

Maurice Wilkes (1913–2010)

Interviewed by Tom Lean, 2010



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Professor Sir Maurice Wilkes was a pioneer of electronic digital computing, with an active career that stretched from the 1930s into the twenty-first century. After research in experimental physics at Cambridge's famous Cavendish Laboratory he was awarded his PhD in 1937, and began working on mechanical and analogue computing in the Mathematical Laboratory. As the Second World War loomed, Maurice was recruited into radar research, spending the war years working on a variety of electronic systems. In his interview, he discussed attending the famous 'Sunday Soviets' at the Telecommunication Research Establishment. These informal meetings between scientists and the armed services were lively occasions intended to make the best use of Britain's scientific knowledge to help with the war effort:

"The RAF had their problems but on the other hand the scientists could see problems that hadn't yet loomed large in the RAF's eyes and so we steered the future activity in those directions.

So the scientists were pointing out problems that hadn't even arisen yet then?

Oh, yes. And, yes, I mean in fact providing a lot of the leadership ... I'm sorry, I don't like to say a problem was there, they're not problems ... they were discussions about the tactical and to some extent the strategic position and how radar might be used to make things go more smoothly, a bit more – and faster.

After the war ended Maurice returned to Cambridge to build EDSAC, the Electronic Delay Storage Automatic Calculator, the world's first practical electronic stored program computer. While a handful of experimental computers had already been built, EDSAC was not just designed as a proof of concept, but as a practical tool that scientists, engineers and mathematicians could put to use solving complex problems. Maurice discussed his intentions behind building EDSAC:

"When I started building the EDSAC I had no doubt about who were going to be our users, they were people like myself. I mean I used to be doing things that would take perhaps a week solving. Solving a set of ten by ten linear equations took about a week with a desk machine, well that could be done rapidly with a digital computer. And those were the people who we made the EDSAC available to – research students in the lab and others, anybody who could make a good case could use it....

"I made a firm rule I would never try to sell computers because I knew they would sell themselves, and they did at the bottom. Started with the students, the students would come in because they knew other students... we had a thing called a priorities committee, which was a frightening name, it tended to be, but it was a fascinating committee for me. And of course people, quite important people in the university were prepared to come and sort of tell... tell us about their plans and what they wanted, and all in the hope of getting their fingers on some machine time."

Maurice remained as head of the Cambridge Mathematical Laboratory, later renamed the Computing Laboratory, from 1945 to 1980. Always modest about his achievements, he was awarded a Turing Award, 'the Nobel Prize of computing' in 1967, and knighted in 2000.

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