

## **Telecommunications Law and Policy**

**Fall 2006**

LAWS 7241; TLEN 5240

Credits: 3

**Time: Tuesdays & Thursdays,**

**2:30-3:45 p.m.**

**1B12**

Instructor: Brad Bernthal

Office Hours:

Mondays 11:00 a.m.-12:00 p.m. (ECOT 351); Wednesdays 4:00-5:00 p.m. (Law 105R)

### **I. COURSE DESCRIPTION AND OBJECTIVES**

This course surveys the basic principles underpinning our nation's telecommunications laws. In particular, we will examine the legal and regulatory treatment of a number of related technologies—from telephony to wireless innovations to the Internet—whose convergence challenges the efficacy of existing laws and established principles. The course will focus most intently on administrative and statutory law, paying special attention to the design and implementation of the Communications Act of 1934. In addition, the course will address the role played by antitrust, intellectual property and constitutional law (particularly the First Amendment) in shaping our nation's telecommunications landscape. Finally, the course will consider the important role played by state and federal agencies—antitrust enforcers, state public utility commissions and the Federal Communications Commission—in developing and administering our nation's telecommunications laws and policies.

It is the objective of this course to:

1. **Identify relevant and enduring telecom law concepts and arguments.** Telecommunications technologies are defined by innovation and change. Telecommunications policy, however, is defined by certain enduring and recurring arguments and concepts. The first priority of the course is to teach the key concepts and arguments that are frequently articulated in the area of telecommunications law.
2. **Analyze critical policy issues.** The course will emphasize the administrative and statutory framework governing telecommunications. Calls for statutory reform (*e.g.*, rewrite the Communications Act of 1934) and administrative reform (*e.g.*, rethink the role of the FCC) are common. The course will attempt to analyze the *status quo* approach to telecommunications as well as certain reform proposals in an intellectually honest and legally sophisticated manner.
3. **Detail the power, procedures, and institutional competence of significant entities setting forth telecommunications law and policy.** This course will address the respective roles of Congress, the FCC, and the courts. State and municipal functions will also be analyzed. Finally, we'll consider the emerging

functions performed by international entities, including governments, industry groups and standard setting bodies.

## II. PROCEDURES

**Class Times and Office Hours.** The class will meet on Tuesdays and Thursdays from 2:30-3:45 p.m. I will be available for office hours on Mondays from 11:00-12:00 p.m. (ECOT 351 in the Engineering Building) and on Wednesdays from 4:00-5:00 p.m. (Room 105R of the law school). I also can be reached via email at < [brad.bernthal@colorado.edu](mailto:brad.bernthal@colorado.edu) >. Priority during office hours will be afforded to students who make an appointment; however, drop-ins are welcome.

**Submission of assignments; deadlines.** All written assignments are due for in-class students by 11:59 p.m. Mountain time on the due date. CAETE students will have one additional week to meet deadlines, except for FCC Simulation Exercise (which will be due on the same day for all students). No exceptions to deadlines will be made absent emergency.

**Policy on Academic Honesty.** Your research, analysis and writing in this course should reflect your own work. Your instructor takes plagiarism seriously and, if you plagiarize, such action is grounds for failure of the course and referral to the Honor Council. *A simple rule: if language is not your own, you need to set it off in quotes and provide attribution.* Other questions concerning academic integrity are less bright-line: any questions about whether or not an act constitutes academic dishonesty are welcome. All incidents of academic misconduct shall be reported to the Honor Code Council ([honor@colorado.edu](mailto:honor@colorado.edu); 303-725-2273). Students who are found to be in violation of the academic integrity policy will be subject to both academic sanctions from the faculty member and non-academic sanctions (including but not limited to university probation, suspension, or expulsion). See the University honor code at < <http://www.colorado.edu/academics/honorcode/> > and < <http://www.colorado.edu/policies/honor.html> >.

**Religious Obligations.** Your instructor will make every effort to reasonably and fairly deal with all students who, because of religious obligations, have conflicts with scheduled exams, assignments or required attendance. Students with religious obligations that conflict with a test or other assignment should contact the instructor at least two weeks in advance to arrange an alternative time or assignment. See the University policy at < [http://www.colorado.edu/policies/fac\\_relig.html](http://www.colorado.edu/policies/fac_relig.html) >.

**Classroom and Course-Related Behavior.** Students who exhibit disruptive course-related behavior may be subject to disciplinary action. *A quick word concerning an in-class pet peeve of your instructors: when you are in class, do not surf the Web, send e-mail or use Internet access in an abusive way.* This applies irrespective of whether your instructors, a guest, or a student is speaking. Such actions are distracting to the instructor and to surrounding students. Violation of this policy will result in a lower

class participation grade. Additionally, professional courtesy and sensitivity are important— particularly when relating to topics such as race, culture, religion, politics, sexual orientation, gender variance, and nationalities. For further information concerning classroom behavior, see the University policy at < [http://www.colorado.edu/policies/class\\_behavior.html](http://www.colorado.edu/policies/class_behavior.html) > and < [http://www.colorado.edu/studentaffairs/judicialaffairs/code.html#student\\_code](http://www.colorado.edu/studentaffairs/judicialaffairs/code.html#student_code) >.

**Policy on Discrimination and Harassment.** The University of Colorado at Boulder policy on Discrimination and Harassment (<http://www.colorado.edu/policies/discrimination.html>), the University of Colorado policy on Sexual Harassment, and the University of Colorado policy on Amorous Relationships applies to all students, staff and faculty. Any student, staff or faculty member who believes s/he has been the subject of discrimination or harassment based upon race, color, national origin, sex, age, disability, religion, sexual orientation, or veteran status should contact the Office of Discrimination and Harassment (ODH) at 303-492-2127 or the Office of Judicial Affairs at 303-492-5550. Information about the ODH and the campus resources available to assist individuals regarding discrimination or harassment can be obtained at <http://www.colorado.edu/odh>.

**Students with Disabilities.** If you qualify for accommodations because of a disability, please submit a letter from Disability Services (DS) to the instructor early in the course so that your needs may be addressed. DS determines accommodations based on documented disabilities (303-492-8671, Willard 322, [www.colorado.edu/sacs/disabilityservices](http://www.colorado.edu/sacs/disabilityservices)) Disability Services' letters for students with disabilities indicate legally mandated reasonable accommodations. The syllabus statements and answers to Frequently Asked Questions can be found at < [www.colorado.edu/disabilityservices](http://www.colorado.edu/disabilityservices) >.

### III. GRADING

#### Course Expectations:

**Attendance is mandatory; class participation is encouraged.** The instructor reserves the right to add 1-5 points at the end of the semester to the grade of students based on attendance and *constructive* class participation. Additionally, the instructor reserves the right to lower a grade 1-5 points at the end of the semester if a student fails to attend three or more classes, fails to properly prepare for class, *or* exhibits disruptive behavior during class.

Grades for the course will be based on the final, a class project, and class participation. Class participation and preparedness are an important part of this course; students will be eligible for an increase/decrease in their grade based on their readiness to answer questions, particularly in view of their performance during an “on call” week. Students will be asked to sign up to be “on call” during two weeks of the semester. During each class, students may also be called on at random to ensure that the class discussion remains focused on areas that are not well understood. This possibility is

meant to be a policy of last resort. Hopefully, students will ask questions when they do not understand a subject and obviate the need for such a step.

During Week 9 of the course, students will participate in a simulation exercise that will involve a number of presentations on behalf of industry groups to a mock panel of the FCC (“FCC Simulation Exercise”). In particular, these presentations will advocate future policy directions that suit each industry group. Two-thirds of the class will participate in this endeavor as industry presenters and the other third will participate as FCC Commissioners and Staff. Each group of presenters will be responsible for distributing “white papers” (not to exceed twenty pages), and for answering questions asked by the FCC. Each group acting as the FCC Commissioners and Staff will be responsible for drafting testimony (also not to exceed twenty pages) to be delivered to Congress. Presentations will comprise 30% of the course grade. The industry white papers are due on Thursday, October 26 (Week 9) and the FCC testimony is due on Thursday, November 16 (Week 12). A final exam will comprise 70% of the grade. As noted above, the instructor reserves the right to add 1-5 points at the end of the semester to the grade of students based on attendance and *constructive* class participation.

#### IV. RESOURCES

The course will be taught primarily from *Telecommunications Law and Policy* (Second Edition 2006 ), by Stuart M. Benjamin, Douglas G. Lichtman, Howard A. Shelanski and Philip J. Weiser. Students must purchase the *Telecommunications Law and Policy* book. Additionally recommended (but not required) is Jonathan E. Nuechterlein & Philip J. Weiser, *Digital Crossroads: American Telecommunications Policy in the Internet Age* (MIT Press, 2005). *Digital Crossroads* does an excellent job of highlighting the concepts, arguments and policy considerations with which any student or practitioner in telecommunications law should be familiar. There is also an on-line list of telecommunications policy institutes, think-tanks, magazines, journals and blogs associated with the book’s Web-site (see <http://spot.colorado.edu/~weiserpj/dc/tp-resources.html>).

Telecommunications policy is a dynamic area of law typified by rapid change. This is a course where topics in the syllabus will often connect to news headlines and business developments. Accordingly, it is important to keep yourself updated concerning news salient to the course. Two aggregation sources, in particular, are highly recommended: (1) Benton’s Communications-related Headlines (<http://lists.benton.org/lists/info/headlines>); and (2) CyberTelecom’s news links (a compilation of technology and policy news available for free at <http://www.cybertelex.com.org/>). Other helpful sources include some of the usual suspects: (i) the *Wall Street Journal* regularly has excellent articles relevant to communications law and regulation; (ii) the Monday Business section of the *New York Times* features high quality reporting on the information industries (same-day issue available for free on the Web at: <http://www.nyt.com>); and (iii) the TechNews Daily Report from *Washingtonpost.com* is valuable (a daily summary of technology stories

available for free; sign up at [washingtonpost.com](http://washingtonpost.com) and request the “TechNews” report under the “Email Newsletters” portion of your “Profile”).

## V. SEMESTER SCHEDULE

Because of the fluid nature of the course, the following is subject to change. Students should consult this syllabus each week to verify the assignments noted below. To the extent possible, course changes will be announced during lectures. **Particularly if you are forced to miss a class period, please check the syllabus to see if an assignment or topic has changed.**

The Syllabus separates items that you should read and those that you should skim. It is expected that students will complete assigned readings during class. Additionally, assigned readings will be considered fair game for the final examination. However, students will not be held accountable for items that are marked *skim* and, except as such items are addressed during class, these readings are not subject to examination.

### **Week One: The Current Landscape and Calls for Telecom Reform**

#### *Topics and Concepts to Cover*

- Course themes and goals
- Syllabus specifics
- Proposals for reform of existing telecommunications laws
- Lag between technological innovation and regulatory reaction
- Convergence
- Shortcomings of current regulatory framework
- Network Effects
- Aspects of Network Effects—(a) interoperability/compatibility; (b) installed base; (d) interconnection
- Monopoly power—(a) ability to raise price profitably; or (b) ability to exclude competitors
- Monopoly Leveraging
- Platform and Applications
- Scale Economies
- Natural monopoly

#### **Readings for Tuesday, August 29<sup>th</sup>**

Digital Age Communications Communication Act, Regulatory Framework Working Group Report, pp. 1-32 (Version 1.0 June, 2005) (available at: <http://www.pff.org/issues-pubs/other/050617regframework.pdf>).

Chairman Michael Powell's Speech to the Progress and Freedom Foundation, *The Great Digital Broadband Migration* (Dec. 8, 2000) (available at <http://www.fcc.gov/Speeches/Powell/2000/spmkp003.html>).

#### **Readings for Thursday, August 31<sup>st</sup>**

Course Syllabus (read closely)

Jonathan E. Nuechterlein & Philip J. Weiser, *Digital Crossroads*, Chapter 1, *The Big Picture* (available at:

<http://mitpress.mit.edu/catalog/item/default.asp?ttype=2&tid=10497&mode=toc>).

Wired Magazine, *Why the World Is Flat*, by Daniel H. Pink (Interview with Thomas Friedman) available at:

< [http://www.wired.com/wired/archive/13.05/friedman\\_pr.html](http://www.wired.com/wired/archive/13.05/friedman_pr.html) >.

(*Skim/Optional*) Charles B. Goldfarb, Congressional Research Service, Telecommunications Act: Competition, Innovation, and Reform, pp. 1-32 (August 12, 2005) (available at [http://www.benton.org/benton\\_files/CRSTelecom%20Act.pdf](http://www.benton.org/benton_files/CRSTelecom%20Act.pdf))

**Week Two: FCC Structure and Regulatory Procedures; Telecom Policy Makers; Issues of Institutional Competence**

*Topics and Concepts to Cover*

- Communications Act of 1934
- Role of FCC
- Public Interest
- Agency capture
- Organization of FCC
- Overview of Regulatory Procedures of FCC
- First principles
- Regulatory Goals/Objectives (Substantive/Procedural)
- Administrative Procedures Act
- Transparency
- Role of Courts
- Arbitrary and Capricious standard
- Growing role of standard setting bodies
- Questions of Institutional Competence

**Readings for Tuesday, September 5**

Mark Becker, *Legislative History of the Communications Act of 1934* (to be available on TWEN) (in Telecommunications Law Regulation and Policy (Sapronov and Reed)).

*Telecommunications Law and Policy* (herein, “TLP”) 3-15, 22-25

(*Skim*) TLP 1097-1170 (*Statutory Appendix—1934 Act*) [**Caveat:** reading a statute is difficult and this is particularly the case for non-law students. Do *not* feel compelled to read the '34 Act Appendix closely. Rather, try to get some sense of what subject matter each of the Titles covers and, additionally, consider why convergence has generated problems for application of the '34 Act as amended by the '96 Act.]

(Suggested background) Nicholas Economides, *Telecommunications Regulation: An Introduction*, 813 PLI/Pat 453, 459-468, 476-488 (Revised August 2004).

Attend SFTP Event 3:00-7:00 p.m., September 7th: *Wireless Revolutions: How Telecommunications Regulation Should Adapt to New Technologies and Learn From Water Law*. All students should attend at least some of this event (and, as available, as much as possible).

**Readings for Friday, September 8, 7:30 a.m.\*\*** (Guest speaker: Bryan Tramont)

**\*\* Note: class time change—our September 7 class will meet from 7:30-8:45 a.m. on Friday, September 8. Please let Brad know if this presents a conflict for you and he will provide to you a DVD of this lecture.**

TLP pp. 51-64 (Chapter 2: *The FCC*)

Cybertelecom, *FCC 101* (available at < <http://www.cybertelecom.org/faqs/Fcc101.htm#pet> >).

Examine sample FCC filings in Implementation of *the Commercial Spectrum Enhancement Act and Modernization of the Commission's Competitive Bidding Rules and Procedures* (available on-line—enter docket # 05-211 under “Docket or RM Number” at < [http://hraunfoss.fcc.gov/edocs\\_public/SilverStream/Pages/edocsAdvanceSearch.html](http://hraunfoss.fcc.gov/edocs_public/SilverStream/Pages/edocsAdvanceSearch.html) >)

**NOTE: please do not feel compelled to read these documents. Just look at them so that you gain a general understanding of the Designated Entity issue, get some familiarity with the FCC Web-site, and—most importantly— learn what the various FCC filings look like.** In particular, you should examine the June 14, 2005 Notice of Proposed Rulemaking (“NPRM”), a few of the ensuing comments (enter docket 05-211 at < [http://gullfoss2.fcc.gov/prod/ecfs/comsrch\\_v2.cgi](http://gullfoss2.fcc.gov/prod/ecfs/comsrch_v2.cgi) >), the January 24, 2006 Report and Order (“R&O”), the March 17, 2006 Petition for Reconsideration, and the April 25, 2006 Report and Order. **OPTIONAL:** If you can’t get enough (or just find it useful to get familiar with the FCC site) and would like to look at more samples, you might also check out

< <http://wireless.fcc.gov/publicsafety/800MHz/bandreconfiguration/index2.html> >. In particular, on right hand side, examine “11/21/01 White Paper,” “3/15/2002 NOTICE OF PROPOSED RULEMAKING,” the ensuing comments (available under “Link to FCC's Electronic Comment Filing System and automatic search of WT Docket 02-55”), and “8/6/2004 REPORT AND ORDER FIFTH REPORT AND ORDER, FOURTH MEMORANDUM OPINION AND ORDER, AND ORDER FCC 04-168.”

### **Week Three: Economic Prisms For Regulatory Evaluation**

#### *Topics and Concepts to Cover*

- Historic approaches to regulation of networks
- Network Effects
- Bottleneck

- Essential Facility
- Economic prisms
  - Antitrust
  - Neo-Classical Economics
  - Schumpeter/ disruptive technologies
  - Network Economics
  - Coase/ New Institutional Economics
  - Experimental economics
- Killer applications
- Public Choice Theory
- Agency capture/ regulatory capture

### **Readings for Tuesday, September 12**

TLP pp. 1055-71, *skim* pp. 1072-1090, read pp. 1091-96 (Chapter 21: *Antitrust and Merger Review in Telecommunications*)

New York Times, *Huge Phone Deal Seeks to Thwart Smaller Rivals*, by Ken Belson (March 6, 2006) (available at < <http://www.nytimes.com/2006/03/06/business/06phone.html?ex=1299301200&en=b62a0e6446637502&ei=5090> >).

Bob Briscoe, Andre Odlyzko, Benjamin Tilly, *Metcalfe's Law is Wrong* (IEEE Spectrum, July 2006)(available at <http://spectrum.ieee.org/jul06/4109>).

(*Skim*) Constance Robinson, Network Effects in Telecommunications Mergers (Aug. 23, 1999) (<http://www.usdoj.gov/atr/public/speeches/3889.htm>)

### **Readings for Thursday, September 14**

Pierre Lemieux, *The Public Choice Revolution*, Regulation (available at < <http://www.cato.org/pubs/regulation/regv27n3/v27n3-2.pdf> >).

James Buchanan, *Public Choice: Politics Without Romance*, (Policy Spring 2003) (Vol. 19 No. 3) (available at < <http://www.cis.org.au/policy/spr03/polspr03-2.htm> >).

Forbes, *Milking the Internet*, by Tim Doyle (August 14, 2006) (available at < <http://www.freepress.net/news/16768> >).

### **Week Four: The Basics of Radio Policy and Spectrum Management**

*Topics and Concepts to Cover*

- Scarcity
- Administrative scarcity
- Spectrum loading
- Ronald Coase

- Command and Control
- Assignment, Allocation, Service Rules and Enforcement
- Fragmentation
- Efficiency

### **Readings for Tuesday, September 19**

TLP pp. 30-50 (*skim remainder of pp. 5-50*) (Chapter 1: *Why Regulate?*)

### **Readings for Thursday, September 21**

TLP pp. 67-77, 113-118, 177-185 (Chapter 3: *Zoning the Spectrum*)

FCC-sponsored course on spectrum management (in particular, pay attention to “Spectrum Management” and “Spectrum Management Functions”) (Available at <http://cisco.netacad-currdev.net/fcc/start.html>).

Forbes.com, *Does Open-Source Software Make the FCC Irrelevant?* By Daniel Fisher (October 18, 2005) ([http://www.forbes.com/businessstech/2005/10/18/open-source-software-FCC\\_cz\\_df\\_1018opensource.html?partner=rss](http://www.forbes.com/businessstech/2005/10/18/open-source-software-FCC_cz_df_1018opensource.html?partner=rss))

**Handout:** *FCC Proceeding— Assignment Hand Out and Groups Form*

### **Week Five: The Evolution of Spectrum Management**

*Topics and Concepts to Cover*

- Auctions
- Property Approaches to Spectrum Management
- Commons Approaches to Spectrum Management
- Unlicensed Uses
- Tragedy of the Commons
- Tragedy of the Anti-Commons
- Harmful Interference
- *Ex ante* and *ex post* regulations
- Flexible management strategies
- Smart radios

### **Readings for Tuesday, September 26**

TLP pp. 83-93, 103-112

Ronald Coase, *The Problem of Social Cost*, pp. 1-10, 21-23 (Journal of Law & Economics) (October 1960) (available at: < <http://www.sfu.ca/~allen/CoaseJLE1960.pdf> >).

Scott Wooley, *Competition In the Air*, Forbes.com, August 1, 2006 (available at: [http://www.forbes.com/2006/07/31/spectrum-fcc-wireless\\_cz\\_sw\\_0801spectrum\\_print.html](http://www.forbes.com/2006/07/31/spectrum-fcc-wireless_cz_sw_0801spectrum_print.html)).

**Readings for Thursday, September 28** (Guest speaker: Dale Hatfield)

Hatfield and Weiser, *Toward Property Rights in Spectrum: The Important and Difficult Policy Choices Ahead*, pp. 1-18 (pay special attention to Matheson's seven dimensions of electrospace) (available at < <http://www.law.virginia.edu/pdf/workshops/0506/weiser.pdf#search=%22Matheson%3A%20Seven%20dimensions%20of%20Electrospace%22> >).

R. Paul Margie, *Can You Hear Me Now? Getting Better Reception from the FCC's Spectrum Policy*, 2004 Stan. Tech. L. Rev. 5, 749 (2004). **NOTE: Please read Parts I and II of this paper, which explain the interference temperature idea.** The remainder of the article is optional.

(Optional/skim) Ellen Goodman, *Spectrum Rights in the Telecosm to Come*, 41 San Diego L. Rev. 269, pp. 270-311 (2004).

(Optional/skim) *Unlicensed and Unshackled: A Joint OSP-OET White Paper on Unlicensed Devices and Their Regulatory Issues*, pp. 1-20 and 45-50 (May, 2003) (available at <http://www.broadbandwirelessreports.com/pressreleases/files/DOC-234741A1.pdf#search=%22unlicensed%20and%20unshackled%22>).

**Week Six: International Dimensions of Telecommunications Regulation**

*Topics and Concepts to Cover*

- Standard setting bodies
- ITU
- WRC
- IEEE
- FCC influence of international rates

**Readings for Tuesday, October 3** (Guest speaker: Patrick Ryan)

Carl Shapiro, *Setting Compatibility Standards: Cooperation or Collusion?* (University of California at Berkeley; revised June 8, 2000) (available at <http://faculty.haas.berkeley.edu/shapiro/standards.pdf>).

The Economist, *The tortoise and the hare*, March 14, 2002 (to be provided).

The Economist, *The global mobile*, October 7, 1999 (to be provided).

(Skim) Patrick Ryan, *The Future of the ITU and Its Standard-Setting Functions in Spectrum Management*, in the *STANDARDS EDGE: FUTURE GENERATION*, Sherrie

*Bolin, ed., p. 341, Sheridan Books, 2005* (available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=855225](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=855225)).

### **Readings for Thursday, October 5**

Read materials available at ITU Web-Site . Specifically, read (i) *ITU's History* (<http://www.itu.int/aboutitu/overview/history.html>), (ii) ITU-R page, (iii) ITU-D page; and (iv) ITU-T page.

Kathleen Q. Abernathy, *Why the World Radiocommunication Conference Continues to Be Relevant Today*, 56 Fed. Comm. L.J. 287 (March, 2004).

Read *Executive Summary and Recommendation 3* (pp. 18-21) in *Spectrum Management for the 21<sup>st</sup> Century*, A report of the CSIS Commission on Spectrum Management, Center for Strategic and International Studies, Washington, DC (2003) (Available at: <http://www.ntia.doc.gov/osmhome/spectrumreform/responses/documents/A14-%20CSIS%20Report.pdf>).

(*Skim*) Regulation of International Accounting Rates, FCC 96-459 (December 3, 1996) (available at < [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/FCC-96-459A1.doc](http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-96-459A1.doc) >).

### **Week Seven: Public Trustee, Indecency and the First Amendment**

*Topics and Concepts to Cover*

- Public Trustee
- Indecency
- Obscenity

### **Readings for Tuesday, October 10**

TLP pp. 197-224; 247-53 (Chapter 5: *Public Trustee Obligations*)

(*Suggest attending as available*) SFTP Event 3:00 – 7:30 p.m.: *CONFRONTING CABLE'S TECHNOLOGICAL FRONTIER* (At the Cable Center in Denver)

### **Readings for Thursday, October 12**

TLP pp. 254-274; 283-285, *skim* 655-692 (Chapter 5: *Public Trustee Obligations –cont-*) read 917-18, *skim* 927-947 (*Regulation of Indecency*)

Progress & Freedom Foundation Blog, *The Saving Private Ryan Censorship "Precedent"?* ([http://blog.pff.org/archives/2005/03/the\\_saving\\_priv.html](http://blog.pff.org/archives/2005/03/the_saving_priv.html))

(*Optional*) Listen to NPR, *The FCC and the Future of Public Broadcasting* (*Talk of the Nation*, August 3, 2006) (available at <http://www.npr.org/templates/story/story.php?storyId=5613378>).

## **Week Eight: Emerging Video Marketplace**

### *Topics and Concepts to Cover*

- Must carry
- Natural monopoly
- MVPD
- Level playing field
- Regulatory asymmetry
- HR 5252

### **Readings for Tuesday, October 17**

TLP pp. 435-450; *skim* 450-463 (Chapter 8: *Emerging Video Marketplace*)

Review current status of House Bill 5252 at Benton Foundation  
(<http://www.benton.org/index.php?q=node/1882>)

*NTIA Comments*, pp. 1-5 closely, *skim* pp. 6-18, in *Implementation of Section 621(a)(1) of the Cable Communications Policy Act of 1984 as amended by the Cable Television Protection and Competition Act of 1992*, Docket 05-311 (available at < <http://www.ncta.com/ContentView.aspx?hidenavlink=true&type=lpubtp5&contentId=2890> >).

*AT&T Comments*, pp. 1-12 closely, in *Implementation of Section 621(a)(1) of the Cable Communications Policy Act of 1984 as amended by the Cable Television Protection and Competition Act of 1992*, Docket 05-311 Docket 05-311 (available at < [http://gullfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native\\_or\\_pdf=pdf&id\\_document=6518328493](http://gullfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6518328493) >).

### **Readings for Thursday, October 19**

TLP pp. 511-514, *skim* 515-547, read 548-561 (Chapter 8: *Programs Grouped Into Signals*)

## **Week Nine: Student Presentations**

### **Tuesday, October 24**

FCC Proceedings—Student Presentations

### **Thursday, October 26**

**\*\*\* Deadline: industry White Papers due**

[To be determined: FCC Proceedings—Student Presentations. Depending on class size, we may not need two days for student presentations. If this is the case, this lecture will cover theories of telecommunications policy as they relate to promoting innovation. Readings will be provided.]

### **Week Ten: Telephony, Monopolies and Innovation**

#### *Topics and Concepts to Cover*

- Rate of Return
- Theodore Vail
- MFJ
- Parts of the telephone network—local loop, switching, transport
- Common carrier
- Tariff and tariffed service (filed rate doctrine)
- Interconnection
- Rate of return regulation (classic rate-making formula "R (revenue requirement) = C (operating costs) + Ir (invested capital or rate base times rate of return on capital))
- Regulatory capture
- Cross-subsidies
- Taxation by regulation
- Universal service
- (Incumbent) Local Exchange Carrier (LEC or ILEC)
- Interexchange Carrier (IXC)

#### **Readings for Tuesday, October 31**

TLP pp. 695-718; *skim* 719-724, read 725-739 (Chapter 13-14: *An Introduction to Telephone Regulation and Defining the Telephone Monopoly*)

*Thursday, November 2:* (Attend as available) SFTP Event-- *NETWORK CONVERGENCE* (3:00 – 6:20 p.m.)

#### **Readings for Friday, November 3\*\***

**\*\* Note: class time change—our November 2 class will meet from 7:30-8:45 a.m. on Friday, November 3. Please let Brad know if this presents a conflict for you and he will provide to you a DVD of this lecture.**

TLP pp. 747-770 (Chapter 15: *Rate Regulation and Universal Service*)

*Skim In re M2Z Networks Application for License and Authority* (available at <http://www.m2znetworks.com/pdf/Application.pdf>).

### **Week Eleven: 1996 Act, Interconnection and Universal Service**

### *Topics and Concepts to Cover*

- Roadmap of 1996 Act
- Section 2(b) of the Telecommunications Act
- Section 251
- Section 271
- Unbundled Network Elements (UNEs)
- Interconnection
- Essential Facility
- Pricing of UNEs—long run incremental cost (replacement cost) v. historic cost
- Cream-skimming
- Interconnection agreement
- Missoula Plan
- Infant Industry

### **Readings for Tuesday, November 7**

*Telecommunications Law and Policy* (herein, “TLP”) pp. 771-98 (Chapter 16: The Telecommunications Act of 1996)

TLP pp. 799-810, *skim* 810-819, read 820-825, 848-862

Hush-A-Phone v. FCC, 238 F.2d 266 (D.C. Cir. 1956).

James Glassman, Monopolists’ Playpen  
(<http://www.techcentralstation.com/040403D.html>)

Alfred Kahn, Regulatory Politics As Usual  
(<http://www.aei.brookings.org/policy/page.php?id=127>)

National Regulatory Research Institute, read Executive Summary pp. i-v, *Commissioner Briefing Paper: Intercarrier Compensation and the Missoula Plan* (August 11, 2006) (available at: [http://www.nrri.ohio-state.edu/Telecom/nrri-briefing\\_missoula-plan\\_081106-final.pdf/view](http://www.nrri.ohio-state.edu/Telecom/nrri-briefing_missoula-plan_081106-final.pdf/view))

(*Optional/skim*) Paul Kouroupas, The Missoula Plan, July 24, 2006 (blog hosted by Global Crossing) (available at < <http://blogs.globalcrossing.com/node/184> >)

### **Readings for Thursday, November 9**

TLP pp. 863-881 (Chapter 18: *Universal Service and Access Charge Reform Under the 1996 Act*)

FCC News Release, *FCC Updates Approach for Assessing Contributions to the Federal Universal Service Fund* (June 21, 2006) (available at < [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/DOC-266030A1.doc](http://hraunfoss.fcc.gov/edocs_public/attachmatch/DOC-266030A1.doc) >) (extending universal service contribution obligations to providers of interconnected voice over

Internet Protocol).

(Optional background) pp. 1-28, Digital Age Communications Act, *Proposal of the Universal Service Working Group* (Release 2.0) (Dec. 2005) (available at < <http://www.pff.org/issues-pubs/books/051207daca-usf-2.0.pdf> >).

\*\*\* **Deadline: Commissioner Statements**-- testimony (also not to exceed twenty pages) to be delivered to Congress

**Fall Break: November 20-24**

### **Week Twelve: Internet and Advanced Services**

*Topics and Concepts to Cover*

- End-to-end
- Multiple ISP Access
- Computer Inquiry rules
- Forbearance under Section 10

### **Readings for Tuesday, November 14**

TLP pp. 905-917 (Chapter 19: *The Internet*)

Mark Surman, *Wired Words: Utopia, Revolution, and the History of Electronic Highways* (available at [http://www.isoc.org/inet96/proceedings/e2/e2\\_1.htm](http://www.isoc.org/inet96/proceedings/e2/e2_1.htm))

Lawrence Lessig, *The Laws of Cyberspace* ([http://cyberlaw.stanford.edu/lessig/content/articles/works/laws\\_cyberspace.pdf](http://cyberlaw.stanford.edu/lessig/content/articles/works/laws_cyberspace.pdf))

### **Readings for Thursday, November 16**

TLP pp. 955-968; 990-1010 (Chapter 20: *Advanced Services*)

pp. 1-12 (§§ 1-17) Report and Order and NPRM, *Appropriate Framework for Broadband Access to the Internet over Wireline Facilities* (Adopted August 5, 2005) (available at [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/FCC-05-150A1.doc](http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-05-150A1.doc)) (note: the R&O also has an excellent discussion of the Computer Inquiries which is optional)

pp. 1-6 (§§ 1-11) Memorandum Opinion and Order, *Petition for Forbearance of the Verizon Telephone Companies Pursuant to 47 U.S.C. § 160(c)* (adopted October 22, 2004) (available at < [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/FCC-04-254A1.doc](http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-04-254A1.doc) >).

### **Week Thirteen: Policies for a Third Pipe; Muni-Wireless; The Future of Broadband**

*Topics and Concepts to Cover*

- Network Neutrality

- Horizontal interoperability: between same type of applications
- Vertical interoperability
- Duopoly
- Muni Wi-Fi

### **Readings for Tuesday, November 28**

TLP pp. 968-972; 1012-1028

Andrew Odlyzko, *The Many Paradoxes of Broadband* (available at <http://www.dtc.umn.edu/~odlyzko/doc/broadband.paradox.pdf>).

Blog entries of Sudan Crawford, *People/Fish* (March 14, 2006) and *The Self-Owned Internet* (January 5, 2006) (available at [http://scrawford.blogware.com/blog/\\_archives/2006/3/14/1821542.html](http://scrawford.blogware.com/blog/_archives/2006/3/14/1821542.html) and [http://scrawford.blogware.com/blog/\\_archives/2006/1/5/1619868.html](http://scrawford.blogware.com/blog/_archives/2006/1/5/1619868.html))

Press Release, August 28, 2006, *FTC Chairman Addresses Issue of “Net Neutrality”* (<http://www.ftc.gov/opa/2006/08/neutrality.htm>)

### **Readings for Thursday, November 30**

pp. 1-16, 59-73, Balhaff & Rowe, LLC, Municipal Broadband, *Digging Beneath the Surface* (September 2005) (available at <http://www.balhoffrowe.com/pdf/Municipal%20Broadband--Digging%20Beneath%20the%20Surface.pdf#search=%22municipal%20broadband%20digging%20beneath%20the%20surface%22>)

Robert McChesney and John Podesta, *Let There Be Wi-Fi: Broadband is the electricity of the 21st century—and much of America is being left in the dark* (Washington Monthly January/February 2006) (available at <http://www.washingtonmonthly.com/features/2006/0601.podesta.html> >).

Visit Web-site of MuniWireless (<http://www.muniwireless.com/>).

Skim City of Boulder Memorandum, *Municipal Wireless Network Study Session*, (April 13, 2006) (available at <http://www.bouldercolorado.gov/files/City%20Council/Study%20Sessions/2006/04-25-06/Wireless%20Network%20Packet.pdf>).

(Skim/optional) *Boston to use nonprofit group to run its Wi-Fi network*, by Matt Hamblen, *Computerworld*, July 31, 2006 (available at <http://www.macworld.com/news/2006/07/31/bostonwifi/index.php>).

**Week Fourteen: The VoIP Case Study; Regulation of Open Source and Emergent Behavior Models of Telecom Innovation**

*Topics and Concepts to Cover*

- Emergent behavior
- Infant Industry
- Decentralized inputs

**Readings for Tuesday, December 5**

TLP pp. 1028-1052 (*Voice over Internet Protocol*)

***Compare and contrast the following four items:***

¶¶ 1-14 of Memorandum Opinion and Order, *Vonage Holdings Corporation Petition for Declaratory Ruling Concerning an Order of the Minnesota Public Utilities Commission* (WC Docket No. 03-211) (adopted November 9, 2004) (available at [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/FCC-04-267A1.doc](http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-04-267A1.doc)).

***with***

¶¶ 1-5, 20 of Report and Order, *IP-Enabled Services and E911 Requirements for IP-Enabled Service Providers* (adopted May 19, 2005) (WC Docket No. 05-196) (available at [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/FCC-05-116A1.doc](http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-05-116A1.doc)).

***and***

News Release, *FCC Adopts Order to Enable Law Enforcement to Access Certain Broadband and VoIP Providers*, May 3, 2006 (available at <http://www.cybertelex.com/voip/fcccalea.htm>)

***and***

¶¶ 1-13, 34-38 of R&O and NPRM, *Universal Service Contribution Methodology* (approved June 21, 2006) (WC Docket No. 06-122) (available at [http://hraunfoss.fcc.gov/edocs\\_public/attachmatch/FCC-06-94A1.pdf](http://hraunfoss.fcc.gov/edocs_public/attachmatch/FCC-06-94A1.pdf))

(*Skim/optional*) Cisco's Comments in VoIP E-911 proceeding ([http://gullfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native\\_or\\_pdf=pdf&id\\_document=6518142878](http://gullfoss2.fcc.gov/prod/ecfs/retrieve.cgi?native_or_pdf=pdf&id_document=6518142878)).

**Readings for Thursday, December 7**

TLP pp. 947-954

Bennett Sigmond, *Free/Open Source Software Licensing—Too Big to Ignore* (The Colorado Lawyer, December 2005) (Vol. 34, No. 12, p. 89) (to be provided).

(*Recommended*) Thomas Friedman, *The World Is Flat*, pp. 81-103 (“Flattener #4: Open-Sourcing—Self Organizing Collaborative Communities”) (available in Norlin library)