John Pinkerton

Scientist who drew on his childhood hobby of building wireless sets to design for J Lyons the world's first business computer

JOHN PINKERTON, who has died aged 78, was the designer of the world's first business computer, which he built for J Lyons & Co, the catering firm known for its corner teashops, in 1951.

The project sprang from a visit made to America in 1947 by two of the company's executives who were investigating developments in office technology. They saw a prototype computer and thought that it might be possible to adapt it to process paperwork.

Learning that the most advanced machine — EDSAC — was then being developed in England at Cambridge, Lyons struck a deal with the university and the firm was given access to the computer, the first machine to utilise a stored program, but one used solely for mathematical calculations.

Pinkerton was then recruited from the university in 1949 and charged with creating for Lyons an engineered version of EDSAC, one that invested it with completely novel features.

Pinkerton's background was in ultrasonics, and he had no prior experience of large-scale circuitry. But he had attended seminars given by EDSAC's creator, Maurice Wilkes, who assured Lyons that Pinkerton was the right man for the job.

Among the principal difficulties facing Pinkerton and his small team was that of making reliable a machine built from 6,000 delicate wireless valves and yards of criss-crossing cables.

Pinkerton drew on both his training as a physicist and his childhood hobby of building wireless sets to design a computer that was sufficiently resilient to execute tasks to a commercial timetable. He did much of the construction work himself, even blowing glass to make
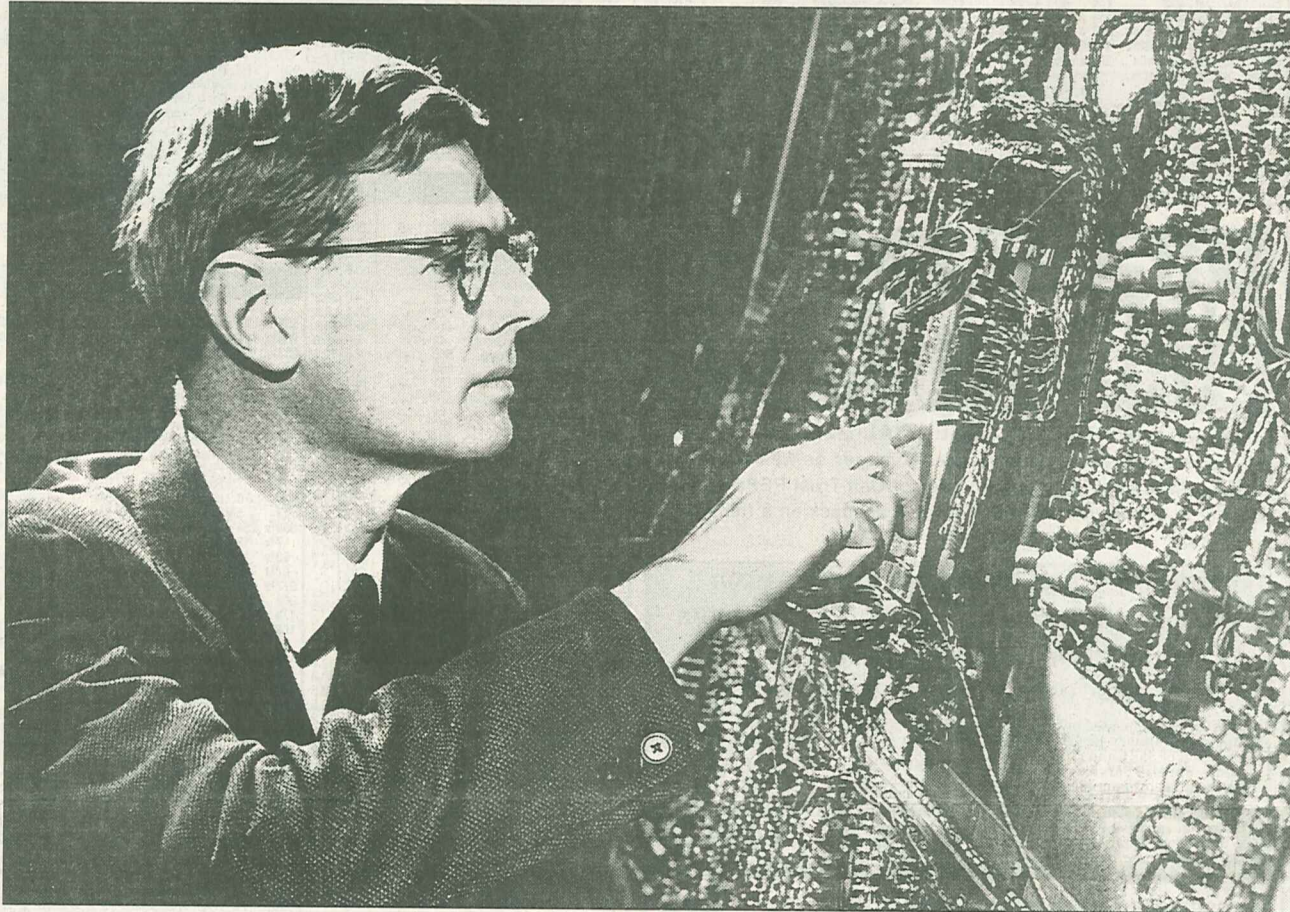
Pinkerton: overcame the problems of building a reliable machine from 6,000 valves and yards of cables

the apparatus for filling mercury delay switches.

Pinkerton was a natural leader, and did not hesitate to put in their place anyone who asked him ill considered questions. His confidence and determination bore fruit in November 1951, with the completion of LEO, or Lyons Electronic Office, the world's first business application for a computer; it valued sales dispatched from the firm's bakery.

LEO was followed at the end of 1953 by LEO 1, which provided the facilities required for full-scale, integrated office work. In February 1954, in the world's first such application, the computer began to process the weekly payroll at the firm's Cadby Hall Bakeries.

John Maurice McLean Pinkerton was born in London on August 2 1919. A surgeon's son, he was educated at King Edward VI School, Bath, Clifton College and Trinity College, Cambridge, where he read Natural Sciences.

He spent the Second World War working on radar development at the Telecommunications Research Establishment, first at Swanage and then at Malvern. After the war he returned to Cambridge to complete his doctorate on ultrasonics, basing himself at the Cavendish Laboratory.

Once the success of LEO 1 had been established, Lyons began to loan its spare capacity to other organisations. The computer undertook work for the Meteorological Office and was used to compile ballistic charts for research by the Ordnance Office into guided missiles. LEO 1 also calculated the distance between every railway station in Britain.

In 1959, LEO Computers was formed to market the system, and Pinkerton was appointed one of its directors. Over the next few years he and his team continued to improve their machine, incorporating technological advances born of the experience of running LEO.

Their efforts culminated in LEO 111, which was both smaller and faster than its predecessors and capable of carrying out different tasks simultaneously. It also understood instructions tailored for a particular purpose.

A number of LEO 111s were bought from Lyons by other companies, including some in the South African goldmining industry in 1962. The next generation of Pinkerton's computers, the LEO 326, won from the Post Office the largest order ever placed with a European computer company at that time.

British computer firms were, however, rapidly being overtaken by their American rivals such as IBM and Honeywell, whose researches were being underwritten by the US government.

Despite the merger in the mid-1960s of LEO Computers with two other leading British firms — English Electric Computers and ICT — to create a consolidated British computer company of which Pinkerton became research director, the LEO series was soon outmoded as the business world's computers by faster and cheaper American products.

Thereafter, Pinkerton became one of the foremost authorities on standards in the computing and telecommunications industries. He served on the European Community Esprit committee on Advanced Information Processing in 1982.

He also took part in discussions with the Department of Trade and Industry that led to the 1984 Telecommunications Act. Pinkerton was twice president of the European Computer Manufacturers Association.

In retirement he acted as a consultant on information technology and worked for a missing persons helpline in London.

He married, in 1948, Helen McKorkindale; they had a son and a daughter.

JOHN PINKERTON

John Pinkerton, computer pioneer, died on December 22 aged 78. He was born on August 2, 1919.

JOHN PINKERTON'S modest confidence, coolness under fire and great clarity of thought gave him a major position in the history of the computer industry. He will be remembered as the man who designed for the commercial computer user in the explosive atmosphere of computing during the 1950s. In later years, when he was being congratulated on designing the world's first business computer, it was typical of him that he should smile courteously and explain that in the country of the blind, the one-eyed man was a pretty useful member of the team.

He moulded a talented group, and, with the sort of determination sometimes described as obstinacy, led it — dragged it — through the development hazards of early computing. He was unfailingly polite, but it was noticed that fools did not stay long in his company.

John Maurice McLean Pinkerton was the son of a surgeon, and went to Clifton College before going up to Trinity, Cambridge, to read natural sciences. He was then called up for war service and to his delight found himself working on radar development at the Telecommunications Research Establishment. This was leading-edge technology of great national importance, and gave him a hunger for applied research.

After the war, he returned to Cambridge to complete a doctorate on ultra-sonic waves in liquids. At the time, the Cavendish Laboratory was buzzing with news of the work of Maurice Wilkes, who had lately returned from the seminal Moore School lectures in Philadelphia, where he had discussed digital computers with other pioneers. Wilkes had returned determined to build a stored-program computer, which had not yet been done in America. The machine was to be called EDSAC.

At about the same time, the board of J. Lyons, the caterers famous for their chain of teashops, expressed concern that existing ranges of punched-card tabulating equipment would not be able to cope with the company's data processing, such as stock-control and the payroll. Two directors visited the United States to compare notes with other companies, and there they were shown the ENIAC computer, designed for complex mathematical calculations. With great vision, they decided that a similar machine could be adapted to their commercial applications. They discussed their thoughts with Maurice

Wilkes, and invested some money in the Cambridge computer project. EDSAC's development was geared to calculations for astronomy, so the Lyons directors decided to build an office computer of their own. Pinkerton responded to an advertisement for a project leader and, with the strong recommendation of Wilkes, was appointed.

Pinkerton justified the remarkable faith of the Lyons board, and in November 1951 the world's first business application — stock evaluation of the output of one of the bakeries — was carried out successfully. A business computer had been designed and built by a catering company. In the golden age of acronyms, it was called the Lyons Electronic Office or Leo. It was made up of several thousand wireless valves and many yards of cabling, known to the engineers as "knitting", resulting in a certain unreliability. A computer's ability to stay "up" was expressed as "mean time between faults", and this was more likely to be quoted in minutes than hours. But eventually the Leo team took advantage of reliable solid-state circuitry.

In the mid-1960s, research and development costs in computing rocketed, and it became clear that only very large companies could survive. Tony Benn, as Minister of Technology, recognised the potential importance of the industry, and began to push the small band of British computer companies into each other's arms. English Electric Computers, Eliot Automation, Marconi Computers and Leo Computers were cast together, and International Computers and Tabulators was then encouraged to swallow the lot.

ICT had itself grown from several mergers, and its executives knew the game well. ICT's own developments became dominant in the new company, with the Leo range sidelined. At first Pinkerton did not feel at home. Once when he had explained some of the thinking behind Leo to some ICT staff, an executive congratulated him for making the subject "easy enough for idiots like us to understand". "Thank you," he beamed. "I seem to have had much more practice at it here than I ever did at Leo."

Unsuited to aggressive marketing, Pinkerton was asked to represent the company on various national and international standards bodies. This meant balancing the contradictory aims of every computer company: encouraging standardisation so that a competitor's customers could easily move across, and maintaining differences so as, ideally, to achieve an overwhelming advantage and monopoly.

His vigour and intellectual integrity ensured that Pinkerton was soon recognised as a leading authority on standards in the international computing community. He was twice president of the European Computer Manufacturers Association.

With his unfailing good humour, he would have enjoyed the thought of a Leo computer doing stock-control for a Lyons Corner House as the forerunner of a personal computer in a cybernet cafe.

In 1948 he married Helen McKorkindale, who survives him along with their son and daughter.