Editorial

I am writing this at the beginning of September wondering what Parliament is going to decide about our future. It seems to me that politics is becoming extreme in all parts of the world and the UK is following suit. Why can't we have co-operation and find a middle way in sorting out all the problems of our society?

The 20120 Spring edition of Bits & Bytes will be No 50, which will be quite a milestone for me as editor. When my career in computing was ended in 1994, after 35 years, I wanted to keep in contact with ex colleagues and suggested to the pensions department that a newsletter should be provided. They were not very supportive! However, after David Palk offered to fund the printing and postage, they changed their mind.

Over the years many people have contributed articles, anecdotes and suggestions, but more recently copy has been very sparse. I think that maybe No 50 will be an appropriate edition to say farewell.

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CS Person of the Year

Hello Adrian, I have to say I only keep up with one friend from ICL, several others have passed away as I am now 80. I was made redundant in April 1992 having been named C.S. Person of the year in 1989. Left a bitter taste at the time but I assign those things to a new generation and have drawn a line under it.

I came to be a 'Problem Manager' after not being put through as a Service Manager in I think 1987 when ICL rearranged Customer Services. with advice from consultants of Anne Shaw. Sometime later I was grateful for the change in career. I became the 'fixit' man for the Branch Manager.

I went out on many missions getting a satisfactory result on all occasions. They were mostly technical problems but also customer ones as well, the great thing was I was just left to my own devices. I was GSS 18 so nothing glamorous but I could make phone calls and make things happen and it was most satisfying. Thinking back I do not believe there was anyone else tasked with solving these 'small' but time consuming problems in the 'Field'. They affected our Branch but were countrywide.

If you like the following story I can follow up with a few more, most were entertaining, well for me anyway.*(In next edition. Ed).*

Tape streamer unit fix

I had stuck my neck out and said the tape dump unit (back up for the daily work on a disc drive) on a data entry level piece of kit was not good enough. This unit was in the top 4 failing units in the company. Inevitably a directive came down from on high to put my money where my mouth was. There had been a committee running for a year by a Unit Manager in Feltham and they produced what they considered to be a 'Gold Brick' replacement unit. The Feltham man had been coming to me each month for advice on his next move and for his reward he got promoted!

Well guess who he nominated as his successor! So I came to run the enterprise. My first move was to secure the minutes of the previous meetings. They were beautifully done with actions etc. all annotated, so I read them all. There was just one flaw, hardly any actions had been completed and usually were carried forward to the next meeting. But the Repair facility at Kidsgrove had done a lot of work and put some money into continuous running and testing of a couple of units under the auspices of Colin the senior repair engineer on his work bench.

I went through the list of ICL people at the meetings I seem to remember there were about 15 or more including support management. They would mostly go to Kidsgrove the previous day stay in a hotel and turn up for the meeting then go home. I felt things could be improved. I sent everyone a 'fax' saying if you cannot make a decision there and then at the meeting do not come!

I also thought that a meeting should max out at 2 hours. This got it down to an afternoon and just five of us and at the first meeting I asked where the repair engineer was, and he came in and joined us. (No one had been talking to him)! Also the Overall Manager of the repair unit. He stayed about 10 minutes and left, I later found out this was a good sign.

We were still looking for the problem as the Gold Bricks were starting to fail as well. I was able to monitor all breakdowns in the country and chase the repair of units to find what the cause was. I think it was at the 3rd. meeting (now weekly) and a chance remark by the engineer was that the testing was falling behind as they had to change the small DC motor that drove the magnetic tape. I was intrigued and we went out to see what had happened.

I inherited a regime of looking for writing failures on the tape with the emphasis on old and hard wearing

tapes and possibly dodgy read/write heads. I asked what happened to the motors he told me that was a common fault and he said they were sent to another company for refurbishing. I found out that this cost about £74.00, well this sort of motor would cost about £20.00 max so a bit of a problem there. The motor had a rubber wheel that forced down the tape on to the capstan to pull it across the read / write head and this motor bearing was wearing oval, though I did not know this at the time. I asked what they did and asked what fault they were fixing

I should add that the obvious thing was to discard the motor and replace it. There was a spares float of motors but not enough and buying in motors I think from Mabuchi meant a minimum order of 10,000. They were making 2 million motors a day!

We discussed this and the ICL responsible engineer went to see the repairers and asked if they had a solution. They said fit a ball race bearing which will take the strain without wearing. I had a chat with our man and said they have been making a lot of money out of us over the years as they were doing a lot of unnecessary work.

ICL was going through a Zero Defects process at the time. We however could never find out what was wrong with the motors they had refurbished. I suggested to our man to try and sell Zero Defects to them (they loved it) and when we send them a motor in future for repair just insert a ball race bearing which cost a few pence and we don't want to pay! Amazingly they agreed!

The statistics behind all this were that there were 2500 units worldwide and the repair people at Kidsgrove were proud of the fact that they were repairing 1200 units a year, not so happy when I showed them the figures. As the units came in all were refurbished in this way with ball raced bearings in the motors until the problem just faded away. During this time I had great support and help from the engineering staff at Kidsgrove and we all got on really well. I think it took about 6 or 7 weeks to sort it out.

I worked out the future savings to ICL in repairs and breakdown costs and it came to several times the amount of money ICL had paid me in salary for my entire career. The icing on the cake for me came about 6 months later when my contact in Kidsgrove sent me a FIR (Fault information Report) that had come in from an ICL Australian lady technician with these words scrawled across it.

'Thank God someone's fixed it'.
Roy Verden

High Flyer

I can't compete with the exotic achievements of the high flyers described in the latest "Bits & Bytes", but this might be one of my earliest recollections.

Recently, my wife was watching an old Poirot repeat of a repeat, where he went into an impressive London building that caught my eye. It had been the first site I'd worked at after training at Powers in Croydon.

In 1948 I was a trainee with Ken Pailes at Royal London Mutual Insurance in Finsbury Square in the City. That spring the company had arranged we were all subjected to a chest X-ray as TB was still rife following the deprivations of the war. Unfortunately, Ken was found to have a shadow on his lung and went off to a regime at a TB hospital in Epping Forest,

risking pneumonia breathing the cold fresh air of an English summer. I was left to hold the fort at Royal London.

One morning I was diverted to a nearby Express Dairy Coffee shop by a Powers trouble-shooter who was quite troubled as he explained he'd heard the Actuary had committed suicide, by jumping off the top floor in the atrium.

I assured him there was nothing I'd done for anybody to go that far and anyway we were on the ground floor but our competitor, Hollerith, had a site on the top floor! He seemed relieved and sure enough all was normal when we went onto the Powers site.

70 years later I was at our church lunch for the retired and we were talking the usual stuff about the changes we didn't approve of and someone was bemoaning that she didn't recognise her old haunts.

Practically all the regulars are ex- Londoners and therefore most reminiscing is about London. One of the volunteers, who run the lunch, asked me how I knew most of the places discussed. I explained I'd lugged a tool bag round the City for 5 years and needed to know the short cuts to save on bus fares and claim them back from the company. A number of the retirees couldn't even remember where they'd worked, but the volunteer, who was a youngster in her mid-eighties mentioned she'd started as a Hollerith punched-card girl at a City office and one day there was a panic as the boss had thrown himself off the balcony. She was quite chuffed to have her anecdote of 70 years ago verified by a reliable witness!
Dennis Goodwin (92-yr. old reliable witness!)

A step backwards before a jump forward ……

It was October 1965 and I was standing ready to boot an Elliot 803B. The six inch diameter spool of plasticised punched tape was poised in the paper tape reader, the large grey metal bin stood ready to catch the tape since I knew it would speed through the air about a foot beyond the reader. I remember the bin was a 2ft grey metal cube and looked uncannily like a large waste paper bin, but it would soon hold the precious five hole tape that allowed the circuitry of the 803 to run as a computer, if a little slowly.

I set the load parameters on the rectangular control board and pressed the PTR READ' button, or was it GO - I have forgotten! After all, it was half a century ago. As I waited for the reader to finish I mused that this felt like a **step backwards** from what I had been doing for the last two years, programming a LEO 326. Some minutes later the tape reader finished and I could run my ALGOL program for the Statistics module I had attended earlier in the week.

The 803B was at Hatfield Polytechnic where I had joined another eleven students in the first year of the Computing Degree. A month earlier, in Sept 1965, we had started and the four year course stretched ahead of us for what seemed an interminable time. During the four year course we were to spend two periods using our newly acquired knowledge working for companies in their computer departments. This practical element to the course is what attracted me in particular. This was what I hoped would constitute the **jump forward in four years' time** when I would be looking for a new job.

Earlier memories of operating LEO 326

Going back a few years prior to 1965 I had worked as an operator and latterly a programmer on one of the early LEO 326s at Shell Mex and BP in Hemel Hempstead. The SMBP company no longer exists but it was owned 60% by Shell and 40% by BP and had its HQ in Shell Mex House on the Strand - you can still see the iconic building with the square tower and clock, north of the Thames. from Waterloo Bridge

Those of you who worked on those early machines will undoubtedly remember they were a leader in the field of commercial computing in the UK, which is why SMBP had bought two of them for its Hemel Hempstead operation. I seem to remember these Leo's had the same Elliot paper tape reader as I was now using on the 803B. The reader consisted basically of a pinch roller to grip and drive the paper tape, a prism to deflect the light from below, a track or guide to keep the tape correctly aligned and the control panel to stop and start it. I think I remember that the only output device on the 803 was the paper tape punch which had to be taken to a separate teletype machine to create a printed report. This teletype machine also had to be used to create the paper tape as input for my Statistics module.

The cries of "Allocate paper tape on Channel 3 Route1" … followed by "Allocate mag tape with alternate routes on Channel 5 Routes 3 and 4" rang out from the peripherals to the man on Buttons. Then it was a scene of organised chaos when one reel of paper tape finished and another needed to be read, there seemed to be so much rewinding – at least we had a little motorised re-winder at SMBP – no such refinement at Hatfield, but then the number of reels was considerably less.

The LEO was a little more sophisticated and costly than the 803B and included for input an 80 column punched card reader. For output it sported a paper tape punch and two 124 column printers (I think that was the width) which was used to produce the customer invoices on continuous stationery and other reports for internal use in the business. Do you remember the Mylar Format tapes that had to be set up round the side of the printer for each pre-printed form? The other job was to use a decollator and cutter to separate the carbon paper from between the four part pre-printed stationery – quite messy on the decollator after handling the carbon. The cutter was designed to feed the single stack of invoices using the sprocket holes on each side and stop momentarily at the perforated division making a double chop either side of the perforated strip. This process was noisy and frequently experienced mis-feeds of the paper which resulted in a mighty paper graunch and a manual re-typing session. The stack of invoices destined for the customer steadily grew on cleanly cut 10⅞ inch paper ready for the folding, enveloping and posting process. Thank goodness for the ability to send these by networks nowadays!!

The main storage medium consisted of ½inch mag tapes, hundreds of them, which were stored in another large room. They were about 12" diameter with a metal spool and were 2,400 feet long - I forget the data storage capacity - but I think these tapes could be termed the work horse of the Leo, being used for sorting data during a suite of programs, for the storage of results or, for example, holding a database of prices and customer information.

The LEO engineers stationed to service and keep it running were called upon from time to time. Perhaps the machine had frozen. Their professional technique was to open the doors of the cabinets housing the circuit boards. Then with a large wooden handled screwdriver, wooden handle against the boards, they would clatter their way along each of the rows in the cabinet. This re-seated any board that might have lost contact. It was quite spectacular to witness and took no prisoners if there was a dodgy component. In fact it worked for 8 out of ten problems.... such was the resilience of transistorised boards.

Occasionally the Elliot paper tape punch was used to produce small reports in parallel with the line printer which had been loaded with pre-printed stationary for a larger report. Unfortunately the punch frequently became over-heated. The maintenance engineers, as resourceful as ever, rigged up their vacuum cleaner on BLOW and used black-n-sticky tape to hold it in position. Very effective! The motor on the vacuum cleaner was obviously more robust than on the paper tape punch.

The jump **forward after Hatfield**

The twelve graduates from that first course at Hatfield completed placements in the computer departments of various companies such as -

General Motors Luton, British Aircraft Corporation, Shell Benelux, The Post Office Gresham Street, Shell Mex and BP, and John Laing

Some were sponsored by a company and then returned at the end of the four year course. Others had experience of two companies during the four years which made them more able to choose a job to their liking after they gained their degree. This grounding in different aspects of computing was varied and extremely useful.

The jump forward some 50 years later was demonstrated at a reunion that was held by Hatfield (now promoted to a Hertfordshire University) where many of the twelve congregated to recount their lives and job experiences. Sadly three had died in the interim period, but perhaps this was only to be expected with a group of 70 year olds. The world had in truth become their oyster with one in Canada, one in South Africa, one in Germany. The others had continued in various companies in the UK and remained for the most part in computer related work as developers, project managers and some had started their own companies. The even spread of female and male graduates on this computing course was refreshing when compared with the output of similar degrees today. A sad reflection on the masculinity we now see in various branches of the IT industry.

The changes in systems over the last 50 years has seen great leaps forward that we, of course, take for granted just as the changes in air transport, motor cars, medicine (computerised tomography in particular) and the internet. I feel that none are more far reaching than in the field of the internet and communications with fast fibre cables, satellites and Wi-Fi affecting everything in our daily lives. Having spent the last 50 years associated with computing I feel I have benefitted greatly from that **jump forward** I had hoped for when I started at Hatfield. Not least is the feeling that I'm still (reasonably) computer literate in comparison with others I meet.

After retirement I now spend too much time connected to the internet or tweaking the Excel sheets I use. One cold hand slides the mouse around the mat whilst the other is gloved until I need to use the

keyboard ….. The cry of "you're not STILL on that thing are you?" is emitted by you-know-who when I emerge for a cup of tea. Are all ex-employees of ICL the same I wonder? Surfing their lives away rather than painting/reading/woodturning or other such occupation…! What would I have done if I hadn't taken that **step backward** and stood at the paper tape reader on the Elliott 803B all those years ago
Bill Forfar

LEO: Publicising and Preserving the World's First Business Computer

Much is known about the way American electronics companies such as Google, Microsoft and IBM have globally dominated the computer industry over many years. Comparatively little publicity has been given to the pioneering activities in the 1950's of the giant British catering company, J Lyons & Co in paving the way for computers world-wide. This company had enormous foresight and innovation qualities that led to development and manufacture of LEO (Lyons Electronic Office) based on user-centred design and subsequently recognised by Guinness World Records as the World's First Business Computer.

Such was the success of LEO within the Lyons Company that versions of the computer were purchased by many blue chip companies such as Ford Motors, British Oxygen, Shell Mex & BP and Government departments, including Inland Revenue and the Post Office. Some remained in operation until the 1980's. A few of the LEO pioneers from the 1950's are still with us, one of whom, Professor Frank Land, has recently been honoured with award of OBE for services to the information systems industry.

Today, The LEO Computers Society, a registered charity, thrives as an active organisation, most of whose members worked on LEO computers during the 30 year lifetime of LEO. The Society is keen to promote, to as wide an audience as possible, the general awareness of LEO and to seek support for the preservation of its history. It seems important to explore LEO's contribution to the start of computing, because the social cost of how we create, share and store information is only now being properly articulated. Media stories frequently cover some aspect of this, from fake news, to data protection, to discussion about artificial intelligence and the Internet of Things. LEO was at the beginning of this story and perhaps, if the central ethos of LEO--the importance of the end user--had been held more closely by its successors, the picture today might be quite different.

To explore these issues now, the Society is currently working, together with the Cambridge Centre for Computing History, on a Heritage Project, funded by the National Lottery. This includes digital archiving of documents and collection of physical material, development of a virtual reality simulation of the original LEO and interviewing those who worked on LEO machines. For current and future generations, the project will assist in the understanding of how computing technologies developed and their impact on our daily lives.

When LEO went into 'retirement' in the 1970's and 80's, some of those who were employed on LEO were understandably allowed to keep items of hardware, documentation etc, as mementos. The Society now seeks help in obtaining such items as donations to the collection being acquired by the Heritage Project and to identify individuals who may have had LEO experience and are willing to offer themselves for interview.

So, here is an appeal to our readers: The LEO Computers Society (www.leo-computers.org.uk) would welcome contact with anyone who has LEO material of any description and would be prepared to donate it for the Heritage project or offer themselves for interview about their LEO experiences. Please contact:
   secretary@leo-computers.org.uk

The birth of series 39

After working for regional support in the Southwest for a number of years I joined the SSC (software support centre) at Reading 01 in 1980. For the next two years I spent most of my time deep within the VME diagnostic guide, code fiche and reams of hexadecimal (System Dumps) sent in by customers in the hope that we could diagnose what was going wrong with their machine after the awful 'System Crash. Please hit Enter' followed by 'Do you want to Print to LP' had overwritten the Oper Screen.

In 1983 A group of SSC staff were offered a secondment to West Gordon to work on the series 39 range of machines which were being developed to 'save the company' (again). Or at least that was the view of Rob Wilmot, or was it Bonfield?, so who were we to argue.

Thus began around 2 years of commuting between Bristol & Manchester, leaving on the Sunday evening, working long days all week, and returning on Thursday evening, or if our project was desperately behind, the Friday. We worked in pairs, if I recall each pair was allocated a Level 30 rig which comprised a very early level 30 processor cabinet and a separate cabinet of FDS300s with a small lan with a 7561 terminal attached. We ran various releases of VME attempting to load from IPL to 'Load Ends', although in the vast majority of cases the load process ran for a couple of seconds before hitting a stop of some kind, then began the on screen dump analysis to try and work out what had happened. Once the stop was diagnosed the oracle was consulted, not a database but a guy (whose name sadly escapes me) , who might have a 'rep' (code repair) to fix it, else a bug report was completed & submitted to the developers.

A constant pain for some considerable time was the problem of 'gobbled' tokens on the macrolan, the fibre optic ring main that connected the fast peripherals. Previous ranges of machines from all manufacturers used thick multicore cables with large Cannon plugs to interconnect the processors input output ports to the various controllers which housed the peripherals. These cables were seriously bulky & expensive items with very limited maximum length, and the multi pin plugs constantly gave contact problems affecting reliability. Series 39 introduced the use of fibre-optics to replace these bulky cables, a radical solution for the time as we were at least six or seven years ahead of IBM who only introduced the technology in around 1990. Being first means being at the bleeding edge so just about everything we used including fibre optic cables, connectors, laser drivers and code to drive & manage fast serial interfaces was new to ICL and the wider technical world. It was a major leap forward by ICL and we were told could well be the saviour of the company cutting major cost out of the production of

systems. However we had to get it working and working at a decent speed. The rigs were initially very slow as all the coupler driving software was written in S3 code and ran in the processor, Much later this code was converted into microcode which ran in the couplers. Remember gobbled tokens? Well this was when something somewhere on the macrolan ring took control of the token and never released it, So every peripheral and indeed processor coupler simply stopped and waited. The system simply died.

I recall we spent days or weeks trying to work out what the problem, or more likely problems were until somebody came up with a simple solution why not just launch another token after a certain time then everything would burst into life again and you could then look at which controller was in a locked up state. Okay on the test rig because you didn't care if you got the old data corruption, however it certainly couldn't be allowed out onto a customer site. This was to come back and bite us later. The first time we ever got a machine up to 'load ends' we closed down the rigs and buggered off down the pub for the afternoon. It was a giant step forward. I recall everything seemed to take forever and I wondered how some of the IBM plug compatible Manufacturers seem to be able to bring their processors into being in months rather than in our case which was years. Still what it did give me a very deep knowledge of series 39 which was very useful when I moved back to the SSC and gradually moved into consultancy rather than diagnostics. Then followed years of installing and configuring machines on customer sites both home and abroad with a group of colleagues who are looking to equally versed in the mysteries of series 39. Dave Bailey, Alan Galpin, Dave Durban to name but a few.

Sometimes having such a deep knowledge of the code et cetera could get you into quite deep pooh. The series 39 load process could be followed on the six digit hexadecimal display on the front of the processor, however on site you were deeply hamstrung in that most of these lights codes were not actually published. We thought we needed the ability of having some idea what was going on in the load without having to invoke a Visa session which in the early days was very slow and clunky. So I decided to produce the definitive list of series 39 lights by gathering data from every source I could imagine including design documents, code trawling and conversations with the support centre. I then got the poor hapless secretaries in the SSC to type this lot up as a series of meaningless hexadecimal digits with what they considered to be gobbledygook after it. It turned out to be quite a sizeable document. The original intention was only to use it amongst the small group of consultants who worked on the machines on site, however I suppose inevitably it broke out into the wild and ran around the world fairly quickly. Even without an internet. The next thing I knew I was getting calls from all over the world As I have been dumb enough to put my name and location on the document. I once got a call from Australia thanking me for the document as they used it to diagnose a cube fault and had replaced it in I assume a level 80. A cube was the central compute units of a Level 80 processor. I've never meant the document to do anything like that. Next thing I knew I was hauled up before management and given a fairly severe bollocking for producing it as apparently it was very company confidential. They were concerned it might get out to third party Maintenance organisations. I survived but I think I was under a cloud for a little while.

Andy Stone

Melbourne Story

I happened to find Bits & Bytes No 48 quite by chance and was quite interested in the articles and also the news of the passing of Mike Forrest.

I am not an ICL (UK) pensioner as I worked for ICL Australia, although my career in computers began in the UK.

I started in 1968 as a machine operator (MO) working at the Kensington Computer Centre (KCC) of the GPO. They had two very big Leo 326 configurations and more staff manning those machines than you could poke a stick at. The GPO gave us a very good grounding in all aspects of computer operations, from job assembly, computer operations through to job disassembly and despatch. 90% of the workload was London Area telephone billing. As a MO you were rostered to work in any of these areas. Even in the computer room you were assigned to work on card readers, printers, tape decks. The main console was manned by a Senior MO and he/she was overseen by an Executive Officer whose job was to determine the order of jobs. At any given time there were as many as ten people manning the computer.

In 1969 I changed career, deciding to opt out of the GPO and into the mainstream of the computer industry which in those days was dominated by ICL and IBM. I joined the British Egg Marketing Board (BEMB), Oxford Circus as an operator/Shift Leader.

They used a larg(ish) ICL 1905E and were leaders in the adoption of new technology and operations ware. George 11 was all the go then. With the demise of the little lion on the egg, for those who can remember, the computer department which by now was operating a bureau service called Sharetime Services, was sold off to Management Dynamics who were based out in Heathrow. For a south londoner that was too far to travel so I went on the hunt and lady luck was kind to me me as I took up an offer to join a couple of ex BEMB colleagues at Scaffolding (GB), Mitcham, Surrey. SGB operated a large ICL 1904E and were just transitioning from George 11 to George 111. The experience I gained at SGB put me in good stead for what was to come. Well as life would have it romance intervened. I met this girl whose family had already been passed to migrate from the UK to Australia.

That's what got me to Australia because prior to that I hadn't given the idea a moment's thought. Before coming across to Oz in late 1972 I had received some good counselling the year earlier by an ICL Personnel Manager based in East Putney, a perfect gentleman named Howard Cork who some of you may remember. I called ICL on the off-chance and got put through to him. When I told him what I was doing he invited me in for a chat. He worked for Personnel in ICL's International Division. He kindly furnished me with a list of all the ICL 1900 installations in Melbourne so that I could approach them for employment once I got to Melbourne.

Fortune favours the bold so the saying goes. I received a few of job offers including an offer from ICL Australia's Melbourne office who had a large ICL 1904A configuration running George 11 with plans to

migrate to George 111. They ran a thriving bureau service called ICL Data Services (ICLDS). I recall my interviews, firstly with Elfryn Lewis of ICL Data Services and then, guess, yes, Howard Cork who was in charge of personnel for ICL Australia. He had sneakily won a trip to work in Australia for a few years. I worked for ICLDS for four years and then got the opportunity joined the mainstream Computer Division in Sales Support. In that role I was fortunate enough to get seconded back to the UK several times. The first, in 1977, was to stage and bring back Australia's first 2960 DME mainframe, which at the time was slated to be installed at a large private pathology business in Melbourne called Dr Bates. Dr Bates fancied himself as a bit of a technology trailblazer. I spent time in the Bracknell computer hall as a shift leader working on the 2900 DME project headed by Geoff Squire. Geoff later became SVP of Oracle Europe, i.e the boss of Oracle Europe. The 2900 DME development project team, also based in Bracknell (BRA01), was headed by Jim (James) Foy whose stellar career in ICT continues as a Director for InboxHealth, Boston, US. Dr Bates 2960 was hangared in Feltham (FEL01) for a few weeks. But, events took a peculiar turn in those few weeks. The one and only 2960 allocated to Australia that year was instead diverted to the Brisbane City Council (BCC), a decision made by ICL Australia management because BCC were considered more strategic as a government sector win.

I returned to Australia with that machine and helped to get the customer acceptance trials passed at BCC. Well, in the meantime Dr Bates was understandably miffed because ICL Australia had blunted his pioneering spirit. He was not interested in being second or third in line and so we lost him as a customer...in due course.

Between late 1979 and 1981 I was based in Port Moresby, Papua New Guinea still working for ICL Australia. In that time we won deals to install 2900s into Air Nuigini, Bougainville Copper and the Electricity Commission of PNG. With the odd 2903 here and there we were kept pretty busy.

My second stint in the UK involved being part of the Australian OPD (One Per Desk) project team. In 1983/4 ICL Australia had won a contract to supply Telecom Australia (now Telstra) with several thousand OPD which they wanted rebadged as the ComputerPhone. More orders were to follow.

Telecom threw loads of people into this project and established well-manned ComputerPhone Centres in the CBD of every capital city of Australia. The year was 1984 and to state the obvious their investment in this project was large. In March the previous year IBM launched the IBM XT, an 8086 based machine running MS-DOS to which they also added 3270 emulation. It wasn't a phone but a personal computer with mainframe communications capability. The OPD was primarily a smartphone with some basic application software included. Those apps were from Psion (UK) and they were the same apps that came with the Sinclair QL. The QL was launched in 1984. Wikipedia claims that 150,000 QL's were sold but somehow I would question that claim. The QL and OPD applications were no match with market leading applications like Wordperfect, Supercalc, Dbase and so on. Lotus 1-2-3 was launched in January 1983 and that spreadsheet gave the PC XT a huge jolt in sales. It was immensely popular. Accountants loved Lotus and we all know how many accountants it takes to run a business?? The exchangeable, direct data access floppy disk on the IBM XT was far superior to the OPD's microdrives. The latter were slow, unreliable and being a tape drive data was serially accessed, i.e. the tape had to be searched for a file. Bad luck if your file was towards the back end of the tape. As a user of a OPD I personally had tape jams more than once. You'd be crying on the way home if that happened to be your last backup.

I read Roger Cooper's piece in Bits and Bytes no. 48 on the OPD. Whilst some of the manufacturing techniques around the OPD may have been ground-breaking...it certainly was an outstanding smartphone, but at it's very high price point was it worth the investment? I would also offer an alternative view to Roger's conclusion that OPD innovations put ICL in a "match fit" state to enter the PC arena. IBM launched the 8086 based PC XT in 1983. ICL's MS-DOS response wasn't until 1987 with the DRS PWS (Professional Workstation), a PC AT (80286) clone with Full XBM comms targeted at the existing account base. At best it sold a few thousand, a small number compared to the huge market penetration of IBM's PC XT. The DRS PWS was also dogged with application software compatibility issues which added to its woes. Sad to say it didn't cut the mustard. The original specification for the DRS PWS was a dream that we had already evangelised to key accounts and the global ICL market in general. What we launched disappointed.

In 1987 IBM launched the Personal System/2 (PS/2). ICL's initial MS-DOS response, the DRS M30, was launched in 1988 and it was not a home designed product. To fast-track it's market response ICL went with a re-badged Acer (Taiwan) product with ICL skins and DRS livery. No part of the eventual range (DRS M30 to DRS M55) was made in the UK. All were made consumer ready in Taiwan. This meant skins and badging were done in Taiwan and documentation etc, inside the box. Acer were, and still are, a reputable company who had OEM contracts with a number of major players. They also sold direct in a number of countries and were doing very well picking up deals for large numbers of PCs in their own right.

ICL were getting in late and most definitely not in a match ready state to take on the IBM PS/2. The decision to go with Acer was considered and sound but of course in true ICL fashion a committee of a thousand wanted to get involved. And so it turned out that the finished product from Acer Taiwan were all shipped to ICL Letchworth (LET01) to undergo an unnecessary second stage testing process to supposedly meet ICL's quality standards. This added time and cost. No matter where the ultimate destination was, e.g. Australia, Germany, France, etc the product had to go through Letchworth staging. Consequently, with the added labour and transportation costs there was not enough profit margin to allow the product to be multi-channeled and compete with the likes of IBM and Amstrad. So once again ICL's answer to IBM was confined to the internal sales force and thus to the existing account base. Ideally we would have liked the product to be sold to the home consumer via Currys and/or PC World or their equivalents of the time. The Personal Computer Business Centre (PCBC, BRA04) management pushed Acer very hard to get the cost down but Acer also played the numbers game well, i.e.

to lower the cost they wanted a higher commitment. With ICL UK and ICL International forecasting small numbers there was no way for ICL to commit to large numbers.

One product line that continued to star in ICL's armour was the CP/M, MP/M and Concurrent DOS based ranges of PC's. Launched in 1981 as the PC1 (ex Rair) it had a good run with the next generation PC2 line and finally with the PC Quattro line running Concurrent DOS. Until 1987 it was the only PC product line ICL had and by then it was well established in the Value Added Reseller (VAR) channel in the UK, Europe and Australia/NZ. By 1987, with ICL's entry into the MS-DOS world the Quattro was looking like an end-of-life product, although in reality it was anything but. The nice people in the DRS Business Centre also wanted to see its demise as, according to them, it had the potential to bite away sales of their newly launched, A4, stackable product known as the DRS300. Because the DRS300 ran the same OS as the PC Quattro they also rather fancied the well-established Quattro VAR business. PC Quattro however delivered great profit margins to ICL and the PCBC pushed it's sales well into 1990. The PC1, PC2 and PC Quattro line were for the most part VAR products, i.e. they were sold with line of business (LOB) software and expertise from the VAR. So VARs made profit on the hardware, software, services and ongoing support. Vanilla software such as Wordstar, Supercalc, Multiplan (the ancestor of Excel), Dbase, etc were also available for the Digital Research CP/M, MP/M and Concurrent DOS platforms and they helped to drive additional sales.

The high volume MS-DOS/Windows market place is not for the faint hearted. The name of the game is to sell product by the truckload, hundreds of thousands and not in the thousands. That is how the game must be played and that is true to this day. IBM got it right. We got it wrong. ICL vacillated for far too long over which platform (MS-DOS or CP/M) would dominate and then when the decision was made in 1987 ICL Manufacturing Ops wanted their piece of the pie. Hence, the Letchworth staging. Some people may not like what I say but that is the unvarnished truth of ICL's play in the PC world. Later in my career, between 1994 and 1997 I spent three years with Apple Australia and that showed me what high volume production and channelling actually means.

That then brings me to Mike Forrest. He was a senior man within ICL International in those days and I had occasions to be in meetings with him where he would usually berate everyone in the room for one reason or another. On the subject of PCs he expected the PCBC to produce a country variant for all our PC's. When asked what numbers they were forecasting his reply was...One. It was of a course tongue-in-cheek response. We were to divert time, money and people to invest in keyboard layouts, manuals, labels, warranty cards, etc to be in the local language...for one PC? PCBC did produce, French and German variants of the product as they were important markets. If memory serves me I think we also did a Swedish variant with no marketing plan or forecast from the country. I was once advised by an ICL International Personnel Manager (a person on secondment from ICL Australia) not to use Mike as a role model...and no, it wasn't Howard Cork. In spite of his ill-temper and bluster I actually liked him because he didn't take BS. He was very astute in spotting

fakery. To fool Mike Forrest you had to do it with supreme confidence.

The first sign of weakness and you were dead meat. I can also recall a time around April/May 1987 when I was still in Australia. Normally based in Melbourne I happened to be in ICL's HQ in Frenchs Forest, Sydney, on some sales and marketing activity around the PC Quattro. By chance I happened to be staying at the same hotel as Mike Forrest and Tomo Razmilovic. Tomo was head of ICL International. I recognised both of them from internal magazines. For the next couple of days I kept a low profile and avoided the hotel restaurant. Whatever they were doing in Australia sure made the mood at Frenchs Forest very sombre. And so it came to pass that ICL Australia finished the financial year, June 1987 in poor shape. It was the famous year where the company profit was in fact a loss due to some fundamental accounting error. There were redundancies including (I think) the MD and yours truly. However, my marketing and product management work with the PCBC team held me in good stead and so a redundancy became a two and a half year secondment with the PCBC in Bracknell. You will get a small insight into Tomo's management style by reading Ninian Eadie's interview for the British Computer Society.

http://archivesit.org.uk/wp-content/uploads/2017/07/Ninian-Eadie-Transcript.pdf

I worked the period Oct 1987 to Feb 1990 in ICL's Personal Computer Business Centre (PCBC), BRA04. The office was above the Bracknell train station. I saw and experienced first-hand the company's forays into the MS-DOS marketplace. My job was to evangelise the work of the PCBC to all the overseas subsidiaries and to cajole them into stopping doing local deals for PC's. That is how far behind we were in the general PC marketplace. For example, in 1988, ICL Australia had signed a local deal to acquire a white-box clone which they badged the CICLone. Interesting name but a bit tacky and it broke corporate rules on the use of the ICL logo. They acquired a handful of them but soon got behind the mainstream corporate initiative. I left the PCBC in Feb 1990 and returned to Australia just when the DRS M50 and M55 were about to be launched. In fact I left ICL altogether and took a different turn by entering the world of networked computing. Novell was the rage and I wanted some of that action.

David Mills headed the PCBC at the time I was there and he was a great manager. He fought many internal battles and was well respected by Mike Forrest for the work he did in establishing a flourishing VAR channel in Europe. I was a member of David's marketing and product management team.

They included Ian Hardacre, Dave Hooker, John Panter, Ray McCann, Ray Moss, Luc Van Geel, Nick Stacey, Cliff Jones, Dave Jackson, John Foster, Sid Burton, Chris Cousins, Chris Kingdon, Morten Hattesen, Ruth Hawkins, Gary Logan, Jon Riley, Gordon Derham (ex ICL Australia), Mike Heneghan and many more who I can picture but can't name. I hope all is well with them. My email is marklabrooy@optusnet.com.au

Mark La Brooy, Melbourne, Oz
ICL Australia 1972 - 1990

Reunions

The West Midlands ICL Pensioners

Meet for lunch, beer and a chin wag, bi-monthly on First Tuesday of the month, usually at The Square Peg, Corporation Street, Birmingham, B4 6PH from 12 noon. (Attendees are usually former Customer Services MF Engineers, POS, Key Edit, etc., from BIR03, BIR04 and 'guest visits' from NOT02).
 All welcome!

Newcastle Friday Club

On the first Friday of each month Ex (and current) ICL/Fujitsu employees from the North-East meet for a beer and bite at Wetherspoons Quayside Pub in Newcastle; we meet at 12:30, and any Ex ICL/Fujitsu people from the North East or who have had any contact with the North East are welcome.
Mike Green 0191 386 6787

ICL Central London

The next reunion will be on Wednesday **16 October 2019** at **The Shakespeare's Head, 64 Kingsway** from 12 noon. The pub is on the eastern side of Kingsway just south of Holborn tube station.

MOD MOB

Retired and active staff from the London and MOD UK unit has met up for a number of years now, so we have now established ourselves as a sociable group of individuals. The date of the next meeting will be posted on Rod Brown's B&B Repository website.

Anyone who is retired or active and wishes to meet up with individuals who worked anywhere on MOD contracts or in the group is welcome. Lots of people worked in CHOTS as well as in the main MOD team and all are welcome, security clearance not required, just bring a smile. Email to **modmob(at)shedlandz.co.uk** for enquiries.

Kidsgrove-Drawing-Office

The Annual reunion is held at the Bleeding Wolf, Scholar Green on the first Monday in December
brian(at)morrismail.co.uk

Liverpool Engineers

We now meet about midday on the second Wednesday of every month at Weatherspoon's, Great Charlotte Street near Lime Street Station.
Bill Wood 0151 426 4025

Old timers Stevenage

We always meet on the last Thursday of the month [Except no meeting in December] @ 12:00 in THE STANDING ORDER in Stevenage OLD town [JD Weatherspoons]
Dave Badminton
email davebad(at)gmail.com or
davebad(at)blueyonder.co.uk
Phone 01245 259301

LEO Computers Society

John Andrews
GlobalLeoSociety@gmail.com

Kent Lads Reunion (New name)

Bill Shepherd
Bshepherd42(at)callflow.uk

ExICL Kidsgrove

Nick Edmonds 01270 585953
nick.edmonds(at)yahoo.co.uk

OBITUARIES

Edwin S Mack, 81,

Died on January 13, 2018 in Sacramento, CA, surrounded by family. Outspoken, charming, and larger than life, he was a computer pioneer, building the world's 1st real-time airline reservation system.

Ed Mack loved his limericks and puns / To torture wife, daughter and sons / But now that he's passed / Our word is the last / But despite that we all miss him tons
The Sacramento Bee Jan. 28.2018

When you are gone

Recent deaths have highlighted a problem for people who want to write an obituary for an ex-colleague.

We have worked alongside somebody for many years but when the question is asked "where they were born, educated, joined the company?" we suddenly discover that we hardly knew anything about them and their family background. This is especially true for those who never married and have no close relatives. Can I suggest that we should each write a potted CV giving these basic details so that when we die the eulogy given in the church or crematorium and published on the Bits & Bytes website is factual.

You should also produce a list of friends and ex colleagues with their phone numbers and/or email addresses so that they can be informed of your death.
Editor

Funeral Details

The Bits & Bytes website now publishes funeral arrangements and are published quickly to enable friends and colleagues to attend. Longer obituaries can be sent to the webmaster and will be published separately.

Fujitsu Pensions Website

https://fujitsu.pensiondetails.co.uk
To access Bits & Bytes click on the link given on the very bottom of the home page.
Direct telephone line to Pensions Department: 020 394 93492 (New number)

Bits & Bytes Archive

The Spring and Autumn editions of B&B will be available in the last week of March and September each year**.**

Please make a note in your diaries to access the website on a regular basis.
www.bitsandbytes.org.uk

NEXT ISSUE

Copy for the Spring 2020 issue must be submitted by 1 February 2020 but would be appreciated earlier.