



# Explorations in Cyber International Relations

Massachusetts Institute of Technology Harvard University

## A View of Top-Down Internet Governance

**Jesse H. Sowell**

Engineering Systems Division  
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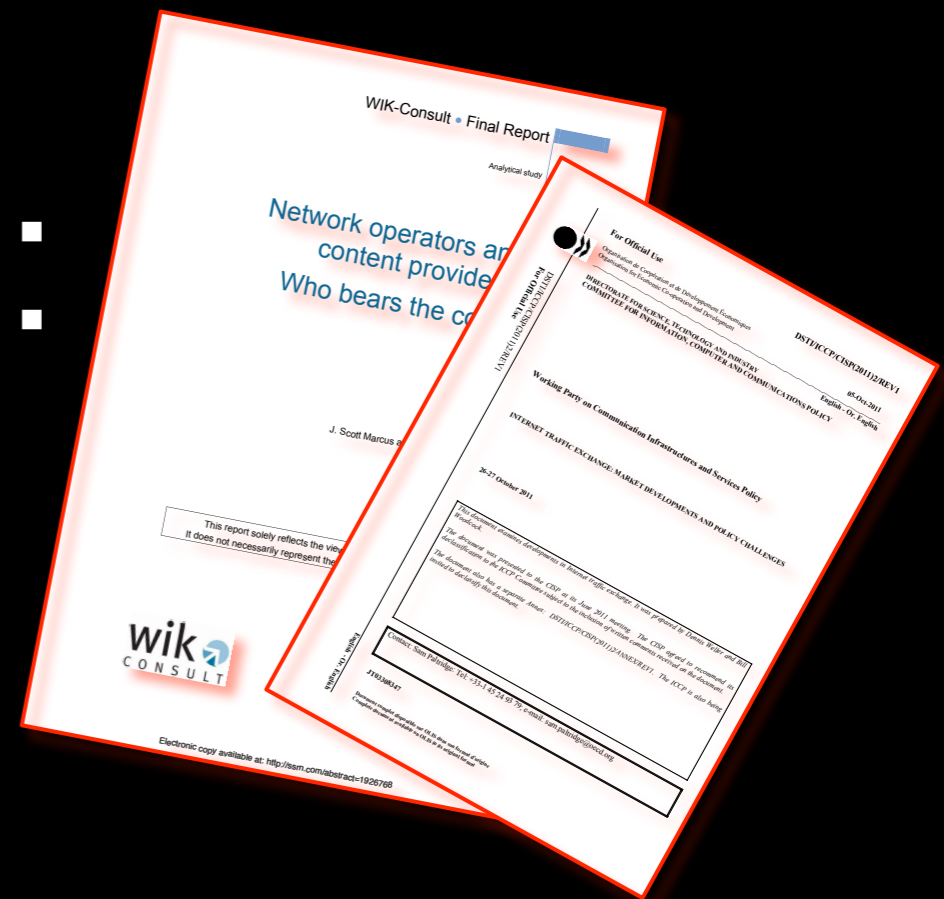
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# QUESTION:



**DOES THE AUDIENCE WANT MORE GOVERNMENT AND REGULATORY INVOLVEMENT IN PEERING AND INTERCONNECTION WORLD?**

Intro question by Martin Levy

# A View of Top-Down Internet Governance

Jesse Sowell  
MIT ESD PhD Candidate



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# A View of Top-Down Internet Governance

My primary research focuses on understanding how the bottom-up communities (that's you) act as a form of "governance." **This talk** gives an idea of how some of the top-down institutions think about governance.

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MIT ESD PhD Candidate



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# Overview

- Take-away
- Definitions of (Internet) Governance
  - WGIG
  - Academic/Operational
- Evolution of “governance” issue areas
- ITU and global regulation
  - Historical telecomm treaty facilitator
  - Aspiring global regulator
- Discuss!

# Overview

- Take-away
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No really, please do come up with questions at the end.



# Take-away first

- ITU is renegotiating ITRs
  - Under current ITR, Internet is exempt (Art. 9)
- Proposals include
  - IPv6 Internet Registry independent of RIRs
  - Regulation of peering arrangements
- **“Legitimacy” based on WSIS-IGF but bottom-up community addresses many of the same substantive issues**
- How should the community:
  - Convey these positive outcomes to regulators?
  - Construct mechanisms for engaging with top-down governance organizations?

# Take-away first

- ITU is renegotiating ITRs
    - Under current ITR, Internet is exempt (Art. 9)
  - Proposals include
    - IPv6 Internet Registry independent of RIRs
    - Regulation of
  - **“Legitimacy bottom-up the same success”**
    - How should the
    - Convey these positive outcomes to regulators?
    - Construct mechanisms for engaging with top-down governance organizations?
- The “g” word. I am going to try to convince you that it isn't all that **out** evil and that you may be **many of** doing some of it already...

# Internet 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 programmes that shape the evolution and use of the Internet.

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Governments retain a privileged role (that capital "G" isn't a typo)

# Internet Governance

Doesn't really mention who is doing development and application, lots of contention here on how

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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 programmes** that shape the evolution and use of the Internet.

Standard definition of a regime, but who creates these? What contributes to legitimacy and authority? We will see lots of contenders...

<http://www.itu.int/wsis/docs2/tunis/off/6rev1.html>, Art. 34



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How? What mechanisms are effective? What evidence do we have they are effective?

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This is a broad definition that tells us *what*, but not *how*.

<http://www.itu.int/wsis/docs2/tunis/off/6rev1.html>, Art. 34

# Governance (How)

governance is the means by which a community effects its image of order

O. E. Williamson, *The Mechanisms of Governance*. New York, NY: Oxford University Press, 1996.

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What is it that the community has found reifies its goals? What does the community value? Given context, why are these effective?

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governance is the **means by which a community** effects its **image of order**

What is it that the community has found reifies its goals? What does the community value? Given this context, why are these effective?

Should read **images** of order, there are lots of communities, each of which operates more or less differently

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# Governance (Unpacking means)

governance is the means by which *order* is accomplished in a relation in which potential *conflict* threatens to undo or upset opportunities to realize *mutual gains*

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This is one way to describe (very abstractly) what the operator communities do. It is informal, but there are well-known norms

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As we walk through the ways UN bodies have framed governance, please consider how compare. Re conflict, there's also a nice conversation about dispute resolution in our future...

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# Brief WSIS-IGF Timeline

- Millennium Development Goals
- WSIS Geneva
  - Principles
- WGIG
  - Map principles to implementation options
- WSIS Tunis
  - Ratify elements of WGIG Report
  - Create IGF
- ITU's aspirations, based on WSIS-IGF "consensus"

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- This is where we got the "fun" top-down definition
- Forthcoming treaty renegotiation based on underlying principles

# WSIS Principles Origins

- Millennium Development Goals (2000)
  - Peace, security, disarmament
  - Development and poverty eradication
  - Protecting our common environment
  - Human rights, democracy and good governance
  - Protecting the vulnerable
  - Meeting the special needs of Africa
  - Strengthening the United Nations

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  - **Human rights, democracy and good governance**
    - ICT infrastructure -> e-government -> more efficient and efficacious governance
    - ICT infrastructure -> greater mechanisms for expression -> democracy
  - Protecting the vulnerable
  - **Meeting the special needs of Africa**
    - ICT infrastructure -> e-government -> more efficient and efficacious governance
    - ICT infrastructure -> economic development -> better quality of life
  - **Strengthening the United Nations**
    - ITU gets more authority -> ITU remains relevant

<http://www.un.org/millennium/declaration/ares552e.pdf>,



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<http://www.un.org/millennium/declaration/ares552e.pdf>,

descriptions interpretation of author

# WSIS Principles (2003)

- Multi-stakeholder
- Development of ICT foundation
- Access to information and knowledge
- Capacity building
- Building confidence and security in the use of ICTs
- Enabling environment (for e-government, economy)
- ICT enabling empowerment
- Cultural diversity and local content
- Media
- Ethical dimensions
- International and regional cooperation

The community is already doing some of this. How can these efforts be conveyed to actors attempting to develop new processes?

Drawn from:

D. MacLean, ed., *Internet Governance: A Grand Collaboration*. New York, NY: The United Nations Information and Communications Technologies Task Force, 2004. and <http://www.itu.int/wsis/docs/geneva/official/dop.html>

# WGIG Issue Areas

- Administration of DNS (root zone and servers)
- IP addressing (IPv6 deployment!)
- Interconnection costs
- Internet stability, security, and cybercrime
- Spam
- Freedom of expression
- Meaningful participation in global policy development
- Data protection and privacy rights
- Consumer rights
- Multilingualism

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“institutional responsibilities...to guarantee continuity of a stable and secure functioning of the root server system of the DNS”

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equitable access to address resources, back to this later”

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studies by international agencies, development of regional and local access points, financing IXPs, building on current international agreements

- Internet stability, security, and

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but coordination with LEAs over protection of networks and technological assets

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● Freedom of expression

● Meaningful participation in global policy development

opportunity for all, especially developing countries, to participate

● Data protection and privacy rights

● Consumer rights

● Multilingualism

# WSIS Tunis Agenda

- Refined “respective roles”
  - “Policy authority...is the sovereign right of States.”
  - “Private sector...important role in development..in the technical and economic fields”
  - Civil society as important role in community
  - IGOs have a role as:
    - facilitators and coordinators of Internet-related public policy issues
    - role in the development of technical standards and relevant policies
- Development
  - National, sub-regional, and regional IXPs
  - Encouraging fair and balanced interconnectivity costs
- Created the Internet Governance Forum...

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# IGF as Mandated

- Governance characteristics
  - Lightweight, decentralized structure
  - Transparent, democratic, and multilateral
- Mandate
  - Discuss policy issues
  - Foster discourse
  - Interface between institutions
  - Exchange of information and best practices
  - Advise stakeholders on Internet development
  - Identify emerging issues
  - Contribute to capacity building
  - Promote and assess WSIS principles

<http://www.itu.int/wsis/docs2/tunis/off/6rev1.html>, Art. 72.

# IGF as Mandated

- Governance characteristics
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Recently, there has been a push for more than just a discussion forum, (re)enter the ITU

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# ITU

- Originally International Telegraph Union
  - Created 1865, oldest IGO
  - Primary telecomm standards and coordination body until early 1990's
- Organization
  - ITU-R: allocates radio spectrum and satellite orbits
  - ITU-T: technical standards and telecomm interconnection
  - ITU-D: telecomm access and ops for developing regions
- *Facilitates* telecomm treaties such as the International Telecommunications Regulations

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At the moment the ITU does not have regulatory power but that may change


<http://www.itu.int/net/about/>

# ITRs in a Nutshell

- ITR is a treaty, signed by ITU *member states*
- Baseline definitions
  - international telecommunication
  - international route
- Operational issues
  - safety of life and priority of telecommunications
  - calculation of charges and accounting
  - binding of ITU-T recommendations
- **Currently Article 9 special arrangements exempts Internet communication**



<http://www.itu.int/oth/T3F01000001>, Art. 2, 5, 6, 9, App. I, Res. No. 3, Rec. No. 3.

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# A Dig at Bottom-up

- “The most powerful actors are able to exercise a significant degree of policy and regulatory control **‘from the bottom up’** by pursuing national and regional interests across a **wide range of forums**, while the most powerful private actors are able to exercise an equally significant degree of market control by **coordinating their activities through private forums**, or through the exercise of raw market power. But what is often missing are **opportunities for the less powerful to be engaged in discussion of global governance issues, to participate in decision-making processes, to understand the consequences** of these decisions, and to adapt their policies, regulations, and practices accordingly.”

# ITU Perspective

- Quotes from ITU Secretary General Hamadoun Touré
  - “[w]e need updated ITRs because without them we risk the collapse of the ICT networks which underpin all communications technologies, including the internet.”
  - thinking of recent regulatory failures in finance and banking, Touré is looking for “a framework that will avoid any catastrophe”

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Enter new proposals for the ITRs, coming in  
December 2012!



# ITR Proposals

- Mandated application of ITU-T recommendations
- Countermeasures against spam and malware
- Dispute settlement
- Interconnection
  - Peering arrangements
  - Impact of costs of international traffic
- Misuse of numbering, naming, addressing and subscriber identification
- Cybersecurity (signaling, traffic, and billing info)
- “Appropriate” use of billing models
- “New technologies” regulation
- Address allocation/distribution

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- Comments or request for presentation references:  
**jsowell@mit.edu**