



A Holistic Approach to Cyber Security

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Cyber Security & Digital Forensics Event

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InternetSociety.org

Agenda

- What is the Internet Society (ISOC)
- The Internet's Three Operating Layers
- Some Definitions
- The Internet ecosystem
- Cyber Security Themes
- Problems & Technology Solutions
- Cooperation and collaboration
- Questions

Internet Society

- Founded in 1992 by Internet pioneers
- Not for profit international organization
 - 110+ organizational members
 - 60.000+ individual members
 - 90+ local chapters worldwide
 - Offices: Africa, Asia, Europe, LAC, USA
- ISOC's mission is "to assure the open development, evolution and use of the Internet for the benefit of all people throughout the world"
- We do this by working in the areas of technical standards, policy development and education



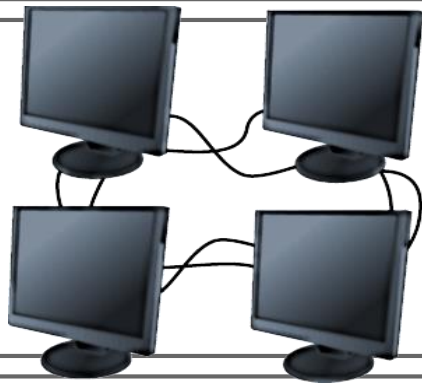
What Made Internet Society Unique?

- 20 years of leadership at the intersection of *Internet technology, development, and public policy*
- Organizational home of the *Internet Engineering Task Force (IETF)*, which sets global Internet Standards
- Trusted reputation as *neutral and unbiased advocates* for the Internet
- Broad engagement across stakeholders including industry, government, universities, and civil society
- Expert contributors to the World Economic Forum, United Nations bodies, Internet Governance Forum(IGF), OECD, etc.
- Access to an *international network of experts*



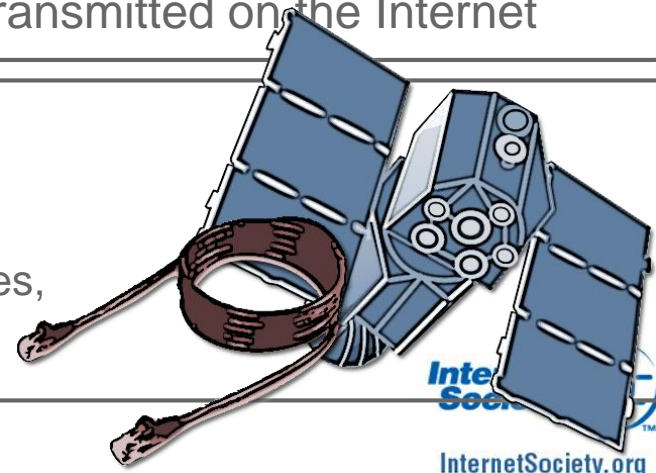
Internet's Three Operating Layers

Content and applications standards (HTML, XML, Java) – Promotes creativity and innovation in applications leading to email, World Wide Web, ebanking, wiki, Skype, Twitter, Facebook, Yahoo, Google, YouTube and much more



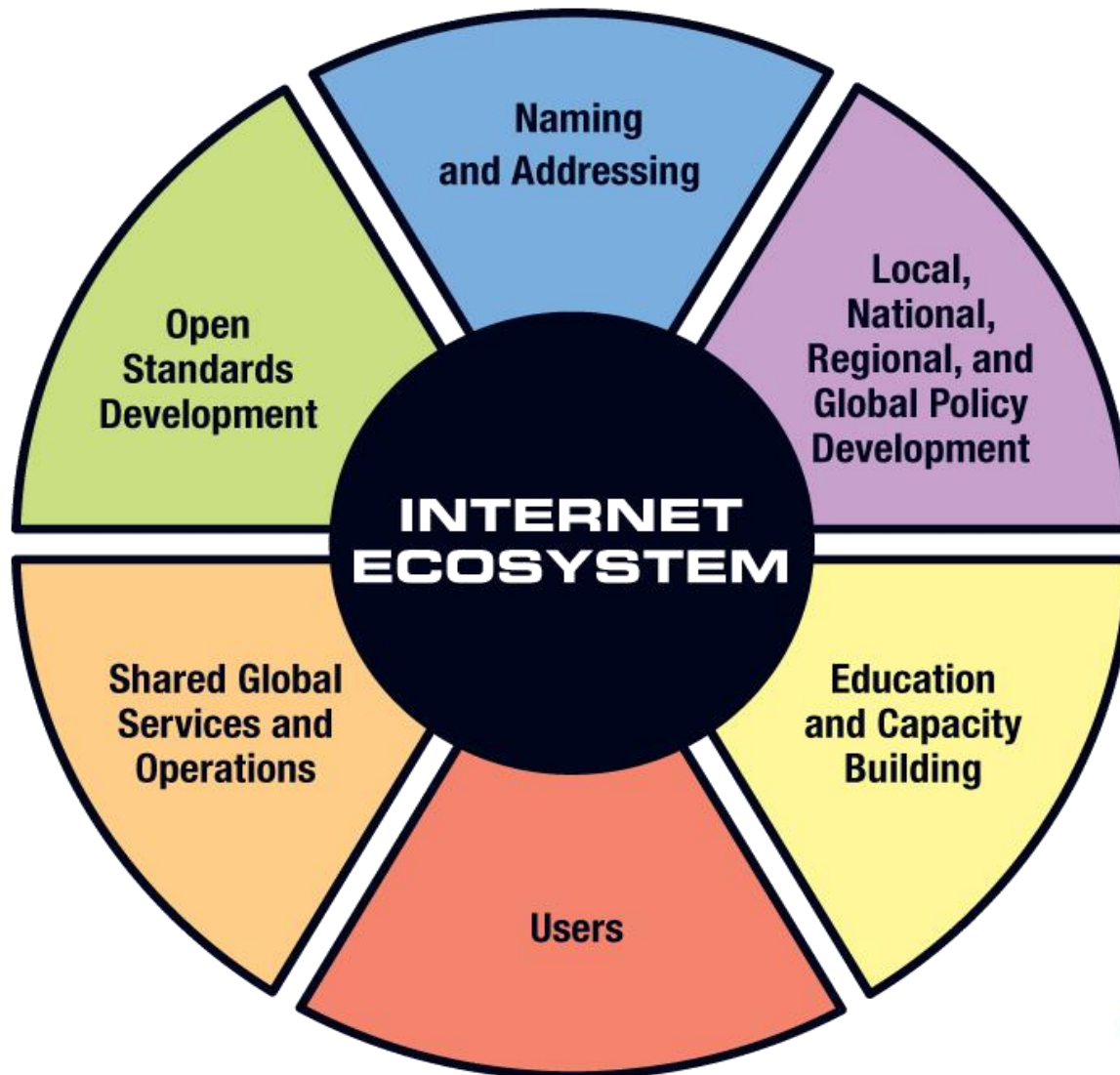
Internet protocols and standards (TCP/IP, DNS, SSL) – TCP/IP, controls traffic flow by dividing email and web data into packages before they are transmitted on the Internet

Telecommunications infrastructure – Physical network made up of underwater cables, telephone lines, fiber optics, satellites, microwaves, wi-fi, and so on Facilitates transfer of electronic data over the Internet



Some Definitions

- *“Cyber security refers to preventative methods to protect information from being stolen, compromised or attacked in some other way”;*
- For the purposes of this event, cyber security is defined as *“anything that includes **security problems** specific to the Internet and their technical and non-technical solutions”;*
- Not every crime that occurs on the Internet is covered by the term cyber security. A **crime is a crime**, and simply moving it to the Internet doesn't make it special!
- Forensics: *“scientific tests or techniques used in connection with the detection of crime”.*



Cyber Security Themes

- Because the scope of cybersecurity is so broad, it is helpful to break it down into these categories

Securing the
Link

Securing
Telecom
Infrastructure

Securing the
Internet

Securing the
Computers

Securing
Applications

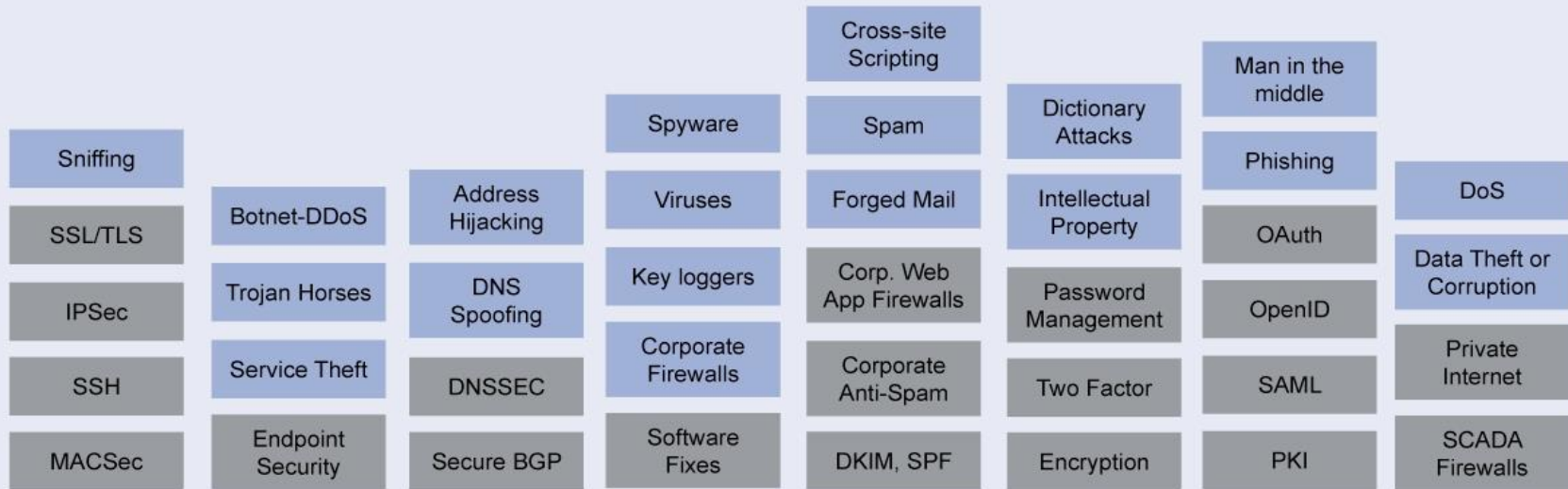
Securing
Data

Securing
Identity

Securing
Essential
Services

Cybersecurity Themes

Cybersecurity Problems and Technology Solutions



Cybersecurity Problems and Technology Solutions

Problem Space
 Technology Solutions

It's All About Cooperation & Collaboration

- Both cybersecurity problems specifically and other criminal activity carried out using the Internet are not going to be solved with technology alone!!
- Close cooperation and coordination by all stakeholders is key!!
 - Governments;
 - Businesses;
 - Academia;
 - Organizational and individual users;
 - Law enforcement agencies;
 - Policy makers worldwide.



the Internet is for
everyone



Thank You

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