

Bits & Bytes

No 34

Editorial

This issue is the first since Fujitsu withdrew funding for the printing and posting of Bits & Bytes. The questionnaire that went out with the last edition has elicited about 80 requests for the printed version. Despite this very small number Fujitsu will still not pay for the printing and postage. I have explored many avenues for future continued sponsorship without success.

Fortunately a number of pensioners have sent me cheques to help with the cost of printing and postage. I have obtained quotes from a number of printers, for printing and postage, and the price per copy for this small number will be about £1.50, double the price that Fujitsu paid for 6,500 copies.

The majority of those who responded sent SAEs and I have enough money to get the next edition printed and I will post No 34 to them.

As I haven't been able to get guaranteed sponsorship for the future I think that those who want the printed version will have to pay for it. This raises the problem of maintaining a subscription database and chasing those who don't send in their money!

I will continue editing B&B but I am **not** prepared to look after the subscriptions. I would appreciate somebody volunteering to take on this task. Richard Taylor's article in this edition is another suggestion on how we could look after the non-PC people.

My main concern for the future is that fewer pensioners will read the newsletter (because it won't come through the post) and that people will not be inspired to contribute stories and anecdotes as they have over the past 16 years. Can I suggest that you all make a note in your diaries, (electronic or paper) to access B&B online in the last week of March and September respectively for the Spring and Autumn editions. See the website links on the back page.

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Websites and Communication.

As well as the withdrawal of funding for Bits & Bytes, there will soon be changes to the websites for ICL pensioners. By the time of the Autumn issue of Bits & Bytes the current ICL pensioners website will no longer exist.

It is intended to be replaced by a new 'Fujitsu Pensions' website for ICL Plan members which will focus on what is required of the Trustees for the delivery of pensions. That site will not include the additional member support and people networking facilities currently provided on the ICL Pensioners website, as reported in the Autumn 2011 issue of Bits & Bytes.

Having a website for ICL people alongside the Fujitsu Pensions website has been proposed, and started – see the link on the back page. The initial version has limited facilities and content, and will not progress much further unless new people come forward to develop, run and provide content for an ongoing independent website. Concern about future ICL pensions gives a theme and reason for ICL Plan pensioners to support an independent website.

It would be good to continue to have a members directory to foster people networking, and to enable discussion and communication among ICL people using forum type facilities for members. That will all depend on new volunteers getting involved and doing the work in developing or running such facilities for their ICL colleagues. Please contact me if you are interested and prepared to take on any part of the work – the challenge is to get more going before the plug is pulled on the current website, and to set up and use new a new website content management and publishing system.

The current legacy system has a directory of members and has over 4700 entries, and that contact information will not be carried forward. The new websites will require ICL Plan members to register again for data protection reasons. I suggest that in the next month that you do make use of the current directory and relay message facility if you wish to contact ICL people just in case no way forward is set up for a members directory.

Since the current ICL pensioners website was set up in 2004 I have looked after content and publishing in a voluntary role as Pensioner Topics Editor. I retired from ICL in 2002, and time has come for me to retire again and for a younger generation to look after an independent website and ongoing communication for ICL Pensioners. Please contact me if you are prepared to get involved.

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Fujitsu News

To see the latest Press releases go to
<http://www.fujitsu.com/uk/news/pr/>

Letters & e-mails

Funding for Printed Bits & Bytes

I live directly under the approach flight path to Heathrow eating my lunch prepared by my Polish wife in my English garden with American and French built planes with British Rolls Royce engines fitted and thousands of foreign passengers on board, coming to London, while eating my German bread sandwich made with Argentinean corned beef and Irish butter, drinking from a Polish glass tumbler with some Scottish Whiskey and French water in it sitting on Chinese patio chairs having a rest from sweeping up leaves, fallen from our Indian Bean tree.

The only thing missing is the Japanese funding for the printing and distribution for your wonderful magazine Bits and Bytes.

You would think, wouldn't you, that in our International lives, we could find a few bob to support you Adrian, who in spite of your big disappointment, you are still willing to continue being the editor of this illustrious and important publication, It would only take a few old farts like me to donate money to keep Bits and Bytes alive.

It should and must really happen in spite of the lack of far Eastern understanding.

Peter Walker

ex HR Manager Responds

As an ex-ICL HR Manager (BRA01) and ICL Pensioner, I am in total agreement with your opinions about the decision of the Trustees of the ICL Pension Plan to stop funding for a hard copy of Bits & Bytes – it is indeed “InHuman Resources” and not in line with what I thought have always been the Fujitsu philosophy of respect and consideration of others. I had the privilege of meeting FJ's then President back in the 1990s when I worked for the Client Server business based in BRA01 (Andy Roberts, Sid Fox, Mike Coote et al) and there was certainly an immense feeling of respect for him by the FJ graduates who were working in BRA01 at the time as well as myself and my colleagues from BRA01.....

Regrettably, there is an assumption by virtually all organisations these days, be it government, public or private sector, that everyone has a computer.... they don't! And what happens when those who do, are no longer able to use it due to health reasons..... In my own family, we have two registered blind parents, plus my brother; sister and brother-in-law who do not have computers or cannot afford to have a computer! It really annoys me when an organisation says “visit our website”..... Well, what if I can't see it or do not have a PC!!! No wonder there are so many people missing out on better deals, entitlements etc. – particularly more senior people or those on low incomes.

I have really enjoyed receiving and reading Bits & Bytes over a coffee and bowl of warming porridge, and keeping up with what is happening in FJ and ex-ICL too....I probably wouldn't take the time otherwise – it's very easy to scan the e-mails but not actually get around to reading them – we're all guilty of that!

I am really disappointed that the perceived feeling of understanding and respect for others seems to have diminished within the FJ organisation over time – may I politely suggest that FJ should consider re-

reading its CSR statements to ensure that everyone in the organisation continues to live the values.....

I wondered if you had thought of writing to FJ's President Masami Yamamoto to express our disappointment with this decision. You are very welcome to pass on my comments to the ICL Pension Trustees and even to the President.

Carole Moxon

Adopt a Pensioner

My main reason for writing was to suggest that there is a section on the new website whereby Internet connected pensioners could sponsor non-Internet connected recipients of B&B. I guess there are now probably more recipients of B&B who have Internet access than those that do not. My idea is that there should be some form of automated email address for sponsoring those without Internet access. For example, if an Internet pensioner wants to be a sponsor, he or she could send an email to the appropriate email address, and in return receive the full postal details of a non-Internet recipient. The initial email could be validated to see that it comes from a genuine pensioner's email address so that spam emails do not cause false hits. When the sponsored person's details are sent back, that name will be marked as covered so that a subsequent sponsor does not get the same address details. There would possibly have to be some form of fail-safe so that should a sponsor pass away, he sponsored recipient gets sponsored by a different sponsor.

There are a number of details that I have not worked out. For example, while I am happy to sponsor a UK recipient (paying the cost of printing the PDF, the cost of the envelope and the postage) the costs for an overseas recipient may not be as easy to handle (unless they have a UK address through which B&B could be forwarded).

There will obviously be a number of pensioners who will not want to act as sponsors, but hopefully there will be enough to make the scheme work.

Richard Taylor email4rnt-fj110713@yahoo.co.uk

My introduction to ICL

First a bit of background, in 1968 I was a sergeant in the RAF technically on Radar and Wireless for the three V-Bombers, Victor, Valiant and Vulcan, but for the past 5 years I had been employed as an instructor at a place known as BCAS which stood for Bomber Command Armament School, at the time an extremely Top Secret Nuclear weapon training establishment that taught the theory and servicing requirements of our then nuclear deterrent. I eventually realized that as my employment in the RAF was coming to an end I needed to think about a future in Civvy Street and there did not seem to be many openings teaching the theory and operation of atomic bombs. Also I realized I was rapidly losing touch with any advances in electronics, believe it or not the electronics involved in the weapons were rather primitive and I needed to move on rather rapidly, I thought computers may be the way forward. At this time there were only two well-known computer companies, IBM and ICT. I tried IBM but all they offered was employment on their old DP kit. So I applied to ICT hoping they might offer something more modern. I did their tests and somehow managed to pass them and was invited to an interview at an

office in Upper Richmond Road; being keen not to be late I actually reconnoitred the road on the Sunday before the Monday morning interview. It was rather disconcerting to approach what I assumed was the ICT office to see the signs on the door said ICL. A double check of the letter confirmed I had the right address so nothing ventured etc. I entered and asked the receptionist if this was ICT, when he said it was, I asked "Then why does it say ICL on the door". He left his desk opened the door and looked in amazement at this sign. "It said ICT yesterday, I have no idea what those are" was his response. It transpired I had arrived on the same day that ICT ceased to exist and having merged with English Electric Computers became International Computers Limited. Incidentally initially I felt like an outsider as there seemed to be quite a bit of rivalry between the old ICT, BTM, Powers Samas, Ferranti and English Electric engineers, and I was just an ICL one! Not to mention the strange creatures who talked about round hole or square hole punches!

The end result after being interviewed by the redoubtable Dick Sheppard, was an offer of two jobs one as an instructor at Letchworth and the other as a Computer engineer, I'd had enough standing in front of a class so chose the latter and was told to report to a Bernard Hone at the Holborn office. I duly arrived at this wonderful building and met up with two other new engineers, Dave Greenwood and Reg Shackles, both had also been told to report to this Mr Hone. Unfortunately no one at this office seemed to know who or where this mysterious person was. Eventually someone appeared who actually seemed to know and told us we were at the wrong office and a Mr Hone worked from a place called Greville Street, luckily only a short walk away. So the three of us trotted off to this place which on arrival had no signs indicating what it was but at least the receptionist said it was ICL. We asked for this mysterious Mr Hone only to be told he was at Putney and would not be back until later in the week! This was getting a bit too disconcerting and having walked past the IBM customer centre on the way, the three of us thought it might be a better bet to try there instead. In fact I remember we did decide to wait a bit longer to see if anyone would appear and assist us. About 20 minutes passed that an attractive girl come up and asked if we were the three new engineers. This turned out to be the mysterious Mr Hones Secretary and Brenda as she introduced herself said "leave it with me and I'll sort it". Sure enough Brenda must have made a few phone calls because she then asked if we knew our way to the Holborn Office, which obviously we did because that's where we were sent in the first place! "Go back there and someone will sort you out", Brenda told us. So off we went back, this time on entering the building which had a rather grand staircase at its entrance we were met by two men looking over the railings at the top of the stairs, one of whom said "are you the new engineers", "Yes" we replied, to which the first one said "right I need one of you" and the other one said "and I need the other two". The first one, who turned out to be Sid Roberts "grabbed" Dave Greenwood, leaving Reg and myself for the other one. This turned out to be Alan Gilbert. Both were Service Managers. Sid was the Orion manager and Alan the 1900 manager. So that's how Reg and I became 1904E engineers and Dave disappeared into the bowels of the Prudential as an Orion engineer. It was all downhill

from there and I never escaped for the next 37 odd years. I have seen the fantastic developments from what we referred to as discrete components, each logic gate being made up of transistors, capacitors and resistors in the case of the 1904E, which we fault found right down to the individual component until "package repair" came along, to VLSI, very large scale integration in the case of the large 2980 systems. Hardware MTBFs (mean time between failures) increasing from about 5 hours on 1904Es to years on current kit. This is being typed on a 4 year old Fujitsu Amilo which has never failed (hardware wise that is, I cannot say the same for Windows!)

Dave Clark Mobile 07901918567

High Speed Data Distribution 1970

Over the last few years, Internet speeds have been doubling every one to two years. Only ten years ago, we were being treated to 512 Kbits/sec Internet and the use of dial-up services began to decline. In issue 32 of Bits & Bytes, Malcolm Baxter described a project to transfer data between Imperial College and London University at 60 Kbits/sec. However, forty years ago, ICL was marketing a product that transferred data at 1 Mbits/sec over cable lengths of up to one mile. This was part of the 7181 video terminal product line.

The 7181 project started in 1969 with a requirement to produce a free-standing video terminal capable of displaying 25 rows of 80 characters. The terminal had to provide its own character storage, but in the late 1960s semi-conductor memory was very expensive and offered very few bits per chip compared with modern devices. The only economical solution at that time was to use a wire delay line. There were two manufacturers that we used for the delay line, which was contained in an enclosure measuring around 30 x 25 x 2 centimetres. This included the actual wire with its torsional transducers and the immediate electronics that provided a TTL compatible interface. As the characters circulating in the delay line were only accessible at the end of their cycle through the line, each character on the screen had to be 'painted' completely before moving onto the next character. This differs from later displays that use a normal TV style raster scan and 'paint' a single horizontal slice for all the characters on a row before moving onto the next horizontal slice for the row of characters. In the 7181, the time taken to complete each character was 8 microseconds, and with 8 bits per character, this required a data rate of 1 Mbits/sec to feed the character display circuitry.

Allowing 10 extra character times for the horizontal line scan to fly back to the left hand side of the CRT, and one extra line for the vertical scan to fly back to the top of the screen meant that the actual display time for a complete screen was 90 x 26 x 8 microseconds or 18.72 milliseconds. This gave a screen refresh rate of just over 53 Hz. In order to keep the length of wire in the delay line and its physical size down, the delay line was actually clocked at 2 MHz, and the data was passed through the delay line twice between successive displays on the screen.

The 7181 was first introduced into the ICL product range in 1970 as a 'remote' terminal capable of transferring data to and from its host at 2400 bits/sec over a modem or serial communications line. The following year, ICL started producing a 'local' version that connected to a host based controller and transferred data at 1 Mbits/sec. The transfer speeds

were dictated by the requirement to get data into or out of the delay line. The remote version had four characters of buffering that provided the gear change between the delay line and the host interface. At 2400 bits/sec, three characters could be transferred every 10 milliseconds. With the delay line cycling in 9.36 milliseconds, a four stage buffer was sufficient and not too expensive either in chip cost or circuit board space to hold it. In the local version, the data had to transfer at the same rate as the screen was being updated, hence the requirement for a 1 Mbits/sec host interface. Furthermore, in order for incoming data to arrive at the correct point in the delay line, the local terminal had to be kept synchronised with a master clock in the host end controller.

The host controller carried 16 terminal ports that could be directly connected to a local 7181 by up to one mile of four-wire cable. In addition, ICL also offered an expansion unit. This unit would take a single host interface and provide outward connections for up to 15 local 7181 terminals. As the expansion units cleaned up and regenerated the signals, this meant that there could be a further mile of cable from the expansion unit to its terminals. Unfortunately, I don't believe ICL ever installed a full house system of a host controller, 16 expansion units and 240 terminals.

A late requirement for the 7181 was the ability to perform a screen scroll up - an operation similar to the way a teletype works. With a scroll up, the top line of the screen disappears, the rest of the screen steps up one line and a blank line is introduced at the bottom.

On the remote version, this was achieved simply by adding an extra scan line for one cycle of the display and blanking the characters that were being lost from the top of the screen. This effectively moved the data circulating in the delay line to be one line earlier than it had been previously. For the local version, a different technique had to be used. As the terminal had to remain synchronised with the master clock in the controller, the local version accomplished its scroll up by transferring the entire screen contents to the controller, where the data was stored in a core store, and then having the data returned to the terminal in its new position. With the 1 Mbits/sec link, a scroll up typically took under 50 milliseconds to complete.

The 7181 series ran for perhaps three or four years, by which time semi-conductor technology had moved on, and the 7181 terminals were replaced with products such as ICL's 7502 and 7503 ranges.

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Accounting Machine Maker & Repairer

I joined Power-Samas in February 1943 at the Bute Street Cardiff office, within Midland Bank Chambers, as a trainee engineer earning £1.2s.6d per week, or as described as an "Accounting Machine Maker & Repairer". During the next three years I received "hands on" training, in the South Wales area which extended everywhere south of a line from Aberystwyth to Chepstow. At the time two experienced engineers, namely W. P. Bates and T. Jones serviced the whole area, all under the control of Bristol. All journeys were taken by bus or train, complete with very heavy tool bag hanging on arm, limited spare parts were carried, in the toolkit. but in general on the spot repairs, make do and mend servicing was the order of the day!

During this period of my service with the company I worked on 21, 36, 45, and 65/80 column equipment.

After military service I returned to the company, continuing to work the same area, all the appropriate training courses at Croydon, Dartford and of course Letchworth. This continued with the inclusion of 80/160/1004 equipment until 1975 when I joined the 2900 group with initially Ray Griffiths (Devizes), then "West is Best" region based in Gloucester with Stuart Heilbron. Then back to Customer Service at Bristol in 1980, not the best period of my service, following this back to Cardiff in 1984, as A.S.M. in Aerospace (Dowty) Sales group with David Boorman, a very satisfying period ensued until retirement in 1988.

My toolkit is still with me, very useful in my very happy home life, thankfully I still have my faculties, despite some hurdles with major worries. The Double Majority correspondence and Bits & Bytes are the only contacts I now have with the company and the forty five years' service with all its variants in name.

Chris. J. Jones

PROJECT WIND

It was a quiet day in the early 1970s when suddenly I was called to the Chief Engineers office. What I have done now, I thought!

"ICL are going F1 motor racing with the MARCH team in 6 weeks" he said. "That's when the Monza Grand Prix is and we'll be there. You're in charge of the hardware at Kidsgrove, so make it happen". He then went on to say I had no budget limit, top priority and could co-opt anyone I needed to get the job done. Oh, and it was on a need to know basis, as the board wanted to keep it away from the press.

I left his office stunned! I had never had a project on those terms, rather the reverse.

I contacted my opposite number in Bracknell and we arranged a meeting the next day. No problem with plane tickets or expenses. It quickly transpired that we needed a communications hub, a couple of outstations, 6 displays and a high speed modem connection with voice. The hub would need software to time the cars which we needed to write.

Bracknell would do all the mainframe software to process the timings and present the running order of the cars and the drivers from the data we captured. The data would be presented to the MARCH team in the pits. There was also a need for a wet/ dry program to best predict when to change tyres.

We agreed that in 4 weeks' time we would have a dress rehearsal in the Bracknell car park. That we would ship the kit direct to Monza from there and then follow it out. Bracknell would handle the logistics.

Well, the clock had started and we raced to meet the deadline. Kit was requisitioned from Marketing stores. An engineer wrote the code for CVS1A hub. Termiprinters were used for the outstations and remote displays connected via a Queuing Line Sharing Adaptor. There was all sorts of tools, generators, tents, modems, cabling, spares that we would need to work, literally, in the field.

The project came together quickly and we shipped everything on time to the Inert Peripheral room in the basement at Bracknell, out of sight. At the weekend we had the trial and timed our own cars circling the car park. The test was successful, so we packed it all into a removal van and waved goodbye.

I must apologise for the lack of names of all the people involved as after all this time, memory fails me. Two of us flew out and the first job was to contact our

advocate and get the Bullens removal van out of customs. We then drove to Monza. We arrived at the gates of a big park and were stopped by security. I asked for Dr Ingeieur Batchagallupi in atrocious Italian learnt on the plane out. It worked like magic and we were directed to the track headquarters in the centre of the park. A quick interview with the big man and we were directed to our site. Did I tell you it was a field next to the track!

We had a spare day before my Electrician and engineer came out which we enjoyed watching F3 and timing the cars with a hand held digital stop watch.

Next day we set up the van with a row of displays for the programmers, the hub, high speed modem, etc. Later that night we tried to connect to Bracknell. The engineer in the Post Office Tower blamed the Italians for a bit of wet string, but the fault was in Bracknell exchange. In the next few days we set up a Termiprinter on the grandstand roof and another beside the track and fitted the displays in the pits. The Programmers arrived and tweaked their software in the van. We were running on generators. The track people came and connected us up to the mains. It was a relief as the generators tended to run out of petrol and overheat. They also erected a 12ft fence around us penning us like animals with a small gate. My Italian wasn't up to understanding why they did it.

It was the night before the Grand Prix, and everything was working. Some of the Main Board were flying in early the next day. Then, suddenly, the lights went off. "No power" said Les the electrician. I'll find out what's up. Off he went into the dark. A few moments later there were several flashes and a smell of burnt circuit board. Les eventually came back with the news. The Italian BBC had disconnected us and reconnected us across the phases giving us 450V, not 230V. We were in trouble.

Working by flash light we started to repair what we could. We changed fuses, cannibalised units and got the modem going and told Bracknell the state of play. It was 01:30 in the morning when Bracknell had our final spares list. Bracknell would send someone with the spares on the first plane in the morning. We groped our way out of the park and had to climb over the wall to get to our hotel. The gates were locked to keep the crowds out.

Next morning we were back on site at 06:30. The courier arrived at 07:00 and it was all back working by 09:00. The directors arrived soon after for the grand tour.

I should explain that security was very tight. Armed Carabinieri on every gate, passes must be shown. I had a director of Sportivo pass and some of the guys had pilota (driver passes). I spent the day ferrying the directors about from secure area to secure area and running up a big bar bill.

It was a big success. MARCH were impressed. Ed Mac boasted to old man Heuer that his engineers knew the positioning and lap times of 24 drivers. Heuer only could track the top 4. So much for secrecy!

Soon it was over, the van was packed. We had a big party with a lot of great guys and headed home the next day. We put in a proposal for upgrading the kit for Watkins Glen and beyond. An air conditioned lorry and trailer not a sweaty horse box. The board meeting was duly held and the decision was not to continue. I was relieved as I was already shattered. Still it was a great experience and one I fondly remember.

Neil Macphail

Milk Marketing Board 541

My interest in the 541 Electronic Multiplier is because when I left school about 60 years ago I went straight to work as a Hollerith punch operator. This is why I feel I can relate to something in the article (in Newsletter Autumn 1997 No.5) which said 'One result of a 50,000 run was the generation of a large amount of 'chat' (the little rectangles punched out of cards). Usually this would be used for occasions such as confetti for a wedding'

A couple of years later I worked at the Milk Marketing Board in the Hollerith machine room, and at various time worked on all the machines. In 1954 I was lucky enough to be chosen as one of the staff to represent the Milk Marketing Board on their stand at the Royal Show in Windsor, where, as said in the article, we tried to show the production of farmers milk payments.

The passage which really held my attention was 'The highlight was to be a visit by the Queen and Prince Phillip. Unfortunately at the appointed time the 541 gave up the ghost. As there was not time to fix it, a pile of blank cards were placed in the feed hopper of the 237 with a card bent up at the bottom, so that cards would not feed. The output hopper was then filled with already punched cards. When the Queen came the machine was set with all the lights flashing and the start lever wedged on the 237 Punch. This gave the appearance of lots of calculations being performed by the 541. I don't think the Queen knew what was happening, but I believe Prince Phillip twigged the con'. When I tell you that I was the operator of the 541 at that precise time it explains my interest in the article. Not only did I have to con the Royals, but also the general public for the rest of my shift. Ah - happy memories.

Pam Parlanti pamparlanti@hotmail.co.uk

SID'S EIGHTIETH

I'd planned Sid's birthday meal meticulously. He'd get here by train and Jack, another ICL pensioner, would drive here 20 miles round the M25. I'd found a convenient carvery and had a backup Pizza Express discount voucher, if the carvery was busy. Jack assured me he knew my place and anyway he had his TOM-TOM. Sid was here by 11.30. No word from Jack by noon. Checked his home, no answer. By 1pm we were getting hungry. By 2pm ravenous. At 3pm we were worried. Luckily the phone rang at 3.30pm. Jack was back home.

He'd made it on the M25 to within 2 miles of my place OK. His Satnav advised him to turn off at the next exit. Jack ignored it, as he thought he remembered a short cut, via the next exit. Just past the recommended exit, he joined the queue at the on-going M25 road widening operation. Like most of my friends, Jack isn't of the mobile phone generation. He claimed to have rung me about noon to explain the situation. He rang somebody, who is still mystified, but I didn't get a call or an answer phone message. By the time Jack had exited from the M25, he realised he didn't know a shortcut and decided to ask his Satnav nicely, to take him home but avoid the M25.

By late afternoon the Early Bird lunch at the carvery had flown, so Sid and I headed for the all-day Pizza Express, which lay in town. Parking is a problem in most town centres and mine is no exception. An acquaintance had a town house in a cul-

de-sac right opposite the restaurant and earlier when I'd asked him about Pizza Express he kindly said I could park outside his apartment, as they'd be away at his holiday place this week. Sure enough, we were able to park right by his front door.

Two main meals for the price of one eased our hunger pangs. On returning to the car, I noticed the upstairs the bathroom window was open. Knowing they were away, I was concerned, though the burglar alarm alongside the window seemed unconcerned.

Grateful for the use of the parking space, I felt obliged to do a good deed. Sid backed my Range Rover up to the house and I was able to climb onto the porch and reach the window. Just as I reached for the handle to lift it and slam the window, I heard the scream from the lady in the bath, who beat me to it in slamming the window. Startled, I stepped back, lost my footing and slid down the porch roof onto the roof of my car. Sid already had the engine running and as I bounced off the bonnet and scrambled into the passenger seat we made our exit, hoping the lady, hadn't seen me! I assume she hadn't, as no headlines appeared in the local paper about a 14 foot Peeping Tom. Later, I contacted the flat-owner at his holiday flat and explained the position. It seemed the porch I'd climbed on, was shared by two apartments. My acquaintance had the DOWNSTAIRS and a fellow with a blonde lady friend the UPSTAIRS. I thanked my friend and decided not to park there again. He assured the blonde hadn't mentioned the voyeur. I insisted she was actually a brunette and how I knew that didn't make me a voyeur!

My reputation was further questioned when I e-mailed my daughter to thank her for the website information on discount vouchers at Pizza Express. Once a year she opens her garden to Pussycat Lodge, a stray cat rescue charity. I produce a quiz for her to sell at the event. On the e-mail I added the Word attachment sample of this year's proposed quiz for her approval. The e-mail was rejected. I tried it without the attachment and it transmitted OK. I sent the e-mail again with a different attachment and it was fine. Checking with my daughter it seems the society is Pussycat Lodge. My attachment was to Pussy Cat Quiz. Outlook Express, I presume, regard that word as obscene! So, not only am I a voyeur but a purveyor of rude words. As Sid remarked, it had been an interesting birthday!

Dennis Goodwin

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Atlas 50th Birthday

The Greatest British supercomputer?

The high-performance Atlas computer was developed in the period 1956 – 1962 by a team led by Professor Tom Kilburn at the University of Manchester. The Manchester-based company Ferranti Ltd. joined the project in 1959. The first production Atlas was inaugurated at Manchester University on 7th December 1962 by Sir John Cockroft, the Nobel prize-winning physicist who was Director of the UK's Atomic Energy Authority.

At the time of its inauguration, Atlas was reckoned to be the world's most powerful computer. It cost about £1 million in 1962. Amongst many new ideas, Atlas was the first to introduce the concept of Virtual Memory, now widely used in most computers. Ferranti Ltd. only built two other Atlas 1 computers,

delivered respectively to a joint London University/British Petroleum consortium in 1963 and to the National Institute for Research into Nuclear Science near Harwell in 1964.

Ferranti provided the University of Cambridge with some units of Atlas hardware on special terms and, in 1963, the Cambridge group produced their Titan computer. This formed the basis for a smaller Atlas 2 product, of which Ferranti sold two machines. One went to the Atomic Weapons Research Establishment in 1963 and the other, after a spell at Ferranti's West Gorton factory, went to the government-sponsored Computer-Aided Design Centre in 1966.

The three larger Atlas computers made a major contribution to the UK's scientific computing resources of the 1960s. The innovative design of the Atlas hardware and software, written up in 25 published scientific papers, proved to be a significant landmark in the development of Computer Science. Atlas has been called the greatest of the British-designed supercomputers.

By 1959 Tom Kilburn's Atlas design team consisted of 13 University and six Ferranti people. Of these 19, about ten are still around. Professor Kilburn died in 2001, though his close colleague Professor Dai Edwards is still with us. By 1961, the Atlas team had expanded to about 50 people, 35 of whom were employed by Ferranti. Many members of the enlarged design team survive today. To date, over 70 ex-Atlas designers, staff and users have been contacted and told about a proposal to hold an Atlas 50th Anniversary event in December this year.

An Atlas Anniversary Working Group has been formed and is planning a day of lectures, receptions and an exhibition on Wednesday 5th December at Manchester University. It is hoped that the event will bring together, possibly for the last time, a unique group of industrialists, academics and end-users who contributed to a world-class project which made a beneficial impact upon the UK's scientific computing resources in the 1960s. Amongst the Atlas survivors there is a desire to commemorate the inauguration of the computer, at the very least by organising a dinner in December 2012 for the surviving members of the development team and their partners.

Simon Lavington **lavis@essex.ac.uk**

Reunions

LEO

The next reunion will take place on Sunday 22nd April from 11:30 to 4:00 pm. The Venue is the usual hotel, the "Doubletree by Hilton" in Southampton Row, London. We are celebrating the 60th anniversary of the world's first commercial job that went live in November 1951 at Cadby Hall, the HQ of J Lyons.

John Hall

leosoc@freenetname.co.uk

ICL Central London

The next reunion will be on Wednesday 18 April 2012 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.

Bill Williams 020 7607 9408

256meteorahlhorn@gmail.com

Stevenage & Letchworth Old Boys (renamed Punch Card Reunion)

The annual reunion will take place on **Tuesday 2 October 2012** at Stevenage Labs STE04.

Please send £10 to Adrian Turner, 5, Nun's Acre, Goring-on-Thames, RG8 9BE. Cheques should be made payable to **Punch Card Reunion** and accompanied by a SAE.

Adrian Turner 01491 872012

Kidsgrove-Drawing-Office-&-Engineering Staff.

The Annual reunion is held at the Bleeding Wolf, Scholar Green on the first Monday in December. It's organised by Jeff Parker, but people can contact me by email.

brian@morrismail.co.uk

Watford-Harrow- Feltham

Mike Ray 01895 230194

Oxford Engineers

Ken Jones 01865 340388

kenwynjones@aol.com

ICL Australia

ian.pearson5@bigpond.com

Copthall House Newcastle Staffs

Bob Green 01782 615290

East Grinstead 81 Club

Gordon Franklin 01342 328479

East Midlands UB40s

Brian Skeldon 0115 9725119

ICL Double Majority Association

Joseph Gardner 01438 362806

ICL Midlands

Brian Trow 01785 257317

LEO Computers Society

John Hall leosoc@freenetname.co.uk

Liverpool Engineers

We now meet about midday on the second Wednesday of every month at Wetherspoons, Great Charlotte Street near Lime Street Station.

George Lynn 01744 29984

Surrey Engineers

Trevor Harding 01483 565144

trevor@harding14.plus.com

Tin Hut Reunion

Olaf Chedzoy 01278 741 269

West Gorton Reunion

Eric W Watts 01457 875080

West Branch Engineers

Eric Reynolds 01452 712047

West Kent Reunion

Ron Harding 01732 761076

ICL Old Buggas

Les Mowbray www.cuin.co.uk/oldbuggas/

ExICL Kidsgrove

Nick Edmonds 01270 585953

nick.edmonds@yahoo.co.uk

OBITUARIES

Nortel Fund

BIR03	John	Brown	28/09/11	83
	Clifford R	Simpson	17/12/11	84
BRA01	Joyce	Gornall	18/09/11	84

BRS06	Eric O	Taylor	04/02/12	80
CRE01	J W	James	11/09/11	88
ELS01	R W	Bye	01/11/11	78
FEL01	Ralf	Ackery	04/12/11	84
GAT01	Gerald	Nolan	25/11/11	83
KID01	Francis G	Cook	02/01/12	91
	Thomas R	Evenson	12/02/12	83
	David I	Williams	10/01/11	79
LEE03	Judith A	Hind	15/11/11	60
LET01	Sheila A	Froy	11/10/11	68
LET03	Dennis F	Carpenter	03/01/12	90
	Leslie O	Rabbits	14/10/11	80
LET04	Cyril D	Rayment	26/08/11	87
	Harold J	Simms	20/09/11	91
LET05	Pasquale	Debenedictus	13/10/11	82
	L	Dixon	27/02/12	81
	Philip N	Dutchman	24/10/11	80
	Ronald R	Edmunds	17/10/11	91
	David A	Godward	08/09/11	88
	John E	Grant	11/09/11	91
	William H	Stuart	04/09/11	82
	Monica W	Turner	28/08/11	85
	Henry N	Webb	23/09/11	85
LET06	John A	Frampton	15/10/11	84
	Brian C	Robinson	18/09/11	81
LON24	Colin G	Price	15/11/11	74
LON30	H	Tarrant	09/11/11	81
LON31	Richard R	Groves	13/01/12	88
	Ignace	Sharpe	05/02/12	86
LON34	Ronald A	Hives	19/11/11	87
MAN01	Kathleen F	Brown	06/11/11	74
	Harry	Dutton	15/02/12	84
	Elsie M	Huddleston	25/01/12	81
	Marie	Lister	29/09/11	81
MAN05	J	Ashelby	15/01/12	86
	S	Barlow	06/02/12	83
	R H	Wild	13/12/11	79
MAN12	Walter	Steel	12/12/11	83
NEW01	Tom A	Lowrie	10/11/11	87
REA06	Margaret	Whyatt	24/09/11	74
REA12	Michael S	Kelly	12/11/11	65
	Allan A	Scarff	09/12/11	65
STE04	Kenneth	Cowap	27/01/12	88
	Ronald T	Perkins	31/10/11	85
	Frederick	Taplin	31/10/11	85
WAK01	James D	Bell	20/10/11	74
Unknown				
Location				
	G A	Bain	06/02/12	95
	Graham H	Blackstock	12/01/12	89
	K J	Bradbury	25/09/11	74
	J R	Burton	12/02/12	81
	E C	Cackett	11/09/11	88
	Kenneth E	Cooper	01/02/12	85
	G J	Donnelly	27/08/11	81
	Ronald N	Ellis	18/01/12	86
	Dorothy M	Fairhurst	05/12/11	86
	Daniel J	Feasey	03/10/11	93
	David	Filkins	09/09/11	65
	Michael A	Gee	17/01/12	85
	John M	Gleave	06/01/12	85
	Leslie F	Graves	30/10/11	87
	Gerald H	Hantuch	20/10/11	83
	B E	Havard	01/01/12	85
	Richard W	Haywood	13/12/11	75
	E V	Hennessey	28/08/11	84
	Arthur R	High	28/10/11	91
	Ruby C	Hitchings	10/10/11	91
	Thomas E	Hughes	09/12/11	91

	R A	Hyman	31/12/11	83
	Leslie G	Jeffries	04/11/11	91
	Janet E	Keay	24/01/12	87
	H	Kitchen	27/11/11	89
	Wilfred	Latham	01/09/11	82
	W K	Low	31/01/12	87
	G	Maddock	18/10/11	85
	Margaret	Mason	04/02/12	69
	Alan	Mellish	28/02/12	81
	Kenneth G	Mitchell	13/12/11	91
	R W	Morton	15/02/12	87
	Dennis O	Muncey	19/12/11	84
	Leslie R	Ovenden	20/01/12	94
	Egon L	Paszor	15/11/11	75
	Valentine	Rowe	12/09/11	78
	Harry	Scott	25/02/12	97
	George C	Seddon	06/03/12	86
	Joan	Spillman	24/01/12	81
	Frank	Stevens	26/11/11	78
	K H J	Tarry	06/11/11	89
	Albert E	Turner	31/12/11	92
	Charles E	Twell	25/01/12	77
	Betty M	Vernon	30/12/11	85
	J K	West	27/02/12	92
	S E	Wheatley	09/09/11	95
	William F	Wood	28/12/11	80
	George S	Wright	18/12/11	78
ICL Fund				
Includes people who died in service				
BIR03	Barry J	Walker	11/02/12	77
BRA01	John D	Cayley	06/10/11	78
	David M	Low	24/12/11	67
BRA05	Jack F	Kane	23/12/11	81
BSN01	Donald McD	Scott	20/09/11	57
ENF01	Edward E	Foxhall	05/02/12	73
FEL01	Clayton W	Benjamin	16/09/11	71
	Patrick J	Cole	01/03/12	74
	Jeffrey	Piner	19/12/11	74
	John C	Tennant	16/09/11	77
HOM99	Ivor R	Bishop	27/01/12	70
	John	Buckley	21/11/11	82
	Keith	Budge	04/11/11	76
	Mark H	Green	20/12/11	47
	Samuel T	Ritchie	08/10/11	77
	Henry W	Sweet	25/12/11	76
	Jack A	Wootton	04/12/11	79
	Ann	Powell	23/02/12	77
KID01	Phillip J	Proudlove	14/09/11	60
	Eric	Rowley	04/02/12	75
	Michael F	Smee	01/03/12	73
	Barry J	Titheridge	25/12/11	68
LON68	Colin J	Coote	23/01/12	59
MAN01	Thomas H	Roebuck	10/01/12	80
MAN05	Roy	Beckett	06/12/11	73
	Elizabeth L	Connor	29/09/11	75
	Sandra	Hibbert	15/02/12	65
	Michael H	Lockett	29/09/11	69
	Francis X	Shaw	20/08/11	68
MAN12	Peter R	Fisher	08/11/11	74
MAN19	Leslie O	Rabbitts	14/10/11	80
MAN34	Walter I	Blomeley	29/01/12	54
MID01	Trevor B	Furney	21/12/11	72
MSC02	Lee	Garside	31/07/11	41
REA24	Graham	Oldfield	15/12/11	64
SLH06	Roy W	Savage	23/09/11	74
STE04	Peter D	Clarke	18/01/12	75
	John E	Morrison	01/10/11	66
	Joseph	Sharp	17/01/12	73

	Peter C	Williams	11/09/11	69
STE09	George	Fowlds	19/11/11	67
	Clive G	Seward	22/10/11	68
STE10	William	McClumpha	28/02/12	70
STE14	Roy P	Slaney	29/01/12	76
WIN01	Peter A	Wellen	29/11/11	79
WSR01	Richard M	Compton-Hall	13/10/11	56

Correction: Due to an administrative error the following entry was in the autumn edition.

MAN05 John B Coker 12/02/11 63

Ben Coker has not died and we apologise for any distress this may have caused, and he wishes to be remembered to all ex colleagues at West Gorton.

Jack Kane

Jack was a Pensioners' rep for many years in his retirement. He died 23 Dec 2011. Alan Wakefield has written an obituary which can be viewed on the ICL Pensioners' website

PENSIONERS' WEBSITES

The current website for ICL Plan pensioners is at <http://uk.fujitsu.com/pensioner>

It has the current and previous issues of B&B, along with a member's area.

This website is due to be replaced in mid-2012 by a new website for ICL People alongside a new website for Fujitsu Pensions. Both are under development. The initial version of ICL People website for ICL plan members is <http://iclpeopleandpensions.org.uk>.

The ICL People website will enable B&B to be viewed online.

In addition Rod Brown has set up a backup repository for B&B at his website www.bitsandbytes.shedlandz.co.uk. Rod also has other interesting information about historic ICL computers on that website – to view click on the links on the left hand column. The two ICL Anthologies produced by Hamish Carmichael are also on this site.

ICL Fund Member Nominated Trustees

Nick Cullen and John Lillywhite have been appointed. Their details can be viewed on the ICL Pensioners' website in the section on Representation in the members' area.

NEXT ISSUE

Copy for the **Autumn 2012** issue must be submitted by **1 September 2012**, but would be appreciated earlier.

The content of Bits & Bytes has been prepared by the Editor to provide a newsletter for ex ICL / Fujitsu staff. Fujitsu Services does not endorse, edit, or attempt to balance the opinions offered here or accept responsibility for any errors or omissions in the information, nor for any loss or damage occasioned to any person acting or refraining from acting as a result of the information or data contained within.

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