

LEO COMPUTERS SOCIETY

Registered Charity No. 1182253



LEO MATTERS

73 Years

Editor: Hilary Caminer

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1951—LEO I Operational



Frank Land with Dame Steve Shirley unveiling our plaque in 2016

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Message from our Chairman - Peter Byford

Welcome to the May 2024 edition of LEO Matters. It has been put together as usual by our excellent editor, Hilary Caminer and layout by Bernard Behr. Thank you to the contributors for your articles.

We are still in a transition period following the successful NHLF period. We will continue to work with the Centre for Computing History in Cambridge and are discussing with them how we can best work together in the future.

This edition starts with the disappointing news that our historian and LEO Pioneer, Frank Land, is standing down as a trustee. Frank's health makes it difficult for him to participate fully in meetings so his resignation is understandable. Hilary tells you more in an appreciation of Frank's value to the LEO story and the Society.

Sadly we have lost a great friend of the Society in Helen Pinkerton, widow of John. There follows a tribute provided by Hilary Caminer and Helen's family.

We have had 41 zoom forums since we started them in October 2020, because of the covid pandemic. If you would like to see a subject covered by a future forum please let us know. I now turn to the December 2023 forum: LEO has had a number of mentions on TV and has also had good exposure on radio. As I hope you may recall, Neville Lyons put together a collection of "LEO on radio" recordings for our December Zoom forum. Neville has penned an article about those radio events.

We are planning some future heritage projects, for which we

will need funding. We aim to improve the telling of the LEO story in education and are still looking for volunteers to help us with this. We would like to recruit an archivist to continue the work on the LEO archive at CCH which was such a vital part of our NLHF project. We have still to put together a funding application for this work. The third area of work is to research what institutions around the UK and worldwide hold in the way of LEO material and help museums with LEO displays. Hilary reports on this project.

The next article is by me, some reminiscences about my time at LEO.

Sadly, but inevitably, several of our members passed on since our last edition, however we have had several new members during this time. One of those we have lost is Elwyn Rees. Some of you might recall him from our Reunions, - he presented us with a LEO II short mercury delay line which is now in the LEO cabinet at TNMoC. Elwyn's son David provides some memories of Elwyn.

As usual we finish off LEO Matters with an information section.



Peter speaking at the Celebration event at CCH

Peter Byford

Peter started work as a programmer on LEO III/1 at Hartree House in 1961 where he remained until 1965. He went on to a long career in IT at various companies including 25 years at British Gas-Eastern.

He writes: 'I became involved with LEO reunions and, in 1981, their organiser 'passed the baton' on to me. The LEO Reunion Society (later LEO Computers Society) was formed and despite many committee changes, no one has yet volunteered to take over as chairman. I have had excellent committee members (now trustees) over the years: I am just a figurehead touching the tiller from time to time!'

STANDING DOWN AS A TRUSTEE Professor Frank Land OBE

Professor Frank Land has recently resigned as a trustee of the Society as, although he is well, he feels that his health is no longer really up to the demands of the role. Just a reminder – Frank is now 95! As members will know, Frank has been the Society Historian and has undoubtedly the best claim of any of us to an in depth knowledge of LEO, its development, its users, its influence and its impact on computing.

Frank joined Lyons' statistical office at the start of the 1950s and was selected to join the LEO I team in 1952 as a programmer and systems analyst. So Frank's association with LEO is one of around 73 years! Astonishing!

For all this time he has held fast to his unstinting regard for the great importance of the role Lyons and LEO have played in the history of business computing – and he has been determined to keep that flag flying.

Frank is always at the forefront of our activities – recent examples have been his starring role in the new LEO film where he talks to camera from his riverside home in Totnes, his chairing of a group discussion of computing history experts at the event we held at CCH last May to mark the end of our lottery-funded project. He has also recently been carefully handing over to others the management of the splendid LEOpedia resource which he initiated and which underpins access to all our archives.

Of course, Frank will continue as an active member of the Society and we are sure to be call on his enormous wisdom and expertise on a very regular basis!

Thank you, Frank!



Frank with the new book at home in Totnes, 2022

HELEN PINKERON

a great Friend of the Society dies aged 100

Just at the end of 2023, the Society committee was sad to learn of the death on Boxing Day of one of its most-longstanding and loyal Friends – Helen Pinkerton, widow of John. Helen had turned 100 just a fortnight earlier and died peacefully at home. Many members will remember her well.

Frank Land recalls visiting Helen in Esher, their stimulating discussions on her own life and achievements, her husband John and the importance of his contribution to LEO and computing and the interweaving of their different lives. He remembers: 'We took long walks together including, of course, my own wife Ailsa. I very much regretted that as old age took an increasing toll we could no longer meet'. Hilary Caminer remembers Helen as a woman with a beautiful Scottish lilt to her voice, a beaming smile as well as a formidable intelligence and a very ready and quick wit. She wore her years lightly.

Helen, of course, supported John in his work on LEO while she herself progressed rapidly in her own Civil Service career reaching the very top echelons. Later she attended LEO lectures – the annual Pinkerton lectures were initiated in



left to right: Ray Hennessy, Helen Pinkerton, Jackie Caminer and Peter Byford

In November 2014, the Society presented Helen and her good friend Jackie Caminer (widow of David) with framed photographs of their pioneer husbands. The presentation was made by Peter Byford and the late Ray Hennessy, a LEO programmer and very active member of the Society.

John's honour shortly after his death in 1997.

Helen also came to LEO reunions and other events.

We print below a short account of Helen's life and very distinguished career in an obituary sent to us by her daughter Liz and son Duncan.

Helen Pinkerton (nee McCorkindale) 1923 - 2023

Helen was born to Isabella and Douglas McCorkindale in Glasgow in December 1923, and spent her childhood there. She was enthusiastic about school, where she flourished, and did her 'Highers' early, before going to Glasgow University for her degree. She came to London in 1944 and joined the Civil Service, working first in the Treasury as an "Assistant Principal"; and on promotion to "Principal" she was rusticated to the Ministry of Agriculture Fisheries and Food where she worked as a personal private secretary in the Labour Government to MP Dr Edith Summerskill, who she certainly regarded as a great role model. Later roles included membership of Milk Division, and work on animal health. She had offices in central London and also in Tolworth, Surrey. When she retired aged 60, she had progressed to the senior civil service

Helen and John Pinkerton - who had just started on his own epic career in the design and development of LEO, the Lyons Computer - were married in December 1948, and they lived in a flat in Belsize Park. In 1956, they moved, with their two children, to a house they had had built to their own design, innovative in that it had hot-air central heating. True to form, they made major changes to their final home in Esher when they moved there in 1971.

When Helen retired, she and John ran a consultancy in support of ICL. Later, she was an effective chairman of the residents' association for their private road, and then worked for a time at and then became the chair of the local Citizens' Advice bureau.

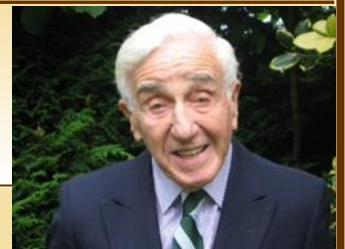
Helen died peacefully at home on 26 December 2023, aged 100, leaving a daughter and a son, five grandchildren, and seven great-grandchildren.



John Pinkerton, David Caminer and Helen Pinkerton at a LEO pioneers supper party in the 1990s

LEO on BBC Radio

Neville Lyons



For our December 2024 Forum we decided to arrange something a little more light-hearted than usual for our theme. We hit upon the idea of playing some BBC radio broadcasts about LEO which had been recorded earlier this century.

Three broadcasts were selected, of length varying between 15 and 30 minutes. To provide added interest we accompanied the speakers' voices with a PowerPoint display of their portrait images or the items they were speaking about.

Among the participants were Hannah Fry (mathematician and TV presenter), Tilly Blyth (Science Museum Curator), past and present LEO personalities: Peter Bird, John Simmons, David Caminer, Ernest Kaye, Frank & Ralph Land, Mary Coombs, Gloria Guy and John Aeberhard.

The first two recordings were part of the Radio 4 series Computing Britain, recorded in 2001 for Radio 4 and Radio 4 Extra respectively. The third was a Radio Five Live Outriders recording, broadcast on 29th November 2011 in celebration of the 60th anniversary of LEO.

They can be heard by going to the LEO Computers Society website at: <https://www.leo-computers.org.uk/leo-on-the-radio/>

The website also carries a recording of that 12 December Forum.



Neville Lyons

Neville's grandfather and Sir Joseph Lyons, co-founder of the catering empire, were cousins. The family relationship inspired Neville to research the history of the company and the story of LEO, resulting in the talks he has been giving for the past 11 years, mainly to retirement organisations. He joined the LEO Computers Society in 2014 and is now a trustee.

LEO on display!

Our new project - finding out what LEO material is held in museums, libraries and archives and making it as accessible as we can



The Society is now building on the lottery-funded project we carried out with our partners at the Centre for Computing History in Cambridge. That project - which ended last May - had many aims and outcomes – all building on the foundation aim of building a safe archive for all the LEO material we were collecting which had no home.

Much LEO material had been stashed away in lofts, garages and cupboards for decades – and indeed even now more is coming to light. This enormous cache of LEO ‘stuff’ urgently needed the attention of professional archivists and a safe haven. CCH provided us with this – and much more.

In particular, LEOpedia , the ‘as comprehensive as possible’ catalogue of all things LEO – which started as a simple WORD document curated by Frank Land is now searchable in easy to access form on the CCH website. Which can be found [HERE](#).

Importantly, LEOpedia catalogues not just the LEO material housed at CCH but points to material wherever we know it is housed – displayed or in storage.

Now we want to conduct some detailed reconnaissance – to discover just what there is ‘out there’- where exactly it is and whether it is publicly available. Obviously we are not starting with a blank sheet and we already have some excellent- and very friendly - professional contacts in museums, libraries and archives around the UK and abroad.

This is also very much designed as a two-way project. We want to be able to help museums and other repositories to display their LEO material as well as it can be – with accurate descriptions and where possible using all the resources – the film, the Virtual LEO I and learning resources aimed at children and young people.

We start with a good list of the institutions that we already know have LEO displays. We feel honoured, for example, that **The Science Museum** in London chose LEO as a key exhibit in its Information Gallery, opened by HM Queen Elizabeth in 1944. Our section of the gallery contains pieces of hardware, photographs, extracts from newsreel film and an audiotape accompanied by some pictures featuring some early LEO staff – including Frank Land and Gloria Guy. We recently met Jessica Bradford, Chief Curator, and discussed ways we might be able to refine some aspects of the display for its 10th anniversary.

Our partners at **The Centre for Computing History in Cambridge** now hold a very substantial LEO archive which is really easy to access and contains lots of fascinating material. There are also permanent LEO displays in the museum which feature the award-winning Virtual LEO I on a large screen. This allows the user to ‘walk around’ the reconstructed computer room by manoeuvring handsets. CCH has a strong educational remit and visiting school parties are able to discover about LEO



Isaac (13) listens to the LEO tape at The Science Museum

using focussed educational resources developed to align with the National Curriculum and its Key Stages.

We also have a permanent display of pieces of LEO hardware at **The National Museum of Computing at Bletchley Park** with whom we work closely. Visitors can also view the LEO film on a PC in the First Generation Room. Vince Bodsworth, one of our trustees, is a volunteer guide at TNMoC and is currently working with the curators there to enhance this PC display with a recording of the Virtual LEO I and other collateral as it becomes available.

Around the UK and abroad there is a growing list of museums with LEO holdings of some kind. Some of these we know a lot about – and count their archivists and curators as friends of the Society. Examples include the **Birmingham Museum** which holds a LEO Half Adder



James (11) at CCH using the Virtual LEO I

donated by Lyons, and the **National Museum of Scotland, Edinburgh** which holds an almost complete LEO III from Phoenix Assurance (unfortunately not currently on display to the public). We are delighted that the **Corby Heritage Centre**, which holds items relating to the steelmakers Stewarts and Lloyds who used a LEO II computer is very active in its promotion of their LEO link. Billy Dalziel, the Heritage Worker there has produced a really great pocket-sized exhibition about this computer which is on display at the 'Discover Northampton' Centre at Rushden Lakes shopping outlet – until September 2024. This is a splendid example of outreach and we hope that shoppers will have their curiosities awakened about early business computing!

As well as museums, we also have LEO holdings in libraries and archives such as the **London Metropolitan Archive** which houses the main J. Lyons and Co archive and owns a LEO III console. The British Library, London holds all all the LEO books and some LEO oral histories and transcripts. **The John Rylands Library, Manchester University** has a very extensive LEO archive which includes material from John Pinkerton and Ernest Lenaerts and the **Modern Records Centre, University of Warwick** holds John Simons' papers. **Archives of IT** has an online collection which includes LEO oral histories and other material. Our colleague, Dr Elisabetta Mori is an oral history interviewer for Archives of IT.

But LEO's fame extends overseas as well, of course. We are delighted that Dag Spicer, Curator at the **Computer History Museum, Mountain View, California** is a keen supporter of LEO and the huge museum houses a LEO display. The largest computer museum in the world, the **Heinz Nixdorf Museum, Paderborn, Germany** makes reference to LEO. There are LEO biographies and news items online with the **IT History Society, US (online)**, the **Charles Babbage Institute, US (online)** has John Pinkerton's oral history - and 'down under' the **Melbourne Museum – Scienceworks** – has Shell's LEO documentation.

So - what next? We held a Zoom forum about this project on 21st February 2024 at which we were delighted to welcome as esteemed guests Jessica Bradford, Head of Collections and Principal Curator, Science Museum, London, Dr Tayce Phillipson, Senior Curator of Science, National Museums Scotland, Billy Dalziel, Corby Heritage Centre Officer, North Northamptonshire Council and Dag Spicer, Computer History Museum, Mountain View California. (at 3 a.m. his local time !) A link to the recording can be found [here](#).

As we explained at the forum, we think that we will need to raise money to pay a research worker to carry out the detailed work of finding out exactly what is where and whether it is currently on display or not. This is potentially quite a big task and too much for our current working group of volunteers. But - we do want to harness the knowledge of you, our members, in letting us know of any places that you know of - maybe local to you - which we might include. We have an easy-to-use questionnaire to complete – available [here](#).

Now that we know we have a substantial body of LEO material safely housed, we do want to ensure that the LEO story gets transmitted to a new generation. If you feel you can help us in this endeavour – do please get in touch! Finally, if you still have LEO material to donate, please also let us know. We would like as many people as possible to see it.

Hilary Caminer

Hilary Caminer is probably the only Trustee with a totally non-technical background. Now retired, her career was teaching English in higher and further education, most recently at the OU. As the older daughter of David Caminer, a LEO pioneer, she has lived alongside the LEO story all her life and, wanting to help preserve the heritage of this amazing invention, accepted an invitation to join the committee. Her work for the Society includes acting as Honorary Secretary, editing the '**LEO Remembered**' anthology, editing 'LEO Matters' and being a member of the Steering Group for our joint Lottery-funded project with The Centre for Computing History, Cambridge.



Temporary Shopping Centre display showing LEO II's role at Stewarts and Lloyds, Corby

Some reminiscences from a computer career which started at LEO

Peter Byford

It all started in the Summer of 1961 when my Dad brought in an Evening Standard and showed me an advert for trainee programmers at LEO Computers. I had applied for a trainee programmer job at ICT a couple of weeks earlier so I knew a little about the role. I duly applied and was invited to Hartree House in Bayswater for an all day aptitude test about two weeks later. Hartree House was housed on an upper floor of Whiteleys department store. (In fact, ICT invited me for an interview a few weeks later).

On the day of the test four men and four women were ushered into a meeting room by a well dressed man who said he was the general factotum. He was our guide for the day. He even suggested that if we got the job we could buy a suit from a local jumble sale.

We were taken into a large room for our aptitude test training where we learnt how to draw a flowchart and turn this into programming code, I thought at the time it was LEO I code but recently I was told it was probably LEO II code. Having spent a couple of hours with the trainer we went to lunch, I think at the 'Prince Alfred'.

Back in Hartree House we were asked to draw a flow chart and then write code to solve a simple problem, making a cup of tea or something similar. Much to my delight, I was offered the job of trainee programmer.

I started a few weeks ahead of the programming course so I was allocated to help the training department, managed by David Yates. This mainly involved running off course notes on a Banda machine. I ran it a bit fast on one occasion and the vibration sent a tray of cups on adjoining cabinet flying – oops.

I started work in the Group Endowments (Durlacher's, Guardian insurance etc.) team in the LEO III/I service bureau, led by Mike Brignall. This was in the large programme office facing Bayswater Road. I was reading requirement specs and drawing flowcharts, getting them desk checked then writing programmes in Intercode language. Again we desk checked each others' programmes. In those early days there was no LEO III to test it on, this arrived in early 1962. Group Endowments was a fairly big team - so much so that we were able to play cricket against teams made up of other teams in the department, always at the Lyons Club in Sudbury.

One day I was walking along the corridor from our office when I met a fireman with a hose, he asked where the fire was. It transpired that there was a fire in some rubbish at the back of Whiteleys. There was no fire alarm system so "everybody" was evacuated, but they somehow forgot about us. There was smoke but very little fire so fortunately we were quite safe. The fire procedures were improved after that. On the subject of improvements, our office was very stuffy and got hot in the summer. One day the boss, Anthony Salmon, visited the office and asked if we had any issues. I told him that the office was hot and stuffy, he said that he would do something about it. A few weeks later a large metal tube which went across the ceiling of the office to the window was installed – we had our air-conditioning.

Once LEO III/I was installed we had a lot of testing to do. This often meant that I had to spend long hours dealing with coding problems. One of the most interesting jobs I had was to write a programme for the Courtaulds share registration and dividend production. This ran well until ICI bought over 50% of Courtaulds shares during a failed bid to buy the company. The storage registers we had on the LEO were not big enough to calculate the dividend due to ICI, so I had to calculate and store the dividend manually and arrange the code so that when ICI's dividend was required it picked up the stored dividend.

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One remarkably useful facility on LEO III was radix arithmetic. So you could code calculations using whatever radix you needed. Main examples were yards, feet and inches, sterling (pounds, shillings and pence) and decimal of course.

Sport and other activities, such as bridge, were encouraged by Lyons. I played bridge many times at Cadby Hall with colleagues and friends such as Dave Alterton, Tom Brooks and Mike Lawson. I have recounted the story of us winning the Lyons Club pennant in previous papers so I won't repeat it here. (Editor: There is a detailed account of the sporting and social side of Lyons by Peter published in 'LEO remembered'.)



LEO III/I at Hartree House, April 1962

I was at LEO for three and a half years. I made some good friends there. At times we had to work long hours sometimes well into the night such as the occasion I slept in the rest room. When I woke up at around 6 a.m., I discovered that my trousers had disappeared and I couldn't get out as the door handle had been held fast by placing boxes of computer stationery under it. Fortunately I was able to call for help out of a window and there was a guy in the kitchen nearby. He came and let me out. I walked to the LEO III/I computer room. My trousers were taped to the door and the pockets filled with paper tape Chads. I should never have slept in the restroom when Toby Edward's shift was on duty as they were famous for playing practical jokes, often at young programmers' expense.

We were called to a meeting in 1964 or maybe 1965. David Caminer told us that LEO Computers would be merged with English Electric Computers. I asked if we would continue to have access to the Lyons Club, I think that Mr. Caminer considered my question somewhat unimportant in the politics of this decision. He did however say that, of course, we would no longer have any links with Lyons, including the social and sporting activities.

I knew that working at LEO, would never be the same again. So I got myself a job at the AA in Holloway- Automobile Association not Alcoholics Anonymous! The computer was a Ferranti Packard 6000, with labels that could be peeled off, calling it an ICT 1904. Several LEO people worked there, we reminisced about our time on LEO machines criticising some features of this machine that, in our view, were a downgrade from a LEO.

Although I was no longer working at LEO/English Electric I kept in touch, indeed some of the LEO people played football at Alexandra Park F C where my father was chairman and was assistant secretary. There were small reunions amongst operators and engineers but it was not until 1978 that there was a LEO reunion for all ex LEO staff organised by the, sadly late, Roy Farrant at the Rugby Club behind Broadcasting House. This became a regular every 3 year event and after the 1981 event Roy passed the baton to me. The LEO Computers Society story started with these early Reunions.

*Two photographs showing the arrival of LEO III/I at Hartree House—1962
Located above the Whiteleys Department Store in Queensway, Bayswater, West London.*



Some memories of Elwyn Rees pioneer of using computers in education.

by his son, David Rees

David Rees has written to us about his father who died on 2nd January this year.

In the 1960's Elwyn was a pioneer in the use of computers in education and was the recipient of the HO Wills LEO computer after it was decommissioned and donated to Linwood Secondary school in Leicestershire. He then proceeded to repurpose the machine as the first computer-assisted learning machine in the UK in the late 1960's and early 1970's.

As part of his work he founded an early Computer Science class at that school. Elwyn went on to apply the lessons learned on that system and applied them to micro computer applications in the 1980's as personal computing developed. He published extensively on the topic until his retirement. In later years he donated a number of artefacts to the LEO association including a mercury delay line storage unit, which is in the collection of LEO parts at The National Museum of Computing at Bletchley Park.

David concludes: I am delighted the delay line is at Bletchley. The line between the Bombe, Christopher, EDSAC, and the LEO was something I heard often growing up. My Dad would be incredibly proud to know "his" delay line was there.

He is survived by his son, David, his daughter Emma and his three grandchildren, Bronwyn, Alice and Isabel.



At the 2012 reunion at the Doubletree by Hilton Hotel, London



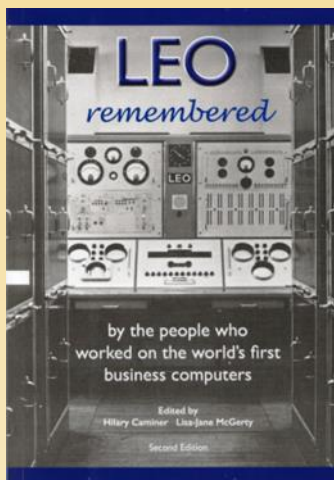
Elwyn Rees with "his" Mercury Delay Line Memory

Available to buy direct from us

LEO remembered – by the people who worked on the world's first business computers

If by any chance you have not yet acquired your own copy, please do – we are sure you will enjoy it and your purchase supports the Society's work.

This edition is, as you probably know, a second, much enlarged version of the original 2016 book. This new version has well over 80 contributions from people who worked on LEO computers from the very earliest days – even before it went live- to those who worked on later machines across the UK and around the world. It is illustrated with contemporary photographs. The book has a foreword by Dame Stephanie Shirley CH, a good friend of the Society. We, as editors, are very excited about the book and feel that it really gives an excellent insight into what work on this pioneering computer was really like. The book received excellent reviews – and we hope that all our members will buy a copy!



- The book is a paperback, A5 size with 244 pages. The price is £8 per copy plus p and p – which will obviously depend on your address.

How to buy copies of “LEO remembered and other LEO items

- **LEO remembered** costs £8—plus post and packaging which will depend on your address.

We also have two other books available to buy.

- **Peter Bird ‘LEO: The First Business Computer.’** Book costs £10. We can quote for postage.
- **Georgina Ferry ‘A computer called LEO’** Book costs £8. We can quote for postage.



Finally, we still have available **sturdy blue LEO bags** – which make great gifts! The bags are very capacious and strong, made of hard-wearing eco-friendly jute, with comfortable cloth handles and a handy pocket on the side. Ideal for shopping, but also multi-purpose – e.g. for storing files and papers, craft materials etc.

Dimensions are: 38cm x 37cm x 13.5 (15” x 14.5” x 5”) £6 each plus postage .

To buy any of these items, Please just send a note to:

LEOremembered@leo-computers.org.uk and we will take it from there!



LEO COMPUTERS SOCIETY

Registered charity: 1182253

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2024

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