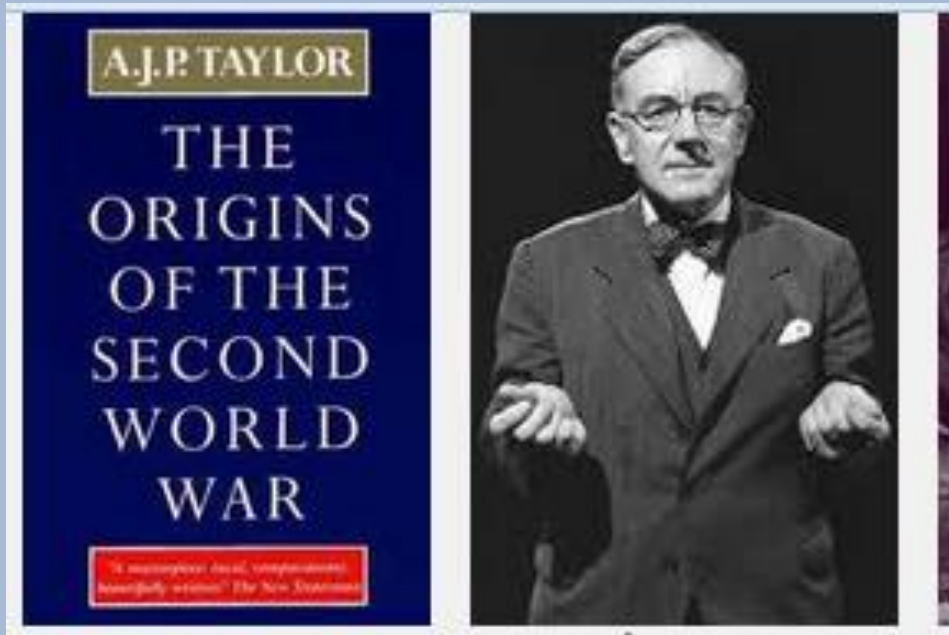
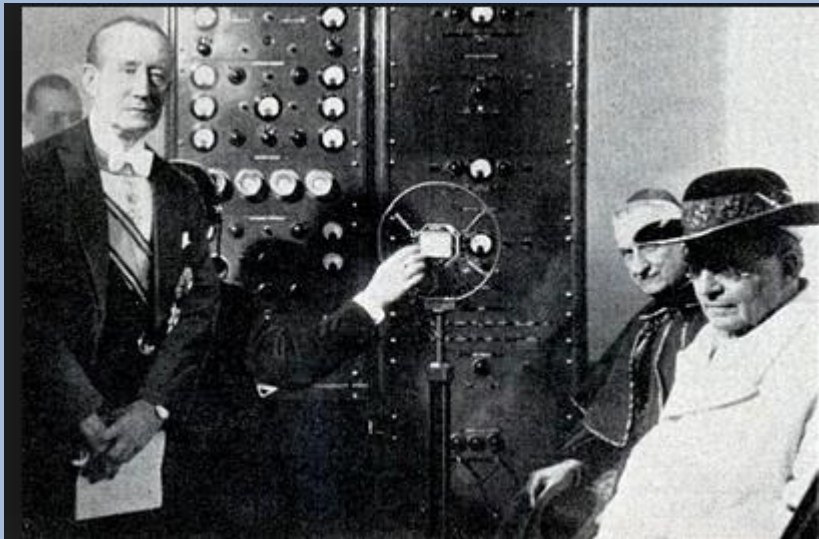


- ◆ The Wireless War
- ◆ Did Wireless cause the Second World War?



- ◆ Vatican Radio February 11 1931
- ◆ Pope Pius XI and Marconi





- ◆ Vatican Radio
- ◆ Two shortwave frequencies using 10 kilowatts of power
- ◆ 1933, permanent microwave link between the Vatican Palace and Castel Gandolfo
- ◆ 1936 ITU recognised Vatican Radio as a special case and authorized its broadcasting without any geographical limits.
- ◆ 1937, upgraded with a 25 kW transmitter and two directional antennas



- ◆ George V Christmas Message
- ◆ 1932



Sandringham connected to the Empire Broadcasting Station at Daventry  
Six short-wave transmitters reaching an audience of 20 million in  
Australia, Canada, India, Kenya and South Africa.

"I speak now from my home and from my heart to you all; to men and  
women so cut off by the snows, the desert, or the sea, that only voices  
out of the air can reach them." Rudyard Kipling

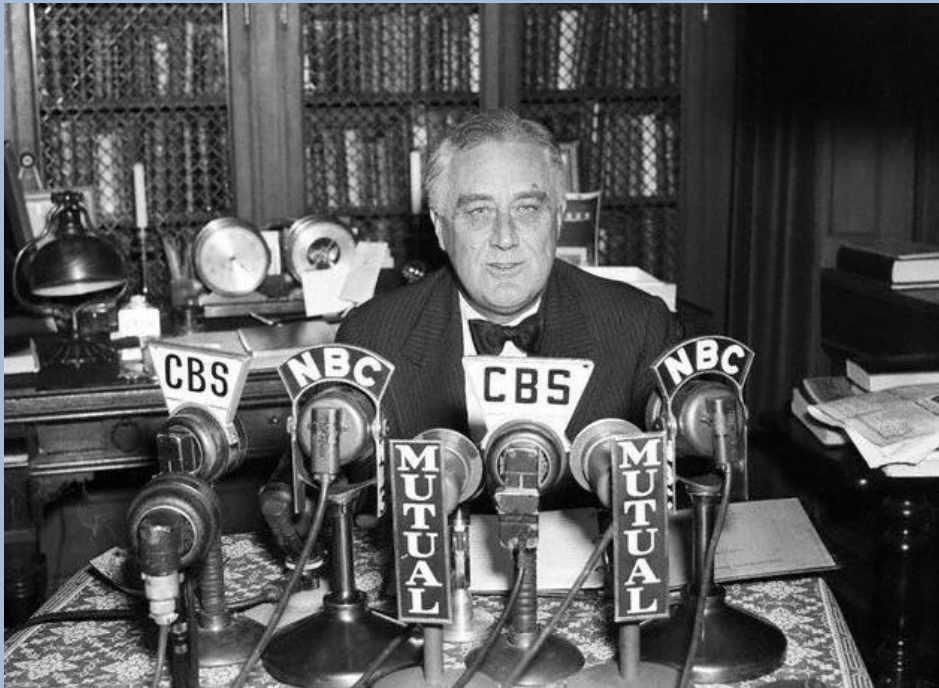
- ◆ 1933 Droitwich long wave transmitter replaced Daventry 5XX equipment.
- ◆ November 1936 BBC started the world's first high definition television (405 line) service from Alexandra Place transmitting in VHF band 1 from 47 to 88 MHz



- ◆ Marconi Emitron camera 1936 George V1 Coronation 1936 and addresses the nation on the outbreak of war 1936



- ◆ Franklin D. *Roosevelt's Fireside Chats 1933 to 1944*  
Fireside Chat on Banking, March 12th, 1933





◆ Mussolini's microphone

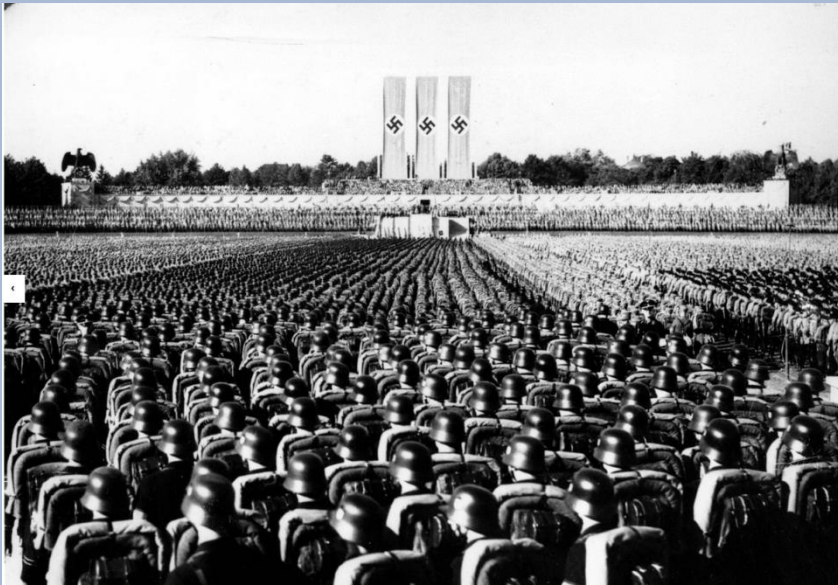




◆ Nuremberg 1934 Hitler's Neumann microphone



◆ 160,000 Germans 1934 Nuremberg



- ◆ Leni Riefenstahl's *Triumph des Willens* (1935; Triumph of the Will),



◆ Olympics 1936





- ◆ Was it all Hitler's fault?
- ◆ History seen through the looking glass of the post war Nuremberg Trials – the war had to be all Hitler's fault for the prosecutions to be valid
- ◆ Hitler's army, navy and air force unprepared in 1939
- ◆ Invaded Austria by accident - 70% of the German tanks broke down between the border and Vienna
- ◆ Poland the first time Hitler's bluff had been called in ten years

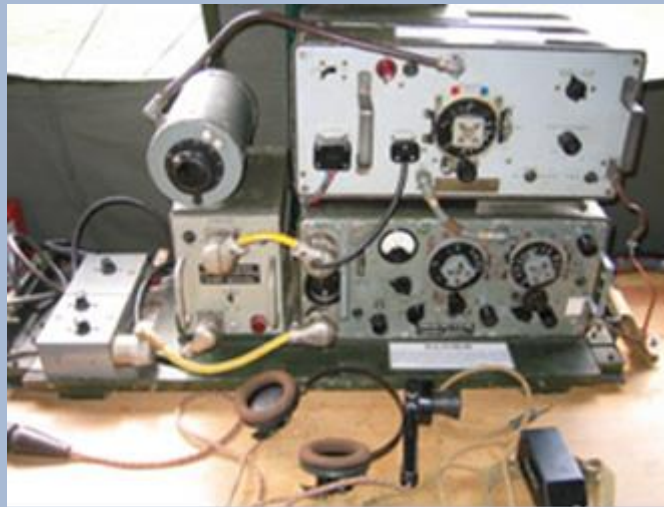


- ◆ Did wireless win the war?
- ◆ The valve that won the war?



High gain low capacitance series of all glass valves for television receivers in areas with weak reception

- ◆ The radio that won the war?
- ◆ WS19 Pye dual band wireless set



1939 German infantry using short wave for back to base communications and VHF for short range

Dual band short wave/VHF radio developed as a response



- ◆ Radar?
- ◆ High gain broadband 45 MHz IF amplifiers, borrowed from a pre war TV receiver



- ◆ The aeroplane that won the war?
- ◆ 1931 Lady Lucy Houston professional dancer and chorus girl donates £100,000 to the Super Marine Aircraft Company to win the Sneider Trophy at 600 kph
- ◆ The Grace Spitfire – shot the first German aircraft down over the Normandy beaches in June 1944



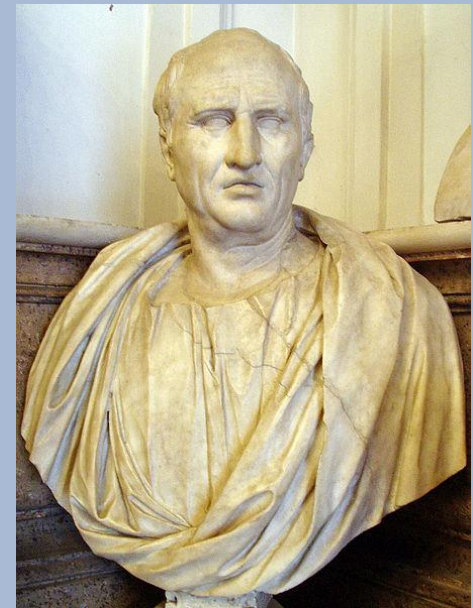
## ◆ The voice that won the war?



‘We shall fight them on the beaches;  
we shall fight them in the hills’  
TV and long wave radio broadcasting  
suspended during the war and  
medium wave reconfigured to make it  
harder to use as a homing beacon for  
German bombing raids



- ◆ Cicero 100 BC
- ◆ 'The sinews of war... a limitless supply of money'





- ◆ Victory goes to the side that makes fewest mistakes.
- ◆ If it hadn't been for Wellington we would all be speaking French
- ◆ If it hadn't been for Hitler we would all be speaking German
- ◆ Hitler's catastrophic faith in cryptography but biggest mistake declaring war on Russia and America- the world's two largest economic powers
- ◆ Churchill – 'America can always be relied upon to do the right thing, having exhausted all other alternatives'



◆ Post war two way radio – The MG years



Mullard GME501 installation in MG TC Midget c.1948

◆ Police radio – wearable wireless



PC using Motorola personal radio c. 1960

<http://www.rttonline.com/wirelessheritage.html>



PC with Lanson personal radio Tx/  
Rx 1963