

# Net Neutrality Protects Democracy



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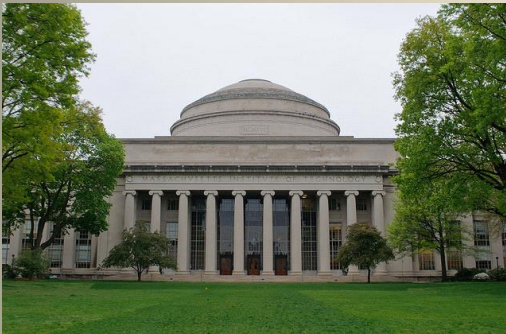
Scholar Commons Soiree: Lightning Lectures

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# The Internet Origin Story: Connecting the Galactic Network

J.C.R. Licklider of MIT in August 1962 writes memos conceiving a “Galactic Network” of interconnected computers that allows quick access to data and programs from any site

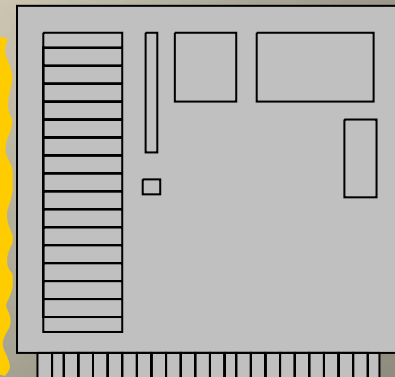


Licklider works at DARPA as the first head of the computer research program, October 1962.



*How would computers communicate?*

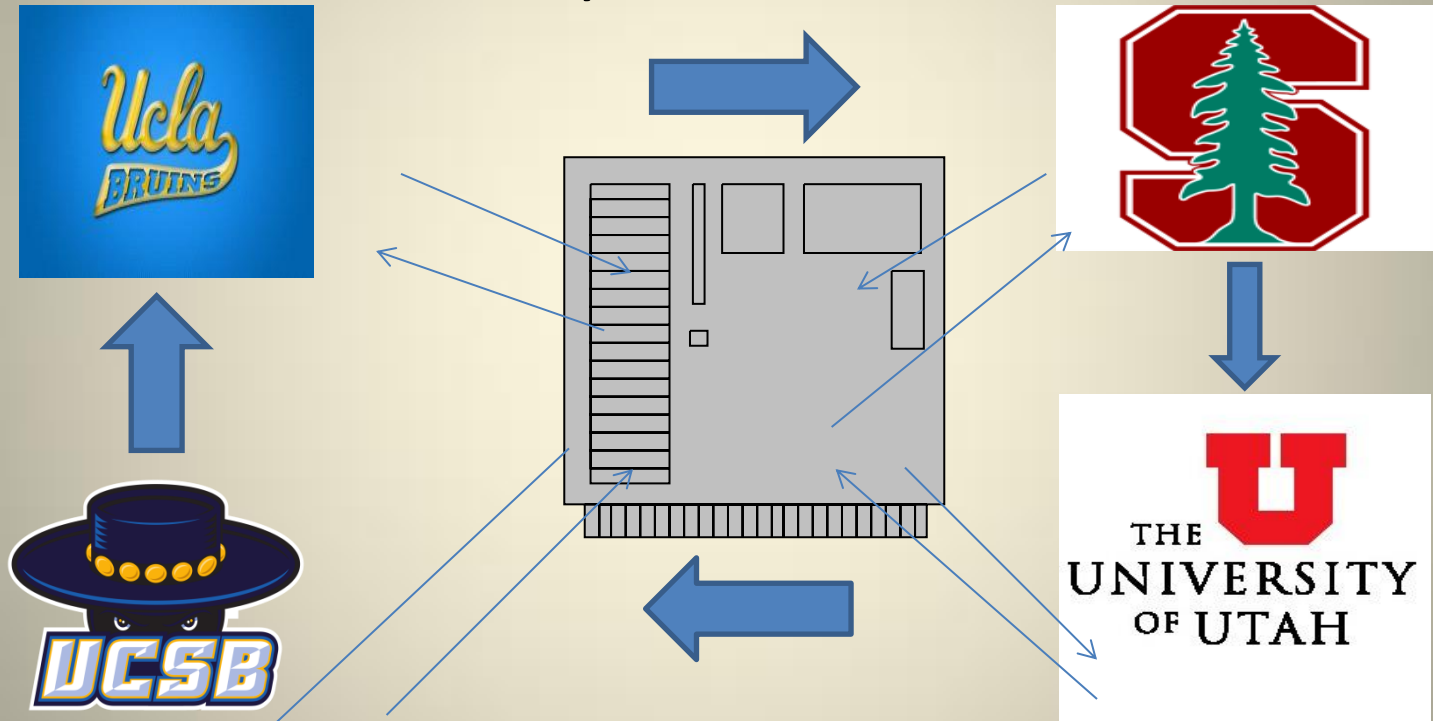
Leonard Kleinrock at MIT, NPL, Rand, and others write papers and books on Packet Switching, Communications using packets rather than circuits, 1961-1967



**BEST EFFORTS STANDARD** for DATA Exchange!

# Internet Evolution: From Cold Warrior to Engine for Innovation, 1969

ARPANET Connects Computers at UCLA, Stanford, UC Santa Barbara, and the University of Utah, 1969: The Internet goes live!



Network access initially restricted to American defense circles and the government-funded scientific community.

More universities and research centers link, 1969-1984

# Speeding and Supporting the Internet, 1985-1991

- **NSFNET, National Science Foundation Network**, funded by the Federal Government to support the Internet's backbone and development, 1985
- NSFNET supplants Computer Science Research Network which had connected universities and research centers to ARPANET until 1991
- **High Performance Computing Act of 1991 (HPCA)**, 15 U.S.C. 5501 (Dec. 1991) (**Senator Al Gore, author, signed by President George H.W. Bush**).
- Mandates coordinated Federal program to ensure United States leadership in high-performance computing
- Created *National Research and Education Network*, industry, academia, and government joint effort to accelerate the development and deployment of gigabit/sec networking

# NSFNET Reaches Beyond the Ivory Tower, 1988-1995



- ***NSFNET had an Acceptable Use Policy (AUP) that prohibited use of the NSFNET for purposes not in support of research and education***
- Experimental commercial uses allowed in 1988, MCI Mail, Compuserve, Sprint, to enhance research and educational uses by allowing researchers to communicate with more people
- AUP changed in 1990 to allow NSFNET “to support research and education in and among academic institutions in the U.S. by providing access to unique resources and the opportunity for collaborative work.”
- 1992 NSF AUP allows the private sector to use the network as long as it indirectly benefited research and education.

## **National Science Foundation Relinquishes control of NSFNET, 1995,**

- NSF funded Network Access Points (“NAPs”) for exchange of traffic and required the privatized NSFNet backbone to connect to them
- **Commercial networks allowed to connect with NSFNET, 1995**



# Internet Models: Library of Alexandria or Modern Sharing Common Room

- **The Internet as the Great Library of Alexandria, Egypt:**



- The Supreme Court’s 2003 case, *American Library Assn. v. US*, 539 U.S. 194, characterized the Internet as “simply another method for making information available in a school or library,” “no more than a technological extension of the book stack.”
- **The Internet as the driver of innovation by enabling sharing:**
- In 2014 the D.C. Circuit concludes the Internet drives a “virtuous circle” of innovation enabling people to access, share, and distribute, *Verizon v. F.C.C.* 740 F.3d 623, 628 (D.C. Cir. 2014)



# Internet Models: Open, Closed, or Controlled System

- **The Internet as an Open System: Anyone can connect, download and share:**



- *Data sent on best efforts basis*
- **The Internet as an Closed System:**
- Only certain parties allowed in (the early Internet).
- **It's all about Control:**
- Parties who control technical access to the Internet can also limit openness (Internet Service Providers, ISPs), Internet backbone carriers (Internet traffic carriers).
- Regulatory debate about allowing ISPs to provide priority Internet access to some parties upon payment arrangements with ISPs

# Internet Models: Open, Closed, or Controlled System

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Oxford  
Radcliffe  
Camera,  
Closed Library

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# Internet Models Drive Democracy

- First White House Web Site Launched, 1994, President Bill Clinton
- More government agencies, non-profits, and businesses launch web sites
- Google founded, 1998
- Facebook launched 2004
- YouTube founded 2004
- Twitter launched 2006
- **Tahrir Square, Egypt, 2011**



- IN THE WORDS OF ONE PROTESTER, FAWAZ RASHED: “WE USE FACEBOOK TO SCHEDULE THE PROTESTS, TWITTER TO COORDINATE, AND YOUTUBE TO TELL THE WORLD.”

# Internet Models Drive Democracy

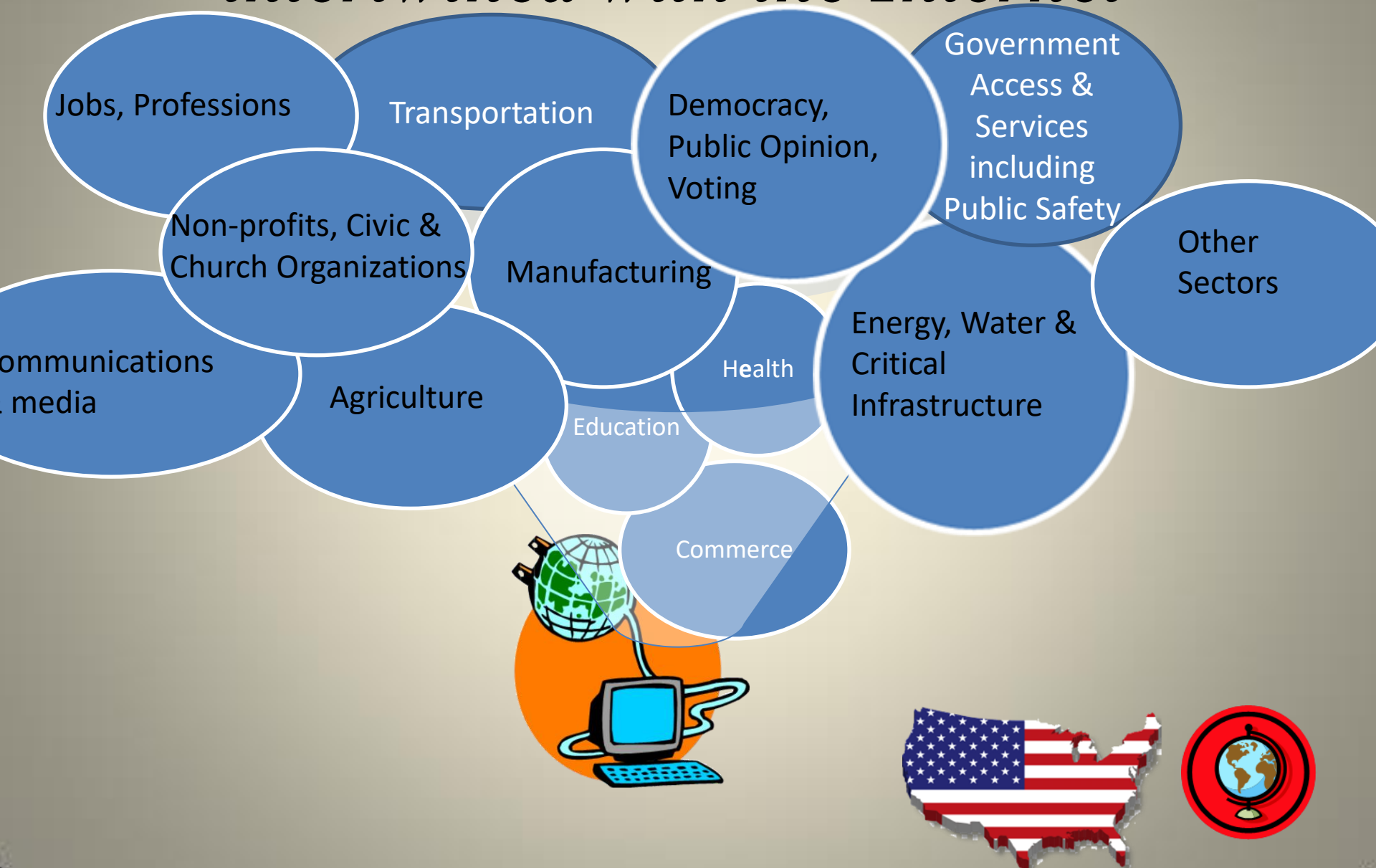
- More government agencies move registration, Voter information, and other functions to the Internet
- More companies limit job applications to the Internet
- More social media sites



- The Internet becomes a distribution platform
- Political candidates and organizations use the Internet to organize and distribute their messages



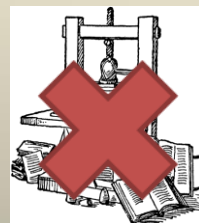
# *Sectors of the U.S. economy and society intertwined with the Internet*





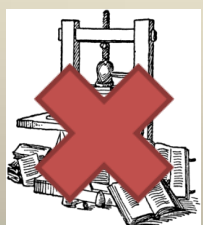
# Internet Gatekeepers Threaten Openness

- Increasing recognition of ISP gatekeeper power as the Internet moves from dial-up phones
- FCC finds in 2010 that ISPs “have both incentive and ability to engage in paid prioritization,” favoring some Internet traffic over others through deals to pay the ISP.
- The D.C. Circuit’s 2014 *Verizon* opinion found ISPs “have powerful incentives to accept fees from edge [content] providers, either in return for excluding their competitors or for granting them prioritized access to end users.”



# The Gatekeepers Want to Collect Tolls

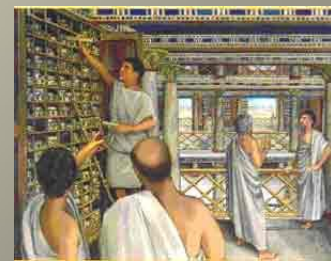
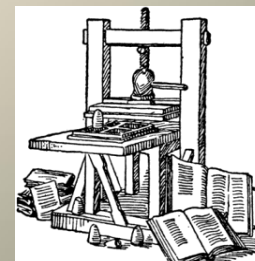
- Verizon’s lawyer argued to the D.C. Circuit “but for [the *2010 Open Internet Order*] rules we would be exploring commercial arrangements” to be paid to prioritize certain Internet traffic.





# FCC Prohibits Gatekeeper Tolls

- FCC 2015 Open Internet Decision recognizes threat of ISP gatekeeper role.
- FCC adopted rules prohibiting ISP blocking, throttling, paid priority
- Rules grounded in Title II of the Communications Act, Common Carrier Regulation, provide legal footing recognized by *Verizon v. FCC* and *USTA v. FCC*, 825 F.3d 674 (D.C. Cir. 2016) .



# Democracy Goes Social; Threatened by Internet Trolls and Hacking, 2016 and on



- 2016 Presidential Election cycle increases Internet use for democratic debate and engagement



- New threats: Congress finds Russia interfered with U.S. elections in 2016, findings incorporated into *Countering America's Adversaries Through Sanctions Act* President Trump signs in 2017
- Some interference executed through the Internet by Russians pretending to be people and organizations in the U.S.



- Other evidence of hacking including into voter databases
- Investigations into Russian interference in U.S. elections continue



- Oxford University 2017 report on "*Cyber troops*," "government, military or political party teams committed to manipulating public opinion over social media
- During the 2017 French presidential elections "cyber troops" unleashed bots "to falsely popularize political issues during high-profile campaigns to give the impression of a groundswell of grassroots support

# Democratic Decision-making process under threat at the FCC as Criminals use Identity Theft to Argue for Repeal of Rules Protecting the Open Internet



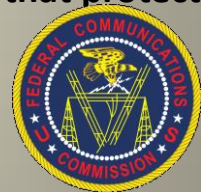
- Identity theft alleged in FCC 2017 proceeding proposing repeal of rules to protect the Open Internet!



Stolen identities used to file  
false statements in FCC  
“Internet Freedom” 2017  
proceeding to urge Open  
Internet rule repeal



- More than two dozen people wrote to the FCC in May 2017 complaining that someone falsely filed comments using their names and addresses without their authorization to urge repeal of rules that protect the Open Internet and provide the FCC with legal jurisdiction to enforce the rules.
- My Reply Comments filed August 2017 support identity theft victim and Congressional demands that the FCC remove the false statements from the FCC web site, investigate, and urge state and federal criminal investigations of alleged crimes perpetrated in the FCC’s proceeding, actions
- As of October 27, 2017 the FCC has done nothing to remove the allegedly false comments, publicly commit to investigate, or deter false filings! This not only violates the Administrative Procedures Act (APA) it is woeful neglect of the FCC’s duty to the public and threatens democracy!
- Paid Internet priority would distort democratic decision-making by allowing ISPs to make deals with those who want to prioritize their messages even if it delays or makes inaccessible other speakers’ messages and obscures democratic debate

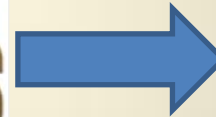


# Gatekeeper Priority Deals Threaten Democracy and Innovation



- FCC 2017 Notice of Proposed Rulemaking (NPRM) proposes to repeal rules against ISP blocking, throttling, and paid prioritization
- FCC proposes to repeal legal basis for enforceable rules that limit ISP gatekeeper exercise of power

FCC 2017 NPRM Eliminates Restraints on ISP Gatekeepers



- FCC 2017 NPRM permits ISP Gatekeepers to make deals with any entity—foreign or domestic—for fast access to the Internet, even if it degrades other Internet users





# Gatekeeper Priority Deals Threaten Democracy and Innovation



- **FCC 2017 (NPRM)** permits ISP Gatekeepers told make deals with any entity—foreign or domestic—for fast access to the Internet, even if it degrades other Internet users

FCC 2017 NPRM Eliminates  
Restrains on ISP Gatekeepers



- ISP in FCC comment that it would like to be able to make paid prioritization arrangement with video game distributors for “isolated arrangements,” without defining what that is or being subject to regulation.
- ***Would “isolated priority arrangement” by ISP for video game displace other Internet uses by the subscriber, even if the subscriber doesn’t know of agree?***
- Some U.S. companies have been subject to sanction for dealing with entities they did not realize were fronts for sanctioned persons or organizations
- Who controls the video game?
- **Priority can be used to interfere with democratic communication**





# Gatekeeper Priority Deals Threaten Democracy and National Security



- ISP Gatekeeper deals can impose costs on and limit avenues for democratic debate
- Such deals can also speed messages of those who pay the ISP, influencing democracy



FCC 2017 NPRM Eliminates Restraints on ISP Gatekeepers



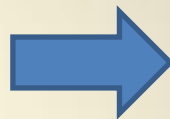
- Under FCC 2017 NPRM, Foreign or Domestic entities could buy fast Internet access, even if it degrades other Internet users including critical infrastructure such as energy and water!
- Prioritized accounts are prime targets as they could delay other messages
- Paid priority and the lack of legal enforcement or safeguards puts American national security and democracy at risk!



# Gatekeeper Priority Deals Harm Water and Energy Public Safety, Reliability, and Affordability, Harming Democracy and the Planet



FCC 2017 NPRM Eliminates  
Restrains on ISP Gatekeepers



- ISP priority deals undermine Internet-enabled Energy and Water-saving devices such as connected thermostats, connected Energy resources, alerts to people to reduce energy use.



- More greenhouse gases and black carbon fuels emitted and fossil-fueled plants used if signals to virtual power Plants degraded due to ISP priority deals

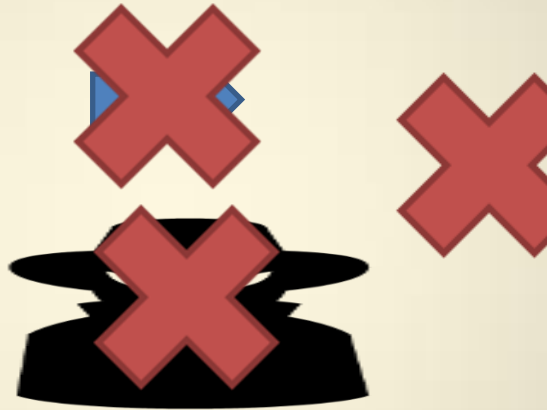


- ISP priority deals undermine reliability and public safety and increase costs of critical infrastructure such as energy and water!



# FCC Ex Parte Comment Period Open Through December 7, 2017

- Protect democracy, national security, and the Open Internet by filing an ex parte comment in FCC proceeding WC Docket No. 17-108, FCC 17-60
- <https://www.fcc.gov/ecfs/filings/express>, file comments in proceeding 17-108

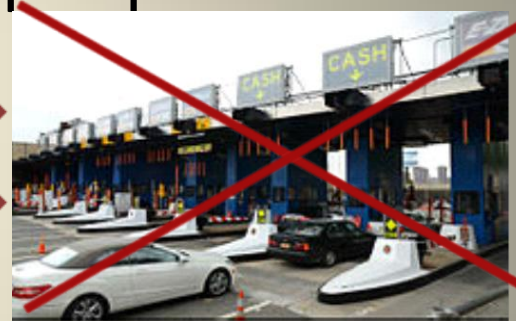


- The question is not just who will control the Internet, the question is who will control American democracy, the economy, and national security?
- Americans control democracy, not ISPs!

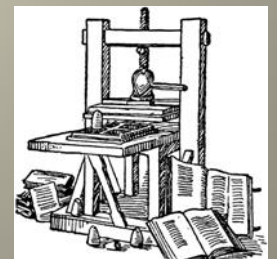
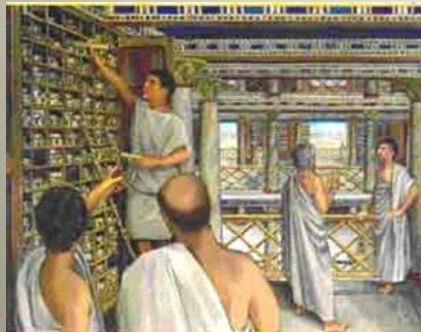


# Internet Users Should Speak Up!

- All Internet users including all who depend on and use critical infrastructure sectors (electricity, water, health, etc.) must speak up about the FCC's 2017 "Internet Freedom" NPRM to unleash ISP Gatekeeper power!



- Net Neutrality protects democracy!





# Thank you!

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