" service?





Headline: “Battle Brews Over Rules for Phones on Internet”

- USA: “Fierce battle is emerging among rival companies and between federal and state regulators over the shape of the new government regulations and control of the service, which has the potential to be the most significant development in telecommunications since the breakup of the AT&T monopoly 20 years ago.”
 - *New York Times, July 28 2004*





One Approach to Convergent Regulation

- New European Regulatory Framework (March 2002)
- Removing technology-specific definitions in legislation
- National Regulatory Authorities (NRAs) in Europe implementing





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Spam and Phishing

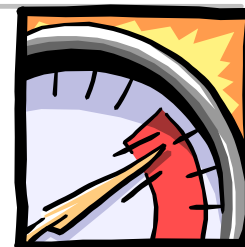


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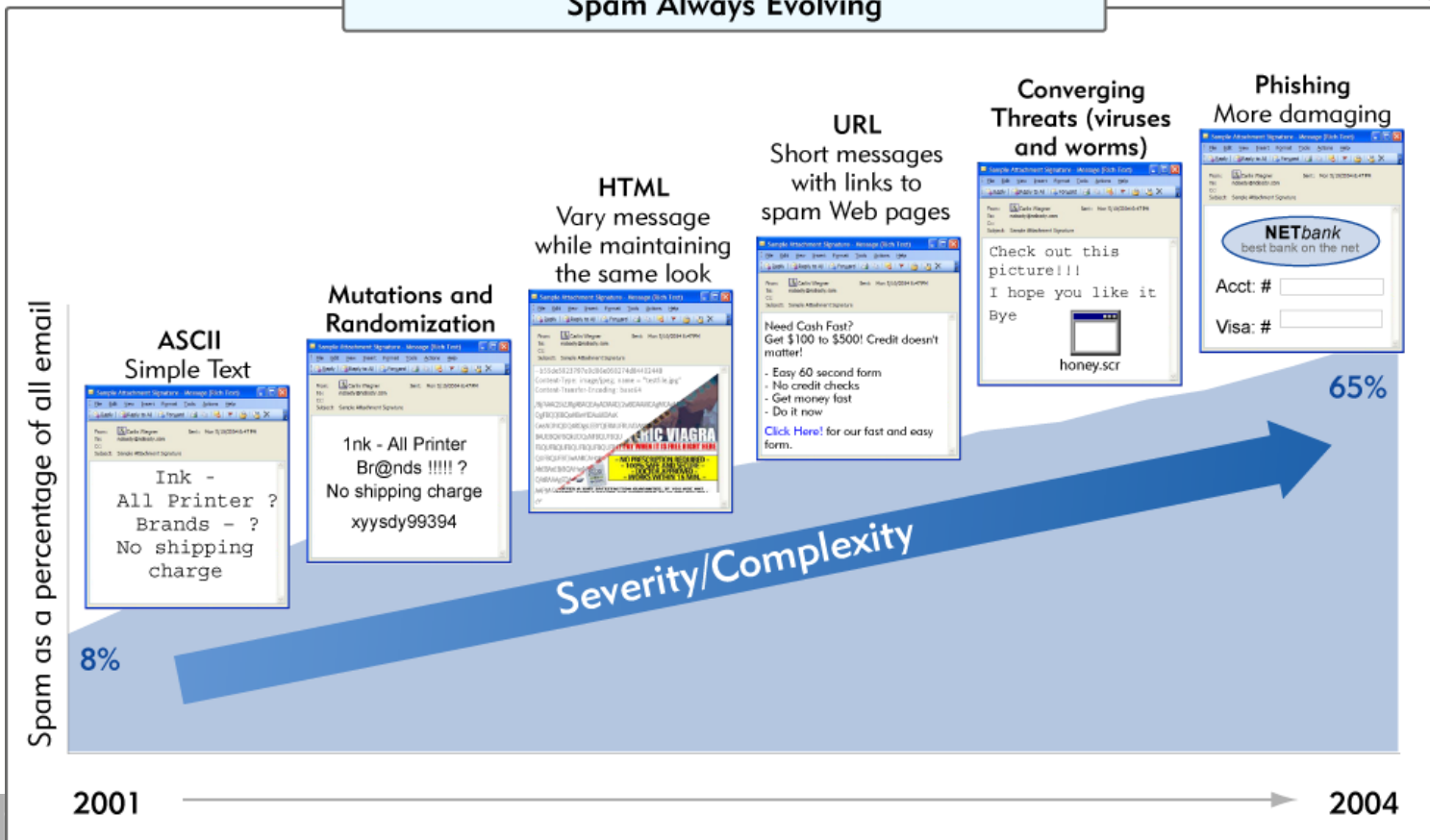
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Spam is not only growing, but is evolving to become broader threat to Internet security



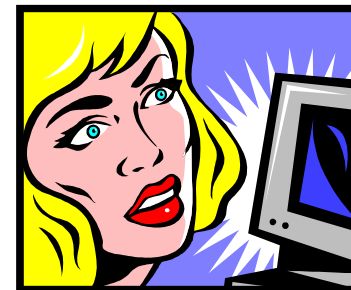
Spam Always Evolving





More bad news?

- Lack of consensus on technical solutions
 - E.g., clash of cultures between open source and proprietary software communities
- Authentication standards are really hard
 - Technologies based on asymmetric encryption standards has not been as successfully deployed as some thought
- SPIT: Spam over Internet Telephony



ITU WSIS thematic meeting on countering spam (July '04)

- Objectives:

- To serve as global forum for the different stakeholders to exchange experiences and share views on technical, legal and other solutions
- To develop specific international cooperative measures to counter spam.

(See report online at www.itu.int/spam)



Some points discussed:

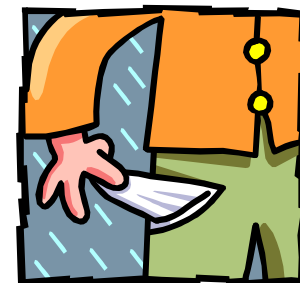
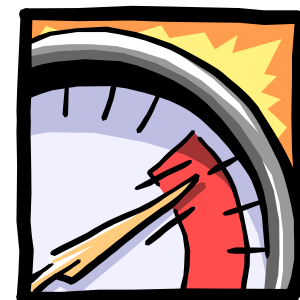
- Spam is a cross-sector problem, therefore different stakeholders need to be involved in different countries. A network of authorities dealing with spam still does not exist.
- There is no unique solution to spam. A multi-layered approach is necessary:
 - technical solutions
 - user awareness
 - appropriate legislation and enforcement
 - industry initiatives
 - international cooperation





Cyberspace makes all countries border each other

- **International cooperation**, on both technical (standardization) and policy (legislation and enforcement) sides has been recognized as a key element to solving the problem.
- **Developing countries** are also dealing with the problem of spam, which has even more dramatic consequences on Internet access than in developed economies. They do not have technical, knowledge and financial resources to face it.





Views of Developing Countries

- Joint contribution from Kenya, Sudan, Tanzania and Zambia at ITU Spam Meeting:
 - “In some countries, the consumers begin to shun the Internet or just reduce their use of the Internet.”
 - “It also causes a Denial of Service on our networks as well as a danger to development in the sector.”
 - “spam is a global problem that should be resolved in collaboration with all other nations.”





Global Symposium for Regulators (GSR)

- ITU Global Symposium for Regulators:
 - Global forum for national regulators to share views and experiences on best practices in regulation
 - December 2003: GSR decides to launch discussion on frameworks for international cooperation on spam
 - March 2004: Virtual conference among regulatory authorities on cooperation on countering spam
 - <http://www.itu.int/ITU-D/treg/Events/Seminars/Virtual-events/Regulators/>
 - December 2004: Annual GSR meeting breakout session on country experiences and international cooperation



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Cybersecurity



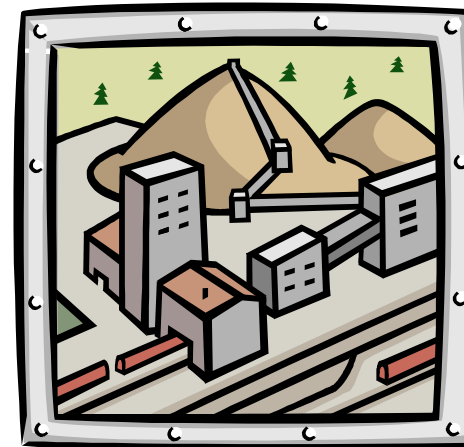
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Cybersecurity

- All countries depend on *critical infrastructures* for their national security:
 - Telecommunications
 - Banking & Financial Markets
 - Health & Emergency Services
 - Transportation Systems
 - Critical Manufacturing
 - Energy and Water
 - Vital Government Services





Role of Critical Network Infrastructures

- In 21st century, most critical infrastructures are dependent on information and communications systems that span the globe
- These are called *Critical Network Infrastructures (CNIs)*



Protecting Critical Network Infrastructures (CNIs)

- CNI protection is providing for the confidentiality, integrity, availability and authentication of information and communication systems
- Protection of both physical facilities as well as data and information they carry





ITU WSIS Thematic Meeting on Cybersecurity

- June 28-July 1 2005 (Geneva)
- ***Theme: Building a Global Culture of Cybersecurity***
 - WSIS Phase I DoP: 5) Building confidence and security in the use of ICTs & AP: C5. Building confidence and security in the use of ICTs
 - Ref: UN Resolutions 58/199 (2004): Creation of a global culture of cybersecurity and the protection of critical information infrastructure
 - One day (June 28) dedicated to follow-up on WSIS Thematic Meeting on Countering Spam



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Emerging Regulatory Issues



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Related Regulatory Imperatives



- The days when legislation and regulation could assume distinct services running over distinct technologies and networks are disappearing fast
- Co-existence and continued intersection of NGN and Internet in terms of technological and regulatory developments should be foreseen



Related Regulatory Imperatives



- Growing concerns about public interest and national critical network infrastructure (CNI) vulnerabilities (e.g. widespread fraud, spam, phishing, security flaws, cybercrime, zombie armies, spyware)
- Transition of Internet to public infrastructure and services will continue to invoke further government and intergovernmental mandates and oversight



“List of 13” Public Interest and National Security Mandates

- public safety (E911) needs
- disability assistance
- law enforcement support
- competition (Computer III/number portability/1996 Act requirements)
- fraud prevention
- reliability and reporting obligations
- restoration after failures
- call prioritization during emergencies
- privacy and data protection
- consumer protection against unwanted intrusions
- universal service and other contributory obligations
- intercarrier compensation
- nondiscriminatory regulatory treatment





Conclusions

- What's at stake?
 - 'Internet Governance' is learning how we cooperate nationally and internationally on the many new policy and regulatory issues related to the information society
- Healthy debates about the best approach
 - private sector and/or national and/or international regulation
 - one size does not fit all
- ITU Constitution
 - "To promote at international level, the adoption of a broader approach to issues of telecommunications in the global information economy and society"
 - "To extend the benefits of telecoms to all the world's inhabitants"



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Thank you

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