Key objectives

• What is law and regulation?
• What are common carriers and utilities?
• What is the difference between laws vs. regulation?
• What laws govern US communication?
• Network neutrality – motivation and questions
• 2015 Open Internet rules
The kinds of law

- **Constitutional law (1787)**
  - relationship between
    - president and Congress
    - federal government and states
  - bill of rights (1791) + 17 amendments
  - short compared to other constitutions

- **Criminal law**
  - “Homicide means conduct which causes the death of a person or an unborn child with which a female has been pregnant for more than twenty-four weeks under circumstances constituting murder, manslaughter in the first degree, manslaughter in the second degree, criminally negligent homicide, abortion in the first degree or self-abortion in the first degree.” (NYS S125.00)
  - "Person," when referring to the victim of a homicide, means a human being who has been born and is alive.

- **Civil law**
  - contract, uniform commercial code, labor laws, …

- **Administrative law**
  - e.g., how can regulations be made and enforced
The US hierarchy of laws

Article I, Section 8: To regulate Commerce with foreign Nations, and among the several States, and with the Indian Tribes (1787)

SEC. 706. ADVANCED TELECOMMUNICATIONS INCENTIVES. (a) IN GENERAL- The Commission ... shall encourage the deployment on a reasonable and timely basis of advanced telecommunications capability to all Americans (including, in particular, elementary and secondary schools and classrooms) by utilizing, in a manner consistent with the public interest, convenience, and necessity, ..., or other regulating methods that remove barriers to infrastructure investment.
## Laws & regulations

<table>
<thead>
<tr>
<th></th>
<th>Laws</th>
<th>Regulations</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Made by</strong></td>
<td>Congress, state legislatures, city council, …</td>
<td>some Federal regulatory bodies (DOT, FCC, NRC, DoAg) = expert agencies</td>
</tr>
<tr>
<td><strong>Based on</strong></td>
<td>Constitution</td>
<td>Federal law(s)</td>
</tr>
<tr>
<td><strong>Vetoed by</strong></td>
<td>President, governor</td>
<td>Congress (Congressional Review Act), defund agency</td>
</tr>
<tr>
<td><strong>Can be overridden by</strong></td>
<td>Federal court, Supreme Court</td>
<td>Federal (circuit) courts, Supreme Court</td>
</tr>
<tr>
<td><strong>Published in</strong></td>
<td>Federal Register</td>
<td>FR, CFR</td>
</tr>
<tr>
<td><strong>Violations result in …</strong></td>
<td>Fine, jail</td>
<td>Fine, jail, loss of license, …</td>
</tr>
</tbody>
</table>
§ 121.571  Briefing passengers before takeoff.

(a) Each certificate holder operating a passenger-carrying airplane shall insure that all passengers are orally briefed by the appropriate crewmember as follows:

(1) Before each takeoff, on each of the following:

(i) Smoking. Each passenger shall be briefed on when, where, and under what conditions smoking is prohibited including, but not limited to, any applicable requirements of part 252 of this title. This briefing shall include a statement that the Federal Aviation Regulations require passenger compliance with the lighted passenger information signs, posted placards, areas designated for safety purposes as no smoking areas, and crewmember instructions with regard to these items. The briefing shall also include a statement that Federal law prohibits tampering with, disabling, or destroying any smoke detector in an airplane lavatory; smoking in lavatories; and, when applicable, smoking in passenger compartments.

(ii) The location of emergency exits.
Communications Act

47 U.S. Code Chapter 5 - WIRE OR RADIO COMMUNICATION

Current through Pub. L. 113-185. (See Public Laws for the current Congress.)

- SUBCHAPTER I—GENERAL PROVISIONS (§§ 151–162)
- SUBCHAPTER II—COMMON CARRIERS (§§ 201–276)
- SUBCHAPTER III—SPECIAL PROVISIONS RELATING TO RADIO (§§ 301–399b)
- SUBCHAPTER IV—PROCEDURAL AND ADMINISTRATIVE PROVISIONS (§§ 401–416)
- SUBCHAPTER V—PENAL PROVISIONS; FORFEITURES (§§ 501–510)
- SUBCHAPTER V-A—CABLE COMMUNICATIONS (§§ 521–573)
- SUBCHAPTER VI—MISCELLANEOUS PROVISIONS (§§ 601–621)
Code of Federal Regulations

- Title 3: The President
- Title 7: Agriculture
- Title 33: Navigation and Navigable Waters
- Title 39: Postal Service
- Title 47: Telecommunications
- Title 49: Transportation
- Title 50: Wildlife and Fisheries

http://www.ecfr.gov/
47 U.S. Code § 151 - Purposes of chapter; Federal Communications Commission created

- For the purpose of regulating interstate and foreign commerce in communication by wire and radio so as to make available, so far as possible, to all the people of the United States, without discrimination on the basis of race, color, religion, national origin, or sex, a rapid, efficient, Nation-wide, and world-wide wire and radio communication service with adequate facilities at reasonable charges, for the purpose of the national defense, for the purpose of promoting safety of life and property through the use of wire and radio communications, and for the purpose of securing a more effective execution of this policy by centralizing authority heretofore granted by law to several agencies and by granting additional authority with respect to interstate and foreign commerce in wire and radio communication, there is created a commission to be known as the “Federal Communications Commission”, which shall be constituted as hereinafter provided, and which shall execute and enforce the provisions of this chapter.
FCC

- Independent federal agency
- About 1,700 employees
Process (APA)

**NOI**
- Notice of Inquiry

**NPRM**
- Notice of Proposed Rule Making

**R&O**
- Report & Order

comments & ex parte
Your phone/Internet bill

<table>
<thead>
<tr>
<th>Category</th>
<th>Past Due</th>
<th>New</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic</td>
<td>0.00</td>
<td>9.88</td>
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<tr>
<td>Non Basic</td>
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<td>108.57</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>0.00</strong></td>
<td><strong>118.45</strong></td>
<td><strong>118.45</strong></td>
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</tbody>
</table>

**Payment by Check**

Paying by check authorizes check processing or use of the check information for a one-time electronic fund transfer from your account. For all payments using bank account information, we may retain the information to send you electronic refunds or enable your future electronic payments to us (to opt out, call 1-888-500-5358).

**Correspondence**

Go to verizon.com/contactus or mail to PO Box 33078, St. Petersburg, FL 33733

Closed Captioning Questions and Concerns?

If you have a concern or complaint with closed captioning on a program, please call Verizon at 1-800-VERIZON. Written correspondence can be sent by fax to 1-888-806-7026, by email to videoclosedcaption@verizon.com, or by mail to Verizon, PO Box 33052, St. Petersburg, FL 33701 Attn: Cynthia Morales, Manager.

**Service Providers**

Verizon NJ provides regional, local calling and related features, other voice services, and FiOS TV service, unless otherwise indicated. Verizon Long Distance provides long distance calling and other services identified by "VLD" in the applicable billed line item. Verizon Online provides Internet service, HMC service and FiOS TV equipment. FiOS is a registered mark of Verizon Trademark Services LLC.

**Bankruptcy Information**

If you are or were in bankruptcy, this statement may include amounts for pre-bankruptcy service. You should not pay pre-bankruptcy amounts; they are for your information only. Mail bankruptcy-related correspondence to 500 Technology Drive, Suite 550, Weldon Spring, MO 63304.

You Can Block Third Party Billing to Your Verizon Bill

For more information, visit verizon.com/blocking or call us at 1-800-VERIZON.

**Local Franchise Authority**

FiOS TV Board of Public Utilities, Office of Cable Television, 44 South Clinton Avenue, 9th Floor, Trenton, NJ  08625, 800 624-0331 Your FCC Community ID is: NJ0926
Before the Internet, before the phone...

Common Carrier

Content

Common Carrier Trains

Right-of-way

Coal
Common carrier & utilities

**Common carrier**
- duty to serve
- without unreasonable discrimination
- just and reasonable pricing
- with adequate care

**Utility**
- franchise (area)
  - may be exclusive or not
- price regulation
- eminent domain
  - dig up street; utility poles
- duty to serve
- example: gas, water, electricity, phone

Barbara Cherry
## Title II overview

<table>
<thead>
<tr>
<th>Para</th>
<th>Title</th>
<th>Summary</th>
<th>Relevance</th>
</tr>
</thead>
<tbody>
<tr>
<td>201</td>
<td>Service &amp; charges</td>
<td>“reasonable request”, “just and reasonable”</td>
<td>umbrella</td>
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<tr>
<td>202</td>
<td>Discriminations &amp; preferences</td>
<td>“unjust or unreasonable discrimination in charges, practices, classifications, regulations, facilities, or services”</td>
<td>OI?</td>
</tr>
<tr>
<td>203</td>
<td>Schedule of charges</td>
<td>tariffs</td>
<td>NECA</td>
</tr>
<tr>
<td>204</td>
<td>Hearings on new charges; suspension pending hearing; refunds; duration of hearing; appeal of order concluding hearing</td>
<td>tariff hearings</td>
<td>rare</td>
</tr>
<tr>
<td>205</td>
<td>Commission authorized to prescribe just and reasonable charges; penalties for violations</td>
<td>tariff setting</td>
<td>rare</td>
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</tbody>
</table>
# Title II overview

<table>
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<tr>
<th>Para</th>
<th>Title</th>
<th>Summary</th>
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</tr>
</thead>
<tbody>
<tr>
<td>206</td>
<td>Carriers’ liability for damages</td>
<td>“shall do, or cause or permit to be done, any act, matter, or thing in this chapter prohibited”</td>
<td>uncommon</td>
</tr>
<tr>
<td>207</td>
<td>Recovery of damages</td>
<td>complain OR sue</td>
<td>protects carriers</td>
</tr>
<tr>
<td>208</td>
<td>Complaints to Commission; investigations; duration of investigation; appeal of order concluding investigation</td>
<td>“Any person, any body politic, or municipal organization, or State commission, complaining of anything done”</td>
<td>consumer complaints</td>
</tr>
<tr>
<td>209</td>
<td>Orders for payment of money</td>
<td>“Commission shall make an order directing the carrier to pay to the complainant”</td>
<td>consumer complaints</td>
</tr>
<tr>
<td>210</td>
<td>Franks and passes; free service to governmental agencies in connection with national defense</td>
<td>“giving franks to, or exchanging franks with each other for the use of, their officers”</td>
<td>employee benefits</td>
</tr>
</tbody>
</table>
Open Internet/network neutrality

- Conceptualized by Tim Wu (Columbia U.) and others
  - general notion of non-discrimination (“neutrality”)
  - details differ
- Economic arguments
  - foreclosure of new entrants
  - vertical integration
- Non-economic arguments
  - participation, personal expression, …
- Counter arguments
  - free market interference
  - disincentives investment (uncertainty, implicit or explicit price regulation)
  - lack of demonstrated harm
  - anti-trust law as alternative
  - 1st amendment arguments (ISP as speaker)
Common questions

• Different charges for different types of content?
• Block competing services (e.g., video or voice)?
• Provide quality of service?
• Block spam or denial-of-service traffic?
• Prevent tethering except for a fee?
• Usage-based charging ($/GB)?
• Charge content providers?
Some high-profile cases

- Madison River (2005)
  - DSL provider blocked SIP ports
  - fined $15,000 by FCC
  - based on Section 201 “just and reasonable”
- Comcast (late 2007)
  - insert TCP RST into BitTorrent traffic
  - later overturned on appeal in DC Circuit Court
- RCN (2009): P2P
- Various mobile operators
- Comcast vs. Level 3 (2010, in dispute) - interconnection
- Comcast, Verizon, AT&T, … vs. Netflix
Background definitions

- **Telecommunications** = the transmission, between and among points specified by the user, of information of the user's choosing, without change in the form or content of the information as sent and received. (47 U.S.C. § 153(43))

- **Telecommunications service** = “the offering of telecommunications for a fee directly to the public, or to such classes of users as to be effectively available directly to the public, regardless of the facilities used.” 47 USC § 153(46) (1999)

- Information service = users of telecommunication services

- cf. Basic vs. enhanced service (CI)
  - **Basic telecommunications**: "the offering of a pure transmission capability over a communications path that is virtually transparent in terms of its interaction with customer supplied information."
  - **Enhanced**: everything else
OI rules: definition

- **Broadband Internet access service.** A mass-market retail service by wire or radio that provides the capability to transmit data to and receive data from all or substantially all Internet endpoints, including any capabilities that are incidental to and enable the operation of the communications service, but excluding dial-up Internet access service. This term also encompasses any service that the Commission finds to be providing a functional equivalent of the service described in the previous sentence, or that is used to evade the protections set forth in this Part.

- **Public Switched Network.** The network that includes any common carrier switched network, whether by wire or radio, including local exchange carriers, interexchange carriers, and mobile service providers, that uses the North American Numbering Plan, or public IP addresses, in connection with the provision of switched services.
OL rules: no blocking, no throttling

- A person engaged in the provision of broadband Internet access service, ..., shall not block lawful content, applications, services, or non-harmful devices, subject to reasonable network management.
- A person engaged in the provision of broadband Internet access service, ..., shall not impair or degrade lawful Internet traffic on the basis of Internet content, application, or service, or use of a non-harmful device, subject to reasonable network management.
OI rules: no paid prioritization

a. A person engaged in the provision of broadband Internet access service, ..., shall not engage in paid prioritization.

b. “Paid prioritization” refers to the management of a broadband provider’s network to directly or indirectly favor some traffic over other traffic, including through use of techniques such as traffic shaping, prioritization, resource reservation, or other forms of preferential traffic management, either (a) in exchange for consideration (monetary or otherwise) from a third party, or (b) to benefit an affiliated entity.

c. The Commission may waive the ban on paid prioritization only if the petitioner demonstrates that the practice would provide some significant public interest benefit and would not harm the open nature of the Internet.
OI: general conduct rule

- Any person engaged in the provision of broadband Internet access service, ..., shall not unreasonably interfere with or unreasonably disadvantage (i) end users’ ability to select, access, and use broadband Internet access service or the lawful Internet content, applications, services, or devices of their choice, or (ii) edge providers’ ability to make lawful content, applications, services, or devices available to end users. Reasonable network management shall not be considered a violation of this rule.