English Electric Co. Ltd.

Four firms joined together in 1918 to form English Electric Co. Ltd. The new company's principal factories were at Stafford, Preston, Rugby and Bradford. In 1942 English Electric acquired D Napier & Son Ltd., who manufactured automobile, marine and aero engines. Finally in 1946, English Electric acquired the Marconi group of companies. The radio pioneer Guglielmo Marconi (1874 – 1937) had founded his *Wireless Telegraph & Signal Company* in 1897. By 1946 Marconi's activities spanned electronics, communications and especially radar, with their main factories being in the Chelmsford region. Marconi brought electronics expertise to English Electric, though for the next 20 years there remained a cultural gap between English Electric and Marconi. For example, the latter designed and sold its own computers until 1964 (see below).

By the end of the Second World War English Electric was a powerful engineering organisation with a wide product range and a payroll of nearly 30,000 employees. Further expansion occurred in 1955, when two locomotive manufacturing companies joined the group. By the early 1960s, English Electric was particularly well-known for its Canberra jet bomber, Lightning supersonic fighter aircraft and the Deltic diesel-electric locomotive.

In common with most engineering firms at the time, English Electric had an internal need for better computing resources. In 1949 the company chairman Sir George Nelson, who was a member of the Executive Committee of the National Physical Laboratory (NPL), seconded a small group of engineers to help with the development of the NPL Pilot ACE computer. The company then improved the design and in 1955 produced a commercially-available version of Pilot ACE called DEUCE. 33 DEUCE computers were built, of which 12 remained in operation within English Electric.

English Electric went on to design several more computers, most of which were intended for the scientific and engineering market and, latterly, for industrial process control. In 1963 the company joined forces with Leo Computers Ltd. Then in 1964 Marconi's computer interests came on board, forming the English Electric Leo Marconi (EELM) combination. The EELM System 4, announced in September 1965, was compatible with the IBM System/360 range of computers.

In 1967 English Electric merged with Elliott-Automation. Then in 1968 the take-over of English Electric by GEC was agreed. (The General Electric Co. (GEC) had its origins in an electrical goods wholesaler established in London during the 1880s). Shortly afterwards, the mainframe computer business of English Electric Computers Ltd. was formally merged with that of International Computers & Tabulators (ICT), the result being re-named International Computers Limited (ICL). This brought the System 4 and the Elliott 4100 series computers into the ICL stables. The remaining process control and military computer activities of English Electric and Elliott-Automation were carried on by a company called Marconi-Elliott Computer Systems Ltd. (MECS), within the GEC empire. MECS was re-named GEC Computers Ltd. in 1971. In 1999 most of GEC, except for the defence-related sections known collectively as Marconi Electronic Systems, was re-named Marconi plc. At about the same time, British Aerospace purchased Marconi Electronic Systems to form BAE Systems. At this point the name GEC vanished from public gaze. In 2006 the name Marconi also effectively disappeared after massive financial losses.

The English Electric computers featured on the *Our Computer Heritage* site are:

Group	Computers	Dates first working	Relative size	Initial target applications
N1	DEUCE	1955	Medium	General
N2	KDF9	1963	Large	General

Within the *Our Computer Heritage* time-frame of 1950 – 1965, the following English Electric computers have not been included in the current version of this website: KDN2 (1962), KDP10 (1962), KDF6 (1963), KDF8 (1964) and KDF7 (1965).   The KDN2 was a small computer developed for process control. From this design, two related small computers (the KDF6 and KDF7) were developed. The KDP10 was a version of the American RCA501 computer, intended for commercial data processing. The KDP10 was later upgraded and re-designated as the KDF8.

For further reading on the background to DEUCE, see: *Turing's legacy: a history of computing at the National Physical Laboratory, 1945 – 1995* by David Yates. Published by the Science Museum, London, in 1997. ISBN: 0-910805-94-7.