MDST 3504

Comparative Histories of the Internet

Class meetings

Tuesday and Thursday
9:30 AM– 10:45 AM
Wilson Hall 238

Instructor

Professor Kevin Driscoll
ked5d@virginia.edu
Wilson Hall 210
Office hours:
https://calendly.com/driscollofficehours

Course description

Today, nearly every adult in the U.S. uses the internet. Wireless signals silently fill our public and private spaces. In this course, you will learn how computer networks became a medium for interpersonal communication and community. We will "reverse engineer" the technologies and technical cultures that gave rise to the global information infrastructure. Along the way, you will explore unfinished systems, abandoned experiments, and other historical "dead ends." This course takes a hands-on approach to media history and you will become familiar with the technical concepts that make the internet possible.

Motivating questions

- What is the Internet?
- Where did it come from?
- How do you know what you know about the history of the internet?
- Does the history of the internet matter?

Major requirements

For Media Studies majors, this course will either count as your "Global Media" requirement or one of your 3000-level electives.

Assessment

- Participation (10%)
- Reading quizzes (10%)
- Reading reflections (10%)
- Projects (50%)
- Side quests (20%)

Assignments

Reading quizzes

Each week, you will complete a short quiz consisting of three to five multiple choice questions based on the readings and screenings for the upcoming week (Tuesday *and* Thursday). The purpose of the quizzes is to give you immediate feedback about your reading comprehension and to establish some baseline facts that we will use in class. **Quizzes must be completed on Collab before the start of class on Tuesday.** There are no make-up quizzes. I will drop your lowest quiz grade at the end of the term.

Reading reflections

The readings for this course come from a wide range of sources: historians, technologists, hobbyists, journalists, and critics. To make sense of this diverse material, set aside time to reflect, in writing, on one or more of the readings. Your responses do not need to be long (~100-300 words) but they should demonstrate thoughtful engagement with specific passages from the texts. An excellent response will do three things: (1) summarize key ideas, arguments, or historical facts, (2) identify confusing concepts, and (3) propose follow-up questions. Avoid making anachronistic comparisons to the present (e.g., "It was just like catfishing"), "whiggish" observations about the past (e.g., "They paved the way to Facebook"), gee-whiz comments (e.g., "Wow! How far we've come since 1982!"), or claims about generations (e.g., anything about "millennials" or "Gen Z"). Aim to understand the past *on its own terms*. **Post your reflection every Monday before noon.** Late posts will not be counted.

Timeline Entries 1 and 2

As we work our way through, across, under, and around various histories of the internet, we will be building a collective timeline of digital artifacts and events. You will be responsible for creating two timeline entries based on the readings from two different days of class. Each entry will be made up of a short piece of historical writing and an image, video clip, document, or other artifact from your own independent research. The timeline will be available on the web. **Due on October 11 and November 15.**

Speculative Fiction Project

Science fiction, also known as speculative fiction or "SF", played an important role in how we conceptualize the internet and imagine its future. After reading some of the science fiction that inspired

the design of the early internet, you will create your own work of SF. Your challenge is to imagine that past events unfolded differently, resulting in an alternative future for the internet. **Due November 10.**

Hypertext Project

Your final hands-on project will be to elaborate your speculative fiction by transforming it from text into *hypertext*. You will learn to write Hypertext Markup Language (HTML) and communicate your alternative future using the interactive idiom of the early World Wide Web. The resulting pages will be hosted on the public web. **Due November 29.**

Side Quests

At least ten times during the semester, you will have an opportunity to complete a side quest. Each side quest is unique, but they all involve a combination of hands-on research and written reflection. Side quests are worth 2 points each and may be combined up to a maximum of 20 points. Plan to spread them out through the semester. A good rule of thumb is that you should have completed at least 3 by the end of October. **All quests must be completed before December 6 at 5 PM ET.**

Grading policy

Your grades will appear as percentages on Collab. At the end of the term, I will round your final grades to the nearest integer (89.49 will round down to an 89 but 89.50 will round up to a 90). I will use the following thresholds to convert your number grades into the letter grades that appear in SIS.

A+	97
A	93
A-	90
B+	87
B	83
B-	80
C+	77
C	73
C-	70
D+	67
D	63
D-	60
F	0

Add, drop, withdraw, incomplete

Deadlines for adding, dropping, and withdrawing are set by the College of Arts & Sciences:

September 6	Last day to add the course
September 7	Last day to drop (without a "W" on your transcript)
October 18	Last day to withdraw

For more details, see: https://registrar.virginia.edu/enrollment-information/fall-enrollment

To request more time to complete the course requirements, also known as an "incomplete" grade, speak with your Association Dean and read the form titled "Incomplete Grade (Extension of Time)" linked here: https://college.as.virginia.edu/forms

Office hours

I am available to meet at various times throughout the week. The purpose of office hours is open-ended and the format is flexible. We can meet to discuss the content of the course or to look over an assignment together. A meeting may be 2 minutes or 20 minutes. We can talk on the telephone or video chat rather than meeting in person. My one request is that you let me know in advance what to expect so that I can prepare. If we don't have class, then office hours are cancelled as well.

Etiquette and Technology

The activities in this course frequently require a laptop. If you own one, please bring it to every class.

Many students find that taking notes on paper is the best way to stay focused in class. You are welcome to take notes electronically as long as your computer use is not distracting to me, you, or anyone else. The temptation to surf is strong so I encourage anyone taking notes on a networked device to turn off Wi-Fi or place your device in "Airplane mode." All devices not used for learning should remain out of sight.

I do not respond to email in the evenings or during the weekend. Allow at least 24 hours for a reply.

Attendance Policy

Regular attendance and active participation are required. You are responsible for managing your own time and attendance. No explanation required for absences—things happen. Excessive absences may result in a lower grade, at my discretion. If you anticipate missing more than two class meetings, please contact me as soon as possible to determine if an alternate arrangement is possible. To read more about the expectations for attendance in the College of Arts & Sciences, see: https://college.as.virginia.edu/class-attendance

Late Work

If you need an extension on a deadline, please let me know as soon as possible. I understand that you have other commitments and unexpected conflicts will come up. You don't need to tell me anything about your personal life, mental or physical health, family obligations, or anything else. Just let me know what you need to stay on track with our class. If you *are* going through a challenging time and could use some help, I will do my best to connect you to the resources and support that you need.

Audio Recording Policy

Class sessions for this course may be audio recorded as a reasonable accommodation for a disability and used for personal study and review. These audio recordings will be deleted at the end of the semester. Recordings will not be reproduced, shared with those not enrolled in the class, nor uploaded to other online environments.

Style Guide

Whenever you add a citation to any writing for this course, follow the Chicago Manual of Style Notes and Bibliography system (also known as Chicago NB). For reference, see:

- "The Chicago Manual of Style Online: Chicago-Style Citation Quick Guide." Accessed January 16, 2017. http://www.chicagomanualofstyle.org/tools_citationguide.html.
- "Purdue OWL: Chicago Manual of Style 16th Edition." Accessed January 16, 2017. https://owl.english.purdue.edu/owl/resource/717/01/.
- ZoteroBib, bibliography tool, https://zbib.org/

Calendar

All readings on Collab or the public Web. Readings should be completed before class on the dates listed.

Week 0   **August 23 & 25**

How do you know what you know about the history of the Internet?

Montfort, Nick, Patsy Baudoin, John Bell, Ian Bogost, Jeremy Douglass, Mark C. Marino, Michael Mateas, Casey Reas, Mark Sample, and Noah Vawter. "BASIC." In *10 PRINT CHR$(205.5+RND(1));:GOTO 10, 157–94*. Cambridge, Mass.: MIT Press, 2013.

Edwards, Phil. "The Hippest Internet Cafe of 1995." *Vox* (blog), August 24, 2016. https://www.vox.com/2016/8/24/12593214/internet-cafe-history.

Week 1   **August 30 & September 1**

What did it feel like to use a computer in the 1970s?

Rankin, Joy. "From the Mainframes to the Masses: A Participatory Computing Movement in Minnesota Education." *Information & Culture* 50, no. 2 (May 1, 2015): 197–216. doi:10.7560/IC50204.

Brammer, Jens. "Time-Sharing in Denmark in 1968." In *History of Nordic Computing* 4, edited by Christian Gram, Per Rasmussen, and Søren Duus Østergaard, 447:167–70. Cham: Springer International Publishing, 2015.

Jones, Steve, and Guillaume Latzko-Toth. "Out from the PLATO Cave: Uncovering the Pre-Internet History of Social Computing." *Internet Histories* 1, no. 1–2 (January 2, 2017): 60–69.

Week 2   **September 6 & 8**

What made the ARPANET different from other networking projects?

Abbate, Janet. "Chapter 1. White Heat and Cold War: The Origins and Meanings of Packet Switching" *Inventing the Internet*. Cambridge, Mass: MIT Press, 1999.

Abbate, Janet. "Chapter 4. From ARPANET to Internet." *Inventing the Internet*. Cambridge, Mass: MIT Press, 1999.

Weber, Marc. "Born in a Van: Happy 40th Birthday to the Internet!" *Computer History Museum* (blog), November 22, 2017. http://www.computerhistory.org/atchm/born-in-a-van-happy-40th-birthday-to-the-internet/.

Week 3   **September 13 & 15**

What role might a computer network play in a society?

Hill, Doug. "The Eccentric Genius Whose Time May Have Finally Come (Again)." *The Atlantic*, June 11, 2014. https://www.theatlantic.com/technology/archive/2014/06/norbert-wiener-the-eccentric-genius-whose-time-may-have-finally-come-again/372607/.

Peters, Benjamin. "How the Soviets Invented the Internet and Why It Didn't Work." *Aeon* (blog), October 17, 2016. https://aeon.co/essays/how-the-soviets-invented-the-internet-and-why-it-didn-t-work.

Medina, Eden. "The Cybersyn Revolution." *Jacobin* (blog), April 27, 2015. https://jacobinmag.com/2015/04/allende-chile-beer-medina-cybersyn/.

Week 4   **September 20 & 22**

How did networking grow differently among the general public?

Mailland, Julien, and Kevin Driscoll. "The French Connection Machine." *IEEE Spectrum* 54, no. 7 (July 2017): 32–37. doi:10.1109/MSPEC.2017.7951720.

Driscoll, Kevin. "Social Media's Dial-up Roots." *IEEE Spectrum* 53, no. 11 (November 2016): 54–60. https://doi.org/10.1109/MSPEC.2016.7607028.

Furman, Ivo. "Hi! Turkiye and Turkish BBS and Digital Cultures." In *The Routledge Companion to Global Internet Histories*, edited by Gerard Goggin and Mark McLelland, 209–24. Florence: Routledge, 2017.

Liang, Li Shao, Lin Yi-Ren and Arthur Hou-ming Huang. "A Brief History of the Taiwenese Internet: The BBS Culture." In *The Routledge Companion to Global Internet Histories*, edited by Gerard Goggin and Mark McLelland, 182-196. Florence: Routledge, 2017.

Scott, Jason (Director). "Episode 2: SysOps and Users." *BBS: The Documentary*, 2005.

Dame-Griff, Avery. "TGNet Map." Mapping TGNet, 2018. http://queerdigital.com/tgnmap/index.html.

Week 5   **September 29 only**

Who benefits? Who pays the bills? Who makes the rules? Who profits?

Abbate, Janet. "Privatizing the Internet: Competing Visions and Chaotic Events, 1987—1995." *IEEE Annals of the History of Computing* 32, no. 1 (2010): 10–22. doi:10.1109/MAHC.2010.24.

Wiggins, Richard. "Al Gore and the Creation of the Internet." *First Monday* 5, no. 10 (October 2, 2000). http://firstmonday.org/ojs/index.php/fm/article/view/799.

Week 6 **October 6 only**

How did early users imagine the internet and its future?

Yu, Haiqing. "Social Imaginaries of the Internet in China." In *The Routledge Companion to Global Internet Histories*, edited by Gerard Goggin and Mark McLelland, 244–55. Florence: Routledge, 2017.

John, Nicholas A. "Representing the Israeli Internet: The Press, the Pioneers and the Practitioners." *International Journal of Communication* 5 (September 2, 2011): 1545–66.

Week 7 **October 11 & 13**

What events shaped the experience of computer "users" during the 1980s?

WarGames. Directed by John Badham. 1983. http://search.lib.virginia.edu/catalog/u2418804

Schulte, Stephanie Ricker. "The 'WarGames Scenario': Regulating Teenagers and Teenaged Technology." *Cached: Decoding the Internet in Global Popular Culture*. New York: New York University Press, 2013.

Kim Stanley Robinson. "Dystopias Now." *Commune* (blog), November 2, 2018. https://communemag.com/dystopias-now/.

Randall, Nan. "'Charlottesville': A Government-Commissioned Story About Nuclear War." *The Atlantic*, January 25, 2018. https://www.theatlantic.com/technology/archive/2018/01/charlottesville-a-government-commissioned-story-about-nuclear-war/551432/.

Week 8 **October 18 & 20**

Where do our visions of the future come from?

Vinge, Vernor. *True Names*. New York: Penguin Books, 2016. First published 1981 by Dell Publishing Co.

Morningstar, Chip, and F. Randall Farmer. "The Lessons of Lucasfilm's Habitat." In *Cyberspace: First Steps*, edited by Michael Benedikt. Cambridge, Mass.: MIT Press, 1991. http://www.fudco.com/chip/lessons.html.

Rheingold, Howard. "Chapter Five: Multi-User Dungeons and Alternate Identities." In *The Virtual Community: Homesteading on the Electronic Frontier*. Reading, Mass.: Addison-Wesley Pub. Co., 1993. http://www.rheingold.com/vc/book/5.html.

Bruckman, Amy. "Gender Swapping on the Internet." In *High Noon on the Electronic Frontier: Conceptual Issues in Cyberspace*, 1996, 317–326.

Week 9 **October 25 & 27**

Is "cyberspace" real?

Nagel, Emily van der. "From Usernames to Profiles: The Development of Pseudonymity in Internet Communication." *Internet Histories* 1, no. 4 (September 2, 2017): 312–31.

Burkhalter, Byron. "Reading Race Online: Discovering Racial Identity in Usenet Discussions." In Mark A. Smith and Peter Kollock (eds) *Communities in Cyberspace*, pp. 60-75. London: Routledge, 1999.

Boler, Megan. "Hypes, Hopes and Actualities: New Digital Cartesianism and Bodies in Cyberspace." *New Media & Society* 9, no. 1 (February 1, 2007): 139–68. doi:10.1177/1461444807067586.

Dame-Griff, Avery. "Tracing Terminology: Researching Early Uses of 'Cisgender.'" *Perspectives on History*, May 22, 2017. https://www.historians.org/publications-and-directories/perspectives-on-history/may-2017/tracing-terminology-researching-early-uses-of-cisgender.

Pause week   **November 1 & 3**

No class meetings this week.

Week 10   **November 10 only**

What is the difference between the World Wide Web and the Internet?

Smackerel. "When Multimedia Was Black and White," February 15, 2005. http://web.archive.org/web/20110131075817/http://www.smackerel.net/black_white.html.

Frana, Philip L, "Before the Web there was Gopher," *IEEE Annals of History of Computing* 26:1 (2004) 20-41.

Abbate, Janet. "The Electrical Century: Inventing the Web." *Proceedings of the IEEE* 87, no. 11 (1999): 1999–2002. doi:10.1109/5.796364.

Week 11   **November 15 & 17**

Who built the early Web? What made it "cool"?

Evans, Claire L. "The Untold Story of Jaime Levy, Punk-Rock Cyber-Publishing Pioneer." *Select All*, April 17, 2018. http://nymag.com/selectall/2018/04/claire-evanss-broad-band-excerpt.html.

Ankerson, Megan Sapnar. "How Coolness Defined the World Wide Web of the 1990s." *The Atlantic*, July 15, 2014. http://www.theatlantic.com/technology/archive/2014/07/how-coolness-defined-the-world-wide-web-of-the-1990s/374443/.

Lialina, Olia. "A Vernacular Web," 2005. http://art.teleportacia.org/observation/vernacular/.

Lialina, Olia. "Vernacular Web 2," 2007. http://contemporary-home-computing.org/vernacular-web-2/.

Week 12   **November 22 only**

How did early users react to advertising on the internet?

Brunton, Finn. "A Short History of Spam." Le Monde Diplomatique (blog), March 1, 2014. https://mondediplo.com/2014/03/16spam.

Spurgeon, Christina. "Online Advertising." In The Routledge Companion to Global Internet Histories, edited by Gerard Goggin and Mark McLelland, 387–98. Florence: Routledge, 2017.

Zuckerman, Ethan. "The Internet's Original Sin." The Atlantic (blog), August 14, 2014. https://www.theatlantic.com/technology/archive/2014/08/advertising-is-the-internets-original-sin/376041/.

Week 13   **November 29 & December 1**

What makes a computer network feel like a community?

Turner, Fred. "Chapter 5: Virtuality and Community on The WELL." *From Counterculture to Cyberculture: Stewart Brand, the Whole Earth Network, and the Rise of Digital Utopianism*. Chicago, IL: The University of Chicago Press, 2006. Pages 140-174.

Newman, Sandra. "Growing Old in New York's Snarkiest Early-Internet Community." *The Atlantic*, May 1, 2017. https://www.theatlantic.com/technology/archive/2017/05/echo-growing-old-online/524577/.

Auerbach, David, Andrei Soldatov, and Irina Borogan. "The First Gay Space on the Internet." *Slate*, August 20, 2014. http://www.slate.com/articles/technology/bitwise/2014/08/online_gay_culture_and_soc_motss_how_a_usenet_group_anticipated_how_we_use.html.

Auerbach, David. "When AOL Was GayOL." *Slate*, August 21, 2014. http://www.slate.com/articles/technology/bitwise/2014/08/lgbtq_nerds_and_the_evolution_of_life_online.html.

Stevenson, Michael (Director). *Geeks in Cyberspace: A Story from the Early Web* (video), 2019. https://www.youtube.com/watch?v=deefSs5Qxz0.

Week 14   **December 6**

Is the Internet fundamentally "American"?

Campbell-Kelly, Martin, and Daniel D. Garcia-Swartz. "The History of the Internet: The Missing Narratives." Journal of Information Technology 28, no. 1 (March 2013): 18–33. https://doi.org/10.1057/jit.2013.4.

Deadline   **Saturday, December 10**

All outstanding work due before 5:00 PM ET.