RUTHERFORD Bulletin 18

25 October - 8 November 1976

Cashing In On Computers

*As well as providing data processing facilities for scientists, the RL IBM 360/195 computer is also a vital part of the Laboratory's Administration, carrying out a lot of work which would be very laborious to do manually, and providing a wide range of up-to-the-minute reports for all levels of management. In this article, Finance and Accounts Group Leader John Jenkins describes the administrative work of the RL computer.**

The traditional prime objectives in any administrative computerisation scheme - finance, accounts, stores, payroll, etc - were implemented at RL some time ago. Besides avoiding the need to process repetitive tasks manually and so making savings in clerical effort, these initial computerisation projects enabled much information to be built up and stored. The next stage of the work was to integrate information from the distinct 'databases' from each initial application into a single comprehensive management information system.

With administrative computing, the possibility of computer failure has always to be taken into account. Although system failures of an hour or more are rare, the possibility of them cannot be ignored. The entire staff of the Laboratory and all its suppliers would not welcome the prospect of having to wait for IBM engineers to finish their work before they could get paid!

All data and programs are stored on disc, and a duplicate disc is always kept next door at AERE Harwell. This enables programs to be run on the Harwell IBM 370/168 in case of emergency - and this has happenned on several occasions. As a second line of defence, the master disc and the Harwell copy are themselves copied onto magnetic tape to safeguard against damage to the discs, while special arrangements have been made to run essential programs elsewhere should both the RL and AERE computers be out of action at the same time.

Of all the current systems on the RL computer, payroll is probably the one which interests most people! The majority of employees are paid monthly, and almost all of these receive their salary by credit to their personal bank account. The RL salary system uses a Personal Record Card for each employee which provides information on PAYE, superannuation, overtime, shift allowance, increments, long hours gratuities, national insurance sickness benefit, advances, mileage, claims and voluntary deductions as well as actual salary.

Although employees are individually notified with all this information, in most cases the money actually gets transferred by means of a magnetic tape containing current salary details. This tape is sent to London by courier, where it is processed on the Bankers' Automated Clearing Services Computer. Individual credits are then passed on to the appropriate banks while the Laboratory's account is debited accordingly.

A separate part of the payroll system handles weekly wages and links up with the industrial overtime system which provides information at Divisional and Group level as well as giving detailed listings of individual overtime hours worked. This computerisation of the overtime information in particular enabled savings in clerical effort to be made.

RL employees book their own monthly effort against individual projects on the Staff to Project Record Card. The information from these cards, together with materials costs booked directly to project numbers, is used to provide a wide range of management reports.

A recent development has been the introduction of a bill payment system which allows both cheques and remittance advice notes for outside contractors and suppliers to be generated by computer. Plans are now almost complete to computerise the recording of assets and inventories, while new possibilities are being continually explored.

The availability of the FR80 microfilm equipment has enabled some of the more bulky items of computer output to be stored more conveniently. One batch of output which ran to 333 hardcopy pages of data was reproduced on two microfiche, each only 11½cm by 8¼cm.

The computer will never be able to replace management, but what it can do is to provide all levels of management with the information they need to make the right decisions at the right time.

*A more detailed account of this work is 'Administration Use of the Rutherford Laboratory IBM 360 computer - Part 2', edited by Peter Starling and John Jenkins, RL-76-058, available from the Library.

READERSHIP RESPONSE

Thanks to all those who participated in the specially-devised Readership Response Survey cunningly mounted in the last issue of the Bulletin.

One of the most difficult jobs of a House Journal Editor is to find out who reads the publication. Weeks and months often go by without any real response coming through and one begins to worry if anybody is reading the publication at all. Ideally, an Editor would like to think that his publication is widely read and is capable of providing a talking point. The response to our last issue shows that in RL, at least, this has been confirmed.

By the way, the specially-commissioned 'logo' itself did not cost anything. It was purely a goodwill gesture to retain business - a bit like a bank giving you a brand new chequebook for free - it's only the cheques you write which cost money.

FILM AWARD

The International Union of Technical Cinematograph Associations (UNIATEC) held their tenth International Technical Film Festival in Moscow early October this year. Each country is restricted to a total showing time of 10 minutes.

The Great Britain entry, 'Finite Elements' was chosen by the British Kinematography, Sound and Television Society and presented in Moscow by David Samuelson, Vice President of UNIATEC, who also read a paper and reported on the film. Special dispensation was allowed for the GB entry as it runs for 12 minutes.

The film was awarded an Honourable Mention and was very well received.

Congratulations to the Atlas Staff and their colleagues from the Royal College of Art who collaborated in the making of this computer animated film, copies of which by the way, are selling like hot-cakes.

INTERNAL EVENTS

NIMROD LECTURE SERIES
Monday 25 October
11.30
Lecture Theatre

Lepton Quark Symmetries

J Pati/IC & Maryland

HEP SEMINAR
Wednesday 27 October
11.00
R61 Conference Room

Particle Physics at Leningrad Nuclear Physics Institute

S P Kruglov/LNPI

HEP DATA HANDLING GROUP SEMINAR
Wednesday 27 October
13.30
R61 Conference Room

The LAMPS Control System

D Machen/Los Alamos/DL

This talk will describe the control system at Los Alamos with particular reference to distributed intelligence and CAMAC systems.

HEP SEMINAR
Thursday 28 October
11.00
Lecture Theatre

Report on the ISR Workshop

M G Albrow/RL

NIMROD LECTURE SERIES
Monday 1 November
11.30
Lecture Theatre

Searches with Photographic Emulsions for Charmed Particle Production Neutrinos and 300 GeV Protons

Dr D H Davis/UCL

HEP SEMINAR
Wednesday 3 November
11.10
R61 Conference Room

Reggeon Field Theory for $\alpha(0)>|$

J L Cardy/CERN

SPECIAL NIMROD LECTURE
Friday 5 November
11.30
Lecture Theatre

Charm Production in Hadronic Interactions

Prof M Abolins/Michigan State & CERN

NIMROD LECTURE SERIES
Monday 8 November
11.30
Lecture Theatre

Coherent Parity Violation

G Karl/RL & GUELPH, Canada

A.G.M

RUTHERFORD AND ATLAS
RECREATIONAL SOCIETY
Wednesday 24 November
12.30
R12 Conference Room

OVERSEAS VISITS **H O Normington, R Matson and J Hammond to CERN, 31 October - 6 November, for installation work on Hyperon.**
The Director, to CERN, 1-4 November, to attend CERN Scientific Policy Committee, CERN Finance Committee and CERN Committee of Council.

FILM BADGE NOTICE **It is Period II. Colour Strip - GREEN for $\beta\gamma$ films and neutron packs.**

Please check that you are wearing the correct dosimeter and that all old ones are returned.

Next film badge issue - Monday 1 November.

EXTERNAL EVENTS

THEORETICAL PHYSICS SEMINAR/CLARENDON LAB - 1615 hrs.
28 Oct : Prof V Heine/Camb - Throwing out K-space-electronic structure of solids from a local viewpoint.
4 Nov : No seminar (sub-faculty).

ELEMENTARY PARTICLE THEORY SEMINARS/NP LAB.,OX - 1430 hrs.
29 Oct : L O'Raifeartaigh/Dublin - Solitons & unified guage Theories.
5 Nov : Dr P Critanovic/Oxf. - The infra-red problem in Yang-Mills Theory.

ELEMENTARY PARTICLE PHYSICS SEMINARS/NP LAB,OX - 1430 hrs.
28 Oct : Dr E Derman - Summary of the SLAC Tropical Conference of August 1976.
4 Nov : Dr M Albrow/RL - Possible future programmes for the CERN ISR.

THEORETICAL PHYSICS SEMINARS AT QMC - 1615 hrs.
1 Nov : Prof Sir Rudolf Peierls/Oxf. - Momentum of light in a refractory medium (Why Minkowski and Abraham were wrong).
8 Nov : Prof D J Thoules/Birmingham - Critical behaviour of a type 2 superconductor in a magnetic field.

APPLIED MATHS SEMINAR/ROYAL HOLLOWAY COLLEGE - 1500 hrs.
28 Oct : Dr J W Essam/Westfield - Percolation models & graph theory.

NUCLEAR PHYSICS SEMINARS AT KING'S COLLEGE - 1400 hrs.
27 Oct : Dr T Daniels/DL - Data acquisition at Daresbury - a new approach.
3 Nov : Dr R Mackintosh - Scattering of protons from nuclei , some new effects.

HEP SEMINARS/CAVENDISH LAB.,CAMBRIDGE - 1500 hrs.
27 Oct : D H Saxon/RL - Analysis of the reaction $\pi^- p \rightarrow \Lambda^o K^o$ below 2 GeV.
3 Nov : J R Albright/Florida State - Looking for long-lived Charm.

PHYSICS & GEOPHYSICS COLLOQUIA AT BRISTOL U. - 1700 hrs.
25 Oct : Prof D D Eley/Nottingham - Electrical conductivity of solid bipyridilium derivatives.
1 Nov : D F Gibbs/Bristol - How a trombone works.

HEP SEMINAR/MANCHESTER UNIV. - 1415 hrs.
28 Oct : A Donnachie - J/ψ production on hadronic processes.

THEORETICAL PHYSICS SEMINARS/MANCHESTER UNIV. - 1430 hrs.
27 Oct : Prof D Thonless/B'ham - Phase transitions at H_{cz} in type II superconductors.
3 Nov : Dr A Bishop/QMC - Some aspects of nonlinearity in solid state physics. (provisional title).

THEORETICAL & HEP SEMINARS AT SOUTHAMPTON - 1430 hrs.
29 Oct : Dr R Delbourgo/IC - Becchi-Route-Stora gauge identities
5 Nov : Dr M Stone/Soton - Instantons and vacuum decay.

THEORY SEMINARS AT DARESBURY LAB - 1400 hrs.
25 Oct : Dr R J Watts-Tobin/Lancaster - Kinetics of a non uniform semiconductor.
1 Nov : Prof J W McConkey/Windson & Manchester - Dissociation of simple molecules by electron impact.

NUCL. PHYS DIVISION COLLOQUIUM/AERE, CONF RM H8, 1530 hrs.
4 Nov : Mr J G Welford/Dounreay - Comparison between Phenix and the Dounreay prototype fast reactor.

THEORETICAL PHYSICS SEMINARS/CONF. RM., BLDG 8.9,AERE - 1415 hrs.
29 Oct : Dr L M Brown/Camb - Dislocations & Continuum Mechanics
5 Nov : Dr J R Fletcher - The Jahn-Teller effect.

SUGGESTIONS AWARDS — At the last two meetings of the Local Suggestion Awards Committee, the following awards were approved:-

Mr P Angell	Admin	R55	£5
Mr P B Nichols	Admin	Atlas	£10
Mr C W Smith) Mr E Tomlin)	Admin	R59	£10
Mr J O Talbot	Admin	R40	£5
Mr P Almand	Engineering	R18	£5
Mr E Angell	Engineering	R18	£5
Mr S J Axford	Engineering	R18	£10
Mr L R A Brown	Engineering	R18	£5
Mr J B Child	Engineering	R18	£10
Mr F Cooke	Engineering	R9	£5
Mr D K Fleet	Engineering	R9	£25
Mr D K Fleet	Engineering	R9	£10
Mr D K Fleet	Engineering	R9	£10
Mr D K Fleet) Mr M Nobes)	Engineering	R9	£10
Mr E T Gourley	Engineering	R8	£25
Mr R P Hogan	Engineering	R9	£10
Mr R P Hogan	Engineering	R9	£5
Mr C Lambert	Engineering	R18	£5
Mr B G Prior	Engineering	R18	£5
Mr B R Robinson	Engineering	R9	£5
Mr M Ryan	Engineering	R8	£5
Mr N P Whitehouse	Engineering	R8	£5
Mr A L Lintern	HEP	R1	£10
Mr F S Whear	Instrumentation	R1	£5
Mr F S Whear	Instrumentation	R1	£10
Mr D D Abbley	Nimrod	R2	£25
Mr P J Champ	Nimrod	R2	£5
Mr P J Champ	Nimrod	R2	£10
Mr C A Grant	Nimrod	R8	£20
Mr C A Grant	Nimrod	R8	£5
Mr G Render	Nimrod	R8	£5
Mr E G Starr	Nimrod	R3	£5
Mr P J Surtell	Nimrod	R6	£15
Mr K Waller	Nimrod	R2	£5
Mr K Waller	Nimrod	R2	£25
Mr K Waller	Nimrod	R2	£10
Mr H G Windless	Nimrod	R2	£20
Mr D Wood	Nimrod	R55	£160.

TEMPORARY CLOSURE OF AERE MAIN GATE — The Main Gate of AERE will be closed from Monday, 25 October for approximately five weeks, to allow the installation of a police box and secondary barrier. During this period the Main Police Lodge will be manned at all times, and the Main Gate (visitors entrance) will be open for use by pedestrians only, during normal working hours and at shift change over times. The North Gate will be manned 24 hours a day, and may be used by vehicles instead of the Main Gate during silent hours.

MISSING EQUIPMENT — The following items of equipment have been reported missing from R12 Electrical Workshop:-
AVO Signal Generator, Type III, Ser. No. 2066
Weston 585 Photometer.
Will anyone with information on these items please contact Mr H O Normington, Ext 6173 or Mr K A Freeston, Ext 6207.

SALES TO EMPLOYEES — Sales of scrap metal/plastics as set out in RLN 12/73 will be made on 5th and 19th November.

Retirements

A number of well known members of staff have departed during the past six weeks. In this issue we say goodbye to two people with interesting but contrasting histories - Jim Pinchin and Jack Foster. There are quite a few stories still to be told and these will follow as soon as time and space allows.

Fate has a habit of dealing strange hands, even more so back in 1940 when for most people the future was, to say the least, uncertain. (RL readers will probably agree that 1976 is not dissimilar).

One young man who joined the RAF in 1940 did not have to wait too long to discover a future that was eventually to involve him in three vastly different projects, each of the "frontiers of knowledge" type.

It all started at the end of 1941 when the young tool room fitter, Jim Pinchin was posted to a disused factory at Lutterworth as one of the first group of 60 people to work on a top secret project, the development of the jet engine under F/Lt Frank Whittle. The initial posting was for six months but constant half yearly renewals keep him there until 1946 when he was demobbed.

After a two year break repairing cars etc, Jim returned to the world of jet engines and as a civilian joined what had by then become the National Gas Turbine establishment, the unit moving to Farnborough a year later where it still exists.

By 1958 Jim had decided to move on to the Atomic Weapons Research Establishment at Aldermaston (the second of those projects). He had hardly settled in before he was sent off to Christmas Island in the Pacific, a trip which apart from assisting in the H bomb test gave Jim a chance to see some of the world. His work, on refrigeration and air conditioning was to be of significance in the future.

Very soon Jim was to see more of the world as the next trip took him to the testing grounds near Adelaide in Australia (near meaning about 700 miles). He was to repeat this trip later for the testing of the second H bomb.

Following the successful development of the ultimate weapon Aldermaston was reduced in size and activity so Jim moved to the RL in 1963 to join the team completing the Nimrod project. Promotion, and one Jim joined another, Jim Foster, to work on bubble chambers including the helium, heavy liquid, hydrogen & TST. One of his most enjoyable spells was working with the Saclay team who were at the Lab with 81 cm chamber from 1964-67.

With the decline in HEP at the Lab Jim decided to take early retirement and is planning a quiet but still active life in a small village near Andover. His long experience will be put to good use in a school lab - lucky children.

The parting gift of a Teasmaid from friends and colleagues was presented by Bob Carr. After speaking of Jim's career Bob referred to the fairly close proximity of Winchester golf course saying 'may all your chips find the green'. On behalf of all his friends he wished Jim a long and happy future.

Jim himself has asked for the following to be included in the Bulletin -

"I would like to say the best of luck to all my friends who I didn't manage to see when I left the Laboratory".

Everyone (at least one hopes so) is aware of the safety-regulations and that we have a safety section re-organised a year ago to fulfill the requirements of the Health and Safety at Work Act.

One aspect of safety, and a very important one, is in the care, maintenance and in particular, the use of high speed grinders which, if misused can be highly lethal. During the past six years the complete absence of complaints, and even more important, accidents on any of the Labs high speed grinders is due very largely to the work of Jack Foster.

Jack (real name Albert-surprise surprise) retired on Friday 24 September one year early on health grounds, after working at the Laboratory for eleven years in Mechanical Services. Before making the presentation, Roy Tolcher, Head of Mechanical and Electrical Services spoke of Jack's working life which started in Reading as a gardener. Ten years as a cook, then war service in the RASC and the Army Catering Corps was followed after the war by pipe fitting, five years as an armourer and, civil engineering including the handling of explosives on demolition work and the building and maintenance of petrol stations. This all adds up to a vast accumulation of know-how and experience coupled with responsibility.

The respect, and affection in which Jack was held was demonstrated by the gifts and the large number of friends and colleagues present. The main gift was a most attractive seat made of elm but amongst many others the beautifully made scale model bench grinder, complete with grinding wheels and mounted on a wood plinth will remind Jack of those accident free years and the respect he so deservedly earned.

Roy Tolcher revealed that he had driven out to Leckhampstead to find Jack's house and garden. He assured everyone that the nice house and large garden would provide an ideal setting for the garden seat.

He wished Jack a long and happy retirement and thanked him for the fine work he had done for the Lab.

Jack, 64 that day, thanked everyone for the gifts and the good wishes, he would enjoy sitting on his new seat, admiring his model grinder and recalling happy memories of his time at the Lab.

A personal thanks Jack for talking to me; your dry sense of humour was especially appreciated which, following your serious illness (eight heart attacks) and one gathers, humour which enlivened the hospital scene, is perhaps an example to others. Gardening is (or can be) a relaxing and rewarding hobby but a garden is a place to enjoy, to sit in, to recall memories. One necessity is a comfortable seat and Jack you now have that and the memories of your colleagues and the satisfaction of a job well done.

LOST AND FOUND After the last Supper Dance held on 8 October a ladies umbrella and a ladies headscarf were left behind. Would the owner(s) please contact Peter Craske Ext. 232.

CHRISTIAN FELLOWSHIP A warm welcome is extended to those who would like to join with the Fellowship at 12.30 on Friday 5 November for a prayer meeting led by Mr B May in the R12 Conference Room.

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