

The **Key Milestones** in Modern Communications Technology



Improved global communications has in many respects defined the modern age more than any other ICT technology, and perhaps more than any single technology. Although this is clearly the achievement of humanity in general and a lot of dedicated engineers in particular it is worth highlighting some of the sometimes insufficiently-known individuals who have led the charge.

We note, too, that the UK has contributed far above its weight to this revolution and that this contribution continues to the present day. UK contributions are noted in bold below.

Key Milestones:-

Wireless	Guglielmo Marconi - Nobel prize 1909
The Telephone	Alexander Graham Bell (1876)
Optical Fibre	Charlie Kao - Nobel prize 2009
The IP (internet protocol)	Vint Cerf (early '70s)
WWW (web)	Tim Berners-Lee - Millenium prize 2004
Cellular Radio	D H Ring of Bell Labs in 1947
Packet switching	Donald Davies of NPL (mid '60s)
Modern Information Theory	Claude Shannon ('40s)
The Integrated circuit	(idea) Geoffrey Dummer (1952) (realisation) Jack Kilby/Robert Noyce (1958)

Note that Marconi and Kao did their key work in the UK but were born abroad, and Bell was British although his famous work was done in the US - so this is a truly global enterprise!

One could also argue for other things (such as Ambrose Fleming's early work on the valve at UCL, London, the Russian work on diode lasers, or Payne's work on fibre amplifiers and many other possibilities) but this serves only to emphasize the depth of engineering and global effort necessary to make a complex system like a modern communications network work.

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