UNIVERSITY OF CAMBRIDGE

Obituaries

Sir Maurice Wilkes, DFBCS FREng FRS

It is with sadness that we announce the death of Sir Maurice Wilkes on 29 November 2010.

Sir Maurice, 97, one of the pioneers of British Computing, was Head of Department from 1946 until 1980.

His contributions have been immense and long lasting, and he will be sorely missed.

Media obituaries

- Guardian
- Independent
- Telegraph
- BBC News
- The Register
- PC Pro
- TechEYE
- MicroScope
- ComputerWeekly
- Cambridge News

See also

- His homepage
- The Relics Project – historic information about the Computer Laboratory

Maurice V. Wilkes

Short Biography

Maurice V. Wilkes was born in England in 1913. He went up to Cambridge University in 1931 and studied mathematical physics and other subjects. In 1934 he became a graduate student in the Cavendish Laboratory doing experimental research on the propagation of radio waves in the ionosphere. This led to an interest in tidal motion in the atmosphere and his first book was on this subject. It also led to an interest in computing methods and, when he returned to Cambridge in 1945 after war service, he became head of the Computer Laboratory, then called the Mathematical Laboratory.

In the summer of 1946, Wilkes attended the famous Moore School lectures on electronic computers in Philadelphia. On his return, he set about building the EDSAC which began to work in May 1949. In 1951, he published with two colleagues the first book to appear on computer programming. At this time, he put forward his proposals for microprogramming, a system which later became adopted widely in the industry. In 1965, he published the first paper on cache memories, followed later by a book on time-sharing.

In 1974, it appeared to Wilkes that the time had come when local area networks based on traditional telecommunication technology might profitable be replaced by networks of much wider bandwidth based on computer technology. The design study for what became known as the *Cambridge Ring* was published in 1975. The *Cambridge Model Distributed System*, a pioneering client-server system, described by Wilkes and Needham in 1980, was based on this ring.

Since 1980 Wilkes has worked in industry, first with DEC in Massachusetts and later with the Olivetti Research Laboratory in Cambridge, England. This laboratory was acquired by AT&T in 1999. In 2002, Wilkes moved back to the Computer Laboratory, University of Cambridge, where he is an Emeritus Professor.

Wilkes is a Distinguished Fellow of the British Computer Society, a Fellow of the Royal Society, and a Fellow of the Royal Academy of Engineering. He is a Foreign Associate of both the US National Academy of Sciences and the US National Academy of Engineering. In 1981, he received the Faraday Medal from the Institution of Electrical Engineers in London and in 1992 he received the Kyoto Prize for Advanced Technology.

In 1967, Wilkes delivered the ACM Turing Lecture and in 1980 he received the Eckert-Mauchly award from the IEEE Computer Society and the ACM. His books include *Memoirs of a Computer Pioneer* (MIT Press, 1985) and *Computing Perspectives* (Morgan-Kaufmann, 1995).

Sir Maurice Wilkes obituary - Guardian

Scientist who built the first practical digital computer

- Jack Schofield
- guardian.co.uk, Tuesday 30 November 2010 18.00 GMT
- Article history

Wilkes with the Witch computer at the National Museum of Computing, Bletchley Park, in 2009. Photograph: John Robertson

Sir Maurice Wilkes, who has died aged 97, was the most important figure in the development of practical computing in the UK. Not only did he lead the development of EDSAC, the first stored-program digital computer to go into service in the 1940s, he and his colleagues at Cambridge University also made significant contributions to software development, and built one of the first high-speed distributed computing networks, the Cambridge Ring. His vision was less about producing bleeding-edge designs than about developing machines that could reliably do calculations for the university's scientists and engineers – people like himself. In the early 1950s, EDSAC, the Electronic Delay Storage Automatic Calculator, was the basis for the world's first business computer, LEO (the Lyons Electronic Office), which was used to run the operations of the eponymous tea-shop company.

Wilkes considered himself lucky to be in at the birth of the computer industry that grew out of the wartime development of ENIAC, the Electronic Numerical Integrator and Computer, which had calculated shell trajectories for the US army. The Americans planned to follow this with a more sophisticated machine that could run stored programs, and Wilkes was given an overnight loan of John von Neumann's seminal paper, First Draft of a Report on the EDVAC, the Electronic Discrete Variable Automatic Computer, which explained the concepts. Wilkes

recognised that this approach was the future – computers became known as "Von Neumann machines".

In 1946, he was invited to lectures on the Theory and Techniques for Design of Electronic Digital Computers at the University of Pennsylvania, the birthplace of ENIAC. Wilkes got there late, but met many of the American computer pioneers, including Harvard University's Howard Aiken and ENIAC's developers, John Mauchly and Presper Eckert. He thus become one of relatively few people who had some idea how to build a computer, in theory, and began to sketch the design of EDSAC on the Queen Mary on the way home.

Building a stored-program computer was still a huge challenge, but Wilkes had the determination and the means to do it. After returning from his work on radar during the second world war, he had been made head of the Mathematical Laboratory, which later became the Cambridge Computer Laboratory. "I didn't have to ask anybody, 'Could I build a computer, please?'," he wrote later. "I didn't have to arrange any budget. I was in charge and I could go ahead. I was the only one who knew anything about building computers, so if I said, 'You build a computer this way', they said, 'Yes, right, that's the way.'"

By today's standards, EDSAC was amazingly primitive. It used valves – vacuum tubes – for computation, like ENIAC and Colossus, Bletchley Park's secret code-breaking machine. Its first memory units used sound beams traversing baths of mercury, which required very precise manufacturing. But EDSAC was up and running in 1949, and performed useful calculations for many years. "We never tried with the EDSAC to exploit to the full the technology of the time, because even a slow electronic computer would be so fast. You don't want to take a bigger jump than you need," he said. The jump from mechanical to electronic computation was the biggest jump there was.

In the days when computers were big, expensive things, they could earn their keep by taking on a small number of very large tasks. Wilkes had other ideas. He envisaged EDSAC performing relatively large numbers of smaller tasks for Cambridge researchers working in fields such as mechanics, economics, crystallography and radio astronomy. This led Wilkes and his team to develop ways to make computers easier to program and to use. In 1951, Wilkes and two colleagues published the first book on computer programming: The Preparation of Programs for an Electronic Digital Computer.

Wilkes also came up with the idea of microprogramming as a way of controlling the computer's operations, by building complex high-level instructions from small ones – microcode. The lab's second valve-based machine, EDSAC 2, which came into operation early in 1958, was the first

computer to have a microprogrammed control unit. The technique was used later in the IBM 360 mainframe, and became a fundamental part of modern computing.

He also helped pioneer networking, having seen some early work in digital telephony at the telecommunications firm of Hasler in Berne, Switzerland. He immediately saw the potential for using the technology to connect computers instead, and started the Cambridge Ring project long before the idea of computer networking became fashionable. Some commercial Rings were installed, but the industry adopted Ethernet instead.

Wilkes was born in Dudley, Staffordshire, to Vincent and Ellen Wilkes. He was very proud of his father, who had started working for the Earl of Dudley's estate as a 16-year-old office boy and worked his way up. He attended the King Edward VI school, in Stourbridge, and in 1931 went to St John's College, Cambridge, where he studied mathematical physics. As a graduate student in the Cavendish Laboratory, he researched the propagation of radio waves in the ionosphere, gaining his PhD in 1938. After returning to Cambridge in 1945, he became head of the Mathematical Laboratory (1946-70), head of the Computer Laboratory (1970-80), and in 1985 published Memoirs of a Computer Pioneer.

After "retiring" from Cambridge University, he worked for DEC (Digital Equipment Corp), the US minicomputer giant, and was adjunct professor at MIT in Cambridge, Massachusetts. He enjoyed it a lot, and said he wished he had worked in industry sooner. Back in Cambridge, he worked at the Olivetti Research Laboratory before rejoining the Computer Laboratory in 2002 as an emeritus professor. David Hartley – his former student, later colleague (as director of the university's Computing Service) and longtime friend – said he continued to go in to work there until his mid-90s.

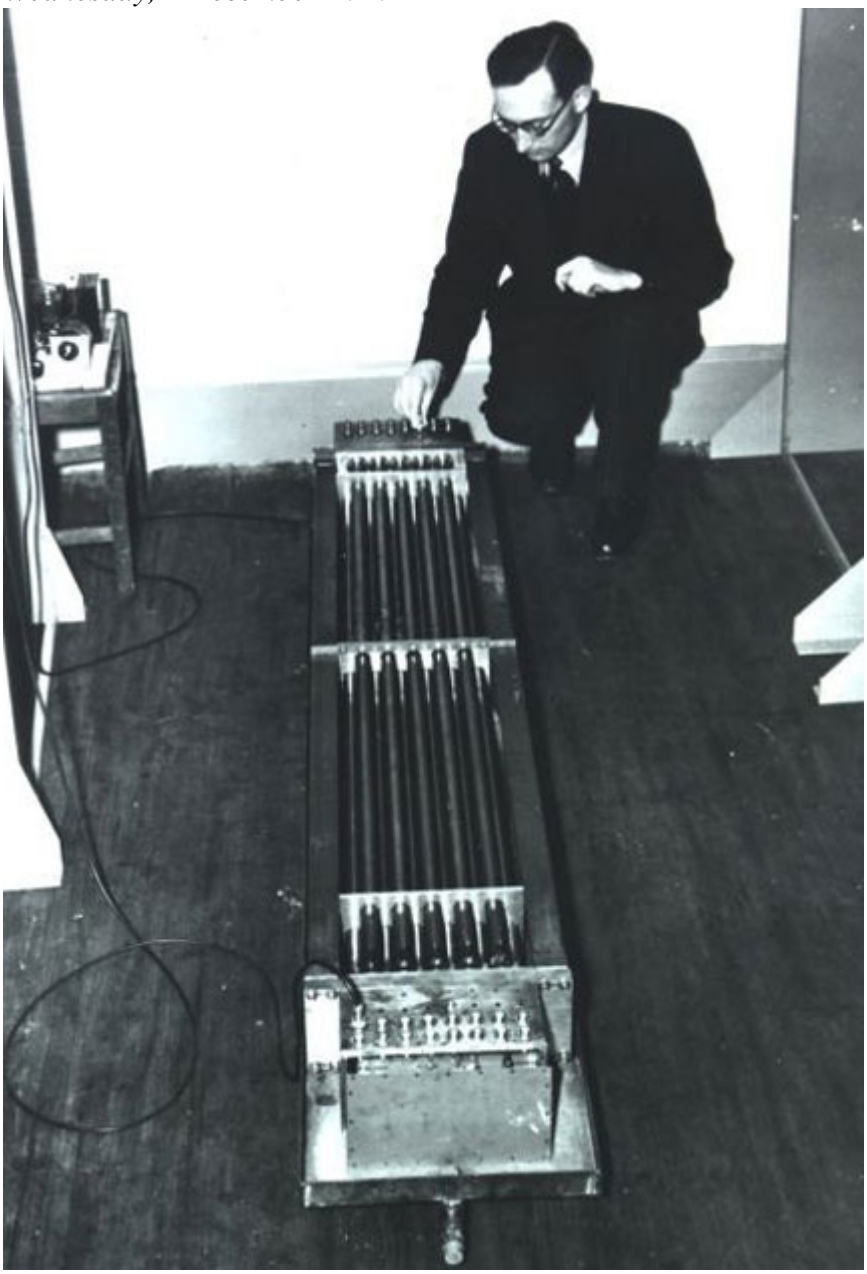
Wilkes was the first president of the British Computer Society, a fellow of the Royal Society, and a fellow of the Royal Academy of Engineering. His numerous awards included the Faraday medal from the Institution of Electrical Engineers in London, and in 2000 he was knighted.

In 1947, Wilkes married Nina Twyman, a classicist he had met in Cambridge. She died in 2008. He is survived by his son, Anthony, and two daughters, Margaret and Helen.

• Maurice Vincent Wilkes, computer scientist, born 26 June 1913; died 29 November 2010

Maurice Wilkes: Visionary and pioneering doyen of British computing - Independent

By Martin Campbell-Kelly
Wednesday, 1 December 2010



Wilkes with a mercury delay line during the construction of EDSAC I at Cambridge University's Mathematical Laboratory

In 1946 Maurice Wilkes was a junior academic and acting director of the Cambridge University Mathematical Laboratory – a tiny outfit with a handful of pre-war calculating machines. One day in May he received a visit from LJ Comrie, an authority on mechanical computing, who was advising Wilkes on re-equipping the Laboratory. Comrie brought with him a

mimeographed document he had received from the University of Pennsylvania titled A First Draft of a Report on the EDVAC. The report described the design for a new kind of computing machine based on electronics. Wilkes instantly realised the report's significance and stayed up all night reading it before Comrie took it away the next day – there were no photocopiers in those days. The EDVAC Report was the foundation on which the modern computer industry was built – it determined the direction of Wilkes' life and that of countless thousands of others who were to be caught up in the computer revolution.

Maurice Vincent Wilkes was born in 1913 in Dudley, Staffordshire. His father was the cashier for the estate of the Earl of Dudley, his mother a housewife. He was educated at King Edward VI Grammar School, Stourbridge. In his teens he read Wireless World and built crystal sets – useful experience when it came to computers. He entered St John's College, Cambridge, in 1931 to read the Mathematics Tripos. He sat in on physics lectures and obtained a radio amateur's licence.

In October 1935 he became a research student at the Cavendish Laboratory under the physicist JR Ratcliffe, working on the propagation of long radio waves. The following spring Wilkes attended a lecture given by Douglas Hartree, a computing expert and professor of mathematical physics at Manchester University, and was immediately drawn to computing. In early 1937, when John Lennard-Jones, professor of theoretical chemistry, set up a Mathematical Laboratory at Cambridge to provide computing and calculating facilities, Wilkes became an early and enthusiastic user. Lennard-Jones offered him the position of University Demonstrator in charge of the Laboratory from October 1937.

On the outbreak of war, the Mathematical Laboratory was taken over by the Ministry of Supply and Wilkes and many of his colleagues were enlisted in the war effort. He was posted to the Air Defence Experimental Establishment at Christchurch, Dorset, where he worked on radar and mathematical research. In autumn 1943 he was transferred to the Telecommunications Research Establishment, Malvern, where he worked on the Oboe bomb-aiming system. There, Wilkes built up a network of contacts that would prove invaluable.

At the end of the war he returned to Cambridge as acting director of the Mathematical Laboratory. In summer 1946, a few weeks after he had read the EDVAC Report, he was invited to a summer school organised by the Moore School of Electrical Engineering at the University of Pennsylvania. The School had just completed the ENIAC, the first electronic computer for defence calculations, and the EDVAC Report described the design for a follow-up machine. Because of difficulties getting a berth, Wilkes did not arrive on the course until mid-August, by which time he had missed more than half. Rarely short on confidence, he decided he had not missed much of consequence. Sailing home on the Queen Mary he began the design of a machine he called the Electronic Delay Storage Automatic Calculator – EDSAC for short, in tribute to the EDVAC.

Wilkes was appointed permanent director of the Mathematical Laboratory and work started on the EDSAC in early 1947. Almost everything had to be done from first principles – memory technology, electronic arithmetic and logic, and control circuits. Wilkes made good use of his wartime contacts to find out about new techniques and locate scarce components. Cambridge was at the centre of UK computing, and he established fortnightly colloquia attended by members of almost every computer project in the country.

The EDSAC sprang into life on 6 May 1949, the world's first practical electronic computer. (Manchester University had got there first in June 1948 with an experimental machine, but the EDSAC was the first capable of running realistic programs.) By the new year the Laboratory was offering a regular service; Wilkes decided it would specialise in writing programs rather than building computers. He was perhaps the first person to recognise the importance of software (a term not used until about 1960).

He assigned the design of the EDSAC programming system to a research student, David Wheeler (later professor of computer science at Cambridge). The system Wheeler created was

a tour de force admired worldwide. In 1951 Wilkes described the techniques in the first textbook on programming, The Preparation of Programs for an Electronic Digital Computer, although the book was known as "Wilkes, Wheeler and Gill". The third author, Stanley Gill, was a young researcher who later became professor of computing science at Imperial College.
The Laboratory took on a steady rhythm of teaching, computing services and research. In 1951 the Laboratory organised its first summer school in programming, where a sizableproportion of the British computer profession got its entrée into computing. Next came a postgraduate diploma in computing, and eventually undergraduate courses. Heavy use of the facilities was made by Cambridge's researchers, including luminaries such as John Kendrew, Fred Hoyle and Martin Ryle. Kendrew's calculations for determining the molecular structure of myoglobin, for which he received the Nobel Prize in 1962, were largely done on the EDSAC.
EDSAC was soon loaded to capacity, and plans were laid for EDSAC 2. Wilkes came up with a new design principle, microprogramming, that greatly simplified the logical design of the new computer. Microprogramming was Wilkes' most important scientific contribution to computing. In the early 1960s IBM based its world-beating System/360 computers around the idea, and it remains a cornerstone of computer architecture.
Cambridge's prominence and Wilkes' confident manner led to constant invitations to give lectures and participate on committees. He was elected to the Royal Society in 1956 and became inaugural president of the British Computer Society in 1957.
He was appointed Professor of Computer Technology at Cambridge in 1965, a title chosen to distance himself from the theoretically-minded professors of computing science by then being appointed in many universities. Wilkes was inclined to underrate theoretical viewpoints. For example, in 1947 he pointedly did not attend the famous series of lectures on computing machines given by Alan Turing, now acknowledged as Britain's computer genius without peer.
Wilkes remained director of the Computer Laboratory (renamed from the Mathematical Laboratory in 1970) until he reached the statuary retirement age of 67 in 1980. His tenure had seen computers evolve from scientific instruments to information processing machines that were the basis of a worldwide industry. The Laboratory was constantly at the forefront of research, leaping on to the time-sharing bandwagon in the 1960s and computer networking in the '70s. Wilkes was good at keeping up with technology trends, preventing either himself or the Laboratory from getting locked into dying research fashions.
He was also deeply interested in the history of his subject. His writings in the 1950s are almost unique for the historical context in which he placed contemporary developments. In 1971 he gave an important lecture on Charles Babbage, the Victorian computer pioneer. In preparation, he made a study of Babbage's manuscripts in the Science Museum Library, London, the first modern scholar to do so. Later he became a good friend of I Bernard Cohen, professor of the history of science at Harvard University.
Wilkes loved America and Americans. Following retirement from Cambridge he became a consulting engineer with the Digital Equipment Corporation in Massachusetts. Whereas at Cambridge Wilkes' position had made him appear a little authoritarian, in the US he loosened up, though he could still be waspish. Freed from running the Computer Laboratory, he was fully able to enjoy his numerous honorary doctorates and awards.
Incapable of retiring, in 1986 he returned to Cambridge, becoming a board member of Olivetti-AT&T Research Laboratories. He continued to make technical contributions and publish articles about Babbage and his milieu. In 1992 he was the first recipient of the Kyoto Prize, computer science's most prestigious and richest award.

Maurice Vincent Wilkes, computer technologist: born Dudley, Staffordshire 26 June 1913; Director, Computing Laboratory, Cambridge University 1946-198,; Professor of Computer Technology, 1965-80, then Emeritus; senior consulting engineer, Digital Equipment Corp, Maynard, Mass 1980-86; KBE 2000; married 1947 Nina Twyman (one son, two daughters); died Cambridge 29 November 2010

Professor Sir Maurice Wilkes – Daily Telegraph

Professor Sir Maurice Wilkes, who died on Monday aged 97, led the Cambridge University team that built the world's first operational stored-program computer.

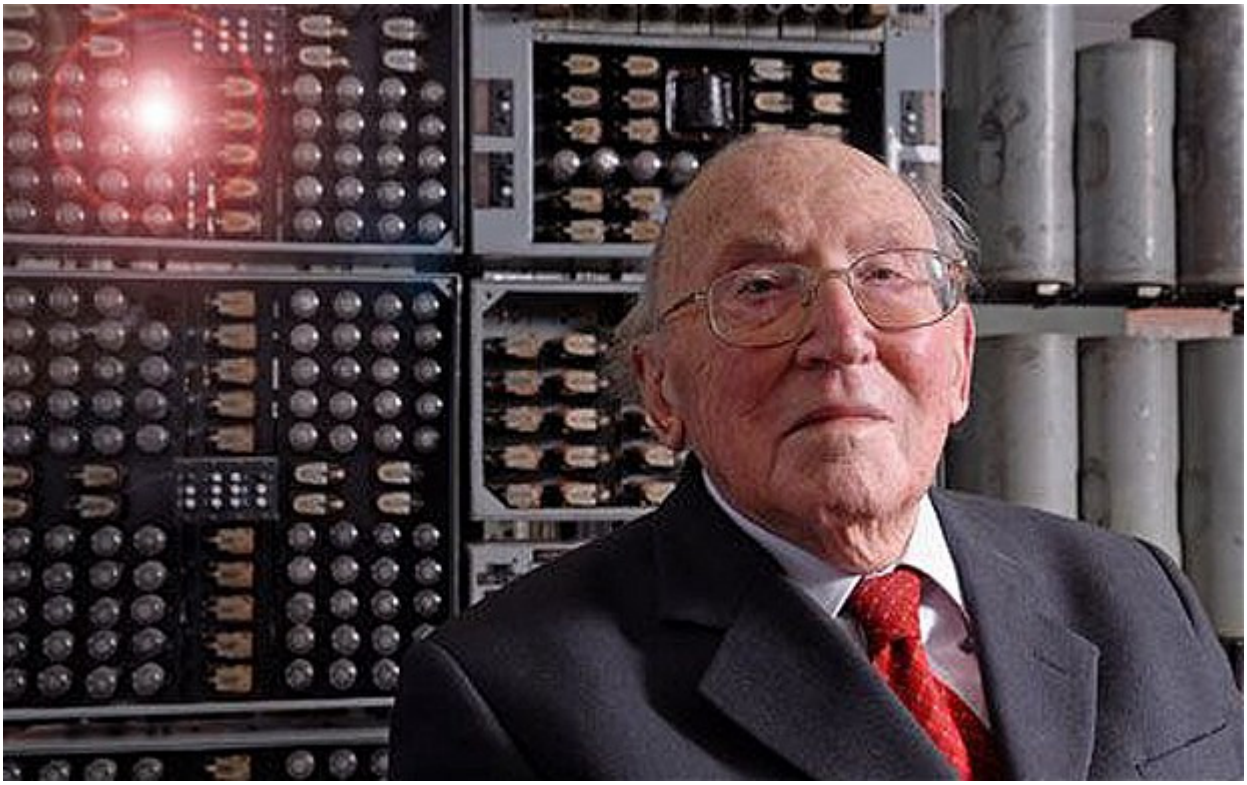


Photo: JOHN ROBERTSON/ALAMY
6:55PM GMT 30 Nov 2010

5 Comments

The computer, known as EDSAC (Electronic Delay Storage Automatic Calculator) was a huge contraption that took up a room in what was the University's old Mathematical Library. It contained 3,000 vacuum valves arranged on 12 racks and used tubes filled with mercury for memory. Despite its impressive size, it could only carry out 650 operations per second.

Before the development of EDSAC, digital computers, such as the American Moore School's ENIAC (Electronic Numeral Integrator and Computer), were only capable of dealing with one particular type of problem. To solve a different kind of problem, thousands of switches had to be reset and miles of cable re-routed. Reprogramming took days.

In 1946, a paper by the Hungarian-born scientist John von Neumann and others suggested that the future lay in developing computers with memory which could not only store data, but also sets of instructions, or programs. Users would then be able to change programs, written in binary number format, without rewiring the whole machine. The challenge was taken up by three groups of scientists — one at the University of Manchester, an American team led by JW Mauchly and JP Eckert, and the Cambridge team led by Wilkes.

Eckert and Mauchly had been working on developing a stored-program computer for two years before Wilkes became involved at Cambridge. While the University of Manchester machine, known as “Baby”, was the first to store data and program, it was Wilkes who became the first to build an operational machine based on von Neumann’s ideas (which form the basis for modern computers) to deliver a service.

Wilkes chose to adopt mercury delay lines suggested by Eckert to serve as an internal memory store. In such a delay line, an electrical signal is converted into a sound wave travelling through a long tube of mercury at a speed of 1,450 metres per second. The signal can be transmitted back and forth along the tube, several of which were combined to form the machine’s memory.

This memory meant the computer could store both data and program. The main program was loaded by paper tape, but once loaded this was executed from memory, making the machine the first of its kind.

After two years of development, on May 6 1949 Wilkes’s EDSAC “rather suddenly” burst into life, computing a table of square numbers. From early 1950 it offered a regular computing service to the members of Cambridge University, the first of its kind in the world, with Wilkes and his group developing programs and compiling a program library. The world’s first scientific paper to be published using computer calculations — a paper on genetics by RA Fisher – was completed with the help of EDSAC.

Wilkes was probably the first computer programmer to spot the coming significance of program testing: “In 1949 as soon as we started programming”, he recalled in his memoirs, “we found to our surprise that it wasn’t as easy to get programs right as we had thought. Debugging had to be discovered. I can remember the exact instant when I realised that a large part of my life from then on was going to be spent in finding mistakes in my own programs.”

In 1951 Wilkes (with David J Wheeler and Stanley Gill) published the world’s first textbook on computer programming, Preparation of Programs for an Electronic Digital Computer. Two years later he established the world’s first course in Computer Science at Cambridge.

EDSAC remained in operation until 1958, but the future lay not in delay lines but in magnetic storage and, when it came to the end of its life, the machine was cannibalised and scrapped, its old program tapes used as streamers at Cambridge children's parties.

Wilkes, though, remained at the forefront of computing technology and made several other breakthroughs. In 1958 he built EDSAC's replacement, EDSAC II, which not only incorporated magnetic storage but was the first computer in the world to have a micro-programmed control unit. In 1965 he published the first paper on cache memories, followed later by a book on time-sharing.

In 1974 he developed the "Cambridge Ring", a digital communication system linking computers together. The network was originally designed to avoid the expense of having a printer at every computer, but the technology was soon developed commercially by others.

When EDSAC was built, Wilkes sought to allay public fears by describing the stored-program computer as "a calculating machine operated by a moron who cannot think, but can be trusted to do what he is told". In 1964, however, predicting the world in "1984", he drew a more Orwellian picture: "How would you feel," he wrote, "if you had exceeded the speed limit on a deserted road in the dead of night, and a few days later received a demand for a fine that had been automatically printed by a computer coupled to a radar system and vehicle identification device? It might not be a demand at all, but simply a statement that your bank account had been debited automatically."

Maurice Vincent Wilkes was born at Dudley, Worcestershire, on June 26 1913. His father was a switchboard operator for the Earl of Dudley whose extensive estate in south Staffordshire had its own private telephone network; he encouraged his son's interest in electronics and at King Edward VI's Grammar School, Stourbridge, Maurice built his own radio transmitter and was allowed to operate it from home.

Encouraged by his headmaster, a Cambridge-educated mathematician, Wilkes went up to St John's College, Cambridge to read Mathematics, but he studied electronics in his spare time in the University Library and attended lectures at the Engineering Department. After obtaining an amateur radio licence he constructed radio equipment in his vacations with which to make contact, via the ionosphere, with radio "hams" around the world.

Wilkes took a First in Mathematics and stayed on at Cambridge to do a PhD on the propagation of radio waves in the ionosphere. This led to an interest in tidal motion in the atmosphere and to the publication of his first book Oscillations of the Earth's Atmosphere (1949). In 1937 he was appointed university demonstrator at the new Mathematical Laboratory (later renamed the Computer Laboratory) housed in part of the old Anatomy School.

When war broke out, Wilkes left Cambridge to work with R Watson-Watt and JD Cockroft on the development of radar. Later he became involved in designing aircraft, missile and U-boat radio tracking systems.

In 1945 Wilkes was released from war work to take up the directorship of the Cambridge Mathematical Laboratory and given the task of constructing a computer service for the University.

The following year he attended a course on “Theory and Techniques for Design of Electronic Digital Computers” at the Moore School of Electrical Engineering at the University of Pennsylvania, the home of the ENIAC. The visit inspired Wilkes to try to build a stored-program computer and on his return to Cambridge, he immediately began work on EDSAC.

Wilkes was appointed Professor of Computing Technology in 1965, a post he held until his retirement in 1980. Under his guidance the Cambridge University Computer Laboratory became one of the country’s leading research centres. He also played an important role as an adviser to British computer companies and was instrumental in founding the British Computer Society, serving as its first president from 1957 to 1960.

After his retirement, Wilkes spent six years as a consultant to Digital Equipment in Massachusetts, and was Adjunct Professor of Electrical Engineering and Computer Science at the Massachusetts Institute of Technology from 1981 to 1985. Later he returned to Cambridge as a consultant researcher with a research laboratory funded variously by Olivetti, Oracle and AT&T, continuing to work until well into his 90s.

Maurice Wilkes was elected a fellow of the Royal Society in 1956, a Foreign Honorary Member of the American Academy of Arts and Sciences in 1974, a Fellow of the Royal Academy of Engineering in 1976 and a Foreign Associate of the American National Academy of Engineering in 1977. He was knighted in 2000.

Among other prizes he received the ACM Turing Award in 1967; the Faraday Medal of the Institute of Electrical Engineers in 1981; and the Harry Goode Memorial Award of the American Federation for Information Processing Societies in 1968.

In 1985 he provided a lively account of his work in Memoirs of a Computer Pioneer.

Maurice Wilkes married, in 1947, Nina Twyman. They had a son and two daughters.

A Comment posted on the web-site

I had the pleasure of listening to Sir Maurice as he visited our school assembly.

He brought some picture on acetates (this was 1984) of his work in the 1950s and 1960s and

he brought a lower school of 600 pupils to complete silence for 30 minutes. This was during the 8-bit computer craze in the UK and we were fascinated that these behemoths were tiny in terms of their computing power.

I remember his exact words as he had a picture of a ZX Spectrum (an early home computer) and said "This is a monster compared to what we had then". Many of us simply laughed as we couldn't believe that a computer that retailed at £129 could beat a machine costing nearly a million.

He must have fired the imagination of many pupils in that hall that day to use their humble 8-bit home computers for something more than games.

I know I did, since the early 1990s I have worked in software and solutions development and now work right at the very edge of state of the art IT.

His ideas on timesharing and caching drive modern computing and telecommunications to this day.

Rest in peace Sir Maurice.

BBC News Father of British computing Sir Maurice Wilkes dies


Sir Maurice Wilkes pioneered the practical use of computers in Britain.

The "father" of British computing, Sir Maurice Wilkes, has died at the age of 97.
Sir Maurice was the designer and creator of Edsac, a computer that ran its first program in May 1949.
The Cambridge machine was the first widely-useable stored program machine and was very influential on the nascent British computer industry.
It set standards for how computers should be used in academia and business that have lasted until the present day.
Following work on developing radar during World War II, Sir Maurice returned to Cambridge to begin designing the machine that would become Edsac.
Prior to the war he had studied mathematics at Cambridge and been heavily involved with the rather limited calculating machines used in the department.
Study of the design documents for what would become the US Edvac machine convinced him that computers were the future and he started the project to build one at Cambridge.
His efforts were helped by a trip to the US to attend a series of lectures, known as the Moore School, run by the American scientists who had built the pioneering Eniac computer and were working on its successor Edvac.
"Maurice Wilkes was the first to turn these ideas into a fully-functional electronic stored-program computer when the Cambridge Edsac ran its first program in May 1949," said computer historian Professor Simon Lavington.


The Edsac computer ran its first program in May 1949

Unlike earlier machines such as the Manchester Mark I which were largely experimental, Sir Maurice wanted to put his computer to practical use.
"The Edsac group was the most influential of the early British computing teams," said Prof Lavington, "most especially in setting high standards for the development of software and the organisation of a computing service to scientists and engineers."
The success of Edsac caught the attention of catering firm J Lyons which funded further development of the machine and led to the creation of the Leo - one of the first machines put to dedicated business use.

Innovations at the Cambridge computer laboratory, such as microprogramming and time-sharing, were widely influential in the industry at large.
"If any person deserves the title of the father of British computing, it is surely Professor Sir Maurice Wilkes," said Prof Lavington.