

Bits & Bytes

No 11

Editorial

The announcement made on 2nd August 2000 that ICL would not be floated on the Stock Exchange has triggered many changes within ICL.

Senior managers who have left the company include Keith Todd, David Palk, John Davidson, Robin Hacking, Nigel Hartnell, and Alan Gibson. I will endeavour to give a picture of the new organisation, with who does what, in the next edition.

Editing this newsletter gives me the opportunity to talk to many people who used to work for the company. The news and info that I hear covers the whole spectrum of life and unfortunately death. Peter Walker has just phoned me, on the eve of his second wedding, to tell me that John Brook had died suddenly in York on 19 September 2000. I am sure that the many engineers who knew him would like to pass on their condolences to his brother Albert and John's two sons.

The result of the recent ballot for the pension fund consultative committee has just been published. I would like to thank Bill Williams for all the good work he has put in over the past years and welcome Colin Marshall to his new job.

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ICL Organisation

Suspension of the Float

Fujitsu Limited, and the Board of ICL PLC, have announced the decision not to proceed with the listing of ICL PLC on the London International Stock Exchange, in the light of current difficult trading conditions in the IT industry and the company's financial performance.

Fujitsu and the Board of ICL believe that it is important for ICL to concentrate on growing and strengthening the business in the next phase of its development without the additional challenges involved in preparing for a flotation. ICL's flotation has therefore been suspended indefinitely. Fujitsu and the Board of ICL consider this decision is in the long-term interests of all stakeholders (customers, business partners, staff and Fujitsu as the sole shareholder). The focus of the company will be to achieve profitable growth in all aspects of its business, building upon its successful track record in e-Business services.

In the light of Keith Todd's close identification with the flotation of ICL, he has tendered his resignation as chief executive. The search for a new chief executive is underway and in the meantime Richard Christou, director, commercial and legal affairs has been appointed deputy chief executive and will assume the role of acting chief executive.

Fujitsu and the Board of ICL would like to thank Keith for all his hard work over the 13 years he has been with ICL and wish him well for the future. Commenting on Keith's departure, Michio Naruto, chairman of ICL, said: 'Keith has been instrumental in redefining ICL's business model and has managed the successful transformation of ICL from a computer manufacturer to one of Europe's leading e-Business services companies. I have worked closely with Keith and have the highest personal regard for him and respect his reasons for stepping down. He goes with our thanks and good wishes.'

Keith Todd said, 'I have been proud to lead ICL over the past five years through dramatic changes to become a leading e-Business services company. I wish the employees and customers well for the future.'

Richard Christou, who has been with ICL since 1987, has extensive first-hand experience of ICL's business and has played a leading role in ICL's transformation to an e-Business services company. Richard Christou said: 'Despite tough external market conditions, trading in the first quarter of the current financial year has been satisfactory. But the challenge for us now will be to consolidate on this start and to ensure that we deliver sustained growth and improved profitability in all of our businesses in the medium and long-term, while not losing sight of our ambition to become the European e-Business services company of choice.'

'We shall continue with our programme to unlock hidden value within ICL and this includes the possibility of listing our Nordic company, ICL Invia, in Helsinki and KnowledgePool, our e-Learning business, on the London Stock Exchange (and possibly NASDAQ) at an appropriate time.'

ICL sells European Spares Logistics

ICL has announced the completion of the sale of its European Spares Logistics business to LOGiCOM Integrated Logistics Ltd, a management buyout supported by 3i, the European venture capital company. The sale of the business, which provides spares and logistics services, is in accordance with ICL's strategy to focus on e-Business services. The sale is effective immediately and will include the

gradual transfer of over 300 staff, of which 240 are located in Stevenage, Hertfordshire.

Logicom will now provide: sourcing and purchasing of spares; inventory management; warehousing and distribution; reverse logistics; warranty reclaim and repair management. ICL will subcontract its European-wide spares logistics requirements to the new company. This will enable ICL to offer a better and more cost-effective service to its customers.

While logistics underpins ICL's maintenance and support of its e-Business services, it is a non-core business. The sale will ensure that ICL has continued access to LOGiCOM's specialist European logistics skills.

ICL Good News

Lotus Notes Call Centre at Maintrain

ICL has won a contract to supply Maintrain, a subsidiary of the National Express Group, with a Lotus Notes database to support a Call Centre for their train maintenance business.

ICL is supplying a combination of Lotus Notes consultancy and technical authoring under a DSBM driven development to provide a document management database. Maintrain are particularly keen to improve the efficiency of the Call Centre to help meet SLAs with their customers.

The project developed from an existing 5-year contract worth £2M - Maintrain selected ICL as their IT partner to support / manage all aspects of their IT requirements.

The total value of the deal is £148K. The value to e-Applications is £108K.

Ferranti Laser Targets Fast-track ERP

Ferranti Photonics, based in Dundee, Scotland, has installed a £70K "quick implementation" ERP system from ICL's MAX International. Ferranti Photonics designs and manufactures carbon dioxide and carbon monoxide lasers, laser systems and related equipment for applications in industry, R&D and defence.

The MAX software will run on Intel-based Bull hardware under SCO Unix and Informix. The software encompasses modules for manufacturing, accounting and sales order processing, and will interface with various existing standalone applications. This is intended to be a step towards a more integrated approach to business information handling and provide better management information.

The company had previous experience of MAX software and had formed the view that it provided the necessary functionality and reliability and would enable the company to bring together a range of data under the one system. As a result of company changes in late 1999, Ferranti Photonics needed to undertake the first stage of their implementation very rapidly, which, in turn, demanded that the hardware be installed by early December.

The implementation of the manufacturing data was achieved and went live on 8th February 2000.

Dublin Corporation e-Procurement

Dublin Corporation is to go live with a pilot of Esat's marketplace.ie. This is Ireland's first secure electronic trading business-to-business (B2B)

marketplace, developed by ICL and Esat Net, Ireland's leading corporate Internet Provider.

Dublin Corporation staff will be able to order and buy online everything from office stationery and consumables to furniture from their desktop PCs. Using a web browser, depending on authorisation level, staff will be able to order from a range of approved products and services, select the best offer available and place their order automatically with the supplier. Marketplace also incorporates management reports that will provide the Corporation with an overview of purchasing habits.

The complete end-to-end electronic trading service is being provided through ICL's pan-European B2B Internet trading hub. ICL is providing the design, consultancy and systems integration, which uses Infobank's InTrade e-Procurement software and runs on Microsoft technology. Application management and IT infrastructure are also being provided by ICL, who are hosting the Dublin Corporation site.

In 1999, Dublin Corporation's purchase of Maintenance, Repair and Operation goods (MRO) exceeded £50M. The Corporation is encouraging its suppliers to trade electronically and expects the majority of its trade and services to be delivered online over the next few years. This coincides with the eCommerce Act that is set to speed up progress towards all Irish Government services being delivered online.

ICL Merseyside Lifelong Learning

Job applications from Liverpool primary children for "virtual" housekeepers, butlers and footmen are received every day via the web to support history lessons and develop literacy skills. Pupils making online visits to Croxteth Hall, former stately home of the Earls of Sefton in Liverpool, can e-mail the virtual Victorian characters, take part in videoconference interviews and listen to stories about how the Victorians lived and worked in the community.

Known as Liverpool Primary Step (Support for Technology in Education in Partnership), the programme forms part of a £14M Information and Communications Technology (ICT) services contract won by ICL. To date, ICL has connected over 50,000 pupils and 2,500 teachers in 180 schools as well as community and adult education centres.

Video Conferencing is providing remote teaching for pupils in Italian, Spanish, French and music composition courtesy of a "virtual teacher" based at the ICL projects office in Liverpool. Interactive white boards, the new hi-tech black board, and virtual reality kits show how pupils can enter virtual classrooms and experience "dinosaurs" and "walking on the moon". Internet and e-mail access are also used to encourage online learning.

Over 25 organisations have joined the Primary Step Programme to develop supporting educational projects. These include Liverpool libraries, The Police, Dark Horse Ventures, United Utilities, Everton and Liverpool Football Clubs, The Catholic Pictorial and The Royal Liverpool Philharmonic Society.

ICL is providing the total managed service, which includes networked PCs, software, virtual reality and videoconferencing facilities, educational services and a technical support desk.

ICL supply ntl billing software

ICL has won a contract to supply ntl, the communications company, with Geneva billing software from Geneva Technology. The contract also includes the implementation and integration of the application by ICL in the UK.

The Geneva solution will provide ntl with sophisticated billing for its range of communications solutions for business customers. The services will complement existing processes and will improve the provision of customer billing across multiple platforms and services.

The Geneva software and the services that ICL is implementing will enable ntl to bill communications solutions in an easier and more efficient manner, providing considerable operational advantages. For example, the billing platform will allow communications services to be bundled into packages tailored to the customer's requirements. It will also allow the introduction of package discounts and competitive rate plans as well as utilising the bill as a form of regular communication with the customer. The solution will also allow ntl to present and charge for multiple services on a single bill and offer the capability to bill in multi-tax, multi-language and multi-currency.

The service will initially be introduced in the UK and Ireland across a range of ntl products and services comprising voice, data, Internet and e-commerce.

ICL began its alliance with Geneva Technology Limited in July 1998 and since then has grown a team of 65 billing experts dedicated to Geneva including developers, business and technical consultants and project managers.

ntl uses state-of-the-art technology to deliver telephone, TV, internet and interactive services to UK homes and businesses. 22 million homes watch ITV, C4 and C5 thanks to ntl's broadcast transmitters; and 12 million homes are located within its fibre-optic broadband network.

ntl helped pioneer digital TV and is involved in digital terrestrial, cable and satellite. It launched the UK's first interactive service in March 1999. ntl's national network carries such names as Virgin, Orange and AT&T with businesses in Ireland, France, Switzerland, south-east Asia and Australia.

KnowledgePool to Design Virtual Farm

KnowledgePool has announced that it will design a virtual farm as part of a £100K e-Learning training contract for students and staff of the Scottish Agricultural College (SAC).

The contract between SAC and KnowledgePool includes the design and development of a series of web-based learning units by KnowledgePool for SAC that will allow postgraduate online students to study organic farming at a time and place which is convenient to them. This e-learning training service will also be made available to farmers to support their continuing professional development.

This announcement marks another development for the digital economy, as farming, one of the oldest and most traditional industries, will utilise online services. The integration of new technologies into farming practices in conjunction with the availability of training services via the Internet is welcomed by

SAC, and also coincides with the recent interest and growth in the practice of organic farming.

In Scotland the number of farmers managing their land organically has risen from 120 in 1997 to a current estimate of more than 500. Sales of organic produce in the UK are currently increasing at a rate of 40 per cent per annum, rising from £390M in 1998 to over £500M in 1999. This figure is estimated to reach £1400M by 2002.

For this project, KnowledgePool will develop an interactive model of a virtual farm, which will allow online users of the training package to plan crop rotations, evaluate problems and introduce changes to the farming system.

KnowledgePool will also train SAC's staff in web-based training development tools, such as Flash, Macromedia and Dreamweaver. Further courses, such as Instructional Design Training, are planned for the future. It is planned that the first two units of a web-based flexible learning package on organic farming will be available to online students and farmers from SAC later this year.

LIFE WITH LEO TO ICL

It seems like only a few months since I left ICL, not the nine years, which it is. I haven't spent my time rebuilding computers or other ex ICL "gismoes". However boredom is not a word in my vocabulary. I spend my time on a variety of activities, from playing golf, holidays abroad, beekeeping, gardening, walking, swimming, a little cycling, and only giving a passing mention to my wife and three grandchildren

I started with LEO in Hartree House in 1961, working on the LEO II, with its thousands of valves, Decca Magnetic tape decks, and Powers Samastronic printers. If I remember correctly the store size was 64 tubes (mercury delay line cylinders about 2in diameter and 3 ft long) which each held 16 words of information. The later LEO IIs had core store, which was a big step forward at the time, and were much more reliable. In those days you never had to wait for a fault to occur, there always something needed fixing. We worked round the clock shifts, an engineer and mechanic on each shift. The system serviceability was good if it reached 80%. The takeover by English Electric to form EE LEO Marconi came in 1963. In 1964 I remember Mike Milgate buying a new Ford Cortina for £630. I thought that he was a millionaire. At the time I had a bike to get to the station.

After retraining on LEO III I moved to Lancashire in 1965, a strange move for a Yorkshireman! With the exception of racial abuse from Lancastrians and Liverpoolians, it is a very pleasant area of the country in which to live. After working on the LEO III at the Premium Bonds Office at Lytham, I was responsible for the LEO III at BICC Prescott.

System 4 (a development of the RCA Spectra 70/45) was announced at Kidsgrove in September 1965. From valves to transistors, then to microchips, in 5 years. In 1967 engineer training started. Peripheral training was "teach yourself from manuals, which were run in the old Army huts at Kidsgrove. The processor courses were run at Radley House in Ealing. I remember we had three Czechs on the first course; I'm not sure how much they took in. They were not allowed to socialise with us. The most important thing I did on the course was to start

playing golf. The main problem was that it was difficult to get in 9 holes on the Gunnersbury Park pitch & putt course during the lunch hour. The lecturer was not happy when we arrived back late. At that time we stayed at the Pembridge Gardens Hotel in Notting Hill (remember the Colonel?). We used to travel by car to Ealing, the driving being quite competitive, but there was much less traffic in 1967. After the course some months were spent at Minerva Road helping with the commissioning of the systems, which were all put together and given a full test (about a week) before being allowed out of the factory. While at the Midland Bank, Brian Norris (the System Test Operator) built a kit car (a Marcos if I remember correctly) from scratch in the customer's garage. After looking after the 4/50 at the Midland Bank in Bootle for a few months it was back to Ealing for 4/70 training in the spring of 1968. Some time was then spent in Kidsgrove working on the 4/70 before it was delivered to the UKAE at Risley. While at Risley (not the remand centre!) Mike Skinner introduced me to Bulls Blood, the very good Hungarian red wine.

It was at this time that ICT and EE computers merged to form ICL, with a loan from Harold Wilson's government.

In early 1969 it was on to Girobank, which at that time had a Spectra 70/45, and a 4/70 being commissioned. During the next few months another 70/45 and two more 4/70s were installed. At the same time there were over 90 magnetic tapes decks on site. They needed over twenty engineers working round the clock. How many do ICL have today in the whole of the North West? Two of the 4/70s had Burroughs cheque sorters connected to them. They were a nightmare to maintain and the customer was non too happy when cheques got shredded.

In the early days of the System 4 far too many intermittent faults were being experienced on the peripherals. This was more pronounced in power supplies and tape decks, which generated the most heat. The problem was finally diagnosed as the through pins on the peripheral and controller PCBs developing dry joints due to the stress caused by the continual heating and cooling. In each PCB there could be over 20 through pins, and on a site like Girobank tens of thousands of PCBs. The only solution was to replace all the pins with a flexible crinkle pin. An exercise was set up to do this. A float of all the different types of PCB was assembled. These PCBs were distributed to all the sites across the country. The site engineers then had the task of exchanging the PCBs in the peripherals and testing to ensure that they worked. Invariably if you changed too many at once you introduced a fault. It was very time consuming. The exchanged PCBs were boxed up and returned to the factory for rework. In addition to the boxes of PCBs, technicians were sent from the factory at weekends to exchange the pins on site. All PCBs, which had been reworked, were marked with a yellow tag. Most of the work had to be carried out when the customer was not using the system, usually at nights and weekends. The exercise went on for many months and must have cost £millions. It certainly helped to pay the mortgage for many engineers.

In 1971 I got my first company car, a Morris Traveller with 97,000 on the clock. It was December and I was promised that it would be replaced early in

the New Year. Unfortunately the Regional Manager did not say which year!

In the early seventies each Service Manager was responsible for his own budget. After much debate we were allowed to buy a calculator, a CBM from Curry's and cost £13. All it would do was add, subtract, multiply and divide.

The 1970s saw the introduction of the 2900 processors with further big gains in getting more into the same space and higher reliability. The 1970s also saw a big decline in the traditional mechanical data prep equipment. In 1978 (Jim Mainwaring will correct me if I'm wrong!), Singer were taken over, which brought headaches with a shortage of trained staff on their data prep equipment, 1500s and System 10s which were relatively new at the time. A few irate customers had to be calmed down.

In 1981 with the demise of the mechanical devices and the more reliable electronic systems we had the trauma of the first redundancies in Customer Services. The Liverpool Office was closed with the loss of over 30 Engineers, Managers and office staff from a total of 180. It was very sad to see people leaving, some with over 30 years in the company.

The first Call Centre was set up in Manchester Arndale Centre in 1981, which covered the whole of the North West from Stoke to Carlisle. The second round of redundancies came in late 1982, with the loss of more highly skilled people. The 1980s also saw the disaster of being sold out to STC.

The "One per Desk" was introduced in 1983? It was ahead of its time, and a very useful tool. As with many ICL products the company failed to develop it. It could have been a World Beater.

In 1986, after 25 years in Customer Service, I joined Peripheral Development in Kidsgrove, managing the peripheral support activity. Do you remember the FDS640, EDS300, PBS Printers, Laser Printers, Micropolis Disks, System Care, Bug Factors (John Stride does!) and all those Mods and Information Sheets?

I think that I was lucky enough to work through the golden years of computer engineering from valves to the current microchips. Having had such an enjoyable career, all the people I met, friends I made, I was quite apprehensive when I retired in 199. In retirement, as the saying goes, how did I find time to work?

Ray Dowson Lathom Ormskirk Lancs

LETTERS

Contributors are asked to give a telephone number on which they can be contacted.

Fair deal from the Pension Fund?

In March of this year pensioners were informed that the increase in their pensions would be 1.8% effective from April 1st. This figure was based on the Retail Prices Index (RPI) for December 1999 and is in accordance with the Plan Rules. The question I would ask is; "Is it time to review the Plan Rules" as this increase does not reflect the true rise in the cost of living nor does it align with the rise in average earnings within the industry.

The winter issue of Pensions Insight No 16 gave details of the value of the fund and the fund liabilities. You do not have to be a financial wizard to see that the fund is very healthy, but simple

manipulation of the details given reveal some interesting statistics.

1. The average pension is circa £7.7k, £20.6m spend on 2668 pensioners or dependants. However I suspect that the majority of long service members come from the Customer Engineering and Manufacturing divisions where salaries were between GSS 14 – 19 so I must assume that a high proportion of pensioners receive less than the average.

2. Between April 1998 and April 1999 the value of the fund increased by £217.6m, six times the total expenditure for the year of £36.2m, to £1407.0m, in theory this sum alone could meet the fund liabilities for over thirty years.

3. A different source of information, Income Data Services, states that average earnings in manufacturing rose by 4.6% and in the service industry by 5.8% in the twelve months up to March 2000. I have no information on the rise of average earnings within ICL, but again I must assume that if the company need to delivery quality products and services they will have to pay the market rate.

So what will become of this massive fund when “Old Father Time” reduces the liabilities to the remaining pensioners and their dependants, after all the numbers will not continue to increase forever as long and dedicated service to one company is not seen as an attribute by modern HR managers, will it just become a company asset?

Could I suggest that the Plan Rules are revised by whatever process is appropriate, and that future increases are in line with the true cost of living, e.g., the same as the average increases within the industry? After all the fund can afford it. This action may just make living a little easier for the men and women who devoted most, or in some cases all, of their working life to the company.

Alan Davidson Ex New 05

1951 Census Remembered

I found Issue 9 of B&B very interesting and in particular the article regarding the 2001 census and the fact that BTM played a major role in providing the equipment for the 1911 Census.

This caused nostalgic thoughts to come to mind, since I was one of the team involved in the 1951 Census, when Powers Samas was awarded the contract. This led me to search my files and decide that I would put pen to paper.

Work was started back in 1948 on the Census machine, which subsequently became known as the Universal Printing Counting Sorter (UPCS)

A paper dated 19th October 1948 written by Arthur Thomas the then Head of Engineering Research identified some of the outstanding features as follows:

65 column cards at 400cpm, independent counting and sorting, automatic total control, grand totals at the end of each group, printing results, 30 inch wide sheet, 207 ch

The machine had two sensing stages through which the cards passed, one for sorting and one for counting.

The Registry Generals Office carried out the work of dealing with the returns, and for this purpose the equipment was located on the first floor of a building - a roller skating rink- on the seafront at Southport. The first floor windows had to be removed to get the machines to site.

There were different coloured cards used for males and females, blue and yellow, and I remember being

sent to Southport because of difficulty reading one or the other, I can't remember which. By skid roll adjustment I think we kept things going. Perhaps somebody else can recall their thoughts on what happened.

I often wonder what young ICL engineers of today would think of such a machine, if I tried to explain the function of sensing cards and operating Bowden cables through a hatchet pin box at 400 cards a minute!

Frank Vaughan Welwyn Garden City

FLAMING YOUTH

There's an irritating advert in one of the glossy supplements. It features some snatches of small talk that seemed familiar to me. Clichés that make up the gist of the type of conversation I seem to get involved in. You know the sort of thing: -

--The good old days—pension rates—pop music—the youth of today—shoddy workmanship—prices--rudeness in shops—state of the pavements etc.

As I read on, I realised it wasn't aimed at me. I was the old fogey it was mocking. All the phrases mentioned were supposed to be boring trivia, not the sort of thing the customer they were targeting would ever discuss. Whether it works as an advert I don't know, as I can't recall the product. I'm sure it was something I wouldn't want, couldn't afford and would dislike intensely anybody who had one, whatever it was!

If I wrote to the magazine protesting the copy was “ageist,” the copywriter would say “Get a life,” an expression I find irritating, like most things relating to youth. Sometimes I find my own grandchildren irritating. We don't communicate easily. Come to think of it, I didn't do a lot to of communicating with my grandfather!

When I was young (an expression that's guaranteed to turn off any young person) life seemed to revolve around grown-ups. There was no teenage fashion, music or radio; in fact there were no teenagers. We weren't a market. As we had no money we didn't exist! Now I'm seriously grown-up, I still miss out. The emphasis is on youth, who have the money and are a market! TV is aimed at a mental age of about 12, Films are tailored for the popcorn generation and I can't make myself heard in their sort of clothes-shop with its deafening “music”, so I wait outside. Then they ask me to move along, as I'm putting off the customers!

So, I stay with my own age group and we moan about unfunny comedians and the embarrassment of foul language on TV. Next time we meet, we still seem to moan about unfunny comedians and the embarrassment of foul language on TV. We don't have many new experiences, hear many new jokes. All the arguments we've heard before and we're at an age where we're not likely to change our opinions anyway.

Perhaps we're not here as a warning to youth. Something they can feel superior to. Something they are never going to end up like! **They** are going to make it and get all the latest gadgets. Having got them, tried them, eventually tired of them, they'll discard them and for the next twenty years go on about how great they were and how nothing today is as good. Probably every generation goes through this cycle.

The trouble is the young don't wish to be told and in fact, we can't help. Our experiences aren't relevant

today. I'm useless at computer games and don't want to surf a hundred channels on Cable TV.

My "game plan" is to get proficient on "The Net"; use phrases like "chill out" and wise-up on "garage music" As I don't know "Generation X" I can't be part of it! I'll get a pair of those "chinos" or are they "nachos"? I'll have to make notes and store all these in-phrases in the patch pockets, as I tend to forget things these days! Then I'll be "cool" instead of "gross" and accepted by "yoof".

You never know. One day, out of curiosity, I might get asked what I did in the war or what was a flip-flop. I'll be ready, if I can remember. On the other hand, when I was thirteen, what went on sixty years before was history and I don't recall asking my grandfather much about The Battle of Rorke's Drift or how to cut a quill pen!

Long live the generation gap! Maybe I will "get a life" I'll get a job! If I can raise the energy, I'll write to "Saga" Magazine and volunteer as a test pilot for Zimmer frames or stair-lifts! It won't impress my grandchildren, but who cares? As long as I'm available for baby-sitting, I'm useful!

Dennis Goodwin Romford

Electro Mechanical Multipliers

It was with great interest I read my old colleague Pete Walker's account of working with Electro Mechanical Multipliers and thought I would like to add a bit more about them.

In 1953 the existing 501 Multipliers were indeed rather tatty, we had already worked in the FEHQ workshops attempting to overhaul some of them. At this time the BTM designed 504 EMM was not fully ready and the first Electronic Multiplier, the 541, was still being developed. Arthur Humphreys and the late George Webb went to Paris and made a deal to buy-in the Bull Electro Mechanical Calculator that was named the 506.

I do not know how many 506 machines were bought but I do recall processing a steady stream of them through the Luton Workshops, where they were fitted with BTM labels and 50-volt motor generator sets.

These decimal machines had ten counters (registers), each with ten adding wheel positions. Each input card was read by an 80 col. brush block, then turned on a Ferris wheel and dropped into a serial card punch unit to receive the output data. Controlled via one large plug board, the 506 could Add, Subtract, Multiply and Divide. In their day they seemed quite fast, the main shaft ran at 180 RPM and Multiplication took one rev. per column in the Multiplier counter. (Zeros in the counter were ignored.) Banks of relays wired with multiplication tables were switched by "column shift" relays to sense each position in the multiplier counter in turn, and the contents of the multiplicand counter was routed via these "times" and "shift" relays to the two product counters where the result was built up. Typical jobs with perhaps only three or four columns in the multiplier would run at about eighteen cards per minute. Electronic Multipliers were of course much faster at up to 100cpm.

All the 506 relays had silver contacts and although some single point relays were in sealed plug-in cans, all the multi relays were open, and through working at 50v were more susceptible to dirty points than the 110v Hollerith machines.

The fault finding technique was to take note of the difference between the correct result and the error result in a calculation. Then work through the long multiplication sum writing all the figures down on a sheet of squared paper. If you were lucky the difference corresponded to one of the stages in the process and could be tracked back to particular relay points.

Division was done by subtracting and column shifting. While testing I used to like dividing a counter holding a row of nines, by one, and watching the answer gradually build up.

A few 506 machines were modified to allow working directly in Pounds Shillings and Pence. This was a huge alteration designed by R&D in Letchworth and I was personally glad that there were not many of these.

In 1955 I was sent to the Regent Oil Refinery in Trinidad to try and improve the performance of the 506 there. The machine room building was located right across the road from the sulphur processing plant. There was no air conditioning and the windows only contained fly screens. On some days blue smoke blew through the machine room and the operators worked with handkerchiefs tied round their faces. All the wiring in the 506 was bound into looms with dry cotton tape. The whole atmosphere was very, very humid and overnight the tape absorbed moisture. Next day when the 506 had warmed up after running for about half an hour, steam could be seen coming out through gaps in the covers.

The machine was allocated to me for a period every day between jobs, and spread over two months I stripped and cleaned it all, including the plugboards. There was some improvement but the major change came subsequently when the building was air-conditioned and a second 506 was installed as back up.

I used to quite enjoy watching the old electro mechanical machine when they were working correctly. It was possible to follow the repetitive processes by looking at the relays and counters. I guess in a modern computer, similar principles of doing arithmetic by adding and shifting are still used but now done on some minute spot on the Processor IC.

Peter Porter Market Drayton

REUNIONS

British 50th Anniversary of LEO project

Some 120 LEO people attended what was probably the 10th (organised) LEO Reunion at the normal venue of the Honourable Artillery Company's elegant headquarters in the City of London in November 1999.

Guests started to arrive from 6pm onwards. They were able to look at display boards showing photos, letters and documents including letters from those who could not attend press cuttings and other documents sent to the Society. In the side (medal) room a video was playing of LEO 1, which had been produced in the fifties. Long tables carried a display of LEO memorabilia; some of the documents and photos stored at the National Computer Archives at Manchester University and the artefacts lodged for safekeeping at the Computer Conservation Society at

Bletchley Park. The side room also contained the bar, which was naturally popular.

A brilliant LEO Anniversary cake had been made especially for the Society and this was on display in the main room.

The main activity for these reunions is renewing old acquaintances and swapping reminiscences and this was actively carried out, slightly interrupted by the usual hot buffet at around 9pm.

The latter part of the evening was taken up by speeches to celebrate the 50th anniversary of the inception of the LEO Project in 1949. It was good to see that three members of the 1949 Project team were able to attend, David Caminer, Ernest Kaye and Ray Shaw.

The first speech was by Brian Oakley CBE, Chairman of the Computer Conservation Society. He gave an interesting talk about the early days of British computing including what influences were likely to have driven the key members of the original LEO Project.

Brian was followed by David Caminer OBE, who had been Director of LEO Computers and later a Director of ICL, David gave a fascinating and amusing insight into the early pioneering days of LEO.

This was the first LEO Reunion since the death of John Pinkerton, and all the speakers paid tribute to the enormous contribution John had made to LEO and indeed Commercial Computing. John had attended all previous Reunions and had universally been held in high regard.

John's widow, Helen, had accepted an invitation to attend the Reunion and she delighted the audience by cutting the Anniversary cake and giving a short talk complimenting the LEO people for being "pioneers" in such exciting times.

This was followed by two briefings by Society members of future activities.

Bob Melling reported on the efforts being made to inaugurate the **Annual John Pinkerton Memorial Lectures** under the sponsorship of the IEE.

The final briefing was by Frank Land who told members about the proposal for a LEO 1 jubilee event to be held in late 2001 to celebrate the 50th anniversary of the first operational running of LEO 1, and the **world's first regular routine office computer job**.

The evening finished, rather reluctantly, at about 11pm.

Photos of the event are on the web site, www.leo-computers.org.uk and a video has been made of both the 1999 London and Oz Reunions, available via Peter Byford. There are only two copies in the UK .

The Jubilee event will be held in late 2001, the next Reunion is due to be held in 2002 . Details of these events will be made available on the web site and to members as soon as details are known.

Dataskil Millennium Reunion

Yes, it is finally happening!

In the enduring tradition of the software industry, however, it will be a bit late - current forecast 12 May 2001 - but this does mean the party will coincide with the 30th anniversary of the formation of the company. The celebrations will take place in Reading, at a venue to be confirmed.

Nostalgia, naturally, will run unchecked and anyone owning any Dataskil memorabilia - photographs,

souvenirs, bug reports etc., is welcome to bring them along to be displayed for all to admire/laugh at.

Tickets may need to be limited, so will be allocated on a first come first served basis. Partners are welcome (if you think they can stand all the reminiscing). Though the event is not-for-profit, there will be a charge of £20 per head to cover venue costs and food. In the unlikely event that insufficient numbers are forthcoming, you will receive a full refund in due course.

To secure your place(s), please send a cheque made payable to 'Dataskil Reunion' together with a stamped addressed envelope, to

Lynda Hewlett 47, Lowther Rd Wokingham Berks RG41 1JB Tel: 0118 9785713

Finally, the event will be all the more enjoyable if we can reach as many of our former colleagues as possible, so please treat this as a chain letter and forward it to, or otherwise alert, any and all ex-Dataskil employees with whom you still have contact. Don't assume someone else will tell them! See you there!!!

ICL Central London Group

The next get together will be on Wednesday 17 Jan 2001 at the usual venue - The Fox at Epworth/Paul Street, from 12 noon.

John Doo 01245 259862

STE04 Office and Retail Systems

As attendance at the monthly meetings has dropped off it has been decided that the meetings will now be **quarterly** i.e. 1st Tuesday of March, June, September and December. The venue will continue to be The Marquis of Granby at Stevenage at lunchtime.

Punch Card & Stevenage Labs Reunion Group

The 3rd Oct 2000 meeting took place with more than 50 in attendance. John Harper gave a very interesting talk on the Bombe Rebuild Project, followed by an after lunch interlude from Dave Clarke. By common acclaim it was decided to meet each year rather than bi-annually. A speaker is required for October 2001!

Note new name of group

Adrian Turner 01491 872012

CAFS Reunion

Hamish Carmichael 0181 337 3176

Liverpool Engineers

George Lynn 01744 29984

ICL Double Majority Club

Jack Gifford 01462 677173

Leo Computers Society

Geoff Parry 01628 770129

West Gorton Reunion

Eric W Watts 01457 875080

Derek Tourell 020 8386 9465

Watford-Harrow- Feltham Group

Please note the new contact name.

Mike Ray 020 8635 5010

Copthall House Newcastle Staffs

Bob Green 01782 657763

Letchworth Group

Dennis Evans 01462 811273

West Branch Engineers

Eric Reynolds 01452 712047

East Grinstead 81 Club

Bert Gill 01903 763370

West Kent Engineers

Ron Harding 01732 761076

East Midlands UB40s

Brian Skeldon 0115 9727835

Oxford Region

Albert Brook 01235 531267

The Walthamstow Mob

Derek Windsor 01992 522761

Tin Hut Reunion Group

Olaf Chedzoy 01278 741 269

OBITUARIES

ICL/Nortel Fund

Taken from the spring edition of the Nortel "Diary" and the summer edition of Nortel "Newslink"

Bracknell	Chevis	Hugh G	27/10/99	92
	Brinkman	Kathleen	04/02/00	69
Beaumont	Nicholson	Reginald J	26/03/00	81
Burnley	Hall	Allan H	24/04/00	79
Croydon	Riley	William G	02/11/99	86
Forest Hill	Finn	Daniel	03/05/00	72
Glasgow	Shearer	George	07/03/00	69
	Gibson	Alan N	30/10/99	87
Harrow	Green	Joe	09/04/00	79
Ipswich	Ling	Robert	29/09/99	90
Kidsgrove	Field	George P A	21/04/00	66
	Forster	Albert	11/01/00	73
	Foulkes	Fred	16/02/00	78
	Myatt	William E	03/01/00	88
Letchworth	Berry	George	06/01/00	85
	Blunt	George W	06/11/99	84
	Briars	Edward C	20/05/00	77
	Calver	George W	07/12/99	89
	Cochrane	William	04/11/99	76
	Fox	Michael R	26/04/00	65
	Gray	Norman W	07/12/99	78
	Green	Alec	31/12/99	84
	Hayes	Edward J	29/11/00	72
	Herd	Stanley R	09/03/00	79
	Hurley	Frederick	29/12/99	86
	Lees	Charles N	10/12/99	80
	Machin	Edward V	09/04/00	72
	Massie	Alexander	04/12/99	79
	Meadows	Albert E	10/02/00	76
	Milnes	Reginald	08/02/00	88
	Mott	Donald J V	20/12/00	78
	Roach	James H	29/02/00	89
	Smith	Cyril E J	25/01/00	73
	Young	Frank H	30/04/00	71
Liverpool	Jones	William W	13/07/99	76
	May	Eric F	08/10/99	82
London	Cater	Eric J	07/12/99	66
Manchester	Brannon	Noel	10/12/99	80
	Flanagan	Walter	09/12/99	74
Norwich	Bruton	Peggy E	17/03/00	79
Preston	White	Ernest W	09/04/00	80
Putney	Evans	J R	16/07/99	75
	Gasser	Ernest F	04/12/99	84
	Gallup	Clement G	08/02/00	79
Reading	Miles	Reginald E	22/10/99	82
S'hampton	Calder	Colin	23/11/99	65
	Warner	Ronald	04/04/00	72
Stevenage	Downs	Clifford	06/03/00	67
	Knapp	Robert W	25/12/99	78
Surrey	Briggs	Ronald H	04/03/00	75
Wakefield	Waites	James R	20/04/00	71
W.Gorton	Hamm	Kathleen	02/11/99	78
	Jones	Elisabeth	21/12/99	77

Jordan	Chris	23/03/00	72
Travis	Frank	27/12/99	70
Turner	Francis C	16/03/00	87
Winsford	Burgess	Alice M	11/04/00 82

Other ICL Locations

Cogger	Alan	05/12/99	66
Curtis	Arthur L	07/02/00	84
Day	Colin B	17/03/00	68
Delmas	Martyn	30/12/99	85
Duffy	Edward	18/05/00	79
Earl	Gladys L	25/04/00	88
Franklin	Kenneth N	11/10/99	89
Grover	John	23/08/99	74
Habgood	Douglas J	28/10/00	66
Harrington	Kenneth D	21/03/00	84
Hilbury	William	21/02/00	78
Hiscock	Leonard A	16/05/00	78
Holdstock	Lilian G	15/12/99	83
Hook	Stanley A	13/03/00	98
Horton	John R	21/10/99	97
Hurst	William	01/02/00	69
Keogh	Kathleen	10/10/99	81
Mewis	Ivy	28/01/00	88
Perera	Withage D	18/02/00	70
Ravenscroft	Frank	31/03/00	77
Rowlands	Michael J	25/11/99	64
Russell	Bertram	25/02/00	85
Spence	Phyllis S	02/11/99	77
Stapleton	Bertram B	18/10/99	76
Tindall	Joseph W	09/08/99	75

ICL Fund

FCY02	Holden	Norman J	19/04/00	53
KID01	Ross	Doreen	20/04/00	53
MAN01	Brotherton	Lynne	20/05/00	53
MAN19	Bartlett	Clive W	29/07/00	64
STE04	Jones	Malcolm	14/04/00	56
WAK01	Campbell	John	17/04/00	50
WAR02	Crosby	Allan	21/08/00	68
WSR01	Boyle	George	26/04/00	54
	Corker	Philip T	16/08/00	69
	Greenhalgh	Robert	16/03/00	55

PENSIONER REPS

Jack Kane 21, Hazlebank Close, Liphook, Hants.

GU30 7BZ 01428 725169

Colin Marshall Grange Villa, Sandy Lane,

Longsdon, Stoke-on-Trent ST9 9QQ 01538 371618

NEXT ISSUE

Copy for the Spring 2001 issue must be submitted by 1 March 2001 but would be appreciated earlier.

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