



COMPETITION PAGE

Once upon a time there was a young Systems Analyst, who, wishing to change his job, decide that his recent (and only) project was worthy of publication. He noticed the growing trend towards multiple papers and diverted his talents to the writing of fifteen papers on different aspects of the project, in which he fondly imagined he had played a significant part. Six of these were eventually published by, respectively:

1. The Computer Journal.
2. Datamation.
3. DEUCE News.
4. Communications of the Association for Computing Machinery.
5. Journal of the Academy of Sciences of the Union of Soviet Socialist Republics.
6. Playboy.

The title and a brief extract of each of these papers is given below. Readers are invited to match each paper to its corresponding journal. A prize of selected back numbers of "Electronics Weekly" will be given to the sender of the first correct solution received by the Editor. The Editor will be assisted in his task of assessing the solutions by a panel comprised of R.W\*lf, M.V.W\*lk\*s, P\*t\*r Z\*l\*hy \*ng\*rm\*n, R\*.\*Sm\*th, F\*d\*1 C\*str\*, J\*.\*Br\*nt, and Gr\*c\* M\*rr\*y H\*pp\*r.

A. L.I.A.R. - Life Insurance Assembly Routine - Mark 5E.

..... and it has been found that in certain cases, when there are only 30 days in the month, that a negative premium may be produced. A set of amendments to the corrections of the revised version of the flow diagrams of Mark 4 are given in Appendix 3. Among other things, these reduce the time of the failure routine by 2 milliseconds. Cards 1067 - 1912 of part 3 of the main programme pack should be removed and destroyed, and card 2416 in the binary-octal conversion pack should be turned upside-down. Pages 41 and 153 of the operating instructions should now read...

B. Cynthia - and Life

..... and into orbit, her vital statistics (39-23-37) steering a sinusoidal course, came our Playmate of the Month, Cynthia (known as Cyn on the campus). Man, like with that broad on the pad those wave forms.....

C. Two Years' Experience in the Use of a Brunsviga in a Large Insurance Office.

..... and after a long and detailed survey by both members of the Operations Research Division of the company it was decided that the project should be started. Training in the use of the revolutionary new methods was given to 13 typists, 2 night watchmen, and a tea boy, who would otherwise have become redundant. A pleasing feature of this part of the project was the way in which all the staff, from Top Management down, disdained to use the COBOL translator supplied by Brunsviga Inc. and decided instead to use binary and English. After 18 months' effort, during which the original life insurance ledgers were copied onto loose-leaf files .....

D. Electronic Robot Takes Over Insurance Office.

..... and with a loud whirring and flashing of lights the monthly premiums were disgorged in a flood of paper. In the two months since installation the data-hungry DDFX has been instrumental in the production of 976301 invoices, receipts, statements, reports, etc., In fact in order to use this phenomenal machine to capacity it has been necessary to transfer the entire workload of the actuarial department.....

E. A Heuristic for the Life Insurance Problem.

.....whilst the card deck generated by the LOBOC compiler was being processed by a battery of off-line printers. Finally the Sort Generator was bottstrapped until it had merged with itself. By this means the 250,000 three-address instruction program for analysing accident statistics was debugged, checked-out, proven-in, counted-down, buttoned-up, and completely tested in three months, using less than 2200 hours of machine time per central processor. The work reported in this paper was supported in part by the O.A.S., under contract number.....



## A TRAGEDY.

Once upon a time, there was a little lake, as may be seen by consulting the Ordnance Survey Map Sheet 110, Seventh Series, reference SJ822542. It was a frustrated little lake: apart from being small, its appeals had been ignored by the Boundary Commission, so that it was forced to lie in dark, wet, miserable Staffordshire, whilst it could see, not fifty yards away, the verdant pastures of sunny Cheshire, flanked on the one hand by the forest of Delamere, and on the other by the mighty outworks of the Alsager Slag Heap Development Corporation. One day, a man from the Potteries came by, and seeing the sullen lake, cried "What a perfect place to hide our export rejects!" (This was before they started selling them on the home market.) So the little lake became the unwilling home of much pottery, so that its waters overflowed. "Hurrah!" cried the lake, "Cheshire, here I come!" But alas, Cheshire would have none of this, and soaked up the waters of the lake in its boundary meadows - not without some difficulty, as could be seen.

Time passed, and (as happens even in North Staffordshire) grass grew and the little lake disappeared from the memory of men, except that it maintained an underground feud with the Cheshire meadows. Then the wise men of Kidsgrove decided that it was not wise to put all their eggs in a china basket, and welcomed the makers of new and strange things to their corner of Staffordshire, who proceeded to bolster the economy by employing many people from all parts of the country, most of whom went to live in Cheshire. So successful did one company become that they sought to build a bigger factory, and when digging the big holes necessary to support a single-storey light engineering works, came across the site of the little lake. "What a shame", they said, and dug out most of the rubble before filling up the lake's bed with a much superior grade of rubble and covering the whole area with reinforced concrete.

The little lake percolated through the ground to renew its battle with Cheshire but wherever it turned it found concrete, brick, or tarmac, until one day it found its way to the surface in a grassy plot. Its joy soon evaporated, however, when it found that Cheshire was nowhere in sight, and it wept and wept, so that the grass became something of a quagmire. So the men who looked after the factory put in a little pump to collect the tears of the lake, and turned them into a fountain for the delectation of those unfortunates whose windows did not command a view of the sunny Cheshire scene.

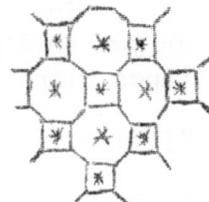
To this day the fountain weeps the tears of the little lake, now lost for ever beneath the concrete; the meadows of Cheshire are no longer sodden. Some people say that this is due to the drains laid in them shortly after the new factory was built.

The sad truth is that the little lake has at last given up its hopeless struggle.

## ALL GREEK.

ALL AREAS ARE COVERED !

-- IN MORE WAYS THAN ONE ! This is a problem in fitting regular polygons together. There are precisely eight sets of regular polygons with this property.



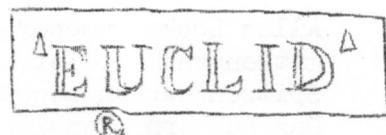
COMMON SENSE AND LOGIC will solve it - but

SUCH ATTRIBUTES ARE SCARCE and we prefer to make cardboard cutout polygons and try them until we hit on a solution. We have lost our scissors:

HAVE YOU GOT THEM ? If so, please send them to us, or better still, come along to the following address and help us make Christmas decorations for the kiddies.

Data Processing Division, Room DDT 126D,  
The English Elastic Co. Ltd., Drystone, Chaffs.

\*These are regular polygons by



THEN AS NOW

Readers will undoubtedly be aware that many of the features of modern digital computers were anticipated in the nineteenth century by Charles Babbage, FRS. What is perhaps less well known is that his experiences also anticipated some of the more peripheral aspects of the computer industry today. The following extracts from his autobiography "Passages from the Life of a Philosopher" will illustrate this more clearly.

"On two occasions I have been asked - 'Pray, Mr Babbage, if you put into the machine wrong figures, will the right answers come out?' In one case a member of the Upper, and in the other a member of the Lower, House put this question. I am not able rightly to apprehend the kind of confusion of ideas that could provoke such a question."

"I at length laid it down as a principle that, except in rare cases, I would never do anything myself if I could afford to hire another person who could do it for me."

"One who had for some years been my chief assistant was tempted by an offer so advantageous that in justice to his own family he could scarcely have declined it. Under these circumstances I took into consideration the plan of advancing his salary to one guinea per day. Whilst this was in abeyance, I consulted my venerable surviving parent. When I had fully explained the circumstances, my excellent mother replied: 'My dear son, you have advanced far in the accomplishment of a great object, which is worthy of your ambition. You are capable of completing it. My advice is - pursue it, even if it should oblige you to live on bread and cheese.'

"This advice entirely accorded with my own feelings. I therefore retained my chief assistant at his advanced salary."

"To describe the successive improvements of the Analytical Engine would require many volumes."

"I explained that the Tables to be used must, of course, be computed and punched on cards by the machine, in which case they would undoubtedly be correct."

"In order to be somewhat in advance of the greatest number that may ever be required, I chose fifty places of figures as standard for the Analytical Engine."

"As soon as the Analytical Engine exists, it will necessarily guide the future course of the science."

"In order, however, to insure accuracy in the printed Tables, it was necessary that the machine which computed the Tables should also set them up in type."

"These patterns are then sent to a peculiar artist, who, by means of a certain machine, punches holes in a set of pasteboard cards...."

"Of course the Engine will compute all the Tables which it may itself be required to use. These cards will therefore be entirely free from error."

"....it might be desirable to compute them by several processes until frequent practice shall have confirmed our belief in the infallibility of mechanism."

"My answer was, that whenever the Analytical Engine should exist....."

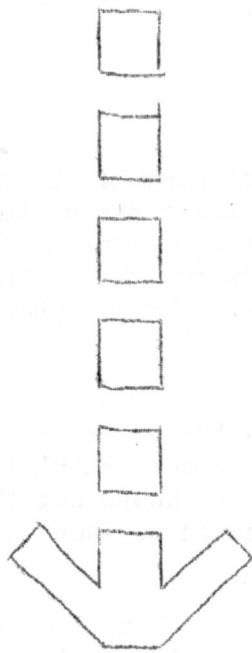
0 + 0 + 0 + 0 + 0

EXTREMELY IMPORTANT

The following amendment, which has only just been drawn to the attention of IFIP WG 2.1, must be made to the Revised ALGOL 60 Report:

In Section 2.4.3, DELETE "...STANDARD FUNCTIONS)."

REPLACE BY "...STANDARD FUNCTIONS), except that the word 'contraband', written with any combination of small and capital letters, can never be validly used as an identifier, since by its very nature it cannot have been declared, and as a label its scope could only be described as non-global."



Pert



'ENGLISH ELASTIC'

To: The English Elastic Co. Ltd., Dept DDT62, Drystone, Chaffs.

PERT PLANNING.

Please send me full details and free sample under plain cover. I am over 21.

NAME . . . . .

ADDRESS . . . . .

. . . . .

(Advertisement

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LONDON LETTERA Plain Man's Guide to Computer Centres - No 27 - Queen's House

As readers who have struggled through the previous twenty-six articles in this interminable series will have discovered, London is a place of ceaseless change. Honeywell whip in an 800, IBM pull out a 650 - how difficult it is to remain up to date, to keep up with the fast computer set. It is, then, with something of relief that we turn to a section of old London that remains almost exactly as it was eighteen months ago and to a centre which has preserved against all the pressures of modern life an equipment of very great antiquity. We refer of course to the English Electric Company's London Computer Centre - perhaps "Salon" would be a happier choice - in Kingsway, W.C.2. (Open 9 - 5.30 by appointment, buses 68, 171, 172, 188 and 196 pass the door when running, admission free, board £30 per hour)

Kingsway, we find, was laid out during the early years of the twentieth century. Architecturally it must be described as a compromise, combining as it does the inconvenience of the old with the ugliness of the new. All the world comes sooner or later to Kingsway and much of it stays there immobilised in the traffic, thus giving rise to the well known saying "jam yesterday, jam today, and jam tomorrow". As a street it has everything - haute couture (Fifty Shilling Tailor), haute monde (The Coffee House), and, brightest jewel in its diadem, Queen's House.

This pinnacle (several pinnacles in fact) of the town planners' skill has had a chequered career. The origin of its name is lost in the mists of time, but it is thought to derive from the fact that Queen Elizabeth (Eliz. I, the former Queen of England, France, Ireland and Virginia) once slept in the house before the house before Queen's House was built. For the English Electric Company Ltd. it occupies a place of honour. In ascending order of importance, it has housed the Company's Registered Office and Boardroom, London Branch Office, Domestic Appliance Division Showrooms, and now the London Computer Centre. As however the ground floor and basement have risen (in importance) so have the upper storeys declined until, at the time of writing, they are occupied by the Ministry of Pensions, Larson Paragon (who speak only through tubes) and the Nigerian Service of the BBC (who speak only through interpreters).

The main entrance thankfully reveals nothing of the decadence above. The Company has rightly assumed that first impressions are important and gaily decorated windows cry out enticingly to passers-by that, within, they will find the answer to their problem of how to handle five million insurance policies - as if ever an answer were needed..... A wide range of photographs, all in exciting black and white, show:

The Commercial Union building at Exeter.

The KDP10 at the Commercial Union building at Exeter.

The high-speed printer of the KDP10 at the Commercial Union building at Exeter.

The print roller from the high-speed printer of the KDP10 at the Commercial Union building at Exeter.

(Copies autographed by Frank Knight are on sale within.)

Do not miss on the left as you enter a photograph of an artist's impression of a model of a KDP10.

It is thus with pleasurable surprise that, having eluded the doorman resplendent in the Company's brown livery, one finds a DEUCE. This collectors' piece - even the Science Museum is without one - is kept in something approaching working order by the ceaseless and devoted efforts of its engineering attendants. On special ceremonial occasions it will even gather its powers to invert a matrix or solve an equation or two to the audible delight of its sylphlike acolytes. These latter may be seen flitting from room to room reverently bearing trays of perforated cards of a sacrificial nature.

But wait. Who is this striding confidently down the gilded corridor? A comely youth with a bowler hat, rolled umbrella, and briefcase containing some sandwiches and the Financial Times. Do not speak to him - he must be a Salesman. He looks pleased. Perhaps he has just received an order for a KDP10.

A few more steps and we have come out at the back of the Centre. A deep chasm yawns to our left. Just visible in the gloom is the top of a stairway which disappears downwards into regions we shall be wiser to ignore. There are some mysteries that are better left unsolved. To our right are more doors through which escapes the faint aroma of cigars. Clearly, it is the region of Management. Our guide murmurs "Sales....Systems.....Manager....."

Enough. We hurry through the final sets of doors and out into the rain-purified air of Lincoln's Inn Fields. Each visitor draws a deep breath. He would not have missed it for anything. It is not every day that he can see history at first hand. He wonders what audacity made him think that he might take his piffling little problem (only 5000 invoices a day) to these more than mortal men.

And hurries off to Newman Street.

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### EDUCATIONAL DEPARTMENT

The University of Leeds

Department of Metamathematics

Diploma in Computing and Numerical Analysis

Martinmas 1962

Candidates may attempt some or all questions or possibly none.  
No credit will be given.  
Sundials and crystal balls may be obtained from the invigilator.

- Q1. Compare any three versions of a well known paper tape code deducing who was on holiday at relevant times.
- Q2. Contrast and compare any three versions of a well known assembly language indicating the temperature fluctuations to be expected in the compiler writer.
- Q3. Define "Natural English Language Statements" without invoking set theoretic concepts, and give an example.
- Q4. What is a glump, bundle, 5-hole tape code? Give examples. A complete laundry list will not be expected.
- Q5. Compare critically a Brunsviga, I\*M 7\*9\*, and a pencil and paper. Do you think a KD\*\* could answer better than yourself?
- Q6. Answer this question?
- Q7. What is (a) a Concept?  
(b) a System?  
Did you conceive your answer systematically? Or did you systematise your conception?
- Q8. Write programmes for (a) calculating the first n cubes,  
(b) mortgage repayments,  
(c) matrix multiplication.  
Answers which use (c) within (a) and (b) will be given lots more marks.
- Q9. How fast does a 1000 characters per second reader read?  
Answer in the form of a Socratic dialogue.

? := ?+??+??+??+??+??+?? = ?

FOR SALE : Ten tons of YAK FODDER, as new. Apply box DDF6.

## University of Pimnsanniedlesia

Department of Transcendental Metalinguistics

Diploma in Obfuscatorial Gaulsornianisms

Answer at least one metaquestion.

Metaquestion 1 : Answer at least one question.

Question 1 : Construct a simple ALGORN concatenation employing at least all of the basic phrases and no phrase which is not basic and hence using metabrackets of the appropriate degree contain the new new construction as a further basic phrase and continue by answering at least one metaquestion.

Basic Phrases :

- optimisation inhibitors
- parallelizability
- mnemonic tetragrammatons
- nomoliteral concatenations
- isochronophobia
- complete prefix language function
- unique deconcatenatability
- monotonicity of scopes
- strictly formalised canonical reduction
- Chomsky phrase structure grammar
- a Chomsky PSG2
- The Markov Algorithm No 3
- metasyntactic
- end of basic phrases
- basic phrases
- metasemantic
- parameterisation of computer characteristics
- two minute rundown at the end of a five speaker morning
- associatively invariant stratification
- classificatory
- mesoprogramming
- Backus Normal Form
- Backus Normal Form per se
- quasi-contextual operators in the metalanguage
- Chinese Polish prefix
- reversed Chinese Polish prefix
- codes of the Shannon-Fano type
- intersection operator
- concatenation operator
- a grammar of say Chomsky 1.5
- glub
- Chomsky
- thunk
- PORD
- zilchfesser
- twonky
- from the seat of pants point of view
- ALGOL à la française pose des problèmes du flèche
- the nth figurate number of order k
- symbolic manipulation under an isomorphism
- modularity of languages
- macrodescription
- basic phrase list terminator

Check : Your result should contain within itself the pseudoboollean intersection of the quasiglossary of the COBOL61 report and the wiring schedules of KDF9 current as at this present moment.

△ △ △ △ △ △ △ △ △ △ △ △ △

IT COULDN'T HAPPEN IN ENGLAND

The following article, a copy of which was forwarded to us by our Man from the Prudential, appeared in the July 1962 edition of Datamation, our distinguished contemporary. We reproduce it verbatim and without amendment, entirely for interest, confident that it will not ring any bells within earshot of our readers.

The Master Plan for Kludge Software

by Dr MORRIS L. MORRIS and Dr. AUSTIN O. ARTHUR  
(Kludge Komputer Korporation)

Previous writers in this series have attempted to show how the road to non-computing can be fostered at its foundations by:

- (1) Engineering glitches into the hardware. With suitable ingenuity, these can be either new botches (discovered after the prototype is constructed, usually, and then firmly cast in concrete) or loving repetitions of what never did work right.
- (2) Marketing the resulting Kludge with the same techniques used to peddle deodorants and cigarettes. The analogy is painfully accurate.
- (3) Applying time-tested rules for maintenance which operate faithfully to minimise uptime. These rules are a sort of check list for the Kludge Fixer so he can save time by listing excuses by the numbers.

Now, brief reflection quickly reveals that the above approaches are only the foundation. The real approach today has far greater scope, since it strikes at the very heart of the matter - software. Everyone knows that software is the thing. The planners at Kludge Komputer Korporation are keenly aware of this trend. Having pioneered so well in the fundamentals, they can be expected to excel here too. What follows is the basic outline followed at KKK. The Master Plan is the result of years of study and represents the ultimate in software systems for users of the famous line of Kludge hardware.

Kludge software master plan

The cardinal commandment of any software development program is "Announce it first, worry about producing it later".

The first and most important Edict is, "Always start with fresh programmers". This is a simple rule and its *raison d'etre* is obvious. Any programmer who has used or designed another system has been adulterated or biased and such bias (sometimes referred to as experience) may well influence him in the task he is to perform.

Edict 2. "Never let your fresh programmers talk to the programmers who designed the last software package, if this can be avoided - but at all costs never let any software programmers talk to the people who design, sell or maintain the hardware". This rule needs no explanation.

Edict 3. "Never let the software specifiers talk to the software implementors. This form of warping young programmers' minds is to be avoided like the plague. Software designers always seem to have the weird idea that they, better than anyone else, know how to implement their designs.

Edict 4. "Never let a software group know that there are other groups." A weaker form of this rule is also useful. "Never let one software group know what the others are doing." The stronger form of this rule tends to create very high morale or esprit de corps brought about by a feeling of exclusiveness. In the weaker, but more pragmatic form, the effect is acquired by implanting the idea that all of the people in all of the other groups are a bunch of inexperienced poopheads.

Edict 5. "If you must document the software, be sure that the documentation is done by a wholly separate group, preferably technical writers who are not too knowledgeable about computers and programming." Many benefits accrue from this approach, but the greatest one is the high regard with which your documents will be copied. Worry not about their accuracy; users are more adaptable than you think. The proof of this is found in the great number of installations still operating Kludges with no documentation.

Turning our attention now to the design phase of software (predicated of course upon the above personal practices) the following rules have served not only the Kludge Komputer Korporation but many of its fellow companies for many years.

Rule 1. "Every software package must have a monitor irrespective of the size of the Kludge." Without a monitor to occupy between 25% and 50% of the available fast store (and at least 1/4 of the backup storage) the users' programmers will become careless. They will eventually discover that one can trade time for space - which leads to reduced utilisation and thus rental income. An appropriately designed monitor on the other hand can be depended upon to waste a minimum of 10% of the available time just searching the system tapes.

Rule 2. "All error messages must be as coy and as ambiguous as possible". The object here is to make the console operator (and, later, the programmer) unstable. For example, what could be simpler than "AN IMPOSSIBLE ERROR HAS OCCURRED ON AN UNSPECIFIED UNIT WHILE EXECUTING AN UNIDENTIFIABLE PROGRAM". It should be pointed out that the creative souls who can compose such wonderful phrases are rare beasts indeed and when found should be coveted and nurtured.

Rule 3. "There should be more phases in the monitor than there are jobs or programmers in a given shop." This is the only realistic settlement to the ever raging argument between the one-phase and three-phase proponents. Besides, how else can you provide the capability for clobbering programmer A's phase p results while running programmer B's phase q interlude if everyone knows what is to happen in each phase? And what better way to keep an operator guessing - you see he is much less likely to call for the KF's under these circumstances - another form of saving not to be discounted.

Rule 4. "Every software routine should have a snappy acronymic name. For instance, we at Kludge Korporation called our Kludge Monitor System KLUMSY, the Kludge assembler KLAP; and the alternate version KLAPTRAP, required for a Kludge with traps (working or not).

Rule 5. "Before letting pragmatic aspects interfere, be sure that the things that count are taken care of. SEE THE SALES DEPARTMENT FIRST AND THE COPY WRITERS IMMEDIATELY". As we all know, if a Kludge can't be sold on its hardware merits alone (and it can't) the software must carry the burden.

A Kludge cannot subsist on a monitor alone. Thus it behoves the Kludge software suppliers to provide working languages for the Kludge. The more the merrier. Since the list of OK languages changes from season to season, and position within the list is not constant (or computable) one had better consult one's marketing people to find out which ones have strongest current motivational appeal. Within these bounds, the guiding principles of Kludge languages follow.

Principle 1. "Hop aboard all the current band wagons". If FORTRAN is the current best selling gee-wiz, write (promise) a better one. Change the name slightly so that you don't lose your identity but not so much that you can't tell who whelped it. Thus, Kludge Korporation's version of FORTRAN will be called KLUDG-TRAN.

Principle 2. "Always release preliminary undegugged versions of the translators, compilers, generators, assemblers, etc." WHY NOT? Let your customers debug the things. Why should you spend your programmers' time and operate a machine with all that awful overhead? If your customers want it badly enough, they'll check it out for you. (Unfortunately, the day is gone when you could get him to design and implement it too.)

Principle 3. "No preliminary or 'field test' version of any translator should be compatible with the monitor or any other translator. The savings realised by the elimination of coordination and liaison would amaze you. This also prevents future coordination and liaison because each 'field test' version gets too deeply embedded for anyone ever to want the final version anyway.

Principle 4. "Join and actively support any and all government sponsored and international magic language generation efforts". This lets you know what the opposition is thinking. But be careful: contribute only those ideas which you know are impossible to implement on the competitors' hardware, or will at least make it look bad. Always be ready with a claim to have a working version of whatever language is the current vogue.

Principle 5. "Never, NEVer, NEVER write a decent or useful training manual for any system." Remember, you may be taking the bread out of the mouth of some striving young author.

Principle 6. "If you must supply an assembler, do it under duress." The best ploy to use to get out of this one is to tell the customer he never ever needs to know the basic language of the machine. All of his problems can be solved with the New International Magic Language Number 6.5. Well, our version of it anyway. As we all know, magic languages are the thing, and you can't sell a Kludge without magic.

We must now turn our attention to software maintenance, an area too often ignored.

Tenet 1. "Each program should be on a separate tape with its own unique format." This is logical. You wouldn't want the corrections for one system to be acceptable to another, would you?

Tenet 2. "Corrections should be distributed at such a rate (empirically determined) as to keep the users from inundating you with requests for additions and changes to the system." It seems best to protect our programmers as much as possible from new and different ideas. Besides, we've always done business this way.

Tenet 3. "Distribute new versions of each system as soon as the previous one is showing signs of being checked-out." This guarantees job security for a very large segment of the programmer community known as 'System Programmers'.

Tenet 4. "Whenever a new system is proposed or implemented, refuse to continue maintenance on some other (any other) existing system." How far can you make a rubber band stretch? We've already provided for keeping our programmers busy!

Tenet 5. "Never let the programmers who implemented the system maintain it." It has been found over the years that many system programmers acquire a certain attachment for their own code and refuse to consider sullyng it with corrections. Thus, the only solution is to have some other programmer do the appropriate surgery (preferably a brand new one, fresh from the university) in the form of absolute binary patches.

In closing, we should like to point out that we of the Kludge Komputer Korporation have managed to keep abreast of the competition in software as well as hardware by having a loyal clique. Which brings us to the last Commandment:

"Form a Users' Group", whence springeth all that is worthwhile. Wine and dine them, buy their loyalty in every way possible - make sure that your users are satisfied and happy. Channel their desires appropriately. Hold meetings at least twice a year and see that all of the attendees get smashed (we at KKK sometimes pick up the tab) and go home feeling generally loved, wanted and appreciated by all.

THE BITTER END

#### PERSONAL COLUMN

Will give 20 YAKS to good home. Apply Box DDF6.

FOR SALE : Various brands of cigarette packets with combination locks attached. Ideal for Bureau use. Easy terms arranged. Apply M. Gassey.

LOST? STOLEN? STRAYED? Two bits in vicinity of old KDP10 bureau. Reward offered. Great sentimental value.

Will all our London visitors wishing to see the night life of Kildgrove and Alsager please restrain themselves.

This is positively the last and final ultimate and definitive agreed and absolutely settled version of the very last statement on this page. And this is the next.

TENDERS INVITED for YAK poison. Apply Box DDF6.

CHILDREN'S PAGE

A Cautionary Tale

Lament for Edward Tripe

Alas, the tale of Teddy Tripe,  
 An overrated Systems Type,  
 Is much beset with blasts and dams,  
 He writes, corrects, rewrites programmes.  
 A Statist through and through, they say,  
 He does twelve crosswords every day.  
 As well as cards punched by the thou  
 He wants his programme testing NOW.  
 Yes, Edward's life with bliss was kissed  
 When he was Systems Analyst.  
 But now he's joined the team of men  
 Who programme for KDP10.  
 Perhaps it would have stopped his flaws  
 If he'd been on a four week course.  
 Alas, alack, and woe is me,  
 And woe also for poor old E.  
 His programme stopped on MARP and BAPE  
 So he bent down to load a tape  
 (To operators not a hint  
 Of where to find HSM print,  
 And so he had to call it down,  
 This most expensive bungling clown.)  
 His tie was blue with motif white,  
 Bedraggled, creased, it looked a sight,

But with its message I concur  
 The Silly Flipping Amateur.  
 He put his routine in the store  
 Somewhere in module number four.  
 He clamped his tape and with a grin  
 Said 'GO' - he was read in!  
 His tie at least was thin and taut  
 As in the servos it had caught.  
 The reader at the motif stalled,  
 And PTRPE it called.  
 It's lucky that his head is big,  
 It then gave MCP and CIG.  
 I'm sure if it could only speak -  
 "I read in Yankee, not in Greek!"  
 Poor Edward feels a largish fool,  
 Reading his nose to the fourth module.  
 Although his neck has round a stripe,  
 He's now a sadder wiser Tripe.  
 So please, Chaps, keep your noses clean,  
 And don't play with this big machine  
 You'll find the system always pays -  
 We hope your tie it never frays.

- W.O.N.

.....I'm too naturally polite, why not try Alan B\*\*\*\*\*-S\*\*\*\*\*.....

Pull together, Kiddies!

For the want of a bit, parity was lost;  
 For the want of parity, a programme was lost;  
 For the want of a programme, a demonstration was lost;  
 For the want of a demonstration, an order was lost;  
 For the want of an order, production was lost;  
 For the want of production, many jobs were lost.  
 Of course, not a word about this appeared in  
 "English Elastic and its People".

Titles are harder than you think.

*Fred the boss wife Y/E/ Scott from out of way down under the deepest  
 South NRK anertic Ant/ric Antarctic.*

*Chinese French Serbe-Great Swiss systems-team Warren comph one-big-happy  
 Family Smith Brown Jones Gilmour Robinson.*

~~ABCDEFGHIJKL MNOPQRSTU VWXYZ~~    ~~ABCDEFGHIJKL MNOPQRSTU VWXYZ~~  
~~ABCDEFGHIJKL MNOPQRSTU VWXYZ~~    0123456789

EDITORIAL STATEMENT

In accordance with the modern trend towards late delivery, DDF was not available to readers on its normal delivery date, Christmas Eve.

The Editor is confident that it will be appreciated that this change of policy (due in fact to pressure of what is sometimes, euphemistically, called 'work') is necessary if we are to keep up with the fast computer set.

Are you  
a  
born  
PROGRAMMER?



Take the Fred  
Drystone test  
and find  
out before its  
too late!



Do you get on  
with other  
Programmers?

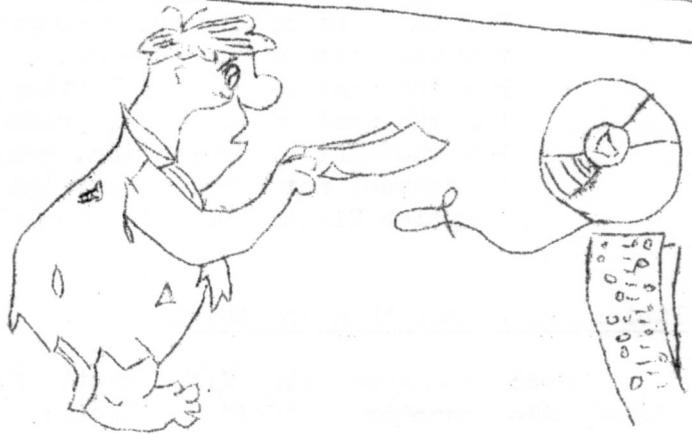
Yes

No

Do you know  
what COBOL  
is?

No

No



Can you stand up  
to Computer writers?

Yes

No

Is your attitude  
towards work  
contagious?

Yes

No



Do you put over your  
ideas with consummate  
tact and diplomacy?

Yes

No

Are you disillusioned and embittered?  
Is your outlook cynical and twisted?  
Answer the following questionnaire frankly.

- You are approached to write a compiler for an APL and given a sheet of paper headed "Final list of instruction codes". Do you
  - Make a spirited start.
  - Make a dispirited start.
  - Go away for three months.
  - Make a paper aeroplane.
- You have detected the 14th paper tape read fault and the e\*g\*n\*er says, for the 14th time, "If you give me the machine for ten minutes I can put it right", do you
  - Go away for ten minutes.
  - Go away and write a card read routine.
  - Go away and write a mag tape routine.
  - Go away and make a paper aeroplane.
- The chaps say that only in civilised and reasonable discussion can we hope to solve our problems. Do you
  - TALK
  - Shout.
  - Take the day off.
  - Make a paper aeroplane.
- They want to know when it will be finished and you haven't the least idea. Do you say
  - I haven't the least idea.
  - Next week.
  - Next week, subject to ...
  - Well, when I've finished making this...
- THEY send round a Memo saying that no member of the staff may take a day of his leave on February 29th next year. Do you
  - Ask your staff committee member to bring the matter up at the next meeting.
  - Approach the boss personally.
  - Take the day off on principle.
  - Make a paper aeroplane.
- You find yourself 3/4 mile from the nearest coffee machine. Do you
  - Walk 3/4 mile and ask Mrs R for a job number.
  - Drive there, applying for a petrol allowance.
  - Send someone else.
  - Make a paper aeroplane, and fly.

WOMEN'S PAGEThe Gentle Art of Filing

Filing is not a suitable occupation for people of a nervous disposition. In fact, it is not suitable for people of any disposition.

Notes for beginners - Is Filing rapidly becoming a Dying Art (hastened on its way by the writer)? Is it a Lost Art and is it joining the ranks of other lost arts? First - ask yourself if you are really cut out for Filing (no, dear, it has nothing to do with your shape - any shape will do).

Filing. Have you the ability to lose some vital letter, memo, document, or some other load of rubbish, in an Emergency? No, they don't really want it - they just want to know if you've still got it. Always say that you know exactly where it is. No, don't tell them you dug a hole and buried it - they worry so - be subtle. It wouldn't do to shatter their faith in you! Misfiling? This never happens. There is always a good reason why you put it there in the first place!

The Equipment. Needle, cotton, buttons of various sizes, spare braces, sharp finger nails, axe, sledge hammer, one free hand always, and two pairs of eyes - the latter preferably in the back of your head.

The System. This is the THING that everyone wants to put things into but they never know what it is or where it is - or if it is! Your chief will probably come to you gaily waving a bit of paper and say "Put this in the System". He has great confidence in you. He thinks you have some ingenious method of producing anything at a moment's notice - even expects you to produce that which hasn't even gone into the system. Politely, take it from him, act like the Expert you are supposed to be, don't argue - he thinks we have a system - he doesn't know - and he's happier not knowing. We don't want any trouble, and besides, he's got enough on his mind wondering what to put in it without worrying if there is one.

The Filing Cabinet. This is the Nerve Centre of any organisation, the necessary evil of the Business World - a work of art in metal - treat it as such. IT will not respond to such treatment as kicks, thumps, bumps or bangs - or harsh words. Treat it with respect - kindness, love, understanding. Use the utmost charm and tenderness. Do this and it will respond to your every whim - but - pull out three of its drawers all at the same time and the ruddy great thing will think nothing of falling on top of you and crushing you to death! METAL MONSTROSITY!!!  
N.B. Don't file in the bottom drawer if you are wearing a tight skirt. Wait until you are suitably dressed.

You now know all about the System, the Equipment, and the Filing Cabinet. If you still feel the urge to become a Filing Clerk, and that life holds nothing else for you, read on - but what follows is not for people of an extremely nervous disposition, Genteel Upbringing, or for those who have led a sheltered life.

Your Colleagues. Are you able to get out of awkward situations? In other words, can you run? I expect you think you are pretty good at it - forget it - this place is full of Herb Elliotts.

Getting News Around. This is always good for a laugh - yes, there will be times when you'll feel like laughing. Just tell someone SOMETHING IN CONFIDENCE. It works.

Telling Jokes. Don't tell any yourself, they wouldn't understand your kind. Now this is the tricky part. If they do tell you a joke and you don't laugh, they'll think you're sour, snooty, in fact a miserable b.... If you do laugh, they'll think you're anything but a lady, so - be subtle - smile and walk away - this way they'll think you're an idiot, but who cares?

Organising. Don't try to organise anything in the way of games, sport, etc.. I can tell you, you are among champions here,

Talking. Don't speak unless you have to - they'll twist anything you say out of all recognition. Good night and Good morning are OK - but watch it - they'll think of something for that soon.

Arguments, discussions. Avoid them - at first. They are all about sex, and no matter what your previous occupation was, you will know nothing at all about this subject for at least six months, after which time you will be in an admirable position to take part in any discussion. You will learn new words, and get new ideas. Avoid putting these into practice.

The Language. This may shock you at first, but watch it - they are so fussy here.

The Docket Room. To be avoided at all times. It sounds OK - but it isn't.

Tea-time. This is the artful part of the job. YOUR tea and YOUR coffee - even though you don't make it - is the best there is and at this particular time you are an ANGEL. In other words they allow you to get the tea and - wait for it - you are allowed a few minutes break to go and wash the cups. You are permitted to entertain the visitors. This means producing the best china (just blow the dust off first) and giving refreshments in the way of tea - but no conversation - they just get the tea, no sympathy!!

Advice. Don't get bitter, take it all on the chin, turn th other cheek, and all that. On second thoughts, don't turn the other cheek - any unusual movement might be taken as a signal to advance. Always remember that your main function (whilst in the Department) is - Filing.

Warning. After being employed as a Filing Clerk, you will no longer be eligible for work to do with the care of young children, or to attend church meetings, mothers meetings, etc., or to have the Vicar to tea.

Do you still wish to make filing your career? For all its faults it's not a bad job - it's just the money that's lousy.

~~~~~

#### This month's knitting patterns

The patterns are of course given in ALGOL 60, as defined by the revised report. For the purposes of this publication, code bodies are given in English: they would in practice be direct signals to an on-line knitting machine.

begin comment basic procedures first;

```

procedure cast on; ENGLISH cast on one stitch ALGOL;
procedure cast off; ENGLISH cast off one stitch ALGOL;
procedure knit; ENGLISH knit one ALGOL;
procedure purl; ENGLISH purl one ALGOL;
procedure increase; ENGLISH increase in the next stitch ALGOL;
procedure decrease; ENGLISH knit two together ALGOL;
procedure pattern; ENGLISH purl 3 together, keeping the stitches on the
                        needle, wool over needle, and purl 3 together
                        again into the same 3 stitches, slip the stitches
                        off the needle ALGOL;
procedure on; begin j := j + (if i > 0 then 1 else 0); r := r + 1; cast on end;
procedure off; begin j := j - (if i > 0 then 0 else 1); r := r - 1; cast off end;
procedure k; begin j := j + 1; knit end;
procedure p; begin j := j + 1; purl end;
procedure inc; begin j := j + (if i > 0 then 2 else -1); increase end;
procedure tog; begin j := j - (if i > 0 then -1 else 2); decrease end;
procedure pat; begin j := j + 3 * i; pattern end;
procedure turn; i := -i;
procedure start; begin i := 1; j := r := 0 end;
procedure K(n); value n; integer n; for s := 1 step 1 until n do k end;
procedure P(n); value n; integer n; for s := 1 step 1 until n do p end;
procedure ON(n); value n; integer n; for s := 1 step 1 until n do on end;
procedure OFF(n); value n; integer n; for s := 1 step 1 until n do off end;
procedure stst(n); value n; integer n; comment n rows of stocking stitch;
                        for s := 1 step 1 until n do begin for t := t while j > 1 & j < r do
                                begin if i > 0 then k else p end;
                                turn end;

```

(continued on next sheet)

```

procedure garter(n); value n; integer n; comment n rows of garter stitch;
  for s:= 1 step 1 until n do begin for t:=t while j>1 ^ j<r do k;
  turn end;
procedure odd; comment first or fifth row of pattern;
  begin P(3);
  for t:=t while j< r-6 do begin pat; P(9) end;
  pat; P(3); turn
  end;

```

integer i, j, r, s, t; comment the variable t exists only on account of that utterly preposterous side effect demanded by section 4.6.5 of the Report, that the controlled variable should be undefined after exhaustion of the for list - a brilliant example of tail wagging dog. I mean this;

```

BONNET: start; ON(93); turn;
  garter(4); stst(5); odd; garter(1);
  p; for t:=t while j< r-8 do begin pat; k; pat; P(5) end;
  pat; k; pat; p; turn;
  garter(1); odd; stst(3); garter(4); stst(36);
  for s:=1 step 1 until 6 do begin OFF(11); stst(1) end;
  stst(4);
  for s:=1 step 1 until 4 do begin tog;
  for t:=t while j>1 ^ j<r-1 do k;
  tog; turn;
  stst(5)
  end;
  stst(10);
  OFF(19);
comment end of bonnet;

```

.....

(Don't miss next month's thrilling instalment - Bootees and Gloves. And there's plenty more to follow. - Cynthia)

::::::::::

#### FOR THE LAYMAN

#### LEGOL

It has long been noticed that the standard mathematical languages are pretty useless when it comes to describing The Ordinary 'Appenings of Ordinary Folk. It therefore gives us great pleasure to announce the results of first experiments with a new language, which we have called LEGOL, and which has remedied this situation beyond repair.

The language LEGOL has, by its very nature, an incomplete syntax - if anyone says this is a virtue he must be a salesman - which means that any LEGOL translator must be constructed to decipher statements without any very evident guides to go by. (For a homely analogy, consider a chemist having to read prescriptions, or the reader of any computing journal such as the IBM...) So a LEGOL translator has three great Principles.

- (i) If a statement is decipherable according to the syntax, its validity is decided according to the syntax. This is the Principle of Always Deciding by Statute.
- (ii) If a statement is not decipherable according to the syntax, the translator finds if it has met the same statement before, and, if it has, makes the same decision on its validity as it did last time. This is known as the Principle of Bondage to Precedents, otherwise the Doctrine of Least Thought.
- (iii) If neither of these applies the translator makes a random decision. This is known as the Principle of Deciding According to the Evidence, otherwise the Doctrine of Strict Impartiality.

The astute reader will not have failed to notice that the term "statement" has not yet been defined. This needless to say is a defect of the syntax, since the term is not there mentioned: but it may be described in more normal terms as "the

application of an undefined function to various unknown operands, putting an arbitrary number of results in sundry meaningless destinations". It is therefore a familiar concept.

The development of the subject is not without interest. It was early found that any translator spent a lot of time looking for previous cases which might serve as precedents, and programmes were soon produced to "organise" or "optimise" this time. It was also found that these programmes soon needed, in their turn, programmes to organise them - this was only to be expected. It was also found that translators were apt to spend a lot of time deciding whether a particular precedent "just fitted" or "just didn't", and this soon led to the production of separate programmes whose duty was to convince the translator on these points.

Another feature was the speedy development of a closed shop mentality, whereby translators would only accept statements produced by other translators; this was felt to be getting rather out of hand, but as the translators simply stopped if their demands were not met there was no way out of it.

The results, however, fully make up for these troubles. So far we have had three statements definitely decided; of these one was invalid, one ambiguous, and one concerned the payment of fees to the relevant translator. It has been held by two translators out of three that the empty statement is not a statement, and by nearly all that the dummy statement is not a meaningless concept. It was further decided by one translator that the syntax was not defined by the syntax, that no precedent existed, and therefore that case (iii) held; a decision is still awaited on this as it has to be decided whether the statement of case (iii) is valid, and, if not, how it can be made valid. One translator will not accept statements which do not begin with a declaration; it has been held that "ME LUD" is a valid declaration under these circumstances. It remains for a translator to get into a closed output loop; the best so far achieved was described as "finite but unbounded". And a piece of output tape from one translator was accidentally read the wrong way through a flexowriter, and resulted in a considerable argument between the editors of certain learned journals over the right to print it.

So much we have achieved, and no doubt more lies ahead. It may be argued - indeed it has been, frequently and forcibly - that our results are not sufficient return for the work involved. But this is hardly the point. The only reason for any of these schemes is to prove them theoretically possible.

EEEEEEEEEEEEEEEEEE

#### LEARN WITH BOOK (pinched from Punch)

A new aid to rapid - almost magical - learning has made its appearance. Indications are that if it catches on all the electronic gadgets will be so much junk. The device is known as Built-in Orderly Organised Knowledge .... BOOK. .... It has no wires, no electric circuits to break down. No connection is needed to an electric power point. It is made entirely without mechanical parts to go wrong or need replacement.....How does this revolutionary, unbelievably easy invention work? Basically BOOK consists only of a large number of paper sheets. These may run to hundreds where BOOK covers a lengthy programme of information. Each sheet bears a number in sequence.....To make it even easier for the user to keep the sheets in the proper order they are held firmly in place by a special locking device called BINDING. Each sheet of paper presents the user with an information sequence in the form of symbols which he absorbs optically for automatic registration on the brain. When one sheet has been assimilated a flick of the finger turns it over and further information is found on the other side. By using both sides of the sheet in this way a great economy is effected ..... BOOK may be taken up at any time and used merely by opening it. Instantly it is ready for use. Nothing has to be connected up or switched on. The user may turn at will to any sheet, going backwards or forwards as he pleases. A sheet is provided near the beginning as a location finder for any required information sequence. A small accessory available at trifling cost is BOOKMARK. This enables the user to pick up his programme where he left off on the previous learning session. BOOKMARK is universal and may be used in any BOOK. ....no further upkeep cost; no batteries or wires are needed, since the motive power, thanks to an ingenious device patented by the makers, is supplied by the brain of the user. BOOK may be stored on handy shelves and for ease of reference the programme schedule is normally indicated on the back of the binding.....

A MYSTERY

There are two gates from the road into the Kildgrove factory. They are known as No 1 and No 2 respectively. The main factory has five bays, known as Nos 1,2,3,4,5. There are some huts, called A,B,C,D,E,F,G,H,... There are numerous telephones, each called by a three-digit (decimal) number. There are four "computing systems", called each by a combination of letters and digits - KDP10, KDF9, KDM2, and, so it is said, KDF6. There are several sections, identified by three-digit numbers beginning with 7. There are countless employees, each identified by a five digit integer.

There are three car parks, but these are different. They have NAMES. They are called, in descending order of age and ascending order of smartness, Southfields, Northfields, and Westfields. Why is this? What justification can there possibly be for this special distinction? Why are places in the car parks allocated, not according to any reasoned system, but by random choice - in fact by lottery?

The key to these fascinating mysteries can only be found after solving the even deeper mystery: What is it that these three car parks are respectively South, North, and West of?

Research has now begun. We are able tentatively to publish a preliminary account of some possibilities as to reasonable methods of approach to the first stages of the opening part of the investigation.

One might imagine that some sort of an answer might be found by reference to a map. But in the expressed opinion of the Director General of the Ordnance Survey, Chessington, Surrey, there is no point from which the carparks are respectively South, North, and West.

Could it be magnetic directions we are dealing with? After all, this is English Electric - and there is some connection between electricity and magnetism. According to the map, no - but we must not forget that Magnetic North is by no means constant in direction.

Experiment with a protractor shows us that a point satisfying the conditions can be found if Magnetic North is 12 degrees or more East. Reference to works on terrestrial magnetism will confirm that not since the time of the Spanish Armada has this been so. Unless, of course, the earth's field suffers such a local distortion in the vicinity of the factory. Could such a distortion be man-made, and maintained deliberately? Is that the secret of the sentry-box guarding the barbed-wire fence, and the enormous metal tower? Is there some sinister reason for maintaining a condition that only the alchemists of Tudor or even earlier times could have understood?

There is even more in the mystery. The points possibly satisfying the conditions are not within the factory area at all. They lie to the East - this is significant - of the offices of the personnel department, beyond the scrap metal bins, and at their centre is a small group of trees.

??????????????????

ACKNOWLEDGMENTS

The Editor wishes to acknowledge the great work done by the several contributors to this learned periodical in reducing his own necessary contributions to an all-time low. In particular, Cheshire County Library, for loaning "Studies in Lunar Topography", by GT, and "Topological Methods in Modern Map Making" by GP. presents

The Editor also ~~thinks~~ to all his readers the compliments of the season, and earnestly solicits material for the next bumper issue of DDT. Particularly from anyone who didn't get a mention this time.

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REGISTERED AS THIRD RATE MATTER BY THE GPO

F.G. Duncan  
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