



Broadcast



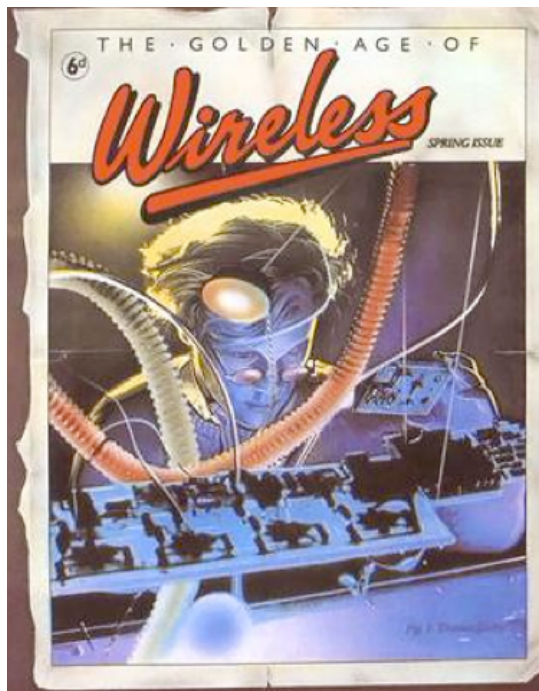
History of Information, August 2, 2010

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 αἵθω "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.”
 - John Trowbridge, Harvard Engineer, in 1892, reviewing plans for wireless telegraphy a sea. (Czitrom, 1982).



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 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

- ▶ “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



Src: <http://outofthequestion.org/userfiles/image/orson-welles-war-of-the-worlds-301244.jpg>

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

