Media Studies: 2

History through technology

Outline

- **The Telegraph**: Speed and ‘global-ness’
- **Newspapers**: Mass audience
- **Radio and TV**: Broadcasting
- **Satellites**: Globalisation
- **The Internet**: A new model
- **Mobile Telephony:** Everything, everywhere

Objectives

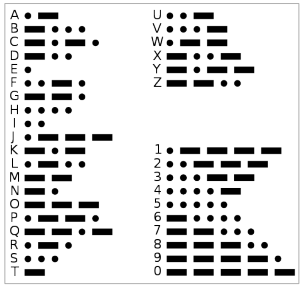
- Understand the role of technology in international communications
- Be aware of historical developments in communication technologies
- Understand how technologies have shaped our expectations of mass media

The Telegraph

- Industrial Revolution
- Railways
- “Free Trade”
- British Empire (world-wide)

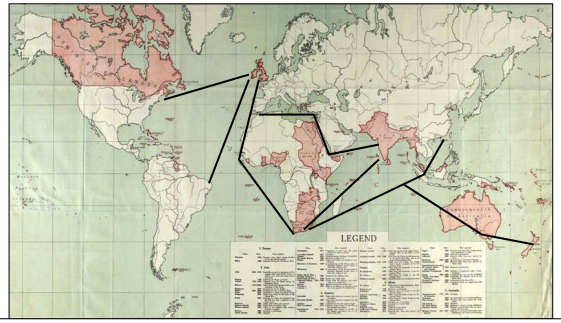
(Samuel) Morse Code

- 24 May 1844: Morse sends first telegraph message from Washington DC to Baltimore.
- Fast operators may be able to send 30 to 70 English words per minute, depending on the type of equipment used.



The first ‘World Wide Web’

Undersea cables from the UK in apx. 1900



Telegraph Communication

- 'Instant' global communication

US White House telegraph office around 1903

Telegraph Communication

- 'Instant' global communication
- BUT...
- **Huge** capital investment required
- 'One-to-one' (point-to-point)
- Infrastructure **unreliable** and **vulnerable**

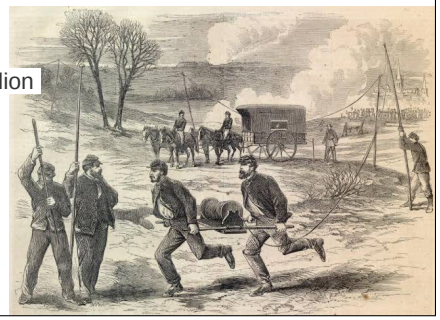
Crimean War / US Civil War

- From middle of c19 telegraph becomes important in newspaper reporting.
- 1854-6 Crimean War reports of William Russell of *The Times*

See - http://www.inventingeurope.eu/story/eye-witnessing-the-war-in-the-crimea-telegraph-vs-camera

U.S. Military Telegraph Corps

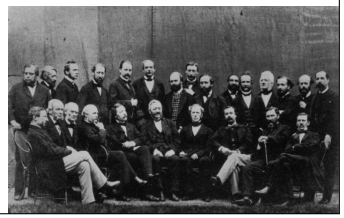
1861-5
US Civil War
Cables carried 6.5 million telegraph messages.



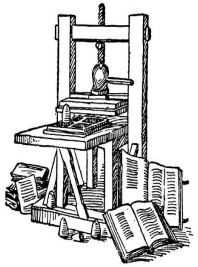
ITU (Int'l Telegraph Union)


LES
GOUVERNEMENTS
des Etats signataires de la
CONVENTION TELEGRAPHIQUE INTERNATIONALE
TITRE PREMIER.
du réseau international.

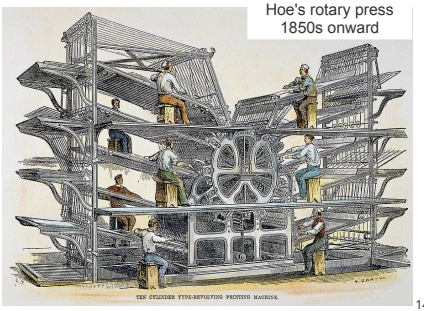
• Founded 17 May 1865, part of UN since 1947
• Regulates international communications technology, standards etc.



Printing / Newspapers



'Gutenberg-style' printing press



Modern Newspaper Press

This press belongs to the *Statesman* newspaper in Austin, Texas.

Built in Germany this press is 20 metres tall and cost $14 million (¥1 億).

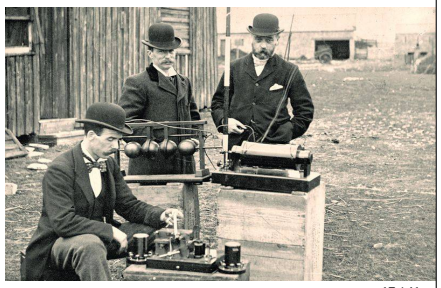
The *Statesman* has four presses in all and can print about 1000 copies per minute.

Wireless (Radio): Early days

- Guglielmo **Marconi** (Pontecchio, Italy)
- 13 May 1897: “Are you ready?”
- 1912: 122 amateur radio clubs in US
- 1919: Formation of RCA (Radio Corp. of America)

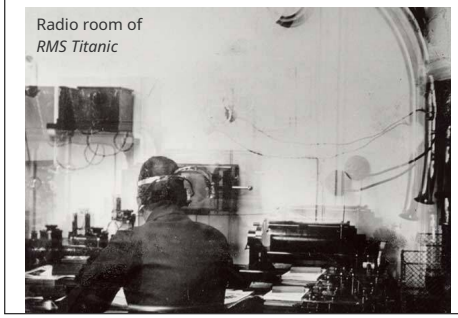
Flat Holm to Lavernock Point

Post Office engineers inspect Marconi's equipment on Flat Holm Island



Ship-to-shore/ship

Radio room of *RMS Titanic*



First uses of wireless telegraphy were in ship-to-ship and ship-to-shore communications.

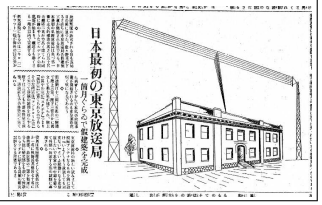
Wireless & 'Broadcasting'

- First wireless experiments during early c20
- First regular services by mid-1920s in US

Poland: crystal set, 1920s

Birth of NHK

- March 22, 1925
- JOAK Tokyo first broadcast from Shibaura studio (JOBK Osaka, JOCK Nagoya)
- NHK formed 1926 when three stations were merged



“Radio Towers”

- Public radio listening facilities
- Over 400 put up 1930-42ish
- Just 40 or so still extant

Komatsubara Park

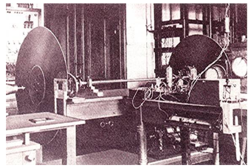
Japan’s first day of broadcasting

1200: selection of *shakuhachi* and *koto* music (30mins)
1400: light opera selection(30mins)

1930: 20 minute lecture
2000: piano music selection
2030: *Nagauta/shamisen* and weather.

Experiments in television

- Paul Nipkow (Berlin)
- Boris Rosing (St Petersburg)
- Vladimir Zworykin (StP. then RCA)
- Philo Farnsworth (US)
- John Logie Baird (UK)
- Kenjiro Takayanagi (JP)

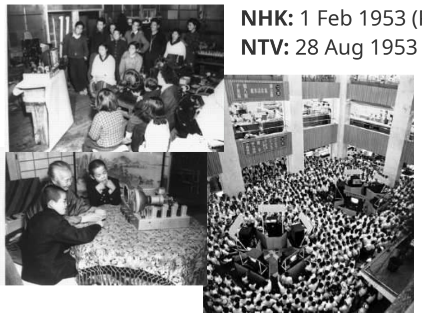


Television Technology

Marconi 707: 1938, 7” screen, AM/SW radio

Sharp ‘1seg’ phone tv

TV in Japan

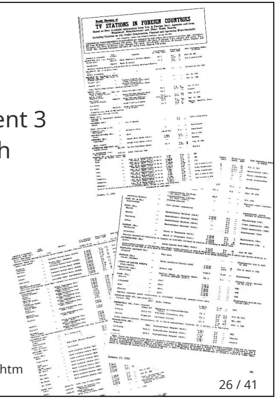


NHK: 1 Feb 1953 (Public service)
NTV: 28 Aug 1953 (Commercial)

Shoriki Matsutaro

TV catches on

- By 1960 a typical adult in Japan spent 3 hours 11 minutes watching TV each day.
- By the mid-1960s there were TV stations in over 90 countries.



http://www.tvhistory.tv/facts-stats.htm

World TV: A shared language?

Early satellites

SPUTNIK 1: launched 4 October 1957

Orbit speed: 29,000km/h

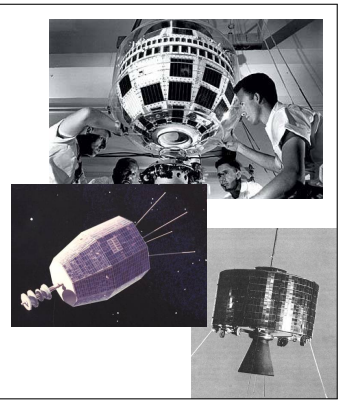
Time to orbit Earth: 96mins

Spent three months in orbit and burned up on re-entry into Earth atmosphere on 4 January 1958.

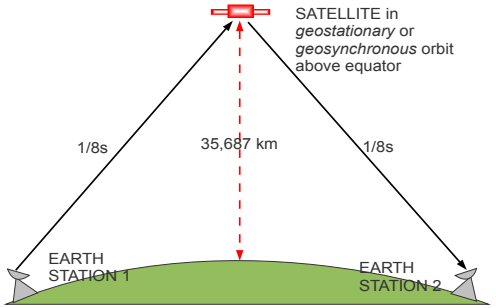
Early Satellites: 2

- **Telstar 1:** launched 10 July 1962

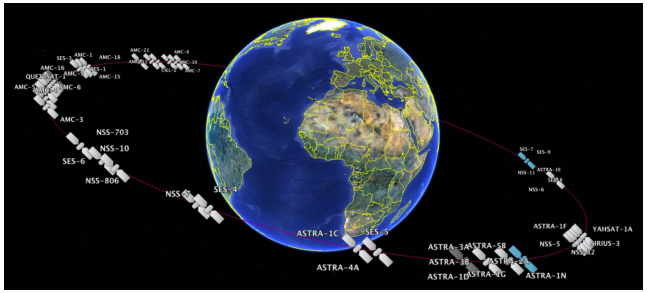
  23 July 1962 used for first intercontinental TV broadcast between US and Europe.
- **Relay 1:** 13 Dec 1962. Used for first Japan-US link, 22 Nov 1963.
- **Syncom 3:** first geostationary satellite, used to broadcast 1964 Tokyo Olympics to US.



Satellite communication



Satellites: 3



Convergence

Computing
Minituarisation
The internet
Everything, always, anywhere

Alan Turing (1912 - 1954)

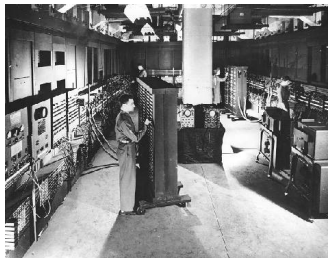
Manchester memorial

The 'Turing Test'

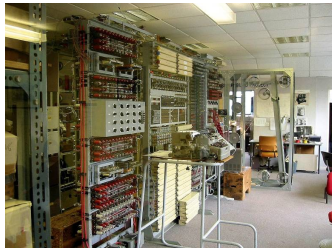
I propose to consider the question, 'Can machines think?'

(1950)

Computing



ENIAC, 1946

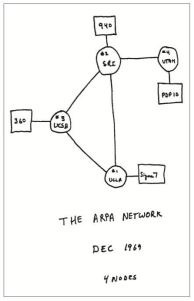


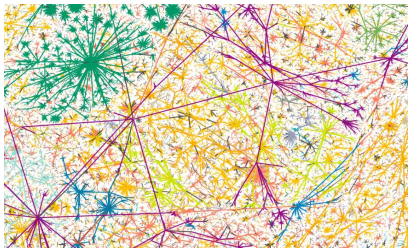
Colossus, 1943
(replica 2007)

Minituarisation

- Transistor replaces valve late 1950s
- Silicon chip on sale 1954 (little demand)
- Microprocessor, 1971

Internet



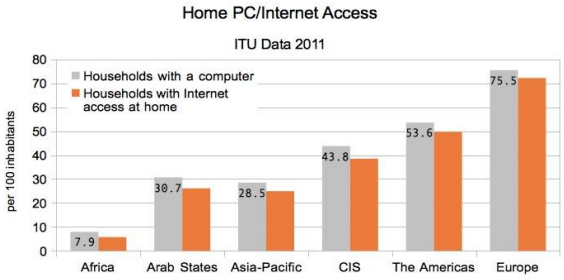


The internet: mapped in 2000

The latest gizmo

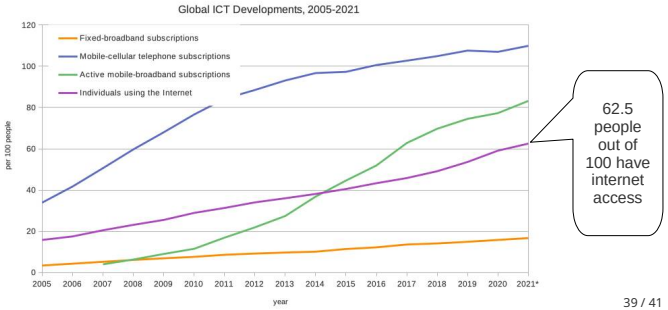
Martin Cooper, Motorola
3 April, 1973...

Access to IT Technology

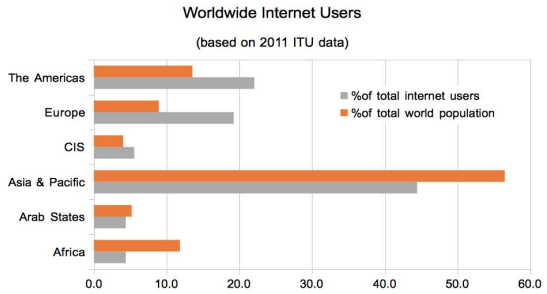


https://www.itu.int/en/ITU-D/Statistics/Pages/stat/default.aspx

2021 ITU Data

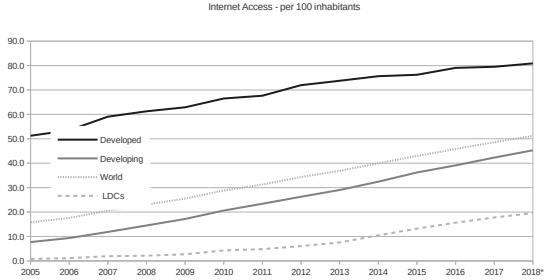


Digital representation?



https://www.itu.int/en/ITU-D/Statistics/Documents/statistics/2018/ITU_Key_2005-2018_ICT_data_with%20LDCs_rev27Nov2018.xls

Disparties in Internet Access



Summary

- The current media ‘landscape’ is a result of historical developments
- Media has effects on what we expect media to do and to be able to do
- Has digitalisation/the internet fundamentally changed *everything*?

END