Security and resilience in the Information Society: *towards a CIIP policy in the EU*

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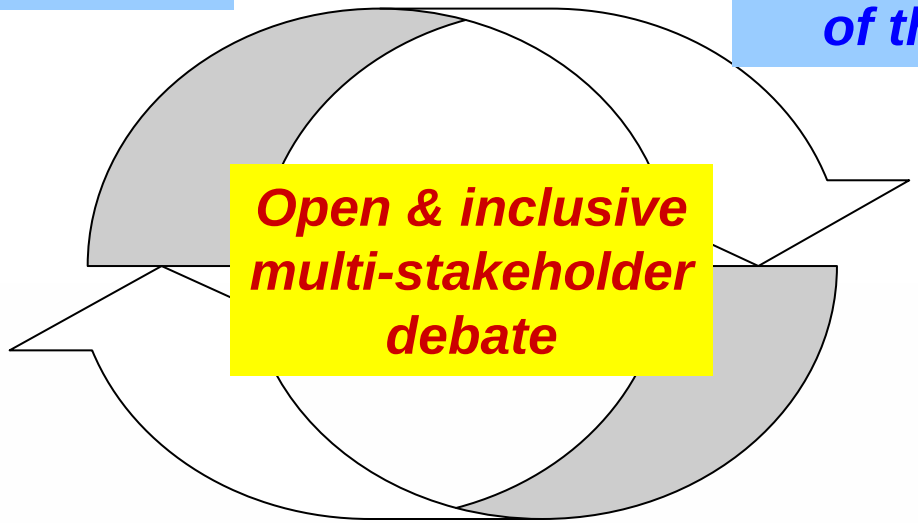
Network and information security: *The European Context*

- **Strategy for a Secure Information Society** [COM(2006)251]
- Policy initiatives on:
  - **fighting against spam, spyware and malware** **[COM(2006)688]**
  - **promoting data protection by PET** **[COM(2007)228]**
  - **fighting against cyber crime** **[COM(2007)267]**
- Proposed package to **reform the Regulatory Framework for e-communications** [COM(2007)697, COM(2007)698, COM(2007) 699]
- **European Network and Information Security Agency**, (ENISA) established in 2004
- **A policy initiative on CIIP** to be adopted by early 2009 – under the general framework of the European Programme on Critical Infrastructure Protection

Towards a secure Information Society

DIALOGUE
structured and multi-stakeholder

PARTNERSHIP
greater awareness & better understanding of the challenges



EMPOWERMENT
commitment to responsibilities of all actors involved

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Policy initiative on CIIP – Q1 2009: *The issues at stake / Rationale*

- CII are the **nervous system** of the Information Society
- Liberalisation, deregulation and convergence → **complexity / multiplicity of players**
- Infrastructures are **privately owned and operated**
- Ensuring the **stability of society and economy** is governments' responsibility
- CII stretch out well **beyond national borders**
- The level of security in any country **depends** on the level of security put in place outside the national borders
- National governments face **very similar issues and challenges**
- The private sector is calling for **harmonised rules**

→ A more integrated and co-ordinated approach to **complement and add value** to the national programmes

→ Contribute to **reinforce the EU wealth creation capabilities**

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Policy initiative on CIIP – Q1 2009: *Dialogue & Partnership*

- **Objectives**
  - Enhance the level of **CIIP preparedness and response across the EU**
  - Ensure that adequate and consistent levels **of preventive, detection, emergency and recovery measures are put in operation**

- **Policy orientations**
  - **Achieve a better understanding and clarity** on the guiding policy principles

- **Approach**
  - **Build on** national and private sector initiatives
  - **Engage** relevant public and private stakeholders
  - **Adopt** All-hazards

Policy initiative on CIIP – Q1 2009: *Preparatory activities (1/2)*

- **2006:**
  - **Study on "Availability and Robustness of Electronic Communications Infrastructures" (ARECI)**
- **2007**
  - **Informal meeting of National experts on CIIP – Brussels, 19 January 2007**
  - **Public consultation on the final ARECI report drafted by Alcatel-Lucent - April 2007**
  - **Member States and private sector meeting on the outcomes of the public consultation– Brussels, 18 June 2007"**
  - **Workshop on "cc TLD's Contingency practices", 19/09/2007**
  - **Workshop on challenges for awareness raising, 07/12/2007**

Policy initiative on CIIP – Q1 2009: *Preparatory activities (2/2)*

- **2008**
  - **Workshop on "Learning from large scale attacks on the Internet: policy implications",** Brussels, 17 January 2008;
  - **2 Meetings with MS on the criteria to identify European Critical Infrastructures in the ICT sector**, Brussels, 5 February & 29 May 2008;
  - **Workshop on "The role of the private sector for Critical Information Infrastructure Protection"**, Brussels, 26 June 2008;
  - **Questionnaire** sent to Member States

Policy initiative on CIIP: *Next steps - Short term*

- **Q4 2008**
  - **Completion of the survey on MS policy approaches on CIIP**
    - **Focus on i) definitions/criteria; ii) risk assessment activities; iii) incident response capability; iv) Public Private Partnership; v) International dimension**
  - **Analysis of inputs**
- **Q1 2009**
  - **Adoption of Commission policy on CIIP + Action Plan**

Policy initiative on CIIP – Q1 2009: *The main areas for action*

- Process to define the ICT criteria to identify the European critical infrastructures
- Improvement of the incident response capability at national and European level
- Development of a trusted public-private partnership at the European Union level on security and resilience to support sharing of information and good practices
- Bridging gaps on national CIIP policies across Europe - Reinforcing the cooperation and the information exchange between Member States
- International dimension of CIIP to reinforce co-operation on global issues, in particular the security and the robustness of the Internet

→ A significant step forward in the implementation of the Commission's strategy for a Secure Information Society

Policy initiative on CIIP – Q1 2009
Tentative Flowchart

Communication

(including Impact Assessment)

Action Plan

(either as part of the Communication or proposal for a Recommendation)

Implementation for the ICT sector* of the European Programme on Critical Infrastructures Protection framework (EPCIP) by defining the **criteria** for identification of European Critical Information Infrastructures (ECIIs)**

Tool: Staff Working Paper & Study to be launched by the end of 2008

Strengthening the incident response capability for Europe by creating:

1. **Governmental CERTs** in all Member States
2. EISAS – multi-lingual **European information Sharing and Alert System**

Tool: 1. Obligation/Recommendation for Member States

Tool: 2. Development of prototype tool (to be funded under the EU Programme on "Prevention, Preparedness and Consequences Management of Terrorism and other security related risks")

Creation of a strong and trusted EU Public-Private Partnership determining the good practices to be followed, in terms of:

-Industrial deployment
-Public policy practices

Tool: Public Private Partnership for European Resilience

International dimension – Creating a unified European security voice and strategy in international discussions and fora (in particular for Internet)

Tool: Global security dialogue following WSIS with aim to create **guidelines on risk preparedness and response**

Policy initiative on CIIP: *Next steps - Medium term*

- **2009**
  - **A study on dependencies on ICTs of finance, energy and transport sectors***
  - **Prototype of a European multilingual information sharing and alert system to provide appropriate and timely information via dedicated e-security web portals on threats, risks and alerts as well as on best practices***
  - **A project on DNS security***

Call just closed:

- **A study on measures to analyse and improve European emergency preparedness in the field of fixed and mobile telecommunications and Internet***
- **A study to support the process to define sectoral criteria to identify European Critical Infrastructures in the ICT sector focusing on the sub-sectors of Internet, fixed and mobile telecommunications***

* Projects and studies funded under EPCIP financial scheme: "*Prevention, Preparedness and Consequence Management of Terrorism and other Security Related Risks* "

Web Sites

DG INFSO Web site on the EU policy on secure Information Society

http://ec.europa.eu/information_society/policy/nis/index_en.htm

Page on CIIP

http://ec.europa.eu/information_society/policy/nis/strategy/activities/ciip/index_en.htm

Page on ARECI study

http://ec.europa.eu/information_society/policy/nis/strategy/activities/ciip/areci_study/index_en.htm

Page on the workshop on large scale attacks

http://ec.europa.eu/information_society/policy/nis/strategy/activities/ciip/large_scale/index_en.htm

Links to EU Policy Document 1/2

- **Strategy for a Secure Information Society [COM(2006)251]**
  http://eur-lex.europa.eu/Result.do?T1=V5&T2=2006&T3=251&RechType=RECH_naturel&Submit=Search

- **Fighting spam, spyware and malicious software [COM(2006)688]**
  http://eur-lex.europa.eu/Result.do?T1=V5&T2=2006&T3=688&RechType=RECH_naturel&Submit=Search

- **Promoting data protection by Privacy Enhancing Technologies (PETs) [COM(2007)228]**
  http://eur-lex.europa.eu/Result.do?T1=V5&T2=2007&T3=228&RechType=RECH_naturel&Submit=Search

- **Towards a general policy on the fight against cyber crime [COM(2007)267]**
  http://eur-lex.europa.eu/Result.do?T1=V5&T2=2007&T3=267&RechType=RECH_naturel&Submit=Search

- **Package to reform the Regulatory Framework for e-communications [COM(2007)697, COM(2007)698, COM(2007) 699]**
  http://ec.europa.eu/information_society/policy/ecomm/tomorrow/index_en.htm

Links to EU Policy Document 2/2

- **European Programme for Critical Infrastructure Protection [COM(2006) 786]**
  http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=COM:2006:0786:FIN:EN:PDF

- **Directive on the identification and designation of European Critical Infrastructure and the assessment of the need to improve their protection**

  Press release:
  http://www.consilium.europa.eu/ueDocs/cms_Data/docs/pressData/en/jha/101001.pdf
  Final text:
  http://register.consilium.europa.eu/pdf/en/08/st09/st09403.en08.pdf

- **EPCIP financial scheme: "*Prevention, Preparedness and Consequence Management of Terrorism and other Security Related Risks*"**

  Call for proposals
  http://ec.europa.eu/justice_home/funding/cips/funding_cips_en.htm

  Call for tenders
  http://ec.europa.eu/justice_home/funding/tenders/funding_calls_en.htm

  Call for expression of interest (looking for external experts)
  http://ec.europa.eu/justice_home/funding/tenders/funding_interest_en.htm

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Annex

- ***Key findings & way forward*** **of the workshop on "Learning from large scale attacks on the Internet: policy implications" (17.01.2008)**

Workshop on "Learning from large scale attacks on the Internet: policy implications"
Key findings & way forward (1/4)

- **Build resilience / Harden the infrastructure**
  - Servers and links redundancy, Anycast
  - Security of routing protocol / traffic exchange
  - Security of DNS service

- **Profiling attackers and understanding** their objectives (know your enemies)

Workshop on "Learning from large scale attacks on the Internet: policy implications"
Key findings & way forward (2/4)

- **Response preparedness**
  - National contingency plan for the Internet
  - Cyber exercises on National/international level are crucial
  - Strengthen multinational cooperation for rapid response (formal rather than informal)
  - Importance of CERTs/CSIRTs and their role for national and international cooperation
- **Measurement - monitoring** of traffic to understand what is going on
  - Computers at the edges could be leveraged to build collective intelligence

Workshop on "Learning from large scale attacks on the Internet: policy implications"
Key findings & way forward (3/4)

- **Technology will not be sufficient**

- Study the **economics of security and cyber crime**
  - *R. Anderson (et al) report on "Security Economics and the Internal Market"* (ENISA)

- Set-up **Public Private Partnership (PPP)**
  - Importance of the role of government, which is to **coordinate** and **be a good user**

- Develop **cross-sector and cross-organisational cooperation** on national, EU and international levels

Workshop on "Learning from large scale attacks on the Internet: policy implications"
Key findings & way forward (4/4)

- **Agree on responsibility's allocation**

- **Information and best practices sharing**
  → importance of trust
  - *EISAS (European Information Sharing an Alert System) feasibility study* (ENISA)
  - Funding for "proof of concept" implementation of an EISAS

- **Raising awareness** and education of individuals, public bodies, corporate users and service providers