Agenda

- Administrivia
  - All paper work graded; back Wed
  - Presentation grades back end of week
  - Reading Response #3 will be posted tonight (due Friday)
- Finish up Advertising
- Broadcast
Wireless
Ether and the Mythological/Philosophical

- “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 αἴθω "to incinerate"[2], 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

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

“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.”

Scientific/Technological Milestones

- 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

- “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

- 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

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”?

- 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

- 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

- Listening to early broadcasts require some technical knowledge and constant tweaking
- DX’ing
  - “In radio it is not the substance of communication without wires, but the fact of it that enthral...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

- “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?

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

- 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

- 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

- Entertainment
- Political
- Journalism
- Religious/Educational
Radio and The Public Sphere

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

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

- 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

- 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

- Talk radio
- Music formats