

# LEO COMPUTERS SOCIETY

Newsletter of Recent Events and Future Plans

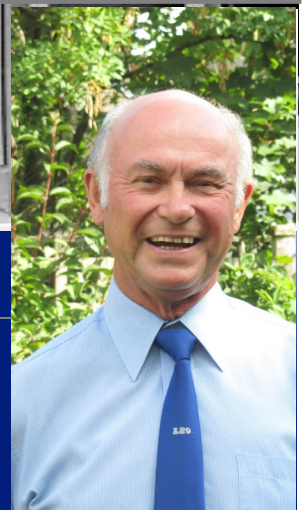
ISSUE AUTUMN 2014

## 60 Years

1954 Leo Computers Ltd



Message from our Chairman P.1  
Impressions of Bletchley Park P.3  
Stats on the LEO Website P.3  
Information Age at the Science Museum P.5  
Archiving LEO Memorabilia P.6  
Progress on LEO emulation project P.7  
The LEO Oral History project P.8  
News and forthcoming events P.8



## Message from our Chairman

Peter Byford

Dear member,

I have been asked to do an introductory note for this newsletter, our first in recent years.

When the early Reunions were held in the late 70s and early 80s, there was no Society just a small group originally managed by Roy Farrant. He “passed the baton” to me and I recollect the first reunion run by my small committee was in 1984. It was a few years later when we formed the LEO Computers Society, initially so we could accept ownership of the LEO film and photos from Fujitsu Services.

It has been a busy time yet again for the Society but the new volunteers that have joined us mean that we now have a strong team to run the Society.

The major event of 2014 was the Reunion which also commemorated the Diamond Anniversary of the establishment of LEO Computers Ltd. As many of you will know it was held at Middle Temple Hall in London. This Hall dates back to the middle of the 14th Century and I know those of you who attended, nearly 170, were most impressed by this magnificent building. We had some minor issues with food, access and getting the sound right for the video which we will sort out for the next reunion. In view of the splendour of the venue we have decided to rebook this for our next reunion on much the same terms. So make a note of Sunday, 10th April 2016 (lunchtime again), we have never before booked a Reunion that far ahead. We hope to be adding some additional interesting displays etc. and we will certainly ensure that the food is much better.

We will continue to adhere to the basic principle of enabling LEO people to meet up with old colleagues and make new friends. We are in the process of seeking sponsorship for this event which, incidentally, will celebrate the 60th anniversary of the very first order of a LEO Computer. If you have any contacts who might be interested please us know, Ralph Land is heading a group looking at sponsorship possibilities.

All aspects of LEO history are important to us and this is area is managed by Frank Land, as chairman of the History sub-committee. The Oral History Project is now led by Mike Storey and he has got this moving again after a little bit of a lull. We would still welcome members who are willing to carry out interviews or help with the editing of transcripts, we have funding which allows us to pay any expenses that are incurred.

The new Information Age gallery at the Science Museum should be opening in October this year. We are keeping in touch and helping them with the LEO exhibit.

Ray Hennessy and John Daines are leading the work protecting and cataloguing LEO documentation. Thanks to all of you who have volunteered to help us out.

I would like to remind members that if you possess any LEO items of interest please do let us know, even if you wish to retain them and also consider donating such items to the Society for preservation. We will undertake to catalogue these items and place them at the most appropriate location, usually, Manchester University, Warwick University or TNMoC (The National Museum of Computing) at Bletchley Park.

LEO gets a reasonable amount of coverage in the various museums and some parts of the media. This is largely because of the efforts of the Society. Earlier this year we were contacted by the BBC's The One Show. Some interviewing was done and photos and video clips provided and we still hope to hear when it is to be broadcast. We will let you know when we hear. I continue to cultivate contacts with various media people in the hope that one day the LEO story may get broadcast. Please let me know if you have any media contacts who might be interested.

Another of the successful LEO projects is the LEO III software emulation project, led by David Holdsworth with the assistance of several of our volunteers. David's report appears later in our newsletter.

Peter Byford

## Impressions of Bletchley Park by Bernard Behr

Bernard and two friends spend a day at Bletchley Park including The National Museum of Computing.

I recently paid a long overdue visit to Bletchley Park. Bletchley is one of the places that one always plans to visit but somehow never quite gets around to it. Although it is close enough to London by car or train, it requires some additional motivation to make the effort. In my case the impetus came from several sources within the space of a few weeks. Firstly, at my initial meeting as a volunteer Honorary Secretary of Leo, I was asked by one co-member my impression of Bletchley; I mumbled a response, being somewhat reluctant to admit that I hadn't been as yet. The second incentive was the enormous publicity accompanying the visit of the Duchess of Cambridge. Some days later there appeared in *The Times* an obituary to Dr Stephen Sebag-Montefiore, father of the historians Simon & Hugh Sebag-Montefiore, which mentions the pleasant times he spent in his youth at their family home, Bletchley Park. This was somewhat surprising as I had no idea there was any connection. After a little research on the web (what an absolutely marvellous facility), I learned that the Leon family, owners and occupiers of Bletchley prior to selling to the government, were closely related. Mystery solved.

I mentioned to two friends that I was planning a visit and suggested that, if they found the prospect interesting, they might be willing to accompany me. I had a positive response from

both even though one had visited previously as a treat for his grandchildren. Let me mention that both are retired surgeons with an abiding interest in much which is artistic and creative and are thus regular attendees of galleries and museums of which London abounds.

Decision made, we drove up to Bletchley one Tuesday morning arriving at about 11am, having pre-booked a guided tour at The National Museum of Computing at 2:00pm. We spent a while, as advised, in the introductory visitors' centre getting the gist of what precisely Bletchley was all about. Interesting, but not vital, we had all quite independently researched websites to get a clear idea of what to expect. It did strike me that it was somewhat busier than I expected for a weekday, not overwhelmingly so, but nonetheless quite crowded. Whilst it was school holidays there were not that many children so one can safely assume it's become an attractive destination to a wide audience.

The grounds at Bletchley are beautifully manicured with a large pond in the centre giving the entire area feeling of sublime tranquillity. The renovation of the main house, gardens, out-buildings and code breakers huts, with I understand the help of a National Lottery grant, has been most tastefully executed. It did occur to me, probably naively, that Bletchley must have been a far more amenable place to spend the war than many of the other theatres.

**Linked in**

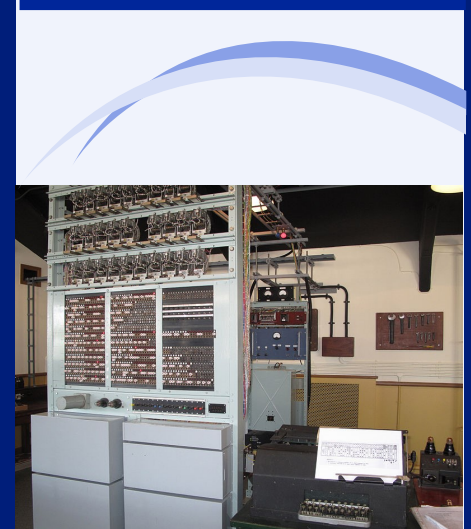


**Linked-In** [www.linkedin.com](http://www.linkedin.com) is an ideal way for Leo Society members to keep in contact with each other. It is free to register and really does not have any security issues. To join the group all you need do is send Roger Emsley an email at the address below and request to be registered under Leo Society Group.

Roger Emsley

Email: [emsley@axion.net](mailto:emsley@axion.net)

*Roger is based in Vancouver*



British Tunny rebuild at TNMoC  
Bletchley Park.

Passing the lake we headed towards the Mansion Building, the obvious heart of the complex. In the entrance hall, in what can only be described



Bernard Behr

as a magnificent Victorian building, we were advised by the attendant that there would shortly be a guided tour giving an overview of the compound. The tour, well attended, was preceded by a short lecture beginning at the Chauffeurs Hut. I should mention that our guide, one of the numerous volunteers, was both particularly articulate and knowledgeable thus helping to create a lucid image of what life must have been like for the many diverse personnel at that critical time. The tour was most enlightening and took well over an hour, finishing well past 1 pm. We just had time for a bite at "The Hut" taking account of our prearranged booking at the Computing Museum.

With 5 minutes to spare we headed in the general direction of the TNMoC only to find our way barred by a formidable security fence. After much toing and froing we finally learned that we would have to exit the entire complex in order to get to the museum. Whilst listed as Block H on the Bletchley Park guide map, it is in fact outside the main compound and run as an entirely separate entity with its own car park, entrance and ticket office.

By the time we arrived, roughly 20 minutes late, our tour had already begun. Apologies made, Lyn the museum manager kindly arranged for the three of us, including another small group of stragglers, to have a specially arranged tour. This tour was divided into 3 parts, each conducted by a different guide, all volunteers. I must at this stage give credit to all three guides for their professionalism, their knowledge and most of all, their ability to impart complex detail to a very varied audience.

The first part began with an interesting explanation of early communications, the background to tele-printers and the coding

thereof and the need for cyphers, all accompanied by several applicable displays. Thereafter, we were given a thorough introduction to the German Enigma cypher machine in all its various guises: its history, its complexity, the mistakes made by operators and how it was all eventually deciphered. Alongside, of particular interest, is the Turing designed electro mechanical BOMBE. This was followed by an introduction to the LORENZ cyphers and their early code breaking equivalents. We learned of Bill Tutte's and his team's brilliant conception that enabled the "British Tunny" to be reverse engineered without the original LORENZ ever having been seen (see picture page 2). For more details I refer you to Tony Sale's wonderful article at:

<http://www.codesandciphers.org.uk/lorenz/fish.htm>

At this most interesting juncture we were hurriedly informed that our next guide was waiting, even though in the adjacent room resided COLOSSUS, the "piece de resistance" of the entire Bletchley exhibition. We were nevertheless obliged to move on.

The second part of our tour was mainly dedicated to calculating and computing, taking us through a whole gamut of displays, ranging from Abacus to various types of slide rules, mechanical and electro mechanical calculators, comptometers, tabulators and eventually arriving in a gallery housing two fascinating exhibits. The first was the reconstructed HARWELL DEKATRON and, whilst informed that it was a single-use machine built for longevity rather than speed, it is nonetheless an impressive audio-visual display. It consists of a host of specially designed vacuum tubes, each tube with a rotating display moving endlessly and accompanied by clicking sounds, quite spectacular. Directly opposite is the reconstruction of the Cambridge built EDSAC, forerunner of our own LEO I. As far as I could determine only the frame is on show at this time, I suspect the components are being assembled elsewhere and I am looking forward to seeing it

The **LEO** website

[www.leo-computers.org.uk](http://www.leo-computers.org.uk)

*some interesting details about visits and visitors to the site.*

By Bob Stevenson

By attaching some tracking code to the end of each page on the website, we can obtain various detailed analyses of visits to the LEO website from Google.

The following figures relate to the three months May – July 2014. In this period there were 850 sessions ranging from 1 to 22 visits per day.

These were made up of 62% new visitors and 38% returning visitors. Visits were from 29 different countries ranging from:

**Argentine (2 visits)**  
**Nepal (1 visit)**

Most visits were from:

- |                |       |        |
|----------------|-------|--------|
| 1. UK          | (482) | 56.71% |
| 2. Canada      | (111) | 13.06% |
| 3. USA         | (49)  | 5.76%  |
| 4. Germany     | (20)  | 2.35%  |
| 5. Australia   | (19)  | 2.24%  |
| 6. France      | (16)  | 1.88%  |
| 7. India       | (15)  | 1.76%  |
| 8. Brazil      | (11)  | 1.29%  |
| 9. China       | (8)   | 0.94%  |
| 10. Czech Rep. | (8)   | 0.94%  |

Most popular browser used:

<b>Chrome</b>	<b>34%</b>
<b>Firefox</b>	<b>31%</b>
<b>Internet Explorer</b>	<b>17%</b>

Popular Operating Systems:

<b>Windows</b>	<b>604 sessions</b>
<b>iOS</b>	<b>91 sessions</b>
<b>Macintosh</b>	<b>80 sessions</b>
<b>Linux</b>	<b>35 sessions</b>

*Bob maintains our excellent website. Ed.*

in full working order. Diagonally opposite the DEKATRON is a rather nondescript cabinet containing several bits and pieces pertaining to LEO. It is quite difficult to know what exactly they all are as there is minimal labelling. Hopefully this situation will be rectified in time. One particular item that caught my attention is a LEO mercury delay line memory module mounted on a wooden

plinth. I have always considered internal memory an interesting component, be it early magnetic core or silicon ram. It is nonetheless difficult for me to comprehend exactly how mercury delay line memory works.

Continuing this part of the tour, the gallery adjacent comprises numerous storage and memory related items of every conceivable size, type and description. There are far too many to give any meaningful description in this short article. In addition there are numerous exhibits of input and output equipment—paper tape, punch cards, line printers, consoles etc., once again, far too many to mention. There are also several post 70's mainframe and mini computers. One exhibit that did draw my attention was the remarkable size of some of some of the disks (as in Disk Drive), I did not have the opportunity to check the specifications but the largest must have been at least 6' in diameter and the weight must have been enormous.

The third and last part of our marathon tour was primarily devoted to the history of computers. Once again we were shown a range of both pre-war and post-war mechanical calculators, adding machines, electro-mechanical and early solid state calculators. Further on was also a small section devoted to software development (always much ignored), a section relating to game consoles and the advent of microprocessors. There is also a tastefully modernised display area sponsored by Google and a largish display devoted to the progress of mobile phones especially smart phones. Lurking in the background I spotted a Cray supercomputer used partially as a rest



Harwell Dekatron

area. The last and final room we visited contained a multitude of early PC's, following their progress through the eighties until quite recently. Many were situated on desks, presumably for casual use by visitors.

By the time our tour ended it was well past 5pm and we had been at the TNMoC for well over 3 hours and the premises were now in the early stages of closing. I would like to mention that our first guide who had not completed his original presentation was keen to continue but both my companions and the others were by this time incapable of absorbing anything further. We nonetheless did take the opportunity to get a brief glimpse of the reconstructed COLOSSUS having just been powered down. The retained residual heat gave one some evidence of the vast amount of power it must consume.

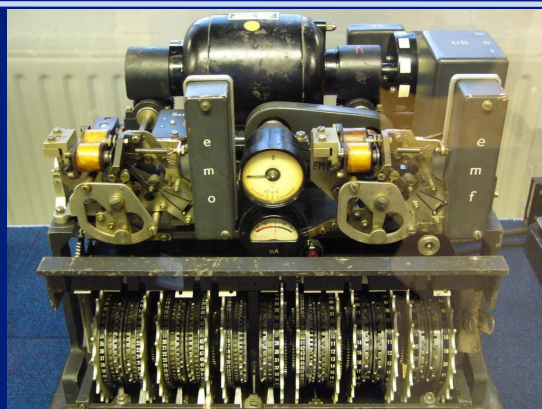
It is certainly self-evident that the TNMoC is the poor relation within the total complex. There is a serious need for an infusion of funds both to enhance the display of their extensive collection and also for some renovation. Britain after all played such a pivotal role in the development of this technology. It does strike me as somewhat odd that the two organisations are run as such separate entities especially since both are so comple-

mentary to each other. It also seems unfortunate that one part is the beneficiary of much Lottery largesse and the other struggles on with no such munificent benevolence. The formidable security fence separating the two should, in my opinion, have been erected in such a way as to allow ready access between the two.

I must at this juncture once again heap much praise on the willing group of volunteers, who expend such formidable effort in less than ideal circumstances. They are all knowledgeable, polite and particularly coherent.

This proved to be an excellent and informative day out, although one day is insufficient to do justice to all that is available. I am thus planning a second visit as there is still much to see and do.

*Parting thought.* At a lunch about two weeks later I asked my two compatriots their take on our recent excursion. After much thought and discussion they both agreed that one particular narrative, amongst the many, fascinated them the most. This related to the recruits, many quite young, who were given six month courses in the Japanese language. At the conclusion they were sufficiently well versed in that difficult language, with all its unique characteristics, to enable them to deal with complex cyphers. This was for my companions a remarkable reflection of the caliber of personnel recruited to work at Bletchley!



The German Lorenz SZ42 Cypher machine with its cover removed



Bletchley Park Main House

# Information Age at the Science Museum celebrates LEO.

By Jessica Bradford

Content Manager | Information Age

The Science Museum, Exhibition Road, London SW7 2DD



Information Age Gallery design © Universal Design Studio

The new Information Age gallery at the Science Museum brings together rare historical objects, innovative digital interpretation and intimate personal stories about how our lives have been transformed by information and communication technologies.

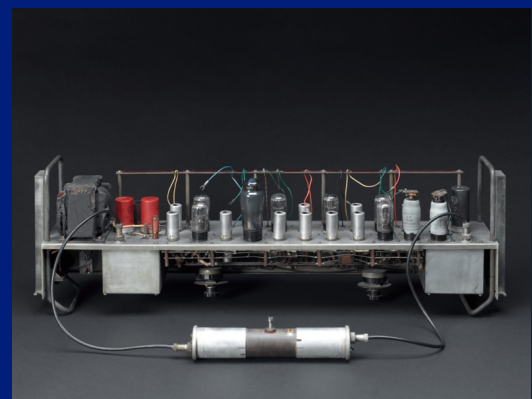
The gallery covers 200 years of innovation through the lens of six technological networks: The Cable on electric telegraphy; The Broadcast on radio and television; The Exchange on telephony; The Constellation on satellite communications; The Web on computing and computer networks; and The Cell on mobile data and communication. Each is a technological network in its broadest sense, uniting people places and ideas. To illuminate the impact of the network on peoples' lives, each includes the stories of three or four discrete 'transforming events'. There are 21 transforming events in total, ranging from the first successful transatlantic telegraph link in 1858, to the television broadcast of the Queen's coronation in 1953 and the race between Vodafone and Cellnet to build Britain's first cellular network in 1985. These transforming events embrace moments of technological innovation, stories of mass adoption and instances of great social and economic change.

Objects form the heart of Information Age. Over 800 objects, of different shapes, sizes and materiality will be displayed in the gallery. Objects act as illustrations of technological change, but also as markers in history and agents of change, transporting visitors to a time and place of use. In the centre of the gallery are the vast aerial tuning coils of a very low frequency (VLF) transmitter from Rugby radio station. This immense structure, made of cables mounted onto wooden frames, resembles a gigantic hexagonal spider's web. Over its long history, the very low frequency transmitter at Rugby played a role in politics and war as well as enabling personal communication through telegrams and Christmas Greetings. Its vast, wooden and cooper structure confounds visitors' expectations of modern communication and the devices we carry in our pockets. It is a powerful reminder of the vast physical infrastructure which supports our desire to connect instantly, in a world in which information seems increasingly

intangible.

The stories within this gallery acknowledge that innovation does not just happen at the moment of invention. It is a continuing process as technology is used and reused in different ways. By telling a vast range of people stories – of inventors, developers and end users – the gallery reveals how people are empowered through their adoption, adaptation and appropriation of technology. The story of the Lyons Electronic Office (LEO) encapsulates this vision for the gallery.

Information Age will display a number of key objects relating to the development of the LEO I and LEO II computers. These include three parts from EDSAC, the Cambridge University computer which became a model for LEO, a storage unit from the LEO I computer and a sub unit from LEO II. Across the gallery, objects are displayed alongside images, film and audio which reveal their historical context and bring their stories to life. The LEO objects will be displayed alongside a large-scale audio-visual exhibit which presents the personal experiences of four people whose working lives were transformed by the computer. Oral history recordings with Frank Land and Mary Coombes reveal fascinating detail about how a small team of Lyons employees learned how the computer worked and designed programmes for bakery valuations, tea blending, payroll and more. The combination of hard work, strict discipline, excitement and a sense of achievement are palpable in their recollections. An interview with Gloria Guy, who worked in the data entry team, further conveys the challenges and rewards of working with LEO. We were also keen to tell the story of the impact of LEO on the front line of Lyons' catering empire: the teashops. Following a national press campaign to identify Lyons employees, the museum interviewed Janette Ruscoe, a former teashop manageress from Wolverhampton who recalled how the ordering process was transformed by LEO.



Storage Unit from LEO I computer © Science Museum, London

The story of LEO sits alongside three other transforming events in The Web network. These include the story of how computers transformed from giant, monolithic calculators into connected machines which enabled people to share information and communicate globally. This story features the BESM-6 supercomputer, the only Soviet supercomputer in a Western museum. Another story is that of the invention of the World Wide Web, featuring the NeXT computer used by Sir Tim Berners-Lee at CERN. Finally, we tell the story of the development of the graphic user interface

(GUI), featuring a replica of the first computer mouse prototype designed by Douglas Engelbart. Together, these stories reveal how computers and computer networks developed over time into powerful tools sharing information, reflecting individuality and facilitating collaboration.

**Information Age opens on 25 October 2014. It will be supported by a programme of workshops aimed at family and education groups, as well as specially commissioned drama character shows and events.**

## Archiving LEO Memorabilia

By Frank Land, September 2014

As part of the effort to maintain the memory of the LEO venture and to make that available to future historians and scholars as well as to interested members of the public an attempt needs to be made to provide an archive with links and access rules. Much material is already held in public archives, and classified and catalogued. But much more is held in private stores and files unclassified and uncatalogued. It should be a task of the LEO Computers Society to archive, classify, catalogue, and where possible, digitize this material.

The Society's Comprehensive Bibliography has made a start in this.

Below is set out the type of memorabilia which should form part of the archive:

### Types of Memorabilia

1. **Hardware and associated items (Blueprints, engineering specifications, etc.).** Items cover the whole range of LEO and System 4 computers and range from complete computers to minor items such as valves and magnetic tape reels.

Many items are scattered in Museums where they may be on display with explanatory texts, but others are hidden away in reserve stores. Some Museums keep accurate records of their holdings but others do not. The principal holdings are in the London Science Museum, Bletchley Park, the Museum of London and in the Museum in Fife, but also at the Computer history Museum in California. The Comprehensive Bibliography provides a list of Museums and indicates some of their holdings of LEO materials.

The principal archiving task is to provide descriptions of materials held, their locations and links to the Museums records.

More material of this kind is held privately by ex-employees or their family usually unclassified and undocumented. Tony Morgan plays an important role in identifying such objects.

The principal task of the LEO Computers Society is to rescue and document these items as they are located or donated to the Society and to find homes for them in selected Museums

worldwide. Where articles duplicate items already held in Museums they should where possible be distributed to Museums which are willing to display them.

The task of the archivist is to catalogue such items and when homes for them have been found to maintain information and links.

*Note:* From time-to-time LEO items come up for sale on EBay or at public auctions.

2. **Published texts referring to LEO, including Books, Papers in Journals, Reviews, Magazine Articles, Newspaper reports and cuttings.**

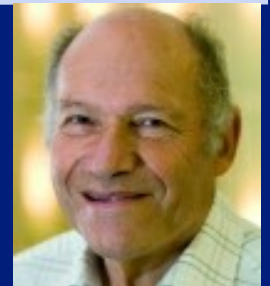
A list of published material is included in the Comprehensive Bibliography compiled and updated by Frank Land, and posted on the Society Website by Bob Stephenson..

At present the Comprehensive Bibliography includes some notes on books referred to. However it does not provide indications of where texts can be located or references to reviews of the texts. A possible task for the archivist is to provide such information including links to the texts and information on obtaining or downloading texts.

Some published texts are located in archives including for example the Simmons Archive at Warwick University and the Manchester University Computing History archive.

3. **Personal Histories** - comprising Oral Histories, Reminiscences, Obituaries, Biographies Blogs and Video recordings..

The Comprehensive Bibliography includes a listing of Oral Histories, and Obituaries, their location and access links. Some of the Oral Histories are held in various public such as the British Library and the Babbage Institute. The LEO Computers Society Oral History Project is not yet archived and a first task of the archivist is to set up such an archive.



Video recordings are listed in the Comprehensive Bibliography and some were made by Goggle and held by them.

Other material such as reminiscences have not been listed or catalogued and exist in Society members files.

Mike Storey and Frank Land suggested the building up of an archive for selected individuals relevant to the LEO story containing the following:-

- a) A catalogue and index of the contents of the archive, probably in alphabetic order by name.
  - For each listed person outline personal details including time and role at LEO or its clients
  - What records are held - oral history, reminiscences, anecdotes, and if deceased—obituaries, and links to other material about that person held elsewhere.
- b) Personal Records:
  - Brief Biography
  - Oral History comprising voice and video recording, digital text transcripts, access restrictions (open access or restricted access), access links
  - Other forms of personal histories such as memoirs, reminiscences and anecdotes, obituaries, access restrictions and access links
  - For persons whose histories are elsewhere access links if available

4. **Miscellaneous Documents** Items include a wide variety of documents including more formal documents such as job specifications, reports such as those reporting on visits to the USA or other computer sites, sales reports and quotations, agendas and minutes of meetings and less formal reports such as

diary notes including, for example the Lenaerts Notebooks.

The two principal collections of LEO Documents are archived in the Manchester University Computer History collection and the Warwick University Library Simmons collection. The former are catalogued but are retained in their original non digitized form. The Simmons collection is catalogued and many of the items related to LEO are digitized and available for downloading. Both collections contain important documents relating to the birth and evolution of LEO.

More documents are held in various museums such as the London Science Museum but with limited cataloguing or accessibility.

A LEO archive should include the catalogues of the principal collections, the rules for accessing the collections including links to them.

In addition to the archived collections a large hoard of miscellaneous LEO documents are held by individuals who were involved with LEO as employees or clients. They are generally uncatalogued, with little or no descriptions of their content. Some are donated to the LEO Computers Society by their owners or by their descendants when the original collector passes away.

Because some of the documents are of historical value a main task for the Society is to examine, sort and catalogue or discard documents and files and prepare the material for archiving and possibly digitizing. Such tasks are probably best carried out by volunteers from the Society.

5. **Films, Television Programmes, Radio Programmes** relating to LEO

Some are listed in the Comprehensive Bibliography accessible through the following link.

<http://www.leo-computers.org.uk/links.html>



## LEO III Emulation

By David Holdsworth

This project is actually about Leo III software preservation, rather than making a virtual Leo III.

It would be possible to view software as preserved if you kept printer listings, or magnetic tapes, but this would be a very narrow view. Our aim here is to preserve software from Leo III in such a way that you can run it on modern and future equipment, and also browse the source text and its documentation using modern techniques, which in today's world means using web techniques. We have the manuals as searchable on-line documents, and the Intercode listings produced by our running of the real Intercode Translator. These can be browsed, with hot links coupling related parts together.

I should perhaps point out that I had no first-hand experience of Leo, and my particular interest is the exploration of the issues in "software archaeology" which arise when working on resurrection of software for an unfamiliar machine. My previous work in this area has involved software from ICL1900 and from KDF9, both of which I knew well. It has become quite clear that without recollections from Leo III veterans, the surviving documentation and software listings would not have enabled a future researcher in computer history to acquire more than a superficial understanding of the software of this machine, which to an uninitiated person such as myself seems quite bizarre. Our progress is documented from time to time on our website:

<http://leo.settle.dtdns.net/>

Currently we are working on the Master Routine Generator.

The above web page provides links to information about what software we currently possess, much of which has been photographed. It would be good to have many more volunteers to copy-type

listings. There is even the prospect of being able to read old Leo III mag tapes. Two items of particular appeal are the CLEO compiler and the GPO's telephone billing program. Any infor-

mation as to where one might find these would be most welcome.

Contact: [ecldh@leeds.ac.uk](mailto:ecldh@leeds.ac.uk)

## The LEO Oral History Project

By Mike Storey



*"I do recall, in yesteryears,  
Friends did, not understand,  
What we did when, we went to work,  
But now, it's second hand".*

### Or Is It ?

The modern day IT industry has evolved so dramatically from both the pioneering, and indeed the early follow on years' of computing, that it was felt the memories from those earliest times should be preserved.

The LEO Oral History Project does just that, and involves the biography, work related experiences and recollections of LEO people being recorded and made accessible for future scholars and others. It is seen, along with other projects, as an important way of keeping the name LEO in the forefront of the UK's computer heritage, as of course it was, back in the industries' pioneering days.

To date, nearly 20 people have been interviewed, with another 67 currently on our list. Some of these recordings are held elsewhere but are available for accessing. The Comprehensive Bibliography, available from LEO Computers Website hold details and links. The current project is scheduled to run until the early part of 2017, but will continue as more candidates for recording are selected.

Before a candidate is interviewed, they will receive a copy of the set questions, and then be interviewed by one of the team of volunteers.

If you feel that you have some spare time to offer, and have internet access, then we will shortly be recruiting for editors, as well as extra interviewers. For more information please contact myself, as below.

Mike Storey at

[meadoways@gmail.com](mailto:meadoways@gmail.com)

## ICL Australia All Stars Newsletter

ICL Australia regularly publish their *All Stars Newsletter*. For those of our members who would like to subscribe. Contact: **Geoffrey Howell**

[gwhowell@tpg.com.au](mailto:gwhowell@tpg.com.au)

## LEO Membership.

Membership to the Society will now be broadened to include scholars, students and enthusiasts who are interested in the history of LEO and its significant contribution to the development of computing both in the United Kingdom and worldwide.

## Committee

Peter Byford	Chairman
John Paschoud	Treasurer
Frank Land	Chair History sub-committee

Ralph Land	
Gloria Guy	
Ray Hennessy	
John Daines	
Colin Hobson	
Cyril Platman	
Mike Storey	
Bernard Behr	Secretary

Tony Morgan	Technical Consultant, membership database manager and history sub-committee.
-------------	--

Bob Stevenson	Website Manager
---------------	-----------------

In addition we have a number of volunteers who are helping with the history projects. Our recruitment of new members is mainly by way of our website. We now have over 700 members.

[www.leo-computers.org.uk](http://www.leo-computers.org.uk)

[globalleosociety@gmail.com](mailto:globalleosociety@gmail.com)

Editor: Bernard Behr

## Upcoming Events

### 2014 –2015 David Tresman Caminer Postgraduate Scholarship

- Middlesex University annually awards the David Tresman Caminer Postgraduate Scholarship in Business Computing to one academically excellent student embarking on a post-graduate degree within the School of Engineering and Information Science.

### 25 October 2014 Information

- Information Age Gallery opens on 25th October 2014 at the Science Museum Exhibition Rd, London. SW7 2DD3.

### 10 April 2016 LEO Reunion

- LEO Reunion at the Middle Temple Hall, Middle Temple Lane, London. EC4Y 9AT.

### Notes on Contributors

- Peter Byford was a programmer/analyst at LEO Computers Ltd 1961-65. 1965-2005 Program team leader and system analyst at various companies, data manager at British Gas-Eastern, data analyst consultant and contractor. He was Secretary of

British Gas data management group and technical director for ICL CUA conferences. Chairman of LEO Computers Society 1981-present. and technical director for ICL CUA conferences.

- Bernard Behr was a programmer at LEO Computer Bureaux in Johannesburg 1966-69.
- Frank Land was Former Chief Consultant at LEO and Emeritus Professor of Information Science at LSE.
- Jessica Bradford is Content Manager, Information Age, The Science Museum, London.
- David Holdsworth worked in IT at Leeds University from 1967 to 2004 and cut his computational teeth on KDF9.
- Mike Storey was a Site Engineer at LEO III/33 - Phoenix Assurance. 14 yrs.as a Computer Field Engineer and Area Manager. 22 yrs. IT Sales Manager.
- Bob Stevenson was LEO II/5 operator and LEO III/1 Operations Manager.