

## **OBITUARIES and BIOGRAPHIES**

**John Aris** – 1934 - 2010 Educated at Eton and Oxford, with a degree and life-long interests in the classics, joined LEO as a programmer in 1958. A career in LEO and its successor companies, including Chief Business Systems Engineer for ICL in 1968 was followed by heading the computer department of the Imperial Group, then becoming director of the NCC. He retained his interest in LEO up to the end of his life becoming a prominent and active member of the LEO Foundation and the LEO Computers Society.  
<http://www.guardian.co.uk/technology/2010/aug/26/john-aris-obituary>  
<http://www.vukutu.com/blog/2010/08/a-computer-pioneer/>  
<http://www.cs.man.ac.uk/CCS/res/res52.htm#i>

**Antony (Tony) Bernard Barnes** – 1926-2000. Tony Barnes joined Lyons as a Management Trainee after graduating in 1947 working in the Statistical Office. He transferred to the LEO programming team in November 1950 where his talents were quickly recognised. In 1955 he accompanied Thomas Thompson to the USA on a six-week tour, visiting several computer manufacturers and users. In January 1956 he became the Administrative Manager of the Design and Development Section of Leo Computers Limited and in June 1959 the Production Director, reporting directly to Anthony Salmon, the main Lyons Board Director responsible for the whole LEO project. He left Leo Computers Limited shortly after the merger with English Electric.

**Maurice Blackburn** – died 2016, LEO Engineer. See also reminiscences of Anthony Robin Davies below. Tony Morgan writes “Maurice was a very interesting person, a real gentleman with a small moustache. He had originally been a pilot with British South American Airways before it merged with British Overseas Airways. He was in Development at Minerva Road and his main claim to fame is in designing the Standard Interface Assembler for LEO III which connected industry compatible System 4 tape decks and also System 4 printers. This was particularly important for Post Office /British Telecom.. It had a unique type of logic element which made it difficult to understand and on which to diagnose faults. When we had problems in 1965 with what I called 'watered down expertise', Maurice ran two one week courses on it for engineers from around the country at PODPS, Kensington. There were a whole series of courses which I organised at that time.”

**Peter Bird** – born 1934, died 6<sup>th</sup> August 2017. After a career in the Merchant Navy achieving his Masters certificate ‘discovered’ computing, studied programming and applied for Jobs in computing. Interviewed by Lyons for an operator job and joined Lyons 1964 as an operator on the LEO III. Promoted rapidly to Operations Manager, then overall Systems Manager. After retirement became interested in the history of Lyons and in the LEO story resulting in the publication of his books on LEO and subsequently on Lyons the Food Empire. The LEO Computer Society book LEO Remembered is dedicated to Peter. Peter’s obituary was posted on the Guardian Newspaper website in the OTHER LIVES section on 10<sup>th</sup> September 2017 at <https://www.theguardian.com/technology/2017/sep/10/peter-bird-obituary> On October 14<sup>th</sup> it appeared on page 38 of the Guardian print edition in the Other Lives section of the Saturday edition. The obituary is also posted by Elisabetta Mori in <http://ta.mdx.ac.uk/leo/in-memory-of-peter-bird/http://ta.mdx.ac.uk/leo/in-memory-of-peter-bird/> and **Wikipedia** posted an obituary at [https://en.wikipedia.org/wiki/Peter\\_Bird\\_\(IT\\_manager\)](https://en.wikipedia.org/wiki/Peter_Bird_(IT_manager))

**George Booth** – Died 19<sup>th</sup> September 1959, aged 90, Company Secretary and Director of J. Lyons, made the case to the Lyons Board for the company to commit itself to build a business computer and to collaborate with Cambridge University with its EDSAC project by providing some funding for the project in exchange for help in setting up the LEO project. His support was crucial in getting the support of his fellow board members; Earlier responsible for recruiting John Simmons as someone to study and improve the efficiency of Lyons. Obituary written by Isidore Gluckstein in Lyons Mail October 1959.

**Dan Broido** – 1903-1990 Born in Siberia of politically active parents, refugee to Germany from Soviet oppression, took degree in Mechanical Engineering in Berlin, and became an engineer at the firm of Rotaprint, who sent him to the UK in 1934 to work in their London branch. Worked for Caterpillar Tractors during World War II on nationally important work, and subsequently for a Company interested in developing automatic reading equipment, Broido filed over 100 patents including one of the earliest bar code systems. The company was taken over by ICT but in 1956 he was recruited by LEO as Chief Mechanical Engineer charged with developing optical reading facilities. This resulted in the development of Lector and later Autolector. When LEO, and later ICL started selling computers in Eastern Europe including Russia, Broido played a key role in the success of that enterprise. A biographical sketch of his carrer can be found on pages 202 to 203 in his book LEO: the World's First Business Computer.  
<http://www.kzwp.com/lyons.pensioners/obituary2B.htm> (page 1)

**David Caminer** – 1915 - 2008 joined Lyons before World War II as a Management Trainee, his career was interrupted by National Service, losing a leg in the battlefields of North Africa, before returning to Lyons and being appointed head of the Systems Research Office ,followed by taking a prominent and leading role in the establishment of LEO. Described by John Aris as the inventor of Systems Analysis, his methodological approach was a key factor in the success of LEO. His ambition, following his retirement was to ensure that the story of LEO would take its proper place in the history of computing. He helped fulfil that ambition by his writing and the establishment of the LEO Foundation. See also a biographical sketch on page201 of Peter Bird's LEO: the World's First Business Computer, and his personal profile is listed in the Oxford Dictionary of National Biography (ODNB) written by Georgina Ferry and published online in 2009.

#### Obituaries and Tributes

Oxford Dictionary of National Biography – ODNB

,(Georgina Ferry)

Switched .com (Will Safer)

Financial Times (Alan Cane)

The Independent (Martin Campbell-Kelly)

Booksellers Association (Martyn Daniels)

The Daily Telegraph

IT History Society

The Times

Scotts news.blogspot.com

The Guardian (Frank Land)

BBC Radio 4 'Last Word'

The Jewish Chronicle

Computing (Iain Thomson)

The Richmond and Twickenham Times

Twinings Tea

The Liverpool Daily Post

Centaur's Rugby Club

The New York Times (Douglas Martin)

Electronicsinfoline.com

The Atlanta Journal Constitution

Computeach

The Chronicle Herald, Halifax, Nova Scotia  
The Day, Connecticut  
The LEO Society website (Frank Land)  
Vnunet.com (Iain Thomson, San Francisco)  
Star Tribune, Minneapolis-St Paul  
Ameblo, Japan  
Guardian Blogs  
Gadsden Times

Computing- Letters to the Editor (R.Sarson)  
Wikipedia  
The Test Bed- Personal Computer World  
Fujitsu - ICL pensioners (Frank Land)  
Chicago Tribune  
The Eponymous Pickle (Franz Dill )  
Funeral piece (Hilary Caminer)

<http://www.telegraph.co.uk/news/obituaries/2188963/David-Camner.html>

[http://en.wikipedia.org/wiki/David\\_Camner](http://en.wikipedia.org/wiki/David_Camner)

<http://www.nytimes.com/2008/06/29/technology/29camner.html>

<http://boingboing.net/2008/06/29/computer-pioneer-and.html>

<http://www.guardian.co.uk/technology/2008/jul/11/1>

<http://www.nytimes.com/2008/06/29/technology/29camner.html>

**Jackie Camner** – died January 2017 aged 94, wife of David Camner. Her daughter Hilary Camner writes: ` My mother, Jackie, died this morning peacefully at home aged 94. Without her, my father's LEO work would have been much harder for him - they were heroes and heroines those LEO partners.

She had a fine career in her own right as a teacher - teaching not only here but in Brussels and Luxembourg when my father was installing computers for the EU. She was also an ardent campaigner on adult education and on local issues as well as a fine dancer, artist and craftswoman. She missed my father terribly and counted many of his LEO colleagues as personal friends.

Doug Comish writes: I was very sorry to hear that your mother had died. She was a quite remarkable character with many accomplishments and a most wonderful wife for David. She was a super support for him during an exciting and important career.

When you look back at what was achieved with LEO it was remarkable. It was a privilege to work with that outstanding team of people from all disciplines—from application designers, programmers, operators, design, development, and production engineers and marketers. The manner in which they all pulled together and overcame problems was probably unique.

Your father played the major role but Jackie was a great support. You can be very proud of them.

**Hamish Carmichael** – died July 2017 aged 83. Hamish after a career with ICL became an active member of Computer Conservation Society. Always a good friend of LEO. Author of book of reminiscences and stories of ICL (including LEO) employees.

Computer Conservation Society obituary

<http://www.coymputerconservationsociety.org/index.htm>

**John Coombs** 1927 – 2012

John joined LEO as a Trainee Programmer in March 1954 while he was still technically on Demob Leave from the British Army in which he had served for some nine years. His army service included time in Northern Ireland and long spells in the Middle East. The army sponsored him at St Peter's Hall, Oxford for a Maths degree but before this finished

he had the opportunity to go to Sandhurst from where he was commissioned into the Royal Artillery.

While John's service in the J. Lyons group of Companies lasted till 1991, his stay with Leo was relatively short as he was transferred to the Works Department shortly before his marriage to fellow programmer, Mary Blood. He continued his training in other areas of the Lyons empire, including the Works Department, the Personal Transport Department, and the Ice Cream Department.

**Mary Clare Coombs** (*née* **Blood**, 4 February 1929 – 28 February 2022).

Mary gained fame as the first women world-wide to write a business application on a computer – the LEO I installed by Lyons at Cadby Hall. Her fame was such that she received the accolade of full obituaries in the Guardian, The Daily Telegraph. The Times as well as the trade press and IT/IS institutions including the BCS the Register and Wikipedia. A full listing of tributes to Mary as at 22nd March 2022 is:

Obituary notices etc for Mary Coombs				
	date	Publication	link	comment
1	09/03/2022	CCH website	<a href="http://www.computinghistory.org.uk/">http://www.computinghistory.org.uk/</a>	Top of news listing
2	10/03/2022	The Daily Telegraph	<a href="https://www.telegraph.co.uk/obituaries/2022/03/10/mary-coombs-first-woman-write-programs-worlds-first-business/">https://www.telegraph.co.uk/obituaries/2022/03/10/mary-coombs-first-woman-write-programs-worlds-first-business/</a>	John Aeberhard. Also posted on <a href="https://www.flipboard.com/">Flipboard.com</a>
3	11/03/2022	The Guardian	<a href="https://www.theguardian.com/technology/2022/mar/11/mary-coombs-obituary">https://www.theguardian.com/technology/2022/mar/11/mary-coombs-obituary</a>	Georgina Ferry
4	12/03/2022	The Register (web)	<a href="https://www.theregister.com/2022/03/12/obit_mary_coombs/">https://www.theregister.com/2022/03/12/obit_mary_coombs/</a>	Uploaded by Putney High School. Several comments online
5	12/03/2022	The NewsTrace (web)	<a href="https://thenewstrace.com/the-first-female-programmer-of-a-commercial-application-worked-in-a-cake-company-and-just-died-at-93-years-old/224277/">https://thenewstrace.com/the-first-female-programmer-of-a-commercial-application-worked-in-a-cake-company-and-just-died-at-93-years-old/224277/</a>	<a href="https://thenewstrace.com/the-first-female-programmer-of-a-commercial-application-worked-in-a-cake-company-and-just-died-at-93-years-old/224277/">https://thenewstrace.com/the-first-female-programmer-of-a-commercial-application-worked-in-a-cake-company-and-just-died-at-93-years-old/224277/</a> Kim Diaz
6	13/02/2022	Retrocomputing (web)	<a href="https://retrocomputingforum.com/t/mary-coombs-first-woman-commercial-programmer-dies-at-93/2428">https://retrocomputingforum.com/t/mary-coombs-first-woman-commercial-programmer-dies-at-93/2428</a>	Link to The Register
7	14/03/2022	BCS	<a href="https://www.bcs.org/articles-opinion-and-research/obituary-mary-coombs-worlds-first-woman-business-computer-programmer-1929-2022/">https://www.bcs.org/articles-opinion-and-research/obituary-mary-coombs-worlds-first-woman-business-computer-programmer-1929-2022/</a>	John Aeberhard Frank Land
8	14/03/2022	The Elective (web)	<a href="https://elective.collegeboard.org/mary-coombs-computer-science-pioneer">https://elective.collegeboard.org/mary-coombs-computer-science-pioneer</a>	Dante A Ciampaglia US website founded 2020 for students
9	14/03/2022	Computer <a href="https://www.computerweekly.com/">Weekly.com</a> (web)	<a href="https://www.computerweekly.com/news/252514561/First-female-business-computer-programmer-dies">https://www.computerweekly.com/news/252514561/First-female-business-computer-programmer-dies</a>	John Aeberhard ( sent in by PB)
10	15/03/2022	Communications of the ACM (web)	<a href="https://cacm.acm.org/news/259299-in-memoriam-mary-coombs-1929-2022/fulltext">https://cacm.acm.org/news/259299-in-memoriam-mary-coombs-1929-2022/fulltext</a>	Refers to full text in Computing - see below.
11	15/03/2022	Computing	<a href="https://www.computing.co.uk/news/4046448/mary-coombs-female-business-computer-programmer-dies-93">https://www.computing.co.uk/news/4046448/mary-coombs-female-business-computer-programmer-dies-93</a>	Dev Kundaliya. Behind a membership wall.
12	17/03/2022	The Times		

<https://www.thetimes.co.uk/article/mary-coombs-obituary-gns7lzf6z> John Aeberhard with additions from the family

13 18/03/2022 20/3/2022 BBC Radio 4

Last <https://www.bbc.co.uk/programmes/m0015bbn> Frank Land and Georgina Ferry

14 ? The Week No link - Neville has sent me scan of the magazine. Can't track down web link to the article

15 Wikipedia [https://en.wikipedia.org/wiki/Mary\\_Coombs](https://en.wikipedia.org/wiki/Mary_Coombs) Updated entry

16 Bucks Free Press

[https://www.bucksfreepress.co.uk/announcements/deaths/deaths/20002314.Mary\\_Clare\\_COOMB\\_S\\_n\\_e\\_Blood/](https://www.bucksfreepress.co.uk/announcements/deaths/deaths/20002314.Mary_Clare_COOMB_S_n_e_Blood/) Death notice from family

### Mary Coombs

**It is with great regret that we report that Mary Coombs, (née Blood), one of the LEO pioneers passed away on 28<sup>th</sup> February 2022 at Stoke Mandeville Hospital, at the age of 93.**

We print below the obituary written by John Aeberhard and then a personal tribute to Mary from her friend and fellow-programmer, Frank Land. On the LCS website you will find links to the very many printed and online national and international obituaries published after Mary's death. There is also a link to the BBC4 programme 'Last Words' which featured Mary with contributions from Georgina Ferry and Frank Land.



Mary at a LEO reunion at Middle Temple Hall (portrait © Mike Hally)

### **MARY COOMBS, WORLD'S FIRST WOMAN BUSINESS COMPUTER PROGRAMMER**

Mary Coombs, the first woman to write programs for Lyons Electronic Office (LEO), the world's first business computer, has died at the age of 93 in Stoke Mandeville Hospital following complications arising after a Covid infection.

Mary Blood as she then was joined J Lyons & Co in 1952 as a management trainee, just a few months or so after LEO had run its first business application and following a holiday job arranged for her by her father, the company's senior medical doctor. Initially, she was put to work in the company's

statistical office operating a calculating machine, but following a stellar performance in an aptitude test, was offered the chance to join the LEO team which, she always said, she jumped at.

Well aware of her role as a computing pioneer – “We were all engaged in a big adventure,” she would say – she joined the computing team when there were just three programmers on board, all men, becoming the only woman in a class of twelve on an introductory computer appreciation course. From here, it was straight into payroll applications for a rapidly growing range of external clients as well as developing programs for internal company use.

It was a huge challenge. Not only had much of the work never been done before, but as Mary would point out, she was working on a notoriously unreliable valve computer, but also one that had just 2K bytes of computer storage compared to the “umpteens gigabytes” available to present programmers.

“When it was LEO 1 you had to know a lot about the machine itself because there was so little storage space that every instruction had to be essential, or it had to be knocked out,” she would tell interested friends.

As well as working on programming to handle payroll for companies such as Ford Motor and Lyons itself, Mary was also involved in such jobs as tax tables for the Inland Revenue, Met Office work and the calculation of ballistics for the Army. She went on to become a supervisor and worked to locate and repair coding errors in the programs created by others.

Family commitments meant that she ceased full-time programming in 1964, but continued to work part-time editing computer manuals and for a few months ran a computer programming course for severely disabled residents at the Princess Marina Centre, Seer Green, sponsored jointly by ICL and Buckinghamshire County Council.

It was not until late 1969 that she ended her formal connection with the LEO team.

Mary returned to full-time employment in September 1973 as a primary school teacher, completing a three-year postgraduate teaching course in 1976. She retired from teaching in 1985 and went on to work as a buyer in the water treatment industry.

Mary Clare Coombs, nee Blood, was born on 4 February 1929 to her doctor father, William, and his wife, Ruth. She was educated at Putney High School and St Paul’s Girls School. Her favourite subject at school was maths, giving a clue to her later occupation. She went on, however, to read French and gain a BA Hons degree at Queen Mary College, London University.

Mary married John Coombs (d.2012), himself briefly a computer programmer on the LEO team, in 1955. Together they had a daughter, Anne, who sadly died aged just six. Between 1965 and 1969 they adopted three more children, Andrew, Paul and Gillian. They survive her as do a younger sister, Ruth and three grandchildren, Grace, Jemma and John.

### **A tribute to Mary Coombs by Frank Land**

*Transcribed by Hilary Caminer from the recording of the LEO Computers Society zoom on 25/3/2022. This zoom session was held in Mary’s honour.*

‘I want to say a few words about Mary who died so recently and tragically. I knew Mary as a personal friend and much of my recollection is of her as a personal friend. I remember we met first at the Appreciation Course which Lyons gave to their own people to see how many of them might fit into the LEO team. At the time Lyons thought they could recruit most of the people they needed for their

LEO team from inside and some of the first generation like the Hemy's and so on had all come from Lyons.

On that course I first met Mary. I didn't recognise her as anything special but she did exceptionally well on the course on her own. She had studied French, but she was a good mathematician and she liked mathematics and indeed one of her obituaries called her a mathematician though she never studied mathematics. We were both on the same course.

I survived the course because I had a wife who was a mathematician and helped me – I don't know where I would be now if she hadn't helped me! Mary managed it on her own and we two were chosen to join the LEO team.

She made an immediate impression, she was thorough, she was good – and we became friends. What I remember most about her was that she was kind. I remember she was always out to help the disadvantaged.

I remember our eldest daughter was the same age as her daughter, the daughter who later died – and I remember sitting on the lawn at High Wycombe with the two girls playing together. Then, on another occasion, they were playing and their daughter hadn't progressed and ours had and we knew then that something was wrong.

Anyway, Mary was clearly a very thorough and good programmer. She always thought that she was kept at the supervisor level rather than at management level because she was too good at her job. But I think it was more because of the glass ceiling which affected most women.

What is perhaps ironic is that Mary, through her death achieved more for the LEO story than she ever did in her life, notable as it was that she was the first woman to write a commercial program. But that wasn't her strength – her strength was her reliability, that she was good at her job, that she was able to deal with other people. The irony is now is that through her death, through the very many obituaries she has received she has raised the status of LEO and made the LEO story better known throughout the world in a way that would have been difficult without that happening. Ironic, but true.

I remember Mary as a kind person, even when she had problems with her own child, a little bit later on she would look after somebody with MS because she felt for them and throughout her life she had this particular kindness. Some people may have called her 'scary Mary' or 'bloody Mary' but these were just nicknames people used. I think we each had our moniker – I don't know what I was called, but I am sure it wasn't flattering.

So let me close by paying tribute to a person who was really a wonderful person for her ability, for her continued striving for what is right and good. She is a great loss to the Society and she is a great loss to humanity.

Let me close on that note as a tribute to Mary Coombs, née Blood as was. Thank you.'

**Betty Cooper** (better known under her maiden name Betty Newman), sister in law of Pat Cooper (Mrs Pat Fantl) Sadly Betty died on 31st August. She worked from 1955 to 1964 on both LEO I and LEO II at Lyons. Her Oral History is noted below in the Oral History section. Applications she made programming contributions include L4, the Tea-Blending job, and the production control application for the Liverpool clock and watch makers J.D. Francis, an application specified by Oliver Standingford. She became a valued member of Leo Fantl's payroll group including involvement with the Ford, Stewarts and Lloyds and Kodak payroll. After retirement from LEO she did freelance programming for LEO II and LEO III customers (including LEO Computers) and devised a system for writing programs in Braille for blind programmers.

<https://www.dropbox.com/s/ix8tnvvm1pdxper/BettyCooper.doc?dl=0>

An earlier very comprehensive interview was conducted by Janet Abbate on 14 September 2001 as Interview # 585 for the IEEE History Center, The Institute of

Electrical and Electronics Engineers, Inc. and is reproduced in Engineering and Technology Wiki at [https://ethw.org/Oral-History:Betty\\_Cooper](https://ethw.org/Oral-History:Betty_Cooper)

**Alan Clarke** died December 2019. Alex Woolard (LEO Engineer) reports:

I have to report the sad news that Alan Clarke who worked at Minerva Road, Kidsgrove and Winsford from 1962 until the Winsford plant closed, has died. Alan was a commissioning engineer working on Leo III peripherals, and subsequently System 4, and the New Range 2900 family. He had a long battle with Cancer and finally lost the fight on 9<sup>th</sup> December 2019 with his family around him. He continued to live in the same house that he bought when he moved up to Kidsgrove in 1965, after the English Electric merger, and leaves his wife Patricia and a son and daughter. I worked with Alan both at Minerva Road and Kindsgrove/Winsford and always remembered him as a smart guy, and a pleasure to work with.

**Hilary Cropper, DBE**, born January 1941, died December 2004. After taking a mathematics degree at Salford University, and a first job with an engineering company, Hilary in 1970 joined ICL, working on operating software for the System 4 range, Though initially working in part-time positions to help raise her children, she was later promoted to senior management roles, eventually becoming the male-dominated company's most senior woman. In 1985, she was headhunted by FI Group, which later became Xansa, to manage its UK operations as Chief Executive, a position she served in until 2000; between then and 2002, she was the company's executive Chairman. During her tenure as Chief Executive and the Chairman, the company's annual revenues grew from £7m to £450m. In 1991, Hilary led a management buy-out of the company and a large number of staff became the owners of company shares. It was in turn floated on the stock exchange in 1996 and many of those staff who had kept their shares (about 100 in all) became millionaires. She had been appointed a CBE in 1999 and was promoted to Dame Commander (DBE) in 2004. Her biography is published by the Oxford Dictionary of National Biography (ODNB), in print March 2009 and online in January 2008, written by Martin Campbell-Kelly. See also: [https://en.wikipedia.org/wiki/Hilary\\_Cropper](https://en.wikipedia.org/wiki/Hilary_Cropper)

**Joe Crouch** – Died 2018. Joe Crouch joined LEO as a trainee programmer and quickly rose to Senior Programmer/Consultant Status, working at Hartree House. When Ilford Limited acquired a LEO II Joe headed the LEO team helping to establish the computer's systems. Subsequently he joined Leo Fantl in South Africa as head of the Programming group. (noted by Norman Witkin)

Leo Fantl writes "A key area (in our operations) ... was production, which covered our operating, data preparation, and local mine data capture. Joe Crouch took the lead here. ... In many ways Joe was another Derek Hemy, incredibly quick to grasp a new point, clear thinking, and a good writer. His direction of the preparation and subsequent management of operations was outstanding. I had chosen Joe to succeed me but this turned out to be not to his liking. Later he did much difficult design work for the larger group, notably Sage Life, the group's insurance company" Joe married a local Afrikaner girl.

John Godwin writes; "I remember them (Bob Day and Joe Crouch) as being among the pioneers of computers in South Africa. In the nineteen sixties LEO III/2 at the Johannesburg bureau was the first commercial multi-processing machine in the country. Along with Leo Fantl and their colleagues they changed the way the Mines and other large companies ran their businesses. Today everyone is a computer expert, but then they really were. I am glad I knew them, true 1930 trail blazers."

**Ian Stewart Crawford.** Born 20<sup>th</sup> March: \_Died 20<sup>th</sup> August 2018.



Born in Eltham, Taranaki, New Zealand. Oldest of 3 born to Dan a doctor and Kathleen a nurse. Excellent sportsman and chess player. Won the Auckland chess championship. At 16 he left New Plymouth Boys High and worked for a travel company. When he was 21 he did a Bachelor of Science at Auckland University in Mathematics. He had his heart set on learning computers. He travelled to Sydney and approached IBM for a job but they required a PHD or an actuary. This would take another 5 years so Ian decided to leave Australia. Went to England in 1956 and joined LEO Computers and then joined PA Consulting as a computer consultant <https://www.paconsulting.com/about-us/> before returning to NZ beginning of 1966 after getting married. He became an independent management consultant in NZ and had approximately 100 assignments in his 30 years before retiring in 1996. He set up the Long Range Planning Society in NZ but this organization does not appear to exist any longer. When he retired he began work on a computer program written in PROLOG on Natural Language Processing which he continued to work on until his health began to fail at the beginning of 2018. He is survived by his wife Virginia Crawford, his daughters Sue Crawford (Independent IT consultant), Kate Everett (Chemical Engineer) and Joanna Crawford (English teacher at Massey University). He had 7 grandchildren. His brother (a doctor and leprosy researcher) still resides in London.

**Mike Daniels** – died March 2018, worked in Service Bureau, Hartree House in Programming and Support 1962-1966. He went on to work with several companies, including UNISYS, RCA (in America), III, an American Company back here. He worked on computer systems all his working life, all over the world. He was mainly involved in print/newspapers but also programming with Concorde. That said, he never forgot the early days.

He was a super guy, always cheerful. I'm so glad you had good memories. Please pass on to anyone who knew him (From Betsan Daniels).

**Mary Josephine (Jo) Davies**, maiden name McCann), D.O.B. 1961 - ?? Started as a LEO II Programmer at Wills, married Keith Davies a member of the Wills programming team, but left Wills to become a LEO III Programmer and later LEO marketing. Became partner of Colin Tully until his death. Peter Byford remembers her on his own LEO III programming own LEO III programming course in 1961.

**Bob Day** – Died 2018. Bob was recruited in 1960 by Leo Fantl to join the newly formed LEO/Rand Mines collaborative venture in Johannesburg, South Africa. Bob, of Afrikan descent, was one of a handful recruited, all of high quality joining within that first period. Bob stayed in a senior role until his retirement.

Leo Fantl writes “Bob Day was a typical South African. With an outstanding secondary education record, he joined the Post Office as a technical apprentice, and completed his training as the top performer for the whole country. Bob is mainly Afrikans but totally bilingual. When he took our appreciation course, he had never done any programming, but I still remember his hostile stare during my lectures –and how I leaned over him while he was writing his test, to see if he was actually writing sense. He got 100 per cent.’ (User-Driven Innovation, p.300)

John Godwin writes: “In the nineteen sixties LEO III/2 at the Johannesburg bureau was the first commercial multi-processing machine in the country. Along with Leo Fantl and their colleagues they (Bob Day and Joe Crouch) changed the way the Mines and other large companies ran their businesses. Today everyone is a computer expert, but then they really were. I am glad I knew them, true trail blazers”.

**Leo Fantl** – 1924-2000 Came to UK in June 1939 as a refugee from Czechoslovakia. Joined RAF age 18 and received technical training. Recruited by Lyons

as Technical Trainee in the Planning Department in 1949, but was transferred to the LEO enterprise in 1950 to join Derek Hemy as a pioneer programmer. Despite a lack of formal training became a first rate mathematician involved in developing mathematical software and doing ground-breaking work in the problem created by rounding errors. Played major role in most of the early LEO applications including the tax tables for the UK Inland Revenue. In 1960 he was seconded to work on LEO's first overseas venture, the joint establishment with Rand Mines of a LEO III computer bureau in Johannesburg. He spent much of his remaining career managing the computer operations of Rand Mines by then the sole owners of the bureau. A brief biographical sketch can be found on page 202 of Peter Bird's LEO: the World's First Business Computer.

[http://www.thocp.net/biographies/fantl\\_leo.html](http://www.thocp.net/biographies/fantl_leo.html)

**Pat Fantl, (Cooper)**, born in USA, came to England, joining LEO Computers as a programmer in 1955 the third woman to join the LEO group after Mary Blood and Betty Newman (who became her sister-in-law). As part of LEO Fantl's payroll team, contributing to a series of applications including those of Ford Motor Company, Stewarts and Lloyds and Kodak. Joined Leo Fantl in South Africa becoming his wife after Leo lost his first wife Frieda in a motoring accident.

**Gordon Foulger** – 1942-2011 After graduating from Queen Mary University with a degree in General Science he became a LEO programmer seconded to work on GPO programs, including the Giro and telephone billing. He became a database specialist and consultant as his career evolved.

<http://www.gordonfoulger.co.uk/obituary.php>

**Bob Gibson** – born 1927, died August 2016. He trained as electronic engineer as part of National Service. After working as an electronic research engineer in Civil Service, recruited by LEO as trainee maintenance engineer. Took responsibility for training customer engineers and rose to oversee all LEO training as well as managing engineering maintenance services, and personnel. Briefly left LEO to become a management consultant but returned to become head of customer support services for EELM. Completed career with ICL as manager Large Projects before setting up his own consultancy. Retired 1988 and published book on Project Management. Gained a reputation as a safe pair of hands for complex and difficult assignments. One of the stalwarts whose contribution played a key role in the success of LEO.

**John Gosden** – 1930-2003 Joined LEO as a programmer in 1953 after taking a degree (pass) in Mathematics at Cambridge University and made rapid progress with his understanding of software. Played a key role in the design of systems software for LEO II and LEO III. Left LEO in 1961 to emigrate to the USA for a sterling career in computing including acting as advisor on computer matters to the US Government. An obituary was published in The Times newspaper in the Lives in Brief Section on January 8<sup>th</sup> 2004. John Gosden, computer programmer, was born on March 9, 1930. He died on December 18, 2003, aged 73. John Gosden had a long and distinguished career in computer technology and applications, in the United States and Great Britain. After studying mathematics at Corpus Christi College, Cambridge, in 1953 he joined the J. Lyons organisation as a trainee programmer. Its small Lyons Electronic Office (LEO) team was engaged on the final trials of the payroll programme for the Cadby Hall bakeries. The LEO system was then equipped with only the most rudimentary systems software, which gave the programmers little assistance. The group of experts were the first to harness emerging computer technology to practical business management, and LEO became known as the world's first office computer.

<https://www.thetimes.co.uk/article/lives-in-brief-3hlnmnmvj9> Resurrection, Issue 33. Spring 2004, published an obituary written by David Caminer, <http://www.cs.man.ac.uk/CCS/res/res33.htm#f> A biographical sketch of his career can be found on pages 203 and 204 in Peter Bird's LEO: the World's First Business Computer. <http://www.leo-computers.org.uk/gosdenobit.html>

• **Kit Grindley** - born in Clapham< London, April 1929, died October 26<sup>th</sup> 2018 in Sydney Australia. Kit Grindley after graduation from LSE in 1956, started as a Management Trainee in Lyons in 1956 and was a part of the LEO team of LEO I and LEO II programmers. Kit developed ideas about a language for expressing requirements he called Systematics as a result of his LEO experience. He studied for a PhD at the London School of Economics and was awarded with a PhD for his research into Systematics in 1972, supervised by Frank Land. He enjoyed a successful and varied career as a computer professional, This included compiling an annual review of the chief issues faced by CIOs when working as a Director for Urwick Diebold, a subsidiary of Urwick-Orr and Partners, acting as a consultant for Price Waterhouse Coopers (PWC), publishing a number of books on computer management including Systematics, editing the Journal IT Reviews working for and being awarded a PhD (1972) by the London School of Economics, followed by being appointed to, first a Professorial Fellowship at the LSE sponsored by F International, whose founder Dame Stephanie Shirley writes about his role in the company in her autobiography **Let IT Go**, and encouraged his research into Systematics setting up research unit for that purpose. and later by a part-time chair in Systems Automation sponsored by PWC also at the LSE. His academic career included a stint as Adjunct Professor at the University of Technology, Sydney. His wife Liz notes of his LEO years: “(those who) knew him during those crazy, exciting and trail blazing years. He was such an exceptional person and we are all lucky to have loved him. Such a great brain and so many talents.” These crazy activities included running with the bulls in the annual Pamplona bull running festival, and getting injured in the process. His books on IT Strategy and Systems methods were acclaimed by his readers. His death is noted in the Sydney Morning Herald – see

Link to SMH obituary: <http://tributes.smh.com.au/obituaries/smh-au/obituary.aspx?n=christopher-grindley&pid=190608434>

**John Grover** – Born December 1924, died 2000. After National Service in the RAF where he gained his pilot's wings, joined Lyons as a Management Trainee in 1947 working on Bakery Accounts. Recruited to the new LEO team as a programmer in 1950, took responsibility for a number of the early LEO applications Including the world's first business application, the valuation of bakery output. David Caminer paid this tribute to John Grover. "John played an invaluable part in out very very small team. He followed the methodology that we laid down unswervingly and made it possible to get it firmly established as newcomers were drawn in. He was a fine trainer and many of the young men and women who were recruited learned the new discipline working under him." He left LEO in 1956 to join Derek Hemi at EMI working on the EMIDEC. A short biographical sketch can be found on page 204 in Peter Bird's LEO: the World's First Business Computer. <http://www.computerconservationsociety.org/resurrection/res24.htm#d>

• **Peter Guest** b.1934, died 1995 aged 61, LEO Maintenance Engineer

Margaret Guest, his widow writes: Peter's education badly disrupted during Wartime, leaving Wm. Penn School, Peckham, London aged 16 in 1951. Attended Woolwich Polytechnic 1951-55 for part time day release, obtained ONC in civil engineering while working for Sir Murdock MacDonald & Partners as a trainee draughtsman. Further HND studies but National Service in RAF intervened including training in communication hardware preparing to be a wireless operator and then posted to Aden where he worked for the Commonwealth Air Forces Communications Network with the rank of Corporal. Came back and worked for Vickers Armstrong at a factory in Crayford, Kent. At the time he joined they were building a valve computer for Powers Samas, the PCC, which had an immense number of problems and not many people capable of solving them! He left when the PCC was going to be superseded by a future design done by ICT.

Early 1960 (the year we were planning to marry) Peter was employed by LEO in London (for a very small wage for the first 6 months) while getting a good grounding in all aspects of this new invention; engineering, testing, commissioning, etc. He was sent out to maintain computers at Ford Dagenham (LEOII/4) and Ilford Films (LEO II/9)

while we lived in a caravan on the outskirts of Romford. He was also training on LEO 111. At the time the head office of LEO Computers was in Bayswater.

Then, about 1964, after LEO amalgamated with English Electric, we moved to the South Coast where he was sent to commission a new English Electric computer for Lloyds Bank at Durrington, Worthing, while also troubleshooting other installations in London and the South Coast.

After the merger with English Electric he spent a lot of time up in Kidsgrove on the KDF9 commissioning and troubleshooting.

Our next move was to Long Ashton, on the outskirts of Bristol where he was Assistant Service Manager. Later becoming Area Manager working on computers for Wills Tobacco and an important (I think Government) installation in Dorset. Later appointed Area Manager for West London and the Western Home Counties.

In 1967, when Marconi split its computer interests from English Electric, another move to Widford, Chelmsford, to work for Marconi who were embarking on a programme to produce the Myriad 1 and design the Myriad 11.

He was also involved in the System 430 for English Electric-LEO (the first integrated circuit design) which caused many problems because of the high reliability requirements necessary for the Military and Traffic Control for which it was intended. He was then Manager overseeing design, production, quality control, budgets, planning and responsible for 45 employees. It was a very stressful time for him.

Then there was a period of uncertainty, with a merger of Marconi with GEC looming..

This made up his mind to move again, to MDS Data Processing, Teeside, Durham.

Peter first joined MDS as Quality Control Manager. MDS was an international company, main Plant being in Utica, north of New York State and another in Germany and he made

regular visits to both locations. After all this travelling he decided to stay more local, so worked for local companies; Redifon, Comark and MBM near Brighton, before finally freelancing as a Business Consultant working from home.

He sadly died of Cancer aged 61.

<https://www.dropbox.com/scl/fi/at2ctlx0ti3cmf4xmaok/Peter-Guest-memoir.doc?dl=0&rlkey=yxc8p1mg2n859v5xtzw3ybm93>

**Hugo Gunning** 1933 – 2017, died of septicaemia. John Daines writes “I remember seeing him first in Hartree House, in a lift in 1962 or 63. Immaculately dressed, he worked on Lector but not an engineer, probably testing. He subsequently worked with and for me as part of the Commissioning Operators team in Minerva Road. In early 1968 he came to Winsford for a few weeks to help with testing 4/50’s. Sometime in autumn 1964 he said one day, “if you want to make some money, Jay Trump will win the Grand National”; and it did. Hugo was a keen follower of the Turf. There is an article about Hugo on page 13 of [https://issuu.com/tthclondon/docs/london\\_mission\\_sep\\_-\\_oct\\_2007](https://issuu.com/tthclondon/docs/london_mission_sep_-_oct_2007) and some super videos at <http://www.red5599.com/Dancehall%202010/hugo.htm> “ Hugo was, as his wife writes, a man of many parts, a musician of note, and TV personality. The above text and two obituaries from family members can be found at <https://www.dropbox.com/s/2rwndw0cldec2pr/Hugo%20Gunning%20obituary.doc?dl=0>

**Peter Gyngell** – born 23 February 1930, died 6th June 2018 at his home in Wollongong, Australia. Peter was born in Wales, graduated from RADA in 1948, but did not follow an acting career. He became involved with LEO in 1958 working for the Ford Motor Company on their LEO II computer at Aveley on the huge Ford spare part application. He played a critical part in the success of that work. He subsequently joined LEO Computers Limited and was appointed manager of the LEO operations Australia in 1961. Neill Lamming writes: “As General Manager of LEO Australia when it was formed in 1961, Peter had a massive presence in the early business computing market in Australia. He personally led the sales campaigns which resulted in spectacular wins against established competitors like IBM with such major organisations as Shell Australia, Colonial Mutual Life, H C Sleigh and Tubemakers of Australia. He was a legend who will always be remembered warmly by those who worked with him.” A more extended obituary is held in the LEO Computers Dropbox archive at <https://www.dropbox.com/preview/LEO%20Oral%20History%20project/LEO%20Memoirs%20C%20Reminiscences%20and%20Anecdotes/PETER%20GYNGELL%20Obituary.doc?role=personal>

**Douglas Hartree** – 27.03.1897-12.02.1958, eminent Cambridge Scientist noted for his contribution to a number of fields of study including early computing – as an example he was the first civilian to programme ENIAC - played a crucial role in the collaboration between Cambridge University and Lyons in the development of LEO. “Hartree’s fourth and final major contribution to British computing started in early 1947 when the catering firm of [J. Lyons & Co.](#) in London heard of the ENIAC and sent a small team in the summer of that year to study what was happening in the USA, because they felt that these new computers might be of assistance in the huge amount of administrative and

accounting work which the firm had to do. The team met with Col. [Herman Goldstine](#) at the [Institute for Advanced Study](#) in Princeton who wrote to Hartree telling him of their search. As soon as he received this letter, Hartree wrote and invited representatives of Lyons to come to Cambridge for a meeting with him and Wilkes. This led to the development of a commercial version of EDSAC developed by Lyons, called [LEO](#), the first computer used for commercial business applications. After Hartree's death, the headquarters of LEO Computers was renamed Hartree House. This illustrates the extent to which Lyons felt that Hartree had contributed to their new venture.” From Wikipedia at [https://en.wikipedia.org/wiki/Douglas\\_Hartree](https://en.wikipedia.org/wiki/Douglas_Hartree) His profile was published in the Oxford Dictionary of National Biography (ODNB), online and in print September 2004, written by C.G. Darwin and revised by Jon Agar.

**George A. Hayter** – Died April 2015 in Northern Cyprus. Joined LEO about 1964/5, on systems and sales, at Allied Suppliers, started at Hartree House, then Computer House and Stag Place. Subsequently worked at BOAC under Peter Hermon, then headed the Stock Exchange computer transformation, before setting up his own consultancy for the financial sector.

**Derek Hemy** – 1920 –2000, Joined Lyons as Management Trainee 1939. Did war service in Royal Corps of Signals. Returned to Lyons in 1946 in Systems Analysis Office under David Caminer. Selected as first LEO programmer, a role in which his performance was outstanding. Left LEO in 1955 to senior role in EMI's venture into computing with the EMIDEC. Transferred to ICL when they took over EMI computing and later became computer consultant for Unilever. More biographical details in Bird, P. J. [LEO: The First Business Computer](#), pp. 204- 205.

**Ray Hennessy** – Programmer, consultant, LEO Computers Society stalwart and Committee Member, spent 32 years at LEO before retirement. Born 1934 died 15<sup>th</sup> November 2016. Oral History edited transcript <https://www.dropbox.com/home/LEO%20Oral%20History%20project/Leo%20Interviews?preview=Ray+Hennessy+edited+P2.doc> Obituary by John Daines Dropbox <https://www.dropbox.com/home/LEO%20Oral%20History%20project?preview=Ray+Hennessy+Obituary+John+Daines.doc>

**Peter Hermon** – Trailblazer in Computer Management. One of the very first computer specialists to make it all the way to the board of a major corporation, Peter Hermon blazed a trail and set standards for successful computer management that were years ahead of their time, most notably for Dunlop Rubber Company from 1959-65 and then for British Airways and its predecessor companies, BEA and BOAC, from 1965 through to the early 1980s.

For BOAC, he developed, virtually from scratch, a computer communications system that covered every aspect of the airline's business activity, including reservations, departure control, message switching, flight planning, crew rostering, engineering and financial control.

This developed into the celebrated Boadicea project, a network of computers linking cities around the globe from the USA to New Zealand, from Finland to South Africa, to a central computer complex in London. The system, implemented on time, within budget and without problems, set standards for the airline industry that have survived to this day. It also had airlines all over the world clamouring to buy the company's know-how and software, leading to sales to over 50 airlines. By 1983, these sales amounted to some £40m a year at 2008 values, enough to cover the airline's investment in computers many times over, a success acknowledged by two Queen's Awards for both technological innovation and export achievement.

When BOAC merged with BEA in 1972, Hermon became Group Management Services Director with the immediate task of integrating two separate computer installations based on IBM and Univac equipment. The role then broadened to embrace organisation and productivity and it was Hermon who produced a report for the Secretary of State for Trade & Industry that led to the full integration of both airlines to produce British Airways in 1976. He also led the team that, in the late '70s/early '80s, developed a strategy for cutting staff numbers from 57,000 to 38,000, achieving savings in excess of £100m a year.

His last appointment at British Airways was as Managing Director of the airline's European Division.

As well as serving on the boards of both BOAC and British Airways, Hermon was also Chairman of SITA, a worldwide communications operation specialising in the needs of the travel industry, and of International Aeradio Ltd (IAL), a BA subsidiary later sold to STC.

He left BA in 1983 to join Tandem Computers as UK Managing Director from where, shortly after, he was headhunted into Lloyds of London, the world's premier insurance market, with a brief to effect a root and branch modernisation of its computer systems. When it came to the crunch, this proved a bridge too far, as Hermon once described it, for such a traditional organisation and he moved on to Harris Queensway and then, as a freelance management consultant, to handle assignments for, among others, Saatchi and Saatchi, Argos and Credit Lyonnais. In 1970 he was appointed a part-time adviser to the Civil Service on computer strategy and later served on the Government's Central Computer Agency

Peter Hermon was born in 1928, His parents were Arthur and Beatrice (nee Poulter). His mother was a dressmaker and his father worked for Morris Motors in Oxford as a technical manager.

He was educated at Nottingham High School where he held two scholarships. He went from there to Oxford University on no fewer than three further scholarships – a state scholarship, a major open scholarship to St John's College and a Henry Mellish scholarship, a single award open to anyone living in Nottinghamshire. He then took a double first in Pure and Applied Mathematics and a prize for the best result across the university. He was then elected to a Harmsworth Senior Scholarship at Merton College for research in Pure Mathematics.

### **Grounding in LEO credited for later successes**

Hermon left Oxford in 1954 to join J. Lyons & Co of teashops and catering fame. It was here that he cut his computer teeth as one of a remarkable group of British computer pioneers who developed the world's first business computer and the applications to run on it. These were stirring days, Hermon recalled, when the computer buff had to turn his hand to everything – business analysis, programming, operating and sweeping the floor before VIP visitors toured the LEO (Lyons Electronic Office) site in Cadby Hall to pay homage to the groundbreaking work that was going on there.

Hermon's particular role within Lyons involved the installation of the first of the second generation LEO 2 computers for the Imperial Tobacco Company in Bristol. The complexity of the tobacco company's pricing and credit terms led to the largest and most complex suite of programs yet attempted at the time. This was followed, in 1959, with the installation of an integrated sales accounting system, a concept years ahead of its time, running on the first of a third generation LEO 3 computers for Dunlop Rubber at Fort Dunlop. Hermon at this time had joined Dunlop and went on to coordinate the company's computer strategy worldwide.

Much of the later computer successes at British Airways were credited by Hermon to his time with LEO. The team he built up at BA contained no fewer than nine managers from LEO Computers with many other ex-LEO people further down the line.

In retirement, Peter Hermon, devoted much of his time to writing. He was a contributor to a book on the development of the LEO computer, entitled in the UK 'User-driven Innovation' and in the US and Hong Kong "LEO: the incredible story of the world's first business computer," published by McGraw Hill. Peter became increasingly involved in the activities of the LEO Computers Society, attending reunions and contributing to keep the LEO flame burning, repeating his conviction that the standards set by the LEO ethos underlay his own success.

He also authored a two-volume "Hill-walking in Wales," the definitive guide to climbing the 170 or so 2000ft mountains in the principality, as well as "Lifting the Veil," a plain language guide to the Bible. He had also preached widely for the Association for the Propagation of the Faith, the official missionary society of the Catholic church.

Peter Hermon was married in January 1954 for 57 years to Norma Stuart Brealey who died in 2011. He had four children with Norma, David, who predeceased him in 1976, Juliet, Robert and Caroline. Six grandchildren and five great grandchildren also survive him. He was married for a second time in December 2016 to Patricia Cheek.

*Peter Michael Robert Hermon, b. 13 November 1928, d. 1 November 2022  
Published in Computer Weekly 18 Nov 2022*

**Mavis Hinds** – 1929-2009 Worked for the Meteorological Office and used LEO I for weather forecasting – the earliest use of computers for modelling the weather in the early 1950s.

<http://onlinelibrary.wiley.com/doi/10.1002/wea.502/abstract> See also Wikipedia: She went on to work with Bushby in using the [Lyons Electronic Office](#) (LEO), an early computer developed by [J. Lyons & Co](#) of [Cadby Hall](#), London, becoming an expert in writing, running and correcting computer programs for weather forecasting. She was seen at that time as one of the first prominent female meteorologists and also the first to play a leading role in the development of [Numerical Weather Prediction](#), not only in the UK but also worldwide See Wikipedia for a fuller account: [https://en.wikipedia.org/wiki/Mavis\\_Hinds](https://en.wikipedia.org/wiki/Mavis_Hinds)

**Goffrey Howells** We are sad to report the death in January 2020 in Australia of Geoff Howells, who worked for ICL in Melbourne for 24 years from 1965 - 1988. It was Geoff who with Anthea Gedge, a colleague, started the regular reunions in Melbourne for former ICL staff. Some of you will have read and enjoyed the ICL AllStars newsletters which come out several times a year and which we post on our LEO website. Geoff kept the database for its distribution – to over 2000 people. Ian Pearson who edits the newsletter is writing a fuller tribute to Geoff. In the meantime he writes 'the dear chap will be sadly missed.

**Lord Edmund Ironside**, born 21.09.1924, died 13.01.2020. Lord Ironside, an active member of House of Lords, joined first Marconi and in 1959 English Electric. On the merger of English Electric, Marconi and LEO Computers to form EELM, Ironside was appointed head of LEO Government Sales, becoming involved in some of the major purchases by the Government of LEO III range computers.



**Derek Jolly** – Born 1930, Died June 2018. Joined LEO circa 1953-54, After grammar school started training as an accountant, but decided to try something else and was interviewed by David Caminer, and Tony Barnes and offered a job with LEO I as an operator. Worked on LEO I, LEO II and LEO III. Became shift leader and then Chief Operator. Left LEO in 1974 to join Access at Southend. Retired aged 60. Derek was one of the most popular people at Hartree, always caring and very competent in his various roles.

Oral History in Dropbox

[https://www.dropbox.com/search/personal?path=%2F&preview=Derek+Jolly+edited+P2.doc&qsid=26418865507404425279799032559688&query=derek+jolly&search\\_token=maaZCi5EZfs9ghMHde3MaOmE5gIkeIs7mVIUbNhfSkQ%3D](https://www.dropbox.com/search/personal?path=%2F&preview=Derek+Jolly+edited+P2.doc&qsid=26418865507404425279799032559688&query=derek+jolly&search_token=maaZCi5EZfs9ghMHde3MaOmE5gIkeIs7mVIUbNhfSkQ%3D)

**Ernest Joseph Kaye** – 1922-2012 Joined John Pinkerton as his assistant in 1949 in the design of LEO I and later LEO II, having been recruited as an electronic engineer from GEC. Later took on the role of procurement officer for the engineering side of LEO. Retired in 1968 to the family firm of renting material for television and theatre productions. See also page 205 for a biographical sketch in Peter Bird's LEO: The First Business Computer.

Ben Rooney in Wall Street Journal <http://blogs.wsj.com/tech-europe/2012/05/07/uk-computer-pioneer-dies/>

Daily Telegraph 10<sup>th</sup> May 2012

<http://www.telegraph.co.uk/news/obituaries/9255130/Ernest-Kaye.html>

From BBC's Jamillah Knowles on the Next Web

<http://thenextweb.com/uk/2012/05/07/business-computing-pioneer-ernest-kaye-dies-aged-89/>

From Frank Land in Guardian Online 14<sup>th</sup> May 2012

<http://m.guardian.co.uk/technology/2012/may/14/ernest-kaye?cat=technology&type=article>

<http://www.youtube.com/watch?v=GE6TX70A3Rc>

<http://blogs.wsj.com/tech-europe/2011/11/14/worlds-first-business-computer-celebrates-60th-anniversary/>

[http://www.bbc.co.uk/blogs/outriders/2011/11/leo\\_making\\_history.shtml](http://www.bbc.co.uk/blogs/outriders/2011/11/leo_making_history.shtml)

**Mike Keen** - Mike died on 27th January, 2020, the day after his 83rd birthday, following a long illness. He was always proud of his association with LEO, starting with his days at Minerva Road

**Ron Kirby:** Died July 25<sup>th</sup> 2020, After leaving the RAF in late 1962 early 1963 joined LEO at Cadby Hall working on LEO II/I. Following a relatively long career in various companies related to the computer industry retired and by various routes got involved in local history as part of which gave talks to local clubs and societies. Belonged to a Probus club and a few years ago when asked to talk about an interesting part of his career chose to talk about the first computer to run a commercial application and later turned that into a talk about the rise and fall of J. Lyons and how the British Computer Industry also rose and fell and along including the story of 'A Computer Called Leo'.

**Ernest Lenearts** – 1910-1997 Despite an interest in things technical his parents persuaded him to take a clerical job at J. Lyons starting in the late 1920s. Bored by his job he asked for more technical training in the hope of getting a job in the Lyons laboratories. His chance to progress came during World War II. In 1941 he became a wireless mechanic in the RAF rising to the rank of sergeant before demobilisation. He returned to Lyons, but was now appointed Radio Mechanic working on innovative

microwave technology. On the inauguration of the collaboration between Cambridge University and Lyons on the EDSAC/LEO project he was sent to Cambridge for the year 1948 both to learn about computer technology and to help in the design of EDSAC. When Lyons commenced building LEO he joined John Pinkerton in the design team. He made many contributions and also helped in the writing of many technical papers including one selected as the best paper of that year. He subsequently took an interest in the man-machine interface including working on speech recognition. He retired in 1969. A biographical sketch of his career can be found on pages 206 to 207 of Peter Bird's LEO: the World's First Business Computer.

<http://www.cs.man.ac.uk/CCS/res/res17.htm#f>

A biographical sketch by his sons Paul and David is provided below and in Dropbox at <https://www.dropbox.com/s/rq527ow3d8kkgak/Ernest%20Lenaerts%20recollecti ons%20from%20sons.docx?dl=0>

Ernest Lenaerts Biographical sketch by his sons, Paul and David.

Dad met Mum (Gladys Minnie Buckledee) when they both worked in the Joe Lyons accounts office at Cadby Hall in the early 1930's. They married at Kew Green Church on 20th June 1936 and set up home in a new house at 2 Pavilion Way, Eastcote shortly after. The war years were clearly difficult but typical for a young couple in the London suburbs with a Morrison shelter in the living room and a lodger (Aunty Enid – who would become a lifelong family friend) as company for Mum. Dad was in the RAF but his eyesight precluded him from flying duties and he ended up untypically as a round peg in a round hole operating and maintaining 'beam-bending' machines in Alexandra Palace. He told us stories of looking out over London and seeing 'buzz-bombs' coming straight at him and being powerless to do anything ! He could play the piano by ear and often entertained his unit playing the huge organ. He said that when you hit the bass notes, glass could be heard tinkling down from the broken windows!

We grew up in the family home when Dad was working on Leo in the early days. We didn't see much of him except at breakfast and week-ends as he rarely got home before our bedtime. Sometimes he wasn't even home for breakfast. He had a camp bed at the office and when Leo was doing all night runs he was there to do running repairs. He loved his job and often commented how lucky he was to be able to combine work with his interests.

He tried to teach us binary arithmetic with limited success. One particular memory was when he came home with one of the first ferrite core memory 'blocks' and explained that this brick sized object could actually store 1kB of binary information ! Compared to the mercury delay lines, this must have seemed awesome.

We did have week-ends as a family and our favourite day out was to the Lyons sports ground at Sudbury Hill. We would have a swim in the outdoor pool, practise tennis at the tennis 'wall' and Dad would often play cricket – he was quite a capable spin bowler. In the '60's we were in our teens and becoming more independent (difficult ??). Dad's work became more managerial but he hated meetings and politics. When English Electric arrived there was talk of moving to Kidsgrove, but retirement came to the rescue and he took up golf. It wasn't long before he was programming his home computer using machine code to produce the weekly handicap list !

Mum and Dad had a long and happy retirement and stayed at "No 2" until Mum died in 1990. After that Dad struggled on for a few more years but he suffered from dementia and ended up in a nursing home, where he died in 1997.

David & Paul Lenaerts – 15th April 2019

**Diane Lewis (nee Bray)**, died March 8<sup>th</sup> 2020, LEO Programmer and wife of John Lewis, LEO Programmer and Consultant.

**George Manley** – 1938-2011 LEO engineer, rising from apprentice to Chief Commissioning Engineer. After an illustrious career with LEO was headhunted by Honeywell before in 1974 returning to what was now ICL. <http://www.leo-computers.org.uk/images/GeorgeManleyObit.pdf>

**Stuart Megan**, died July 2022. Stuart worked as a computer operator – shift leader - on the Leo 3/35 at the Bath SWGB site, working like about 10 others on the LEO III and 4.50 for BARIC on permanent night shift.

He stayed with computers moving to the US and was one of the early employees with Netscape.

**Donald Moore** – 1920-2013, started his career in computing by setting up and managing the Army Payroll Centre with an IBM 705, subsequently took over the Shell-Mex & BP LEO III computer Centre at Hemel Hempstead. Obituary: <http://announcements.telegraph.co.uk/deaths/169330/moore>

**Tony Morgan**, June 1937- April 4<sup>th</sup> 2020. Tony Morgan, who has died aged 83 after contracting Covid-19, was one of the heroes of the early days of computers. As a computer engineer from the late 1950s, he was responsible for the installation of the pioneering [Leo computers](#) worldwide, including for the GPO (now BT) for telephone billing. After a 38-year career he remained an active member of the Leo Heritage Project, using his unrivalled knowledge to identify the company's artefacts. Tony took early retirement in 1995 but continued to work with the Heritage Project in the rescue and identification of computer artefacts, and advised on two books, User Driven Innovation (1996), edited by David Caminer and Leo, The First Business Computer (1994), by Peter Bird. As well as a demanding job, Tony was very sociable, and lived a full life with a wide range of activities. He played rugby for Lyons/Centaurs until he was 42 and continued as treasurer and club secretary for a further 25 years. His passion was Formula One and he detailed records of all races for over 50 years. Keen on jazz, he attended dance weekends until arthritis stopped it.

An Appreciation of Tony's life and contribution to LEO was published in the Spring 2020 edition of LEO Matters, pages 14-15 and can be found at: <http://www.leo-computers.org.uk/images/LeoNewsletterSpring2020.pdf>

The Guardian published an obituary of Tony in its Other Lives section on May 7<sup>th</sup> 2020 by Frank Land. This can be found at: <https://www.theguardian.com/technology/2020/may/07/tony-morgan-obituary>

**John Denys Neale** - born October 1936, died 2006, Engineer and Entrepreneur founded company to help users transfer data from one make of machine to another. Their big break came when Phoenix Insurance decided to update to the IBM 360 from their old system (Editor: LEO III/33). Once again they had no way of transferring their huge database from the old system to the new. The only way they could achieve this was by manually re-entering all the information. Since John understood both formats, he managed to persuade them that he could take on the task of automating the transfer. He was given (in those days) a huge order which he used as the basis to build his company, appropriately called Transdata Ltd.

[http://home.btconnect.com/Amaya/Obit\\_JDN.pdf](http://home.btconnect.com/Amaya/Obit_JDN.pdf)

## **Belated Obituary for Godfrey (Geoff) Parry died 9<sup>th</sup> April 2010, first secretary of the LEO Computers Society**

by Peter Byford, chair, LEO Computers Society charity and Alan Thomson (ICL editor pensioners website)- first published in 2010 but in a limited form.

Geoff died 9<sup>th</sup> April 2010, aged 70 years. He had been suffering from Parkinson's for some years.

Geoff helped organise the 1<sup>st</sup> LEO Reunion on 23<sup>rd</sup> November 1978 assisting Roy Farrant. It was at the 2<sup>nd</sup> LEO Reunion on Friday, 30<sup>th</sup> October 1981 that Roy passed responsibility for organising the next one to me, stating that Geoff, Dick Warren and Frank Kelly would help me. So the first LEO Reunion committee was formed. Geoff was involved with organising Reunions and was the secretary of the Society's committee from 1977 until 2000. He continued on the committee during 2000 but his illness meant that he couldn't continue, although minutes of committee meetings in 2001, do record apologies for absence from Geoff. References to him do not appear in minutes after 2001.

I personally feel guilty that we did not give any form of presentation to Geoff for his 23 years of service nor really made any contact with him after 2002. Part of the reason was that he had a "lodger" in his house who refused to pass on messages to him, nevertheless we should have arranged to see him.

As mentioned above, Geoff was the Society's first secretary and as he still worked for ICL he arranged contacts with LEO people who also worked for the Company, Without Geoff I am not sure that the Society would have successfully taken off in the way it did.

Geoff was well liked within LEO and ICL although he was never one to push himself forward. He was a singer, he was Welsh so maybe in the genes. He sang every year in the Big Sing at the Royal Albert Hall, until Parkinson's prevented him from going.

His LEO and ICL career details were provided by Alan Thomson. He joined LEO Computers in October 1961 as a LEO III/1 operator. Later he also worked on LEO III/4 (Met. Boroughs machine) and on GPO LEO IIIs at Hartree, John Humphries House and Charles House up to 1969. From 1969 to 1972 he worked in Sales Support for ICL LON24. During the period 1972 to 1975 he was in Planning support at LON24 & LON23. 1975 to 1992 saw him become a financial accountant covering LON24, LON14, WSR02, SLH01 including the Windsor cash office from 1984 to 1988. For the period 1988 to 1998 he managed purchase ledger covering WSR02, MDN06, SLH09 and REA23. Geoff retired from ICL in 1998.

**Robert E Peel – Died 2015.** He was an intrinsic part of the Master Routine team with such luminaries as Adrian Rymell, Colin Tully, Nigel Dolby, Sheila Milne and I'm sure a few others whose names I have forgotten. The Intercode Translator team interacted closely with the Master programmers and I remember Bob as a thoroughly pleasant and

competent member of that illustrious team. I think he worked on the Allocator/Loader routine which had to take the translator output and do something sensible with it. I remember nothing but the great professional relationship we had with him.

**Margaret Perrot** died on 28th November 2020.

She was a pioneer with the service bureau of LEO at Hartree House, and she was the last person to go to Cadby Hall to do a small program amendment on Leo 1 just before it was scrapped.

**John Pinkerton** – 1919-1997 After doing research into radar systems and receiving a PhD at Cambridge recommended by Maurice Wilkes to Lyons as the Engineer to design and develop. He joined Lyons in January 1949 and started to build the small team of engineers which succeeded in building LEO I as a machine based on the EDSAC design but significantly modified for business data processing. In 1959 he was appointed a Director of LEO Computers Limited, but resigned on the merger creating EELM. On the further creation of ICL he took charge of research into the product lines being developed by EELM. Subsequently he took a leading role in the development of International Standards and represented the UK in bodies such as the European Union's ESPRIT project. He also became Chairman of the editorial Board of the ICL Technical Journal. As a tribute to his outstanding qualities the IET inaugurated an annual Pinkerton Lecture and the WCIT set up an annual Pinkerton Award to the years leading apprentice. A short biographical sketch can be found on page 208 of Peter Bird's LEO: the World's First Business Computer. The Oxford Dictionary of National Biography, (ODNB), published an obituary September 2004 both in print and online written by Martin Campbell-Kelly.

<http://www.independent.co.uk/news/obituaries/obituary-john-pinkerton-1144708.html?pageToolsFontSize=200%25>

<http://www.cs.man.ac.uk/CCS/res/res19.htm#g>

[http://ieeexplore.ieee.org/xpl/freeabs\\_all.jsp?arnumber=707576](http://ieeexplore.ieee.org/xpl/freeabs_all.jsp?arnumber=707576)

<http://conservancy.umn.edu/bitstream/handle/11299/107600/oh149jmp.pdf?sequence=1&isAllowed=y> <https://www.cliftoncollege.com/external/clifton-memories/john-pinkerton-and-the-first-business-computer/>

**Clive Richards**, CBE, Financial and technology entrepreneur, philanthropist born 1st September 1937, died 16<sup>th</sup> April 2021 Twenty years before the Big Bang in the City of London in 1986, there was a small but important bang at the City offices of Wedd Durlacher Mordaunt & Co.

Extract from obituary published in Times newspaper on 1<sup>st</sup> July 2021 at

<https://www.thetimes.co.uk/article/7a71c506-d9cc-11eb-8f14-0bb645f59db0?shareToken=3b74eedfc49523fed3df4d7d3db2fab7>

“In 1966 the stock-jobbing company exemplified the traditional image of the gentleman stockbroker who did most of his business over a long lunch. But Clive Richards, the managing partner, signalled the electronic revolution that was to come by buying a LEO (Lyons Electronic Office) III, the first computer

in the City of London for £140,000 (£2.7 million in today's money). Richards continued to invest heavily in information technology in the Seventies after he moved on to Rothschild Investment Trust, financing the development of the Datasolve Computer Bureau, a mainframe computer that was hired out by companies.

**Anthony Salmon** – 1916-2000 A member of the ruling Salmon and Gluckstein family, founders of J. Lyons & Co, was assigned Managing Director of LEO Computers Limited on its foundation in 1954 and became a main board Director of the parent company in 1955. He played an active role in promoting LEO sales using his extensive business contacts. Ceased active involvement after merger of LEO with English Electric in 1963, though nominally Vice-Chair of merged company. A short biographical sketch can be found on page 208 of Peter Bird's LEO: the World's First Business Computer. <http://www.kzwp.com/lyons.pensioners/obituary2S.htm> (page 1)

**Ann Sayce** (maiden name **Tunbridge**). She worked at Charles House (GPO) on LEO 326 between 1964 -67 -note after this she worked at Westminster Bank and CEGB-Victoria, writing IBM as she says, "rubbish". Finally teaching computer studies at schools and adult education courses.

**Ray Shaw**

### **LAST OF THE ORIGINAL DESIGN TEAM THAT BUILT LEO**

Ray Shaw, the last remaining link with the original design team that built the world's first business computer, LEO (Lyons Electronic Office) has died aged 98.

Recruited into J Lyons & Co in 1949 for his expertise in radar and radio telecommunications by the LEO hardware team leader, Dr John Pinkerton, he was involved initially with the development of special test equipment and testing schedules for basic units within LEO, but later worked on the design of many of the 90 circuits that went into the early LEO machines.

He went on to do design work on the LEO II development that enabled the system to operate four times faster by interleaving the pulses from the mercury delay line storage without major changes to the processor.

Shaw left Lyons in 1956 to work down under with, briefly, Amalgamated Wireless of Australia on component standardisation and specification, and then joined the University of Sydney Physics Department at The Adolf Basser Computing Laboratory to work on magnetic tape backing storage for the university's computer, pioneering the use of error-correcting code techniques to minimise the loss of information due to magnetic tape flaws.

Returning to England in 1960 he joined English Electric Computers in Kidsgrove, Staffordshire, to work on the design of the KDF9 computer and then, by a strange twist of fate, found himself back with Pinkerton's research group and LEO after English Electric's takeover of the Lyons computer business in 1963.

### **Work on standards**

His later work with LEO involved working on a number of high-profile projects involving advanced data transmission techniques, including research into packet-switching techniques and data transmission standards. The European Computer Manufacturers' Association (ECMA) had a series of Technical Committees (TC's) and Shaw was vice chairman of TC9 that was looking at data transmission and error correction techniques that would in time become part of the multi-layer model that supports the internet.

Raymond Denby Shaw was born in Ilford, Essex, the son of Eliza Shaw, nee Pember, and Frederick Alfred Shaw. He left school at 16 with little in the way of qualifications apart from a facility for mathematics.

He joined Jacob White & Co, a privately owned electrical and mechanical engineering workshop. Then, in 1940, he went on to work on the testing of thermionic radio valves with Standard Telephones & Cable Company in Sidcup, Kent. His main ambition at the time was to become involved in radio research, which led to a move to the Electro Physical Laboratories in Hendon, London, that were engaged in R&D work relating to photovoltaic detecting devices and systems. And thence to Vacuum Science Products at Norwood Junction, a company concerned with the development and manufacture of silver-caesium photoelectric devices.

In 1943, Shaw volunteered to serve in the Royal Air Force and was trained as a radar mechanic, becoming involved with airborne radar equipment and navigational aids and air-to-ground cathode ray tube displays both in the UK and in the Far East theatres of war. Demobilised with the rank of sergeant in 1947, he returned to his pre-service employers continuing work on photovoltaic photoelectric devices and studies in radio and telecommunication engineering.

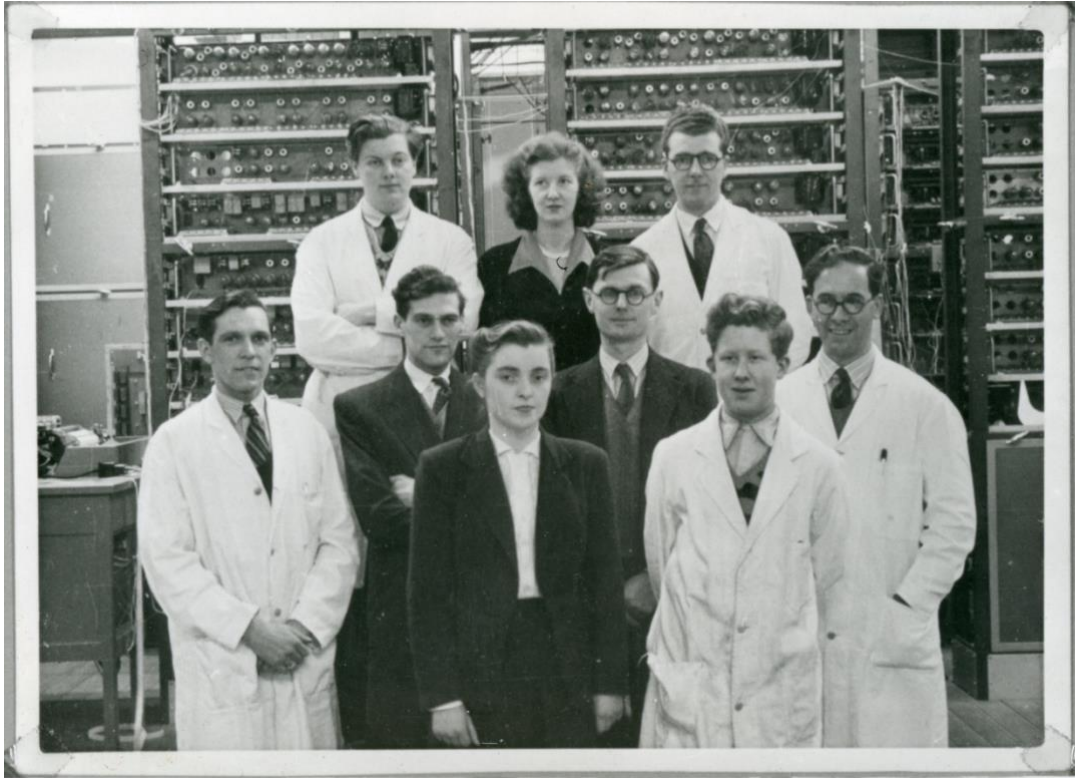
Following the merger that created ICL in 1968 and through to 1980, when he retired from ICL, he was involved in the formulation of mainframe computing system requirements for future products. He was also prominent as the leader of an advanced team of trouble-shooters.

### **Founding member of BCS**

A founding member of the British Computer Society, Ray Shaw's many interests were reflected in a wide range of other memberships, including the Chartered Institute of British Management, the Defence Electronics History Society, and the British Society for the History of Mathematics.

He was married twice, but had no children. His first marriage, to Ann Twyford in 1952, ended in divorce in the 1970s. The second, to Muriel Fussel in 1982, ended with her death from cancer in 2005. His one sister, Eileen, pre-deceased him in 2015. He is survived by her children, Yvonne and Alan, and by five other nephews and nieces from Muriel's side of the family.

*Raymond Tempest Shaw, b. 17 April 1924, d. 27 November 2022*  
[Remembering Ray Shaw](#) a Video of John Daine's presentation



Ray Shaw (far left in front) with members of the early LEO build team, including its leader, Dr John Pinkerton (middle row, second from left with glasses)

An addendum from Dag Spicer

Thank you so much sending me this – I really appreciate the extra effort you make to include those of us who are a bit off-piste in terms of time zone!

What a wonderful presentation by John Daines. Please pass along with deep admiration my best wishes to him for a touching and informative talk.

I've downloaded the whole meeting and will be keeping it in my personal research archives – it's a fine source of information on LEO, as are every LEO meetings.

The discussion about whether “LEO was cost effective” was interesting. My feeling on that is more relevant than whether it made sense economically was that Lyons would not have been able to grow at the rate it did without computers – they were facing a crisis of complexity that only computer methods could tackle. My \$0.02. :\_)

Thank you again for this amazing talk, Peter. I am honoured to be included.

With warmest regards,

Dag Spicer



Senior Curator

Computer History Museum

Editorial Board, IEEE Annals of the History of Computing

1401 N. Shoreline Blvd.

Mountain View CA 94043

**John Simmons** – 1902-1985 after gaining a first class degree in Mathematics from Cambridge University he was recruited by George Booth, Lyons company secretary as a Management Trainee and statistician with a brief to review and develop the Lyons business processes. Under his tutelage many innovations to business processes were introduced and in 1932 he established the Systems Research Office. In 1947 he sent two of his managers to the USA to study if Lyons could learn from American business processes. The outcome of the visit was the famous Standingford/Thompson report suggesting the possibility of computers as an engine for making the company more efficient. He used his own reputation and authority to endorse the idea and the resulting collaboration with Cambridge University to build LEO. He was appointed to the Lyons Board in 1954 as an Employee Director and a year later as a full Director. His reputation in the business world was an important factor in the establishment of LEO, the product of a catering company, as one of the leading computer supplier in the UK and further afield. A biographical sketch can be found on pages 209 to 210 of Peter Bird's LEO: the World's First Business Computer, and his profile is included in the Oxford Dictionary of National Biography, (ODNB) written by Georgina Ferry and published online September 2005.

<http://www.oldbrightonians.com/notable-obs/business/john-simmons-bc.-1916.html>

<http://www.oxforddnb.com/view/10.1093/ref:odnb/978019209210inPet8614128.001.0001/odnb-9780198614128-e-57059?rskey=A6LhXK&result=4>

**David Caminer** adds:

Handwritten notes by David Caminer in preparation for his Pinkerton Lecture and transcribed by his daughter Hilary, hon. secretary LEO Computer Society January 2021. Words in brackets below are guesses at what was on the original manuscript.

This may well be the last time that we of the small band who conceived the first business computer, built it and first put it to work. And so it seems appropriate to put aside reticence for a moment and to say a few concise words about my colleagues.

First then to Simmons. I have already spoken about him as the architect of Lyons office systems and (its) infrastructure. Without the enormous respect that he had gained from 'the family' as the controlling group of the Company was known, it is more than unlikely that LEO would have been proceeded with. He was known as a man who could be relied upon utterly and that when he made a proposal it had been completely thought through and would be carried to fruition, within a fixed time- frame and within budget. He was confident enough to advise the family of his intentions more than he needed to do. He believed very firmly in carrying everyone along with him and when LEO was actually being built he made certain that it should not be regarded as a Frankenstein and first invited all the management and supervisors of the offices to see it in progress. He promised that no one would lose their job because of it, arguing that it could take time for the Computer to replace labour and by that time there would be natural wastage.

He himself was a formidable person. He had glacier blue eyes that were transfixing. He was very quietly spoken. I don't remember him ever raising his voice. He was a tidy man

in every sense. I recall his large mahogany desk. Always clear when we entered his room. He would then take the paper to be discussed from his top right hand drawer. It was always there, in place. His questions were searching/He was not always satisfied with the answers, but his natural courtesy did much to check his impatience. If we didn't altogether agree with what was being proposed, he would smile rather thinly and declare 'I hear what you say!' If we were unwise enough to continue on this same track, he would repeat 'I hear what you say' this time with a note of resignation and dismissal. He was a totally logical man. Thinking the impossible was no problem for him as long as it could be logically supported. He brought his mathematical disciplines to his management chair. These were not just ... but a continuum in his style of thought.

John Simmons was a very private man. He was always the captain of the ship, but was not at all well known except to his senior officers. Many working in his large offices would not have been able to recognise him. He only very seldom ventured onto the shop floor. He was the son of missionaries and, without wearing his faith on his sleeve, we were very aware of the responsibility he bore for the people working for him. He was particularly conscious of the situation in which he had placed the small army of machine operators, all girls and women that had grown up. They were the counterparts of the operators in the continuous band factories, but as he noted, while those within factory operations could chat while they carried out their repetitive operations, the accounting ... or ... ..groups had to keep their minds on the work all the time. When he discovered it, I don't know, but he found that in the drive for efficiency, he had implanted drudgery in the offices. He quickly saw the potential of the computer to eradicate that drudgery and he seized up it. <https://www.dropbox.com/scl/fi/i2pncloi68lpa3jywtrrg/John-Simmons-appreciation.doc?dl=0&rlkey=qut7r1fol6k2lei49g5v117yx>

**Anne Smewing (maiden name Hills), died 2012. LEO 1, 1951 -55 Secretary to Mr. Ernest Lenaerts. Keeper of daily diary of computer time use, Preparation of weekly graph for Mr Simmons.**

**John Smythson**, born 1931, died December 2019 aged 88.

His wife Judy writes: "John read Mathematics at Trinity , Cambridge but changed to English after the first year as the school he had been evacuated to during the war had not covered Applied Maths and he found at Trinity that he had too much to catch up on . It says a lot for his versatility that he was able to graduate in English after only two years study . After an abortive few months in advertising he was lucky enough to spot an advertisement for some new fangled thing called a computer and he started his career at LEO in 1956. After a period spent programming he moved to the training department under Robin Gibson and found his true home starting at Hartree House , then in Ealing and finally at Beaumont until 1990 when he had to retire following a devastating brain haemorrhage . He was wheelchair bound and disabled in many ways but has survived nearly 30 years through grit and determination, living a fulfilling life, never feeling sorry for himself but concentrating on what he could do rather than that which he could no longer do. There may be some oldies who remember him". Peter Byford adds "many will remember him as Training Manager at Hartree House and his ability to make nervous applicants and LEO recruits feel at ease."

**Oliver Standingford** – 1912-1980, Senior Lyons Manager who at the behest of John Simmons, visited the USA with T.R. Thompson. They jointly wrote the report which was instrumental in the initiative which led

**Robin Stanley-Jones** – Died 2013, joined as a technician around 1961 and worked at Minerva Rd; did 24/7 shifts on III/1 at Hartree House; then went with LEO III/8 to Australia (Tubemakers of Australia) (1963?). He “became ICL. He remained in IT, mostly with Digital Equipment, until his retirement.

**George F Stevens** – 1911-2002, senior Lyons manager who took responsibility for the running of the Lyons LEO Computers when LEO Computers Limited merged with English Electric. He subsequently oversaw the switch by Lyons to IBM computers.  
<http://www.kzwp.com/lyons.pensioners/obituary2S2.htm>

**Matt Taub** Died December 2021 joined the Research Department of LEO in the summer of 1955 after working for about five years on the application of electronics in telephony. Left LEO in 1957. LEO 1 was already in operation, and LEO 2 under development in what had been a tea warehouse near Shepherds Bush. For the first few months I worked on the Input/Output system, which, I seem to remember, was called the Annexe. and fulfilled the same functions as the Channels in the later IBM 360 machines. But another part of the machine began to present problems, and I spent much of my two-year stay with the Company on the task of overcoming them. In both LEO 1 and LEO 2. the main memory consisted of mercury delay lines, using techniques originally developed for radar during World War 2. In LEO 1. the ultrasonic pulses circulating around the delay lines were of about 1 microsecond duration, but LEO 2 sought to be more ambitious, and reduced the pulse duration to 0.25 microseconds. This called for electronic circuits whose performance was close to the limits of what was then possible, and the design of these circuits was my main task. In the course of this work, the Research Department moved from Shepherds Bush to Minerva Road, and for the last few months of my time at LEO, I was Assistant Manager of the Research Department immediately under John Pinkerton. By the summer of 1957 LEO 2's storage problems had been overcome, and I felt that it was time to move on.

**Thomas Raymond Thompson (TRT)** – 1907-1976. The Oxford Dictionary of National Biography (ODNB) includes a profile of T.R.T by Peter Bird, online May 2011. The Lyons Mail published an appreciation of TRT in its April 1976 issue. This can be found in the Warwick University Simmons archive filed as 383-S4-14-2-9.jpg. TRT was one of the giants of the LEO enterprise. Frank Land published a personal recollections of TRT in the Spring 2020 edition of LEO Matters, page 10. <http://www.leo-computers.org.uk/images/LeoNewsletterSpring2020.pdf>  
<http://www.kzwp.com/lyons.pensioners/obituary2T.htm>  
<http://www.oxforddnb.com/view/article/101160>

The IT History Society includes a profile of TRT at

<http://www.ithistory.org/honor-roll/mr-thomas-raymond-thompson>

papers. It has been copied by Neville Lyons and is available from him. David Caminer in a handwritten note on John Simmons and TRT penned before the Guildhall Conference adds: Thompson was a very different personality from John Simmons. He was a very able organiser and

an enthusiastic disciple. He had been Simmons' right-hand man for more than 20 years. He was an enthusiast for what he was engaged upon and his enthusiasm was infectious. He and Simmons were an optimally matched pair: Simmons quiet and chill, Thompson sometimes noisy and often ebullient.

His speed of uptake was phenomenal. How much of the report of the seminal report of the trip to America came from him and how much from Standingford is not known, but his agile mind was certainly capable of picking it up all by himself. Frequently he raced ahead of anyone explaining something to him and became impatient if the other person didn't keep up with him. He would put himself in the front row before the computer staff explaining the construction or programming of the machine and could always be relied upon to jump out of his chair after a few minutes and declare 'What you mean to say is this!' Sometimes he was right, but not always.

His quick uptake and blatant enthusiasm meant that Thompson quite unconsciously thought that he was more responsible for some new ideas than he really was. Sometimes this was resented but more often the engineer or systems or programming person responsible was more than happy that the idea would now be carried forward with Thompson's fire and energy behind it.

If he had a fault it was insensitivity. He had come from a humble background and was proud of his success, but he couldn't quite understand that members of his staff could also be naturally bright without having been to Cambridge. ... (almost notes at this stage)

He was equally .. about everything he did whether it was bridge or rugby or amateur dramatics. In the senior dining room in which he lunched he was well-known for 'Thompson's Laws of England.'

<https://www.dropbox.com/scl/fi/d8iq55jaz2uv7lmq9uge0/TRThompson-appreciation.doc?dl=0&rlkey=rk32m88gmzcajzz7pel35ufyx>

papers. It has been copied by Neville Lyons and is available from him. David Caminer in a handwritten note on John Simmons and TRT penned before the Guildhall Conference adds:

**John Tomlinson** Died 2012, LEO Operator, 1962 LEO II/1, 1966 LEO III/1

Career in computing. Worked on LEO III as a programmer on Postmaster Accounting System – 1970/71 – and later for ICL on Post Office System 4 computers. After leaving Post Office joined ICL Dataskill.

Then various jobs with Corning, Thorn/EMI and Electolux where he became IT Manager. Subsequently became responsible for Information Security First for Northumbria Police and then Leicester.

From Simon Tomlinson: My Dad was John Tomlinson who worked for Leo during the 60's. I was a very small boy. We lived in Marlow and Dad used to commute to London to Leo.

My Dad was far more intelligent than me and had a great sense of humour. I have a couple of copies of 'Myopic' which reflect this! There are a few quotes of my cheeky replies to him from certain situations at home which are lovely to have in black and white.

I can't tell you much, apart from the few attached photo's as I was so small, but I do remember one funny story. Apparently, one night shift worker had an air bed so that he could have a bit of a kip after a pub visit earlier on in the shift. Everyone would work

extra hard to cover their colleagues `free time`. but, one night everyone came running out of the store room gasping after the offending worker had let the stale air out of his air bed after it had been inflated several days earlier after a few pints and a couple of ciggies! Dad ended up running the computer department for Leicester City Council and we moved up here in 1972. It was regretted by Dad in hindsight, but that is all in the past.

**From Bob Stevenson:** I knew your father well. We both worked as operators/shift leaders on the Leo III/1 computer, at Hartree House in Queensway, which figures in 3 of the photos you have, and often went for meals together in Queensway or Westbourne Park, where there was a great choice of restaurants. When I was Chief Op. I was asked to nominate someone to go to a Moscow computer show and help demonstrate a Leo III computer. Naturally I proposed John, who had all the necessary skills and was probably a bit more presentable than some of the other ops! I also remember that John took home one of the large punched card machines that were being scrapped and set it up in his garage, presumably hoping to have a profitable home business. I don't know how it went but he didn't give up his day job.

**Peter Titman**, died 2019 - Ann Titman, Peter's widow writes

"I am writing to let you know that my husband Peter Titman died on Sunday 16th November. He designed the magnetic core for Leo 111, if I remember rightly, working with Dr Pinkerton. He left to join IBM and had a successful career in computing"

**Colin Tully** – 1936-2007 Joined LEO in 1960 after graduating with a degree in Economics from Cambridge University. Became very much involved with Software Development including coding the LEO III Master Routine. Subsequently mixed an academic career with consultancy and practice at Standard Telephone and Cables. Had stints as an academic researcher at York University, Cranfield and the London School of Economics, finishing his career as Dean and Professor at Middlesex University. Maintained his interest in LEO and its achievements via the LEO Foundation and the LEO Computers Society.

<http://www.bcs.org/content/conWebDoc/16757>

<http://comjnl.oxfordjournals.org/content/52/3/388.short>

<http://www.leo-computers.org.uk/images/colintullytribute.pdf>

Tributes to Colin have been contributed by many of his colleagues and friends including Darren Dalcher, Brian Randell, Nigel Dolby, Adrian Rymell, Taz Daughtrey, Ian wand, Ralph LandPatricia McQuade and John Lindsay. They have been collected in one document in archived in Dropbox at

<https://www.dropbox.com/scl/fi/5uljbewmvy15jy5zqs3r0/Colin-Tully-tributes-060108.doc?dl=0&rlkey=kq1ffmy4coiwr1om8p9g99put>

Colin's CV and other career details can be found in Dropbox at

<https://www.dropbox.com/scl/fi/zw946gi2wboj6mdzj302i/Colin-Tully-CVs.doc?dl=0&rlkey=dwj1k5rt92ph1u5n439c0fijj>

**Chris Tyson** – Born 1941 in Scotland, died 1970. Joined LEO at Hartree House as a trainee programmer in September 1963.

**Wallace Weaving** – Born 1931, died 6<sup>th</sup> November, 2012. Wallace joined EELM in the UK but was transferred to EELM in Australia early in 1963. An account of his career was published in the Australian All Stars (ICL) magazine in 2013 and an edited version is held in the LEO Computers Dropbox archive,

<https://www.dropbox.com/preview/LEO%20Oral%20History%20project/LEO%20Memoirs%20C%20Reminiscences%20and%20Anecdotes/Wallace%20Weaving%20Obituary.docx?role=personal>

Pam Garnsey (with some added and fond reflections from Neil Lamming, Mike Benton and Kent & Sheilagh Brooks)

**Mike Webb** – Died November 2015 at his home in Anglesey. Joined LEO as a mathematician and operational research specialist. After leaving LEO became an academic, first with the LSE and subsequently as head of business studies at Manchester Metropolitan University.

**David John Wheeler FRS** (9 February 1927 – 13 December 2004)

David Wheeler, a member of the team at Cambridge University which built EDSAC under Maurice Wilkes, had the distinction of being the first person to be awarded a PhD in compute science in the UK in 1951. He played an important role in the collaboration between Cambridge University and J. Lyons in the period starting in 1949 when the Lyons Board made the decision to go ahead with the design and construction of the first LEO computer. In particular much of the systems software including the initial orders, the use of subroutines and relative addressing owe much to his invention and tuition. But he also experimented with Derek Hemy in drafting a payroll program to be tried on EDSAC. He went on to have a distinguished career in Computing, became an FRS and held in international esteem. He is included in the Dictionary of National Biography (ONNB), his profile written by Martin Campbell-Kelly published online 3<sup>rd</sup> January 2008 and in print 5<sup>th</sup> March 2009. He is remembered in many obituaries and tributes including a biographical sketch on page 211 of ‘LEO: The World’s First Business Computer’ by Peter J. Bird. His Oral History is held in the Babbage institute.

[https://en.wikipedia.org/wiki/David\\_Wheeler\\_\(computer\\_scientist\)](https://en.wikipedia.org/wiki/David_Wheeler_(computer_scientist))

**Sir Maurice Wilkes** – 1913-2010 Maurice Wilkes, played a leading role in the design of the Cambridge University EDSAC Computer in the late 1940s and in return for some funding for that project from J. Lyons & Co, allowed the Lyons team to use the EDSAC design as the basis for LEO I, cooperating with the LEO team and helping in the selection of J. Pinkerton as the chief LEO Engineer. He will be remembered as a good friend of LEO. His obituary was published online January 2014 by the Oxford Dictionary of National Biography, (ODNB), online written by Martin Campbell-Kelly/

[http://en.wikipedia.org/wiki/Maurice\\_Wilkes](http://en.wikipedia.org/wiki/Maurice_Wilkes)

<http://www.guardian.co.uk/technology/2010/nov/30/sir-maurice-wilkes-obituary>

<http://www.telegraph.co.uk/news/obituaries/technology-obituaries/8171435/Professor-Sir-Maurice-Wilkes.html>

**Alex Williams.** (Words from Robert Timms) -- A number of Alex’s LEO and ICL colleagues were among the gathering of family and friends who celebrated Alex’s life in Melbourne on 28 March, a beautiful sunny autumn afternoon. Maurice Roberts gave a moving Reflection alongside the warm family tributes.

Alex was a great work colleague and a great friend to me, highly professional and well-liked by all including our clients, successful as a technician, then in project management and later on in sales. He became a staunch Aussie while remaining a passionate Welshman, a Rugby Union fanatic and a great family man.

To quote part of the conclusion from his son Gavin's fine eulogy:- "So Alex – a sports mad, tight-arsed, beetroot-hating, workaholic, cynic. A brilliant childhood, a lovely wife, two lovely kids and 6 marvellous grandchildren. A lucky life. Some one who was just lucky. .... No dad, you embraced the opportunities that came your way with enthusiasm, hard work and integrity. Sure you had a lucky life, Dad, but you made your own luck too". Alex's son-in-law Neil has prepared a Drop-Box link:

<https://www.dropbox.com/sh/9qemziaqp04t21e/AADIMy-qDnPC0owp7Ekrazb0a?dl=0>

This contains a number of items. The article "Alex's Letter to his Loved Ones" is highly recommended. It is a wonderful description of Alex, his background and attitudes, lovingly prepared by Maurice Roberts.

### **John Frank Winterbottom (1928-2017)**



John Winterbottom spent almost 10 years working for LEO through its various reconfigurations, incorporating English Electric and Marconi, until further consolidation of the industry led to the merger with ICT and formation of ICL. He joined LEO in 1960, working at Minerva Road as a Design Engineer under John Pinkerton. He was involved in a wide range of research and development projects and regularly attended meetings of ECMA and later IEE standards committees. Although John was an engineer by training and at heart, he was fascinated by the business opportunities that computing technology offered and the potential of improved interface design and speech recognition in facilitating interaction with machines.

Along with a number of colleagues, John left Minerva Road in 1969, shortly before the site was closed following the creation of ICL. He became General Manager (Engineering and Manufacture) with Farrington, an American data processing company which had a UK base in Havant, Hants at the time and whilst he enjoyed the many opportunities to spend time in the US that came with the job, they were short-lived as Farrington closed its UK operation in 1971.

John graduated from the University of Durham in 1952 with a BSc in Electrical Engineering and spent the following six years working in the motor industry, first with Joseph Lucas and then with the Motor Industry Research Association (MIRA) as a research engineer before his time at LEO. He also completed an MSc at Birmingham University during this time.

After almost ten years in the computing industry, John moved into Higher Education, joining Portsmouth Polytechnic as a Senior Lecturer in Management and progressing from there to become Head of the School of Management Studies in 1979 at a time when it was moving into a new premises, purpose built to provide a base for residential programmes as well as established management programmes. He was responsible for setting up and managing a series of bespoke programmes for the MoD, mainly concerned

with Project Management and Defence Procurement, and another for the construction industry. During the 1970s he was also active as a consultant and served on the IEE S6 Committee which dealt with Engineering Management.

John retired from full-time work in 1987 but continued to share his experience and enthusiasm for engineering by teaching a management module to first year engineering students at Southampton University until he and his wife, Joy, retired to their final home in Swanage, Dorset in 2000. Even after their move he continued to maintain contact with professionals in both management and engineering through his involvement in various committees associated with his fellowships with the British Institute of Management and the IEE.

John and his family have many fond memories of his time at LEO, including occasional visits to Minerva Road, and became particularly good friends with Ernest Lenaerts and his wife Gladys. "Uncle Len", as he was known to us, provided us with a supply of coloured paper tape to make into paper chains and delighted us all by somehow punching onto tape a repeating Happy Christmas message to us all one year. Joy Winterbottom, John's widow, has recently written to the society to say that John looked back with great pleasure to his days with LEO; he had many lasting friendships with colleagues from those days and thoroughly enjoyed the early LEO reunions.

John died in January 1917 after a long period of illness. He is survived by his wife Joy, as well as their three children and their families.

**Anne Moggridge**, eldest daughter of John and Joy Winterbottom

**Peter Wood** – 1918-2013, who has died at the age of 95, was given a good send-off in June, well attended by family, old boys and members of his bowls club. Peter was very modest about his war, but it was revealed that he was evacuated from Dunkirk, trained as a commando, fought in India on the North-West Frontier, was captured by the Japanese – and escaped! He ended the war as a 27-year-old Lt-Colonel, still in the Far East. An England-schools rugby international, he became a pillar of the Association, and a leading member of both the cricket and rugby clubs. He was Ground Secretary for many years, and a vice-President of the Association and those clubs. After the war he was responsible for the first commercial computer in the country, the LEO I, as DP Manager for the Lyons Organisation. A biographical sketch can be found on page 212 of Peter Bird's LEO: the World's First Business Computer.

**Anatol Zak** – LEO III engineer, 1934-2015 See

[https://www.dropbox.com/search/personal?path=%2F&preview=Anatol+Zak+Biographic+Notes.doc&qsid=67346903616870339613192425801690&query=anatol+zak&search\\_token=maaZCi5EZfs9ghMHde3MaOmE5gIkeIs7mVIUbNhfSkQ%3D](https://www.dropbox.com/search/personal?path=%2F&preview=Anatol+Zak+Biographic+Notes.doc&qsid=67346903616870339613192425801690&query=anatol+zak&search_token=maaZCi5EZfs9ghMHde3MaOmE5gIkeIs7mVIUbNhfSkQ%3D)

for brief bio.

**Others whose death has been noted, but of whom more information would be welcome:**

**Jamie Anderson**

**John Merton Baker**

**Geoffrey Barnsley**

**Peggy Baty**

**Norman Bishop**

**Ray Bradshaw**

**Rupert Blake**, died 2017

Geoff Christopher

Peter Clare, died 18/6/21



**John Coombs**

**Geoff Cooper**, Design Engineer, died 4<sup>th</sup> January 2017

**Ian Crawford**, born 1930 died August 2018 in Remuera, New Zealand

**Mike Daniels** – died March 2018. Mike worked in the Leo Service Bureau, Hartree House in Programming and Support 1962-1966. He went on to work with several companies, including UNISYS, RCA (in America).

**Keith Davies**

**Colin Davis**

**Ernie Doors**

**Wally Dutton**

**Bob Elmer**

**Brian Elsey**, May 8<sup>th</sup> 2017, Programmer on LEO I in 1958 and progressed through LEO II and III at Lyons.

**Alan Evans**

**Mavis Everitt (nee Tin(d)ale)**

**Jim Feeney**, died April 2016, aged 72 after a short illness

**Sean Ferguson**

**Roger Ford**, died March 2017, Operator at W.H. Wills

**David Garood**

**Mike Gomm (Australia)**

**Jean Harrison**, died December 2015, LEO Ii/I and LEO III/7

**John Hemstead**

**Sally/Sylvia Hindley**, Died 2018 aged 81

**James Hitchen**, died October 2016, Operator at Shell Mex & BP

**Alan Hooker Jr**, died 26<sup>th</sup> September, 2017

**Peter Hopson**, died January 2016, LEO II/5

**Chris Joint**, died November 2014

**Alan King**, died 2017, LEO I, LEO ii/1, LEO III/7, LEO III/46

**Bob Knight**, Died May 2016

**Michael Knowles**

**Alan Lake**,

**Colin Lewry**, died 21 September, 2017, LEO 11 design, Radley House LEO II Training and then with ICL in 1959 Sales Consultancy Training. Member of Magic Circle.

**David Litten**

**Ross Macadam**

**Ken MacLachlan**

**Pat Magee**, died November 2014

**Eve Manley**

**Bob Melling**

**Reg Miller**

**Sam Mitra**, joined J Lyons as electronic engineer, LEO 1953, died 1985

**Frank Moran**

**David Musson**, died May 2016

**Peter O'Keeffe**, died February 2017

**Fred Owen**

**Bruce Parkin**

**Geoff Parry**

**Bernard Pierce**, died April 2016

**Alan Potter**

**Alan Poster**, died March 2016, Renold Chains 1960

**Mrs Pam Procopiou**, died April 2016, Hartree House Receptionist

**Gerry Randall**, died December 2015

**Francis Richards**

**Mike Roberts**

**Brian Rogers**

**John Rookes**

**Dave Rowberry**, Software Programmer, later member of Animals group, died 2003

**John Rowe**, Died 2019? John worked on LEO II/6. He did a 6-week programming course at Cadby Hall in 1958, on secondment from Ministry of Pensions and National Insurance (MPNI). The following year he moved to Newcastle to do payroll programming

**Geoff Rowett** , died August 2015, LEO III/5 and LEO III/22

**Ted Rowley**

**David Springle**

**Andrew Stephens**, died July 2015, LEO III/26 LEO II/34

**Frank Thorne**

**John Tomlinson**

**Gerald Turner**, died August 2016, Operator LEO III/6

**Frank Walker**

**Merwin Whitfield** died 17<sup>th</sup> November 2021

**Note: Would anybody who has further information about people on the list including dates of birth and death, when at LEO or its clients, position or role, links to obituaries, pictures [please send them to Frank Land [f.land@lse.ac.uk](mailto:f.land@lse.ac.uk)]**

Brief biographical sketches of a number of Lyons and LEO people can be found in **LEO, the First Business Computer**; P. Bird, Hasler Publishing, 1994, pages 200-212.

The following people – in alphabetical order - are noted:

Tony Barnes, Daniel Broido, David Caminer, Mary Coombs, Leo Fantl, Isidore Gluckstein, Montague Gluckstein, Samuel Gluckstein, John Gosden, John Grover, Derek Hemy, Ernest Kaye, Frank Land, Ernest Lenaerts, Joseph Lyons, John Pinkerton, Anthony Salmon, Ray Shaw, John Simmons, Oliver Standingford, Thomas Raymond Thompson, David Wheeler, Maurice Wilkes, Peter Wood.

