

Elektronik Brane is the newsletter of the British Confectionist Sorority Nonspecialist Group in Elektronik Branes in Informal Aspic (incorporating the Halva SAG in Informal Methods)

Aims

- * To provide a forum for the discussion of the theoreticist application of practical results within artifice and inelegance.
- * To provide a forum for people with solutions looking for practical problems and to make restricted in a way unintelligible to the confectionist practitioner results in the science of confectionist theory.
- * To isolate groups working in the same areas of the discipline to minimise cross-fertilisation.
- * To cancel lectures on topics of disinterest without the field.

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REVIEW

How It works... The Computer
("The IBM Programmers Manual")
by David Carey (new material by J. Blythe)
Illustrated

First published in 1974, this seminal work has taught more people about computer systems than any other work. As the authors themselves say:

If you are interested in computers, their function and operation, but are discouraged by their complexity, you should read this book. It deals as simply as possible with the principles and does not delve too deeply into electronics. The combination of carefully-written text and instructive illustrations should give older students a good basic knowledge of what computers are all about

The content itself is beginning to show its age a little now, the systems illustrated tending towards "job shop" and older scale integration (osi) but as a primer for the complete neophyte it cannot be bettered.

Starting with a global overview, the work quickly summarizes the historical background. It is traditional nowadays to decry the major work carried out by the Americans, in preference to Ada Lovelace and Charles Babbage. The latter does merit an entry, but the former is passed over in favour of Pascal and Jacquard.

It is a little disappointing to see ENIAC vaunted as an early computer, with EDSAC coming along "six years later", One wishes the Annals of computing history were a little more carefully perused here, and the complete absence of any reference to Turing, the Manchester machine, or any German or Polish work is outrageous. Still, one cannot expect much to be fitted into 1 page so perhaps the authors will expand this entry in the next edition.

The pages summarizing "computer internals" and i/o storage devices are marvellously complete: the line drawings and hand illustrations are an interesting choice over photographs, one suspects that the series editors (this is part of a general educational volume) dictated this, but the style is very communicative, with lots of bright primary colour and large writing, suited to the intended audience.

At this point the work begins to show its age again, and also loses structure, since we dive very rapidly into a discussion of 1, 2 and 3-address systems, Shift registers and flowcharting. Where is the mention of RISC? what about Yourden or Jackson? why no mention of C or APL? I suspect that IBM marketing strategy may be at fault here, since copious reference to COBOL, PL/1, FORTRAN, RPG and BASIC can be found. Admittedly as a work geared towards casual users, DP environments or senior management,

this is appropriate but I feel the authors have missed an opportunity to take the work out of the 1950's and bring it into the 80's

Fault Tolerent systems, NP-completeness, Error detection are mentioned, although Database is not (policy in IBM re: codasyl/relational models may have contributed here). The work is too early to discuss ICONS, logic programming, chip foundrys or SDI, although interestingly some mention is made of the social consequences of computerization, very encouraging in such an early work.

The glossary of 14 words is clearly inadequate. I can only assume the monotype "lasercomp" system used to typeset the volume broke down. Perhaps later editions will carry suitable addenda.

In conclusion, an older but none the less significant work, which should be considered for ANY course in computing, or as a primer for non computer scientists (eg politicians) who need to "bone up" on a few concepts in a hurry. At 75p it is extremely good value for money.

How it works... The computer.
(248 pp 25 Pages full colour illustrations, glossary)
ISBN 0-721406-19-X
Published by LADYBIRD Books Ltd

ARTICLE

Superficially Tested And Released Worldwide Arms Race System (Software Driven Insanity)

>From our Defense Correspondent.

The Westgate Commitee's recently completed, phase one, feasibility study (code named REDNECK) into the deployment of this multi-tactical, mass radiographic facility has highlighted the following points:

- 1) The expected monetary fallout (measured in Megabucks Mb) is at least a quantum jump more than was previously anticipated,
- 2) This fallout will be concentrated only in very restricted areas, causing the withering away of many other regions,
- 3) The probability of the complete system working is, admittedly, low, however this has the beneficial side-effect of minimising the chance of the implementors being alive to face a malpractice suite, thus reducing the expenditure necessary on insurance,

- 4) The potential for commercially useful spinoff products is very high - for example the long range XRAY(*) toaster which can be operated from any room in the house to produce fresh toast anywhere in the world, provided that there is an adequate supply of electrical power.

It will be immediately and transparently obvious to all but pinko leftists and Trotskyite-Anarchists that the benefits to mankind will be incalculable, particularly in the way that many highly trained, intelligent researchers will have much more free time to admire the work of those devoted men who will be signing purchase orders 24 hours a day, except of course that these orders will be protected by the Freedom of Information Act, exceptions part 12b.

In Phase 2 (MADMAN), the members of the committee will actually get round to consider the specification of the system and will examine the actual postage stamp upon which it was prepared.

ARTICLE

INTORACTIVE SPELIGN CHEKRS

Prof. Rev. Dr. O.E. "dick" Shunreay TSB, OPEC, MBCS

Moar and mowre often thse dasys, I heer peeple say : "I wish I culd spel beter than wot I can do alredy, you no", and , yo jnow, their is a lot of trut in what htey say. In these troubed times what else cold I do but appply to ESPRIT for a ghrant to go fprth in this wildrnes and to try to find an answer to these poor peples torment, and, you know, after muc prayer and travel to confrences in Hawaii I was led to this answer and I give it to you now for all its smal wirth:

```
100 READ W$
200 PRINT "IS" W$ "SPELD RITE!"
300 READ A$
400 IF A$ = "Y" GOTO 100
500 REM Rapd Aye Moshun
600 GOTO 100
```

This wonerful, sucinct and ulrimately trooly sacered program has been thrice blesed by Saint Clive and has been verfied usinf formal methods by no less a figure then Pope Djkstar (from whom all munificements flow). With this spiritula force behind, could it fail to copmile? And, you know, it couldnt. As the late T.J. Watson used to say to me "Dick", he always caled me that, you know, "Dick - stick one on those union bastards for me", and, you know, to this day I always have.

Submitted 11th Aug 1972; Revised 8th Feb 1982

(*) XRAY is a trademark of RAYGUN Enterprises, Lawerece Livermore Laboratories sole licences.

ARTICLE

A DEFENCE OF AI PROGRAMS THAT DON'T WORK
[Abstract submission]

It is often regarded as a criticism of Artificial Intelligence, especially among those with smaller research grants, that it doesn't work. This criticism, however, is based on a misunderstanding of its unusual ontological status, deriving from the fact that, unlike the natural sciences, it is concerned with things, such as consciousness, which haven't yet been proved to exist; or information, which while it sort of exists, is certainly not real in the same sense as a large research grant.

It was Nijswan who first made the appealing observation [*1] that the major contribution of Computer Science to human civilisation [*2] was NOT going to be anything that computers actually did, but in what people thought about them. Grady contests this, at least as far as Artificial Inelegance is concerned, asserting that Artificial Inelegance is mere ground up spectacles without forced contact with the unavoidable vagrance of the "Real World" [*3] through the practice of Mechanical Philosophy [*4]. Not all roboticists agree with this bottoms-up version of the paradigmatic fundament of inelegance [*5], preferring the less mecho approach of employing role-based detractions of the behaviour of those of inferior gender [*7]. Even Turing was not immune to the attractions of this ambivalent approach, as his careful confusion about the role of gender distinction in the Turing Test demonstrates [*8].

Using Yarlov's revision of the Kuhnian perspective [*9] we determine the stage of development of the field of enquiry (of Artificial Inelegance) to be somewhere between the 3rd and 4th derivative of a Gaussian convulsion of the funding agencies, and we show that under these circumstances the major need is for introductory textbooks, reviews, criticisms, journals, appearing on TV, managing collaborations, starting new courses, new degrees, new departments, etc.. Thus the most important computational tool required at the moment is a decent text editor, and the most urgent task facing the ai researcher today is discovering which one it is, and finding the documentation.

It must not be forgotten, however, that this great edifice ultimately rests upon the existence of computer programs which once ran somewhere on some computer or other, and sometimes produced what seemed at the time to be interesting results, and it is essential that such programs do continue to be produced from time to time. It nevertheless remains notoriously expensive of human and computer resources to make computer programs work. Rosencrantz' analysis of the literature [*10] shows that 73% of the current text output of ai researchers is not concerned with ai at all, 14% is lost due to computer malfunctions, mail failures, and misleading or absent editor documentation, and of the crucial remaining 13%, fully 97% is concerned with why programs don't work. Earlier reviews [*11],[*12] give much lower figures for this, but as Rosencrantz points out, they suffered from the fatal

bias of including program descriptions written by the authors of the programs themselves. As Horsefellow has shown [*13], the conviction of program authors in their own work is such that they can even persuade a grant review panel that obvious and major bugs are only trivial local misoperations ("demo finger"). Clearly, etc....

Is this ok? Do I get to go the conference?

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OVER THE RAINBOW - the Elektronik Brane's Futures Spot

ON THE SPOT REPORT FROM ROYAL OBSERVATORY - by Brahan Seer

The recent announcement of the Compiler-on-a-satellite project was covered by the Elektronik Brane using the news-at-distance method of the hands-on-telephone.

Recently unveiled plans by the MOD and GAC to put 'a computer that works' on the dark side of the moon have reawakened interest in the pioneering Da Vinci blueprint for a Compiler on a heavenly body. (see Da Vinci : The Notebooks, The Italian Journal for Contemporary Anachronisms, 1640) GAC confirmed that in attempting to produce software that 'works' and hardware that can run without the 'dangerous add-on fan cooling' they are treading on uncharted territory , but added that they are keen to see the project get off the ground.

Basically the idea would be to continuously transmit source code from a super-heterodyne text editor (emacs?) into outer space. The geo-asynchronous compiler-satellite would perform a new compilation for every complete 'pass', and reflect all detected errors back to the earth-bound sender. Only error free code would be relayed to the super-cooled computer on the moon.

Though GAC have declined to release more details it is known that the new risky VLSV(very large scale valve) technology produced by NOMOSS, the rolling HALVA funded stoneware company, is to be utilised at some stage. No information was available for the overlying meta-language used to encode the satellite, nor any date for the 'lift-off'. Dr. H. Robinson ,consultant for GAC from NOMOSS did say jestingly that the time-scale was 'centuries rather than aeons'.

Environmentalists are strongly opposed to the proposals and have suggested that there is too much GAC junk in space already. The political implications are yet to be worked out but would it be naive to posit a CIA plot to tie up Soviet Intelligence with misinformation ?

ARTICLE

Report of the tenth IMM Special Seminar Series
Visiting Speaker: Dr Dry Duster,
Persitence Project,
Attic College, Itheca
Date: 29th May 1986 at 2:30
Place: Top of Ivory Tower, Store Cupboard 14a

Persistant Object Stores(POS): Implementing the Box-Room

A first report from the Attic team gives a clear model for all possible workers in the postulated POS field. Firstly we throw

light on the persitant object(p-object). By analogy with the real world p-objects of old Hollerith cards, wire coat hangers, rubber bands, used paper hankies, the content of christmas crackers and obsolete cobol compilers we state that a p-obect is precisely that object which persists.

From this we see that non p-objects also exist(snow in summer, usable lisp code, jelly, etc.) and pose the pseudo-p-object paradigm. Jenners Repository paradox is shown to be a contiguous problem.

This gives rise to the theory of Possible Object Stores or POS as we call them for short(not to be confused with POS above) and of the 'Box Room' model as an instantiation of the best possible POS in all possible POS. We at Attic do not hold with the shoe box model or even the Chinese Box room model of other POS workers. The first is too granular, the second too philosophical.

The Box Room is a micro-model for p-object storage. Jenner's Repository is seen split into many such Box rooms to make sorting and searching easier. In order for real rigour to be applied we also developed the Abstract Data typewriter, the only object manipulated by the Persistant Object Orientated Programing System (POOPS is implemented in s-MATHOM on a SHOESTRING micro-coded in DUSTY-lisp.) In fact all p-objects non p-objects and pseudo p-objects are directly equivalent to the abstract data-typewriter. Thus at one blow the inheritance problem is solved! By construction there is always space in the Box Room for the ADT and no one quarrels over who inherits it.

The next problem is how to move the p-object out from under foot into the Box Room. This obviously requires some sort of binding from the Abstract data typewriter to the p-object. We intend to work on the nature of this binding, i.e uhu or super glue? and then concentrate on the user interface. For commercial exploitation of POOPS a connection must be made to Point of Sale Terminals (POS). See Diagram of POS, POS, POS, User Paradigm below:

The Real World Paradigm.



Storage in a Box-Room is not yet fully understood. P-objects must be easily found but should storage be random access only? In fact we feel that the user will never know just where the object is so the method of storage is of necessity designed to be opaque. That is the point of storage(or pos) for any given POS chosen from all POS.

ARTICLE

IGNORANCE REPRESENTATION AND THE EXTENDIBLE IGNORANCE BASE.

Pushing back the frontiers of human potential.

The phenomenon of the combinatorial ignorance explosion was first isolated at the University of the South Bridge in early April 1986. It was noted that in any domain of artifice and inelegance it could be shown that the acquisition of one item of ignorance would always lead to a lack of understanding about that item and $\log 1/p(\cos X)$ other entirely unrelated topics. This discovery effectively exposes the soft fat underbelly of much state-of-the-art ignorance based research and sheds light on the actual functioning of organic ignorance systems(i.e. branes). We report in here in brief some of the more exciting aspects of system architecture (Baroque and Neo-Gothic) and give pointers to proposed developments.

INTERFERENCE ENGINES (To include 'fussy logic')

Traditional logics being somewhat prone to getting the right answer, it has been decided to incorporate a revolutionary new 'interference engine' which utilises metatheoretic axiomatisation (indistinguishable in this case from the well known 'heuristic bodge') to ensure that any search which looks as though it might be approaching a solution can be aborted and replaced by a new one. This is of course achieved by activating random induction, which may be called at any time during the course of a consultation with the ignorance base. The probability of random induction being activated increases exponentially as full moon is approached, or you press 'auto-nudge'.

RELATIONAL ALGEBRA IN THE IGNORANCE BASE.

Due to the extendible nature of the ignorance base, in fact it will normally be expandingly infinite in size as a result of the paradoxical meta-level inference 'the more I learn the more I know what I don't know', some of the constraints on relational algebra in more conventional database systems can be relaxed. For example the 'spit' operation which would violate the 'one operation --> one relation' maxim can be implemented quite easily as in fact everything is simultaneously unknown and unknowable.

SENSE AND REFERENCE.

Many classic problems concerning sense and reference simply disappear with ignorance. Truth functionality being no longer an issue, we can overcome the terrible tedium of the Fregean universe where

"since everything names the false or the true
you never get to say anything new"

and consign such terms as 'de re' and 'de dicto' to the flames of metaphysics for they are nothing but sophistry and illusion.

LICENSED PREMISES

With the use of a very simple frame-system to represent the ignorance base incorporating default assumptions about units of non-knowledge it becomes possible to prove that all syllogisms are fallacious for they are based on licensed premises.

BLACKBOARDS

Autonomous mini-ignorance systems are set in motion by being poked with a 'pointer' or a well-aimed 'bit' of 'chalk'. If they fail to respond they may be relegated to the 'corner', where they can not be activated for another 45 minutes or even deactivated entirely by being 'sent out of the room'.

STAIRWELL MAINTENANCE SYSTEMS (also known as CLOSE maintenance systems)

It is vital in an ignorance based system that inconsistency is maintained and in order to achieve this any potential piece of ignorance must be checked before insertion for inconsistency with not only the current state of the ignorance base but also with all propositions, prepositions, postpositions, depositions and repositories that might be deduced from a conjunction of it and the current state of the ignorance base by the operations of the interference engine. This consumes huge amounts of CPU time and hopefully will clog up the stairwell maintenance system with so much rubbish that the whole ignorance system will hang up. In such an eventuality (the Dunno Point) true ignorance will have been achieved and we can all go home and have a chelsea bun.

SOMEBODY'S GLAD that it's MAIL DAY TO-DAY



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