

# *Regulatory Governance & Policy for the Digital Economy*

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## Prior papers...

1. Lehr, W. and D. Sicker (2017a), "**Would you like your Internet with or without Video,**" Journal of Law, Technology & Policy, vol 2017 (issue 1 Spring)

*Problem may be Entertainment eating Internet*

2. Lehr, W. and D. Sicker (2017b), "**Communications Act 2021,**" TPRC45, forthcoming Journal of High Technology Law, 2018.

*Agenda Setting: what we need Communication Regulation to do*

3. Lehr, W., D. Clark, and S. Bauer (2013), "**Measuring Performance when Broadband is the New PSTN,**" Journal of Information Policy, Vol. 3 (2013), pg. 411-441

*Legacy regulation is big impediment to future policy*

# Communications Policy

- **Scope for communications policy?**
  - Can't be everything, but BB/Internet impacts everything.
  - Role for National (independent, sector-specific) regulator?
- **Broadband & Internet related, but distinct**
  - BB platform for lots of services
  - Internet is e2e: ISPs, Edge providers (GANFAM...)
- **What are (some of) the questions?**
  - Prioritized policy agenda? *CommAct2021*
  - Is new CommAct2021 a dream? Probably yes, but maybe not..
  - What's most important focus in near term? *Transparency*
  - (How much of this is result of Entertainment eating Internet?)

# Broadband Platform

- **(1) Last-mile bottlenecks**
  - Reduce entry barriers to **facilities-based competition**: spectrum, empower edge-based alternatives (muni networks), access to ROW/conduit/pole-attachments, etc.
  - **Regulate shared access** to any *true bottlenecks* (and last-mile may not be only bottleneck...)
- **(2) BIAS not the only service using platform**
  - What to regulate? Mischiefs and spillovers enduring problem. Cross-subsidization w/ shared resource always messy.
  - OTT is substitute and complement
- **(3) Broadband platform continues to evolve**
  - Mobile-fixed convergence
  - Video (CDNs)
  - Clouds (where should functionality live?)

# Internet: what is bad behavior on e2e?

- **Internet regulation (if at all) has to be market-based....**
- **(1) ISPs not only players with market power – GANFAM**
  - Interconnection a market negotiation?
  - What are problems?
    - Congestion? (who should solve?)
    - Abuse of market power?
    - Mislead or misinform market: consumers? Edge providers?
    - Lack of level playing field? (is regulation needed to level field?)
    - (Coordination: interoperability? Connectivity?)
- **(2) What is good behavior?** (ISPs not only potential villains..)
  - Search/Routing: where is e2e? "find X" or "get me to IP add X.X.X"
  - Traffic management/Pricing? 2 sides of same coin
  - Consumer choice? informed behavior or alternatives choices?
- **(3) What to do about it?**
  - Regulatory reform: authority to regulate bad actors (not just ISPs)
  - Transparency...

# Transparency

- **Who needs to know what?**
  - Consumers: Truth in Advertising...(do they actually read anything...)
  - Edge providers: What do they need to provision alternatives ??
  - Regulators: case-by-case w/ confidential disclosure...if have capacity
- **How should we learn?**
  - Measurement by 3rd parties: CAIDA et al. → need platforms
  - Disclosure: mandatory
- **What information disclosed by ISPs would be most helpful?  
What about "cloud" providers? (GANFAM, "darkening" Net?)**
  - Capacity
  - Traffic flows
  - Contract terms (Business practices)



**OTHER STUFF....**

# Digital Economy transformation disrupting *everything*

Sector	ICT driven changes	Challenge
Media	Streaming, a la carte	Entertainment eats the world. <b>Fake news.</b>
Banking	ePay, crypto-currency	Financial market <b>stability.</b>
Energy	Smart grids	<b>Climate change</b> , shift renewables
Services	Sharing economy (Uber, AirBnB, etc.)	<b>Regulatory reform</b> - Employment, Consumer protection, Sector specific rules
Fiscal	Footloose asset ownership	<b>Eroding tax base</b>

Etcetera ...

## Communications Policy? *critical Digital Economy Infrastructure, new "PSTN"*

- Communications Policy is the **plumbing** policy for a world where **Information Policy** is what's most important
- Refocused → Broadband Platform & (Open) Internet
- Light-handed, market-based (adaptive, dynamic, multi-stakeholder)



**Title I: FCC goals, scope, authority**

- Define FCC goals, scope of jurisdiction, and authority
- Specify what national goals should be with respect to essential communications infrastructure, not what technology

**Title II: Bottleneck facility regulation**

- Replace legacy Title II Common Carrier regulation of Telecommunications Services and operators.
- Provide framework for (a) identifying bottleneck facilities; (b) enabling shared (open) access and interconnection to bottleneck facilities; and (c) structural remedies to protect against spillover of bottleneck facility regulation into non-regulated markets/services.

**Title III: Competitive Communications Market Monitoring & Enforcement**

- Provide framework for promoting healthy market competition and industrial policy goals for communications sector
- Enforce Powell's 4 Open Internet principles protecting consumer choice
- Enact Universal Service plan to ensure affordable access to minimum level of essential communications services for all
- Promote healthy ecosystem for data measurement, reporting and analysis to support evidence based decision-making and regulatory enforcement actions
- Provide inclusive process for evolving rules frameworks as conditions change

**Title IV: Spectrum Management**

- Transition to independent spectrum regulator focused on efficient management of shared access to spectrum resources, independent of other industrial policy goals

**Title V: Public Safety and Critical Infrastructure**

- Provide framework for management and interconnection of communication networks and services required for public safety, criminal enforcement, and for critical infrastructures

**Title VI: Transition Plan**

- Include here all regulations from legacy Act that are in process of being transitioned either to new framework under Title above or for sunset as part of deregulation

# Entertainment/Smart-X Economic Convergence

- Entertainment: ~5% consumer expenditures; leisure time limited
- Smart-X: energy grids, infrastructure (cities, roads), healthcare, etc.

	Entertainment	Smart-X
Function	Entertain	Communicate, Control
Key Feature	Differentiate Quality of Experience	Interoperate Connectivity
Demand	Leisure \$'s/Attention	Management
	Economics	
Macro	Distribution	Growth
Micro	Windowing, IPR  Market segmentation	Min. requirements  Reduce costs, enhance capability

## Pricing/Capabilities?

- Entertainment: distribution channel bundling/discrimination key
- Smart-X: reliability, security, privacy, & cost key