

Brief Communication Timeline

Communication is the process of exchanging words, signs, or information with others. It is done either verbally or non-verbally.

Early cave paintings

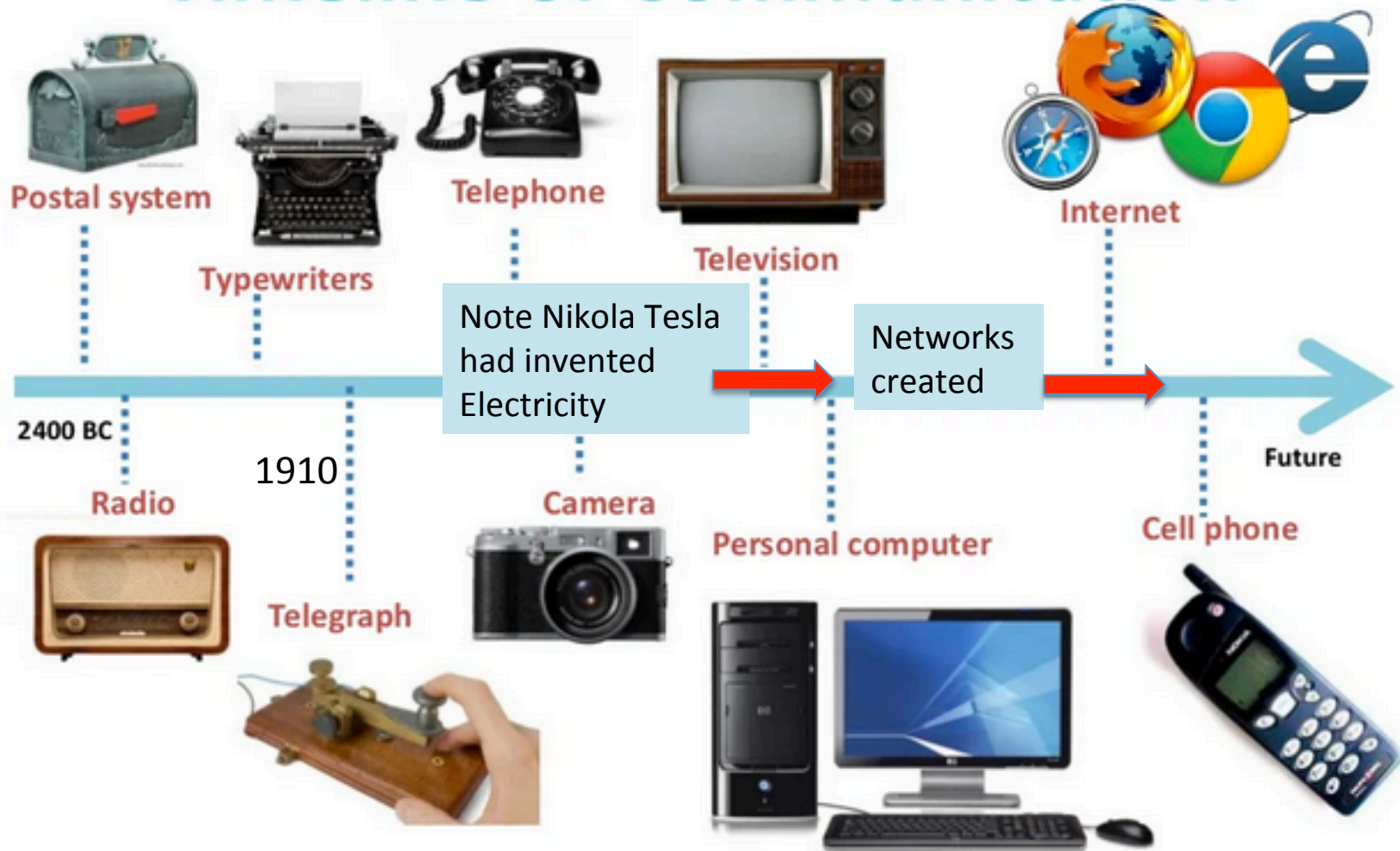


Communication Timeline



Modern Communication

Timeline of Communication



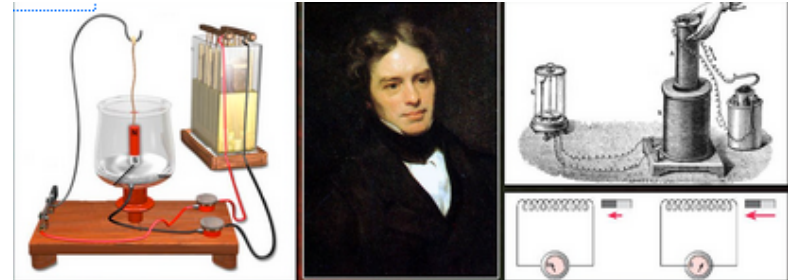
Modern Communication Electricity

1752. Benjamin Franklin discovered electricity with his famous kite-flying experiments



1833 Michael Faraday, was the first one to realize that an electric current could be produced by passing a magnet through a copper wire.

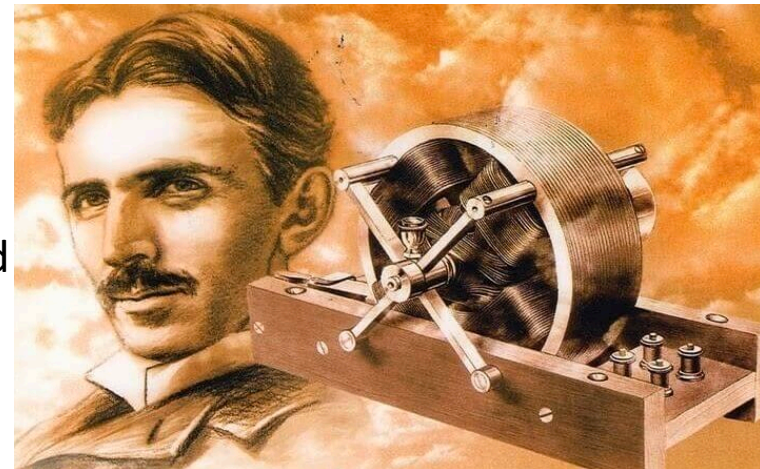
He invented the first electric motor and dynamo, demonstrated the relation between electricity and chemical bonding, discovered the effect of magnetism on light, and discovered and named diamagnetism.



1879 Thomas Edison focused on inventing a practical light bulb, one that would last a long time before burning out. He used Direct Current (DC = Batteries etc.)

Nikola Tesla May of 1888

After receiving a patent on the electric transmission Of power Tesla subsequently demonstrated alternating current electricity in 1893. Tesla discovered magnetic field and created the alternating current electrical system Alternating Current – Used world wide today Europe 240 volts, USA 110 volts system.



A History of Communication

- 3 million years ago Speech
- 2 Million years ago Hand Signals
- 1 Million Years ago Fires Smoke Signals
- 200BC Flags land & Sea



Camera was invented by Frenchman Joseph Nicéphore Niépce.
Cameras invented and marketed by **George Eastman (1854–1932)**

1822 Computers Charles Babbage invents a computer, but computers were not built until 1940's Alan Turing invented computer science.
Domestic computers 1990's Apple & Windows appeared 1991 onwards



1877 on Heliograph Mirrors Lights

1844 May 24 Morse Code invented

March 1876, Alexander Bell Telephone



1891 the Edison Company successfully demonstrated a prototype of the Kinetoscope



1895, Guglielmo Marconi Wireless

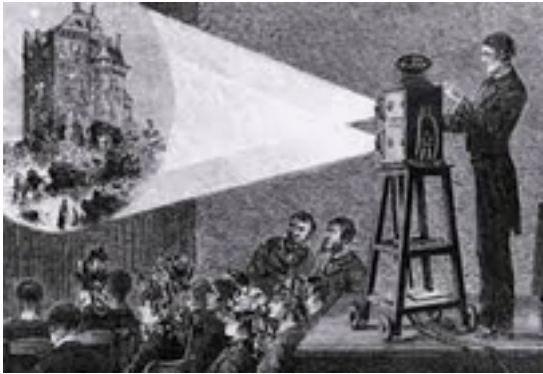


1941 on Mobile Communication established using short wave wireless

1965 – Chandros Rypinski, Jr. patents the first multiple channel radio telephone system



A History of Communication Camera & Film



1890's Movies Silent and Black & White

1920's Movies Sound and Black & White



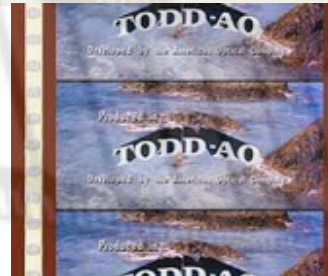
The Jazz Singer



1940's - 60's Movies
Sound and Colour

Wizard of Oz

1960's Movies Sound and Colour Todd A O

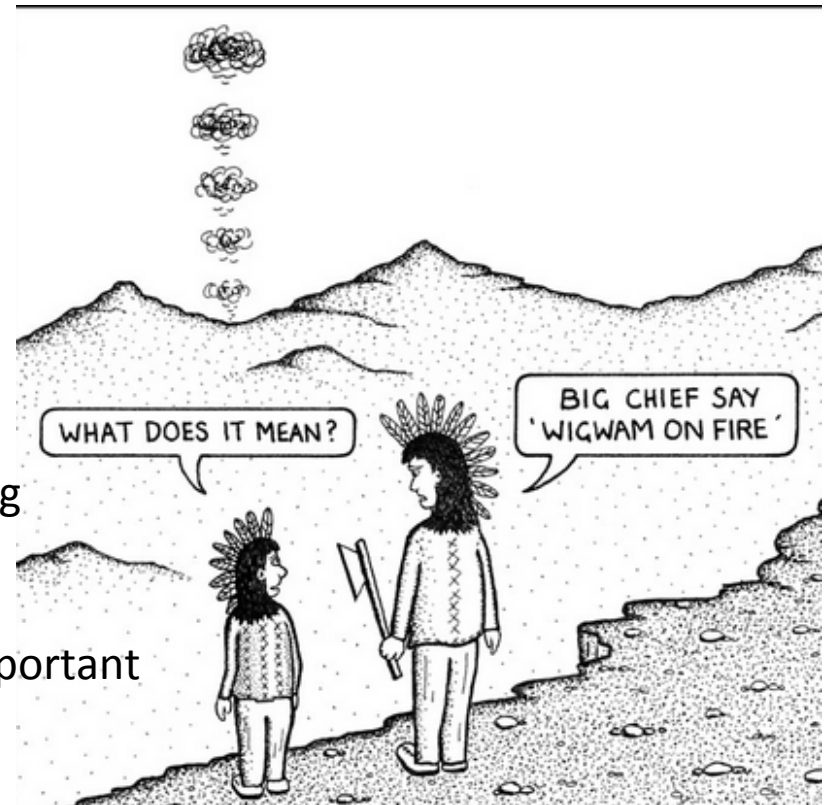


3DTechnology



A History of Communication

When humans began to talk around 500,000 BCE communication began. symbols and images were being used to portray information and languages developed. However this was short distance communication we had to be in earshot of our friends, so hand signals developed which could be seen from a distance various developments occurred



Smoke signals were used by many cultures including the Native Americans a very long time ago. It is one of the oldest forms of visual, long distance communication. Messages of warning, help and important news were sent in messages using smoke signals.

Usually a call for help was a beacon fire on a hill



Written Communication

Messages were sent by hand written on scrolls of papyrus, or hammered on clay tablets or rocks

The history of scrolls dates back to ancient Egypt. In most ancient literate cultures **scrolls were the earliest format for longer documents written in ink or paint on a flexible background**, preceding bound books; rigid media such as clay tablets were also used but had many disadvantages in comparison.



As far as components go, ink is made up of two key parts: the pigment and the carrier. The pigment is the dye itself, and is what is delivered by the vessel to the paper or printing medium (paper). Using feather cut at an angle they dipped the tip into an ink pot made up of crushed beetles or any dye and wrote a letter.

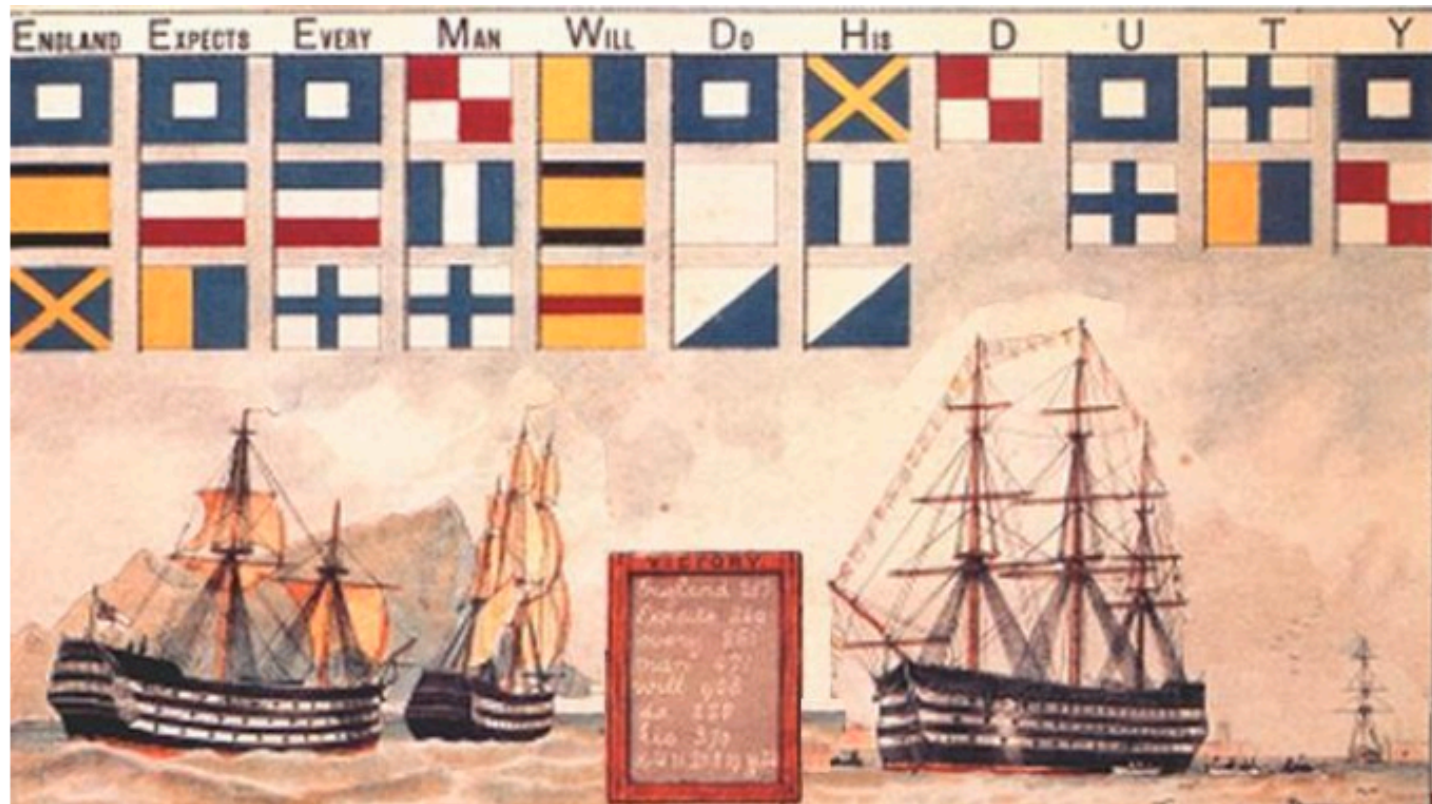


A History of Communication

Other ways of communication began, these included Flags on sticks, flags on ships, mirrors and heliograph

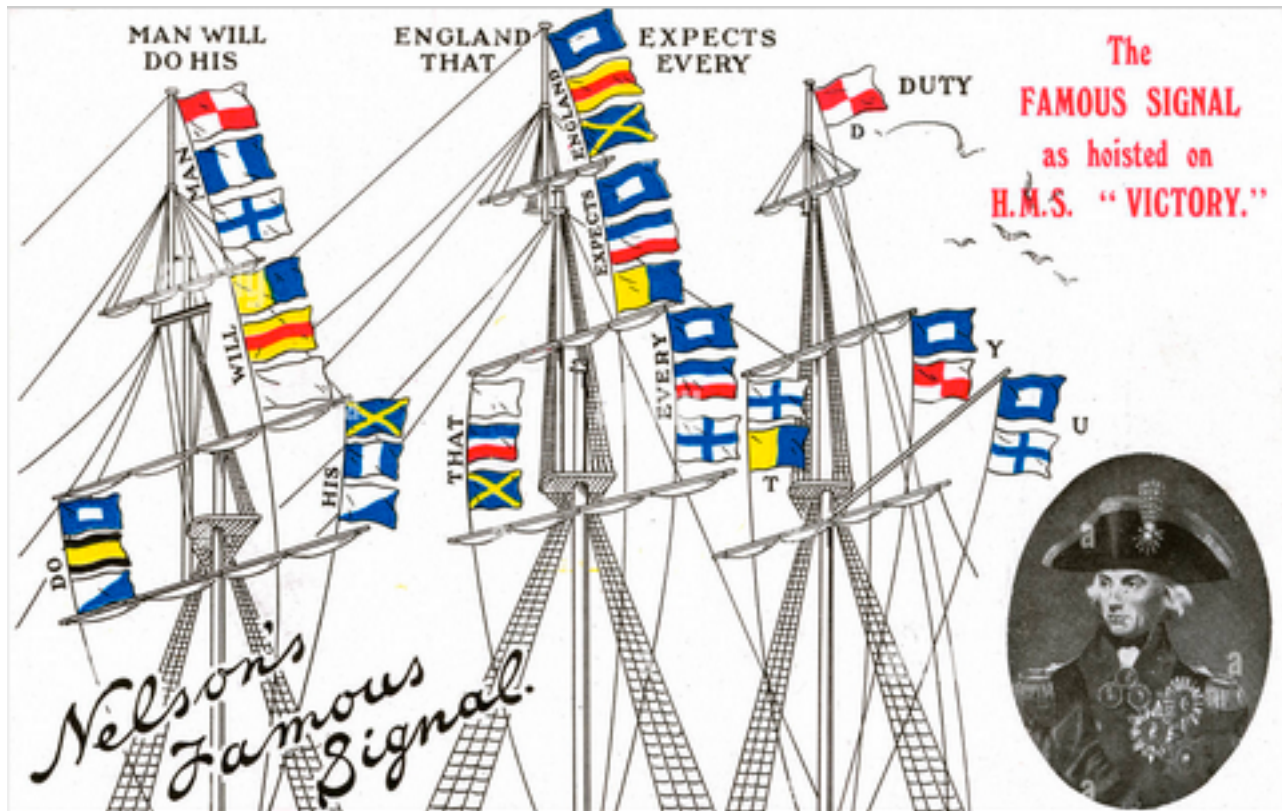
A heliograph (from Greek 'sun' and 'write') is a **semaphore system that signals by flashes of sunlight (generally using a pre-arranged code or later Morse code) reflected by a mirror**. The flashes are produced by momentarily pivoting the mirror, or by interrupting the beam with a shutter.

Ships used flags the most famous signal being



Flag Communication

So by the 17th Century we had some crude communication



England expects that every man will do his duty



A History of Communication

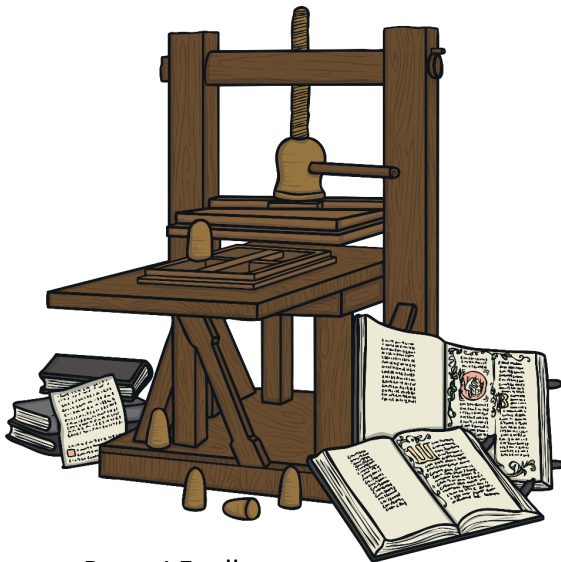
Monks & Priests usually copied written works, taking years to complete one book, using ink and paints



But In the 1440s, a man named Johann Gutenberg invented a machine that could print many books quickly. Before this time, books were handwritten and this meant that there were not many books available to buy or read. With the invention of the printing press we could communicate reading news sheets and later newspapers and magazines by

1450, we had a printing Machine perfected and Ready to use commercially:

The Gutenberg press



A History of Printed Communication

Early Newspapers were crowded full of mainly text



1899 Magazine



1912 News



Newspapers
Magazines



Modern newspapers



Paper Communication

People used pen and paper to write letters and this was a very popular way of communicating. In the 1800s, official postal systems were set up all over the world, to deliver letters and parcels. However, sometimes the system was unreliable because it took a long time for a letter to reach its destination and sometimes letters could be lost and never arrived at their destination.



The invention of paper replace parchment scrolls and we saw the beginnings of letter post

The Pony Express was an American express mail service that used relays of horse-mounted riders. It operated from April 3, 1860, to October 26, 1861, between Missouri and California. It was operated by the Central Overland California and Pikes Peak Express Company.



A carrier pigeon is a pigeon that has been trained to carry messages from one point to its home. A message is attached to the pigeon's foot. Carrier pigeons were used in the First World War so that people were not at risk delivering important messages through war zones.





Mobile Communication

Hand signals

Hand signals (called sign language) are commonly used by people who are deaf. However, many people use other hand signals in their daily lives, especially in their work. For example, a ground handler directs an airplane to its parking position and a police officer uses hand signals when directing traffic.



<https://designanddigitaltechnology.wordpress.com/2014/06/06/communicationtechnology/>



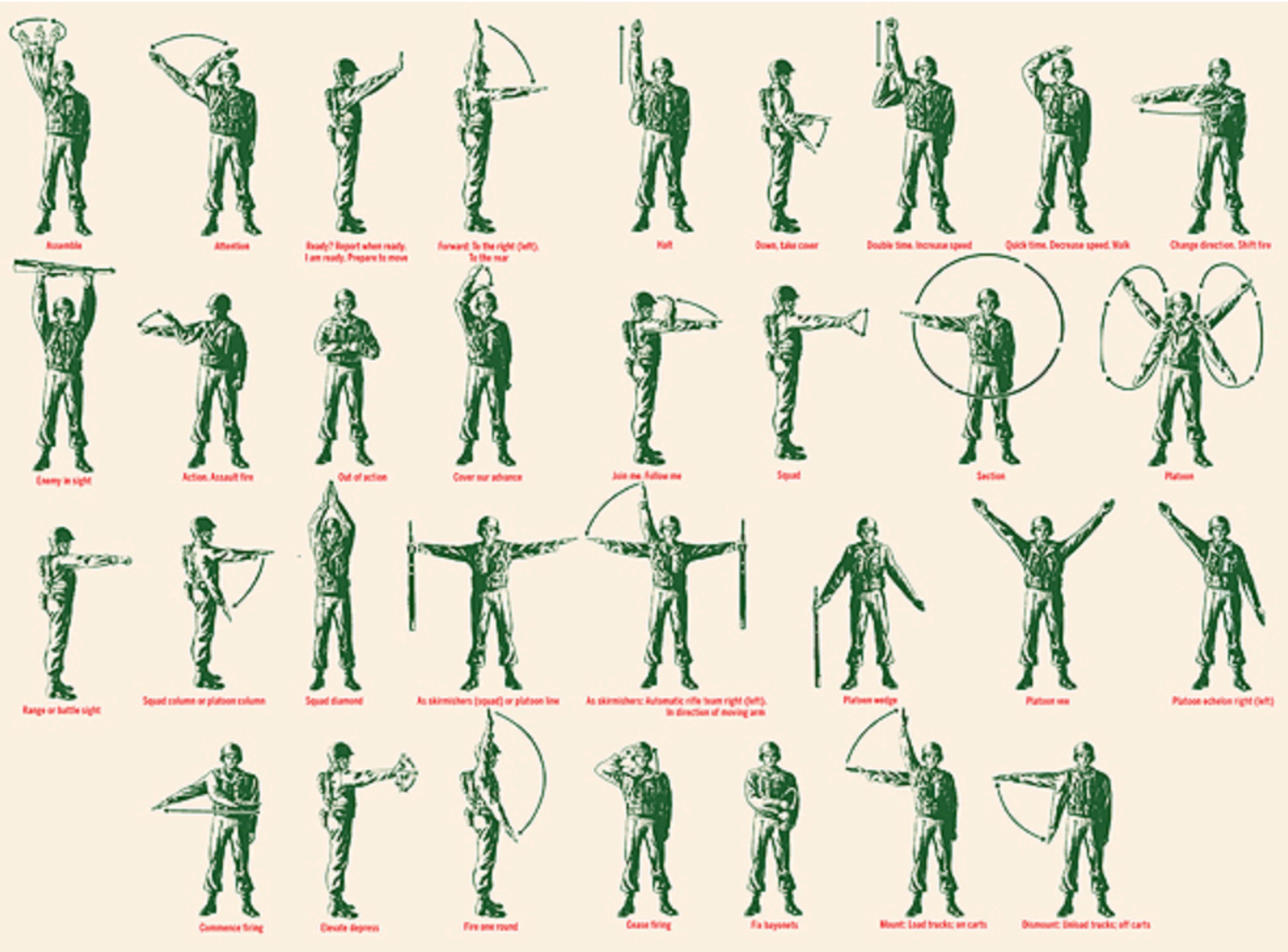


Mobile Communication

Hand Signals

Army

Navy use
heliograph



<https://designanddigitaltechnology.wordpress.com/2014/06/06/communicationstechnology/>



Networks

When did networks begin Morse Code

Radiotelegraphy and aviation. **In the 1890s, Morse code began to be used extensively for early radio communication before it was possible to transmit voice.** In the late 19th and early 20th centuries, most high-speed international communication used Morse code on telegraph lines, undersea cables, and radio circuits. Morse developed the concept of a single-wire telegraph.

In time, the [Morse code](#) that he developed would become the primary language of telegraphy in the world.

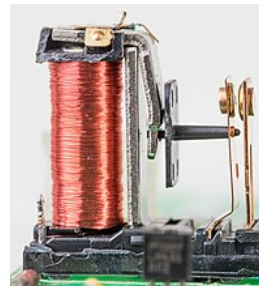
Cooke and Wheatstone formed a partnership and patented the electrical telegraph in May 1837, and within a short time had provided the [Great Western Railway](#) with a 13-mile (21 km) stretch of telegraph. However, within a few years, Cooke and Wheatstone's multiple-wire signaling method would be overtaken by Morse's cheaper method. Morse encountered the problem of getting a telegraphic signal to carry over more than a few hundred yards of wire. Morse introduced extra circuits or [relays](#) at frequent intervals and was soon able to send a message through ten miles (16 km) of wire.



International Morse Code

1. The length of a dot is one unit.
2. A dash is three units.
3. The space between parts of the same letter is one unit.
4. The space between letters is three units.
5. The space between words is seven units.

A	● ■	U	● ● ■
B	■ ● ● ●	V	● ● ■ ■
C	■ ■ ● ■	W	● ■ ■ ■
D	■ ● ●	X	■ ● ● ■
E	●	Y	■ ● ■ ■
F	● ● ■ ●	Z	■ ■ ● ●
G	■ ■ ●		
H	● ● ● ●		
I	● ●		
J	● ■ ■ ■		
K	■ ● ■ ■	1	● ■ ■ ■ ■
L	● ■ ● ●	2	● ● ■ ■ ■
M	■ ■ ■	3	● ● ● ■ ■
N	■ ■ ●	4	● ● ● ● ■
O	■ ■ ■ ■	5	● ● ● ● ●
P	● ■ ■ ■ ●	6	■ ● ● ● ●
Q	■ ■ ■ ● ■	7	■ ■ ■ ● ●
R	● ■ ■ ●	8	■ ■ ■ ■ ● ●
S	● ● ●	9	■ ■ ■ ■ ■ ●
T	■	0	■ ■ ■ ■ ■ ■



A relay

Wire Poles
carry signals

A History of Communication

Morse - Electrical Telegraph

In the 1800s, telegraphic communication was invented which involved sending electric signals through a wire. A well-known version of the electrical telegraph is Morse code. Morse's code used dots and dashes, which were short and long pulses, sent through the wire to match letters and numbers.

This type of communication allowed for instant communication across very long distances, which was something that had never been done before.

A	●—	N	—●
B	—●●●	O	— — —
C	—●—●	P	●— — ●
D	—●●	Q	— — ● —
E	●	R	●—●
F	●●—●	S	●●●
G	— — ●	T	—
H	●●●●	U	●●—
I	●●	V	●●●—
J	●— — —	W	●— —
K	—●—	X	—●●—
L	●—●●	Y	—●— —
M	— —	Z	— — ●●



Networks

When did networks begin - Marconi

Marconi was convinced that communication among people was possible via wireless radio signalling. In 1895, he began to experiment at his father's home in Pontecchio, where he was soon able to send signals over one and a half miles.

https://en.wikipedia.org/wiki/Guglielmo_Marconi



Marconi spark key used on Titanic



Titanic The role played by Marconi Co. wireless in maritime rescues raised public awareness of the value of radio and brought fame to Marconi, particularly the sinking of the [RMS Titanic](#) on 15 April 1912. [RMS Titanic](#) radio operators [Jack Phillips](#) and [Harold Bride](#) were not employed by the [White Star Line](#) but by the [Marconi International Marine Communication Company](#). After the sinking of Titanic on 15 April 1912, survivors were rescued by the [RMS Carpathia](#) of the [Cunard Line](#). The Carpathia took a total of 17 minutes to both receive and decode the SOS signal sent by the Titanic. There was a distance of 58 miles between the two ships. After this incident, Marconi gained popularity and became more recognised for his contributions to the field of radio and wireless technology. **S O S Became the universal signal for help. All ships had to keep their radios on at all times.**

For aircraft **The "mayday"** procedure word was conceived as a distress call in the early 1920s by Frederick Stanley Mockford, officer-in-charge of radio at Croydon Airport, England. He had been asked to think of a word that would indicate distress and would easily be understood by all pilots and ground staff in an emergency.



A History of Music

Music was created thousands of years ago

The first-ever written piece of music, presented in a cuneiform “alphabet”, was found in Syria and it probably dates back to 3400 years ago. Usually music was created probably drum-based, percussion instruments being the most readily available at the time (i.e. rocks, sticks). Then a flute and eventually other instruments appeared. Leading to great musicians and orchestras

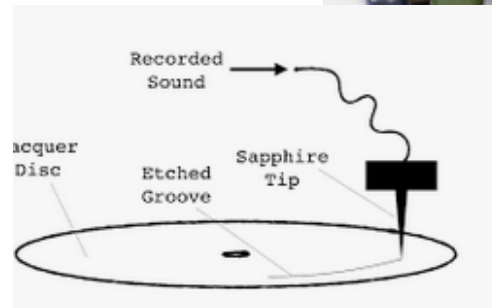


A History of Music

Music was produce for listeners about two hundred years ago

Early music was first transmitted after after Edison invented the phonograph in 1877 invention of the first phonograph, Edison established the Edison Phonograph Company. After making many improvements, it produced spring-powered phonographs in great numbers.

These phonographs, equipped with trumpet-type horns and called “suitcase” phonographs,



Then music was recorded on disc 78rpm, 45rpm and 33rpm



A History of Communication

Radio Crystal Tuning, Radio Wireless

Early radios relied on a frequency and a tuner to tune into the signal, thanks to **Marconi**



Radios send messages by radio waves in the air, instead of through wires. In the early 1920s, people spent hours listening to stations that were broadcasting news, music, sports, drama and variety shows.

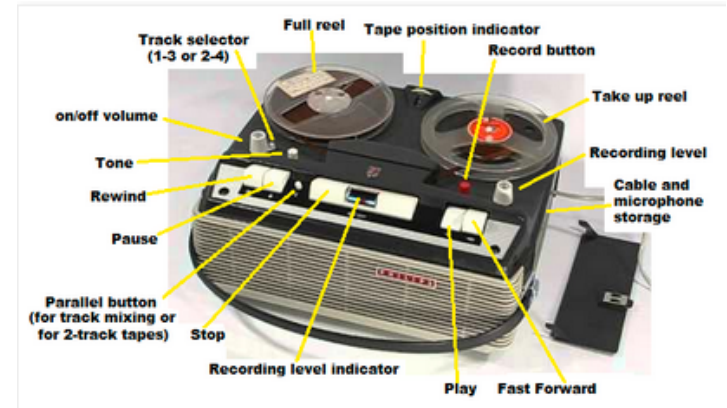
As radios further developed we added tape recording for the first multimedia devices Ghetto Blasters



A History of Communication

Tape to digital

Reel to reel tape recorder appeared and then 8 track tape discs then Cassette Tape and eventually CD Rom and DVD to digital using Binary code to convert sounds to computer base sounds.



Reel to Reel recorder



8 Track Disc



Cassette Tape



Digitized music



CD Discs



A History of Communication

Telephone using line communication

In the late 1800s, a man named Alexander Graham Bell invented the first telephone using wire to transmit voices over long distances.

Early phones needed to be fixed with wires



A History of Communication

Brick Phone to Mobile Telephone

But with modern technology, telephone calls can be sent through radio waves or satellites, which makes them cordless.

Modern mobile phones can not only make phone calls but they can be used for text messaging, taking photos, playing games and accessing the Internet. Over the years, phones have also become smaller and

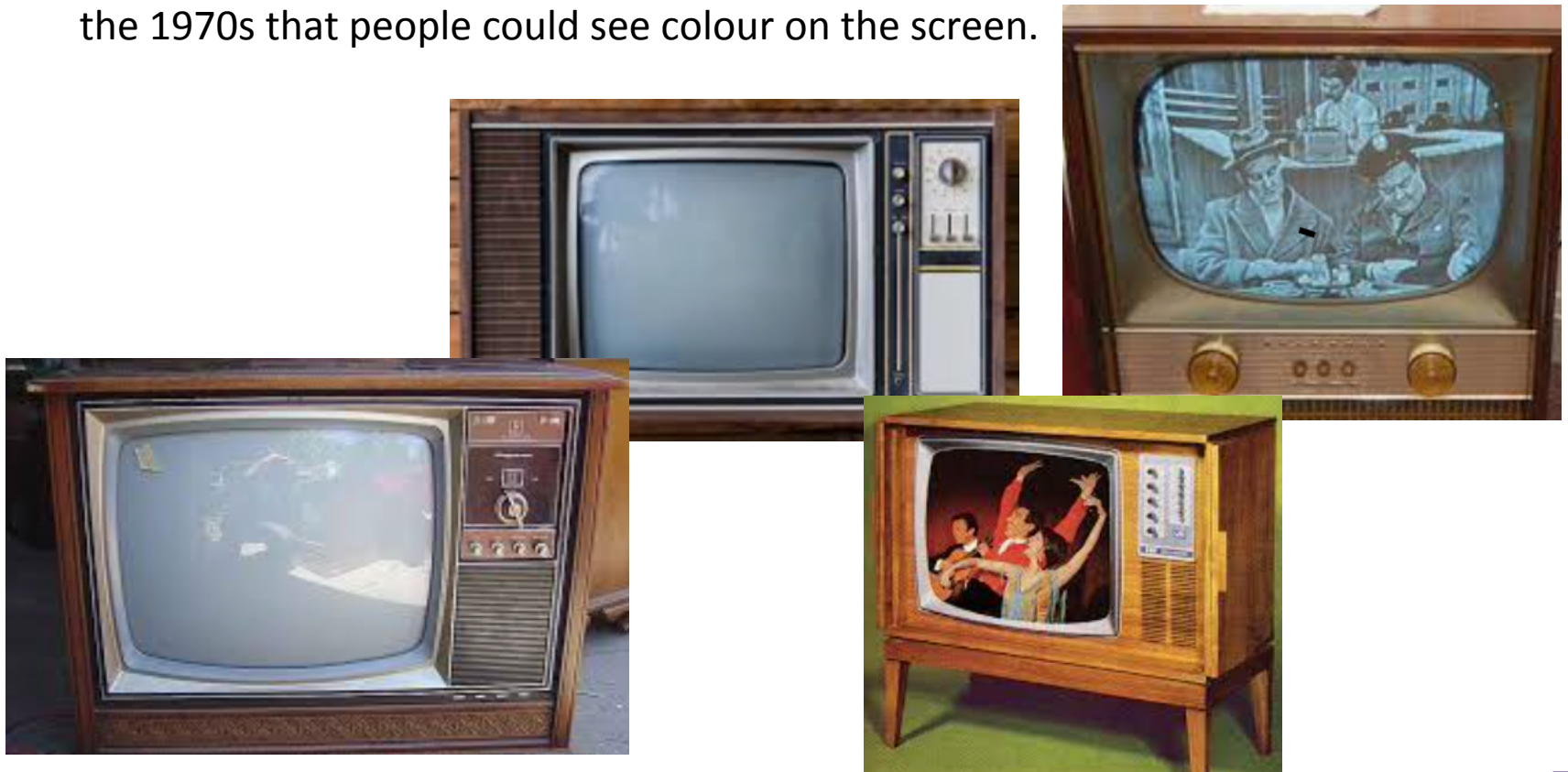
lighter to carry. These days, people can not only hear each other talking, but they have a small screen that allows people to see each other as well.



A History of Communication

Television

The invention of television in the 1920s was a breakthrough in technology because it was the first time sound and pictures could be sent over the air. At first, television images were only displayed in black and white and it wasn't until the 1970s that people could see colour on the screen.



A History of Communication

Television

In 1990, LED (Liquid Crystal Display) TV appeared, leading to larger flatter screens. Despite having a different acronym, LED TV is just a specific type of LCD TV, which uses a [liquid crystal display \(LCD\)](#) panel to control where light is displayed on your screen. These panels are typically composed of two sheets of polarizing material with a liquid crystal solution between them.

An OLED display uses a panel of pixel-sized organic compounds that respond to electricity. Since each tiny pixel (millions of which are present in modern displays) can be turned on or off individually, OLED displays are called “emissive” displays (meaning they require no backlight).



A History of Communication

Computers 1970's

In the early 1940s, the first electric computer was created but it was very large and not like the computers we use today. Since then, inventors have transformed the way computers work so that they are faster, more mobile, more powerful and multifunctional.



A History of Communication

Computers 1980's

A range of new computers hit the market like the Commodore 64. and more famous the Apple II
Others include :- ZX Spectrum., IBM PC 5150.
Apple Macintosh. Commodore VIC-20.
Amstrad CPC 464., BBC Micro., ZX Spectrum +2.



Commodore 64

Apple II who is this?



Amstrad CPC 464.



A History of Communication

Computers 1980's

Along with the invention of the Internet in the 1990s, people became interconnected through computer networks that link computers worldwide. There are many popular ways of communication over the internet, such as email, social networking and instant messaging.



The perfect choice for high-performance family computing

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- 25MHz 68040 processor
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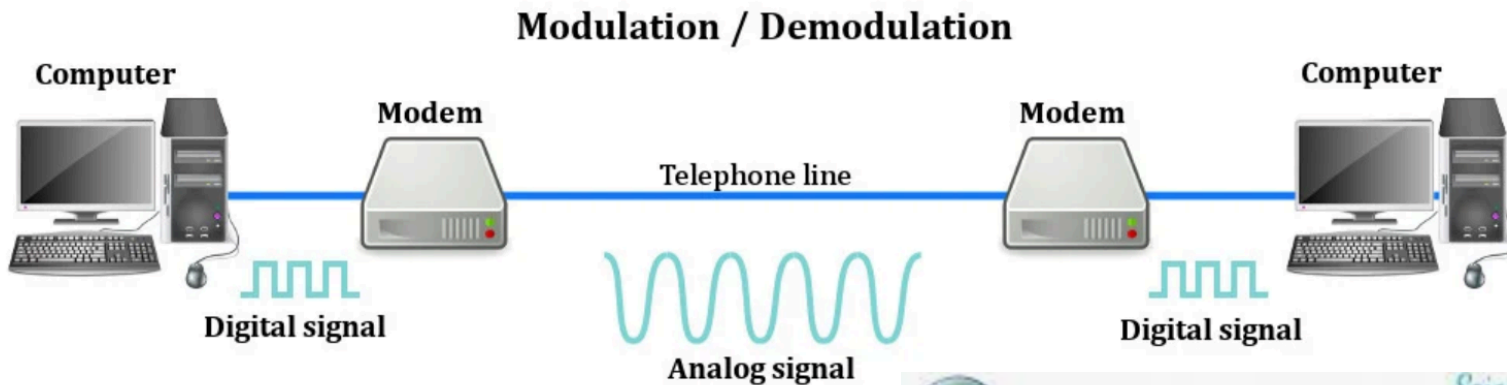
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Computers 2000's

Along with the invention of the Internet in the 1990s, people became interconnected through computer networks that link computers worldwide. There are many popular ways of communication over the internet, using a modem to convert signals this enables communication via email, social networking and instant messaging.



Modem

