

BROADCAST

8/1/11

History of Information

Agenda

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- Questions about papers?
- Reading responses
 - ▣ #3 due Wednesday
 - ▣ #4 optional, due Monday
- Broadcast

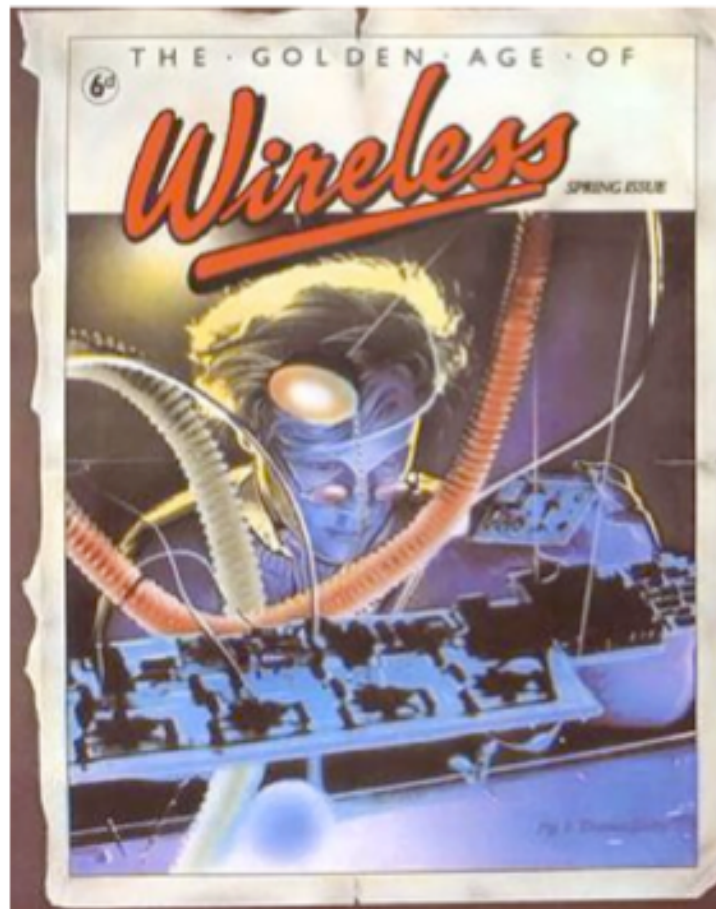
Quiz

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- 1. What is the significance of the “ether” within the history that Czitrom describes?
- 2. Discuss the history of broadcast, what are the major shifts that take place? You may discuss the uses of broadcast, regulatory issues, the role of business, etc
- 3. What are the conflicts and tensions within the early history of broadcast? Are they relevant for us now?

Wireless

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Ether and the Mythological/ Philosophical

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- “The word αἰθήρ (aithēr) in Homeric Greek means “pure, fresh air” or “clear sky”, imagined in **Greek mythology** to be the pure essence where the gods lived and which they breathed, analogous to the *air* breathed by mortals (also personified as a deity, Aether, the son of Erebus and Nyx). It corresponds to the concept of आकाश (*akasha*) in **Hindu philosophy** and is linked to Brihaspati (or the planet Jupiter) and the center direction of the compass. It is related to αἶθω “to incinerate”, also intransitive “to burn, to shine”
- Aristotle included *aether* in the system of the classical elements of Ionic philosophy as the “fifth element” (the *quintessence*)

Scientific/Technological Milestones

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- 1861-1865: James Maxwell describes propagation of electromagnetic waves
- 1886: Heinrich Hertz demonstrates transmission & reception of radio waves at 20 m. distance

Useless?

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- “It’s of no use whatsoever. This is just an experiment that proves Maestro Maxwell was right – we have these mysterious electromagnetic waves that we cannot see with the naked eye. But they are there.”
 - Hertz in 1887, responding to his students’ question: “What next?” (Capra. 2007. Quips, Quotes and Quanta...)”)
- “Telegraphing through the air without wires by means of electricity does not seem to have an element of practicality in it.”
 - John Trowbridge, Harvard Engineer, in 1892, reviewing plans for wireless telegraphy a sea. (Czitrom, 1982).

Scientific/Technological Milestones

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- 1895: Nikola Tesla transmits radio waves from NY to West Point (50 mi.)
- 1895: Guglielmo Marconi transmits radio signals over a mile using coherer, basis of early radiotelegraphy
- 1896: Marconi receives British patent for transmission & reception of "Hertzian waves" (US patent 1896)

Mythical vs. Practical

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- “Its practical uses are indubitable, but it has a wider interest from a scientific standpoint, in that it opens up a vista of fascinating speculation into the possible revelations in store for us concerning the powers and potencies of the mysterious ether.”
- J. Ambrose Fleming, 1899
- “we are growing a new sense; not indeed an actual sense organ, but not so very unlike a sense organ...”
- Oliver Lodge

Scientific/Technological Milestones

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- 1900: Marconi patents tuning dial
- 1901: Marconi claims to have transmitted radio signals from Poldhu (Cornwall) to Newfoundland
- 1906, Christmas eve: Reginald Fessenden makes first audio broadcast from Brant Rock, MA. Handel aria heard as far away as Norfolk, VA.

Initial Uses

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1. Military (specifically Navy) – national security and warfare (WWI heightens demand and breaks IP stalemate)
 2. Commercial organizations – Global communication and spread of commercial “news”
 3. Hobbyists and “amateurs” – Global communication in the promotion of utopian ideals (or technophilia)
 4. Educational institutions
- All of these “stakeholders” have a mix of what we might now call “point-to-point” and “broadcast”

“Anarchy in the Ether”?

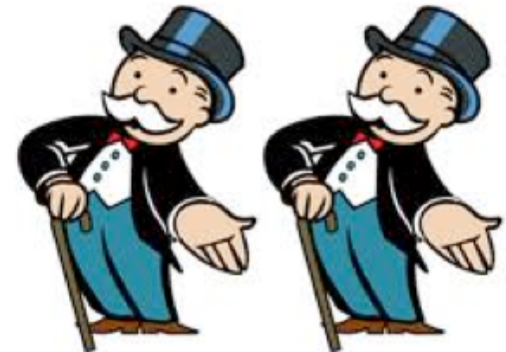
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- 1920 - First regular broadcast by station KDKA (Westinghouse)
- 1922 – Commerce Dept exceeds 300 licenses by May, ends year at 570
- 1922 – High turnover rates and spectrum conflicts mar the new medium
- 1923 – Sec’y of Commerce Herbert Hoover initiates conference to update obsolete regulatory framework

Commercial Tussles

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- RCA proposes that cartel consisting of GE, AT&T, Westinghouse blanket the nation with six “super power” stations
- AT&T seeks to model radio on the (monopoly) Bell telephone system
- Westinghouse aligned with both RCA, GE



The Medium, Not The Message

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- Listening to early broadcasts require some technical knowledge and constant tweaking
- - ▣ “In radio it is not the substance of communication without wires, but the fact of it that enthralls...Someday, perhaps, I shall take an interest in radio programs. But at my present stage they are merely the tedium between call letters.”

The “Private” Sphere

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- “public in the privacy of the home”
 - ▣ Direct access into private homes on mass scale
- What are the consequences of this?

Who Will Pay For Broadcasts?

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- AT&T begins “toll” system in 1922, charging advertisers
- Hoover says advertising will “kill the radio industry”

Commercial/Regulatory Resolutions

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- 1926 - RCA, GE, Westinghouse create NBC; AT&T exits broadcasting in return for preservation of long lines monopoly
- 1927 Radio Act opens radio to wide use of advertising, creates commerce-friendly Federal Radio Commission
- “today’s broadcasting media continually propound the idea that their current configuration is the only one possible.”
- Czitrom

From Radio Mania to The Golden Age

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- 1930 – more than 600 stations broadcasting to more than 12M radio homes (40% saturation)
- Most of the powerful stations are commercial
 - ▣ Political censorship reinforces status quo
- Music gives way to entertainment, news (until after WWII)

Broadcast Uses

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- Entertainment
- Political
- Journalism
- Religious/Educational

Radio and The Public Sphere

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- Radio vs. Print
 - By 1939, 70% of Americans relied on radio for news
 - FDR's Fireside Chats connect/inform nation but also establish radio as powerful new political tool
 - Conflation of news and entertainment
 - Epitomized/underscored by Welles' War of the Worlds
 - "March of Time" combines news/drama



Television and the Newsreel

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- 1911 – first newsreel produced for RKO theaters
- 1931 – “March of Time” weekly movie magazine
- 1951 – “March of Time” ends

The Rise of TV News

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- 1963 – CBS extends evening news to 30 min.
- 1965 – Nightly news runs daily coverage of Vietnam war – Morley Safer films US troops burning houses in Cam Ne
- 1967 – CBS launches "60 Minutes"
- 1969 – Spiro Agnew launches attacks on "effete corps of impudent snobs" in media
- 1973 – Telecast of Watergate Hearings
- 1980 – Ted Turner launches CNN
- 1991 – Desert Storm bombing of Baghdad relayed live by CNN

TV and Spectacle

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- Effects of televising political, sporting, military events
 - ▣ JFK vs. Nixon debate
 - ▣ State of the Union address
 - “Lenny Skutnik moment”, 1982
 - ▣ Political convention as political advertising



Radio post-TV

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- Talk radio
- Music formats

Wednesday 8/3

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- Reading response #3 due
- Regular office hours this week