ICANN60 Capacity Building



Housekeeping

What is the Internet?

A subset of telecommunications – a transmission network for communications

OR

•A global collection of computer networks,

- with a common system based on the Internet protocols
- physically linked by telecommunications infrastructure
- supporting packet-based communications between disparate computer platforms and operating systems
 controlled by the TCP/IP suite of protocols

OR **Really only 20 protocols** *On the net, you find computers On the web, you find information*

Capacity Building: How It Works

All Internet communication uses packets
Packets contain "Headers" and "Payload"
Payload at one layer includes nested header information for the next layer

IP Header				IP Trailer			
			payload				

The Internet routes packets only by looking at IP addresses in the IP header – information gets from source to destination without the network knowing or caring what application or purpose the packets are intended for.

Capacity Building: The Internet



The Internet Design

Internet was based on the idea that there would be multiple independent networks of rather arbitrary design, beginning with the ARPANET as the pioneering packet switching network, but soon to include packet satellite networks, ground-based packet radio networks and other networks. The Internet as we now know it embodies a key underlying technical idea, namely that of open architecture networking. In this approach, the choice of any individual network technology was not dictated by a particular network architecture but rather could be selected freely by a provider and made to interwork with the other networks through a meta-level "Internetworking Architecture".

Brief History of the Internet

Capacity Building: Internet 'Code'

Code' is Law

- The Code of Cyberspace the software and hardware
- We can build, or architect, or code cyberspace to protect values that we believe are fundamental. Or we can build, or architect, or code cyberspace to allow those values to disappear. There is no middle ground. Lawrence Lessig, Code Version 2.0

Capacity Building: Domain Names

www. example. co

First level domain/top level domain

- Generic top level domains (gTLD) (.com etc)
- Country Code top level domains (ccTLD)(.us etc)

Second level domain

Third level domain

Capacity Building: Numbers/IP Address



Capacity Building: Governance

Internet governance is the development and application by Governments, the private sector and civil society, in their respective roles, of shared principles, norms, rules, decision-making procedures, and programs that shape the evolution and use of the Internet.

World Summit on the Information Society (WSIS)

Internet governance No one person, company, organization or government runs the Internet. It is a globally distributed network comprising many voluntarily interconnected autonomous networks. *Wikipedia*

Governance: A Mud Map



Capacity Building: Governance

Internet Ecosystem

- Numbering and Addressing: ICANN
- Local/National/Regional/Global Policy development
- Education and Capacity Building
- Shared Global Services and Operators
- Open Standards Development
- Users

Capacity Building: Issues

Access

- Capacity
- Affordability
 Digital literacy
 Critical Infrastructure
 Security
 Openness/net neutrality
 Human Rights/privacy
 Intellectual Property

Capacity Building: Governance

Select One Organisation from one of the Governance Categories:

- 1. How does it contribute to governance of the Internet
- 2. Give examples of its output(s)
- 3. Can you participate in the organisation how?

Capacity Building: Day 2

Capacity Building: Governance and ICANN

Capacity Building: ICANN

The Beginnings of ICANN:

- February 1998: The National Telecommunications and Information Administration (NTIA) (within the US Department of Commerce) issued a Green, then White Paper for the improvement of the 'technical management of Internet Names and Addresses'
- September 1998: ICANN established as a private, Not-For-Profit Corporation in California – under contract with NTIA – to be responsible for the the management of domain names, numbers and protocols.

Capacity Building: ICANN

What does ICANN do?

- Has contractual oversight of registries
- Has contractual oversight of registrars.
- Coordinates policy with the five regional Internet registries (RIRs) for allocating and assigning unique numerical identifiers.
- Works closely with the Internet Engineering Task Force (IETF) to maintain and administer protocol parameters.

Capacity Building: ICANN Structure



Capacity Building: ICANN

ICANN, under contract with the NTIA in 2000, also took over responsibility for the functions of the Internet Assigned Numbers Authority (IANA) that had been exercised by the Defense Advanced Research Project Agency (DARPA). The Functions included:

- Coordination of the assignment of technical protocol parameters
- Administrative functions associated with root management/root name name servers
- Allocation of IP address blocks to RIRs
- Other services associated with APRA and .INT

IANA Transition

Was under the US Department of Commerce's National Telecommunications and Information Administration (NTIA)

1 October 2016: US control lapsed – functions now in the Post- Transition IANA (PTI)

Replacing (?) US oversight with new accountability mechanisms by the 'empowered community'

See:

https:/community.icann.org/display/atlarge/At-Large+Capacity+Building+Program+-+2016 <u>https://www.icann.org/community#groups</u>

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Capacity Building: ICANN Structure

THE NEW ICANN WITHOUT NTIA



Capacity Building: ICANN Governance

ICANN By-Laws: Mission

s. 1.1(a) The mission of ICANN is to ensure the stable and secure operation of the Internet's unique identifier systems as described in this section. Specifically, develop and implement policies

- For which 'uniform or coordinated resolution is reasonably necessary to facilitate the openness, interoperability, security and/or stability of the DNS' (for gTLD registries/registrars) and
- Developed through a 'bottom-up consensus based multi-stakeholder process'...

Capacity Building: ICANN Governance

Human Rights and ICANN: By-Laws

Commitments and Core Values (to guide the decision and actions if ICANN:

s.1.2 (b) (viii) Subject to the limitations set forth in s. 27.2, within the scope of its Mission and other Core Values, respecting internationally recognized human rights as required by applicable law. This Code Value does not create, and shall not be interpreted to create, any obligation on ICANN outside its Mission, or beyond obligations found in applicable law. This Core Value does not obligate ICANN to enforce its human rights obligations, or the human rights obligations of other parties, against other parties.

What does ALAC Do?

At-Large Advisory Committee (ALAC) is the primary organizational home for the voice and concerns of the individual Internet user

- Advises on the activities of ICANN, including Internet policies developed by ICANN's Supporting Organizations (is empowered to initiate a Public Comment proceeding and to request the GNSO to initiate a Policy Development Process)
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Types of ICANN Policy:

- DNS Policy developed through a formal policy development process (PDP)
- Operational Policy defines ICANN operational policies - input is usually sought via public comment or other means.
- General Practices operational but have not gone through a formal process

Participation in ALAC Policy Development

- Contribute to ALAC development of a policy position on an issue
- Participate in policy 'webinars'
- Attend ICANN meeting 'Open Forums'
- For PDPs
- Become a member of a Working Group as part of the PDP process
- Become a 'pen holder'/contribute to an ALAC policy statement

ALAC: Policy Development <u>https://atlarge.icann.org/policy-summary</u>

Each group pick a topic and report to the meeting on the ALAC policy on that issue

Discussion

Capacity Building: Day 3

Capacity Building: The Dark Web

Jeff Bedser CEO iThreat Cyber Group SSAC Member

Capacity Building: Day 4

Capacity Building: Hot Topics

Introduction Introduction to Break Out Sessions Session 1 New gTLDs and Contracted Party Session 2 - ALS Relations Session 3 - IDNs Session 4 - RDS/WHOIS Feedback: Rapporteurs Next Steps