with "If it's May, it must be Galway (Groups)".

We are also happy to report that the famous group theory program CAYLEY has now been implemented at U.C.G. This is a tremendously powerful program (about 4500 blocks - ¾ million lines of FORTRAN) which has taken over 10 years to develop. It can deal with computations in, e.g. finite presented groups, permutation groups, matrix groups, low index subgroups, character tables and has over 200 algorithms. It is used in some universities for undergraduate teaching of group theory - it has its own mathematical language and no knowledge of programming is required. We also hope to implement MATRIX soon on a trial basis. This is an undergraduate teaching aid developed by John Cannon and a group at Sydney (who are also responsible for CAYLEY). It is best described as a *laboratory tool* (and so is not a "package" as such) for mathematics and I understand that this particular program will include among others, Gaussian Elimination, eigenvalues-vectors, linear (in)dependence, simplex algorithm. Others being developed are NEWTON (calculus!), KOENIC (graph theory).

Ted Hurley

CONFERENCE ANNOUNCEMENTS

PROTEXT I

The First International Conference, Exhibition and Workshop on Text Processing Systems

Gresham Hotel, Dublin, Ireland
22 - 26 October, 1984

Organised by Professor John Miller, Trinity College, University of Dublin

Aims and Scope

These events aim to bring together a cross-section of people from business, industry and academia who share an interest in computer-aided text processing systems. Particular emphasis will be placed on the following areas:

* computer-aided generation of generalised copy (e.g. graphics, mathematical, non-English language)
* computer generated book-quality masters for print production
* interactive editing systems
* computer-aided typography
* human factors (e.g. the handicapped, the unions).

Both software and hardware aspects are included.

Conference (24 - 26 October 1984)

This will consider future developments and current research in both the hardware and software areas. Keynote speakers at the conference include:

Brian Kernighan (Bell Laboratories)
Pierre MacKay (University of Washington)
Brian Reid (Stanford University)

Vincent Quint (University of Grenoble and INRIA)
A.N. Other (Hewlett-Packard)

Several formal discussions may be held on controversial topics of current interest by protagonists of international repute (e.g. Whither typesetting?).

Workshop (22- 23 October 1984)

This will be concerned with state-of-the-art computer-aided text processing systems. Live demonstrations of actual text processing systems (including SCRIBE, TEX, TROFF and EDIMATH) will be presented and tutorials given on their use.

Exhibition (22 - 26 October 1984)

Companies marketing software and hardware related to computer-aided text processing systems will exhibit their products during the Workshop and Conference. It is expected that several new products will be announced at this exhibition.

Registration Fees

These cover entry to all technical sessions, a copy of the Workshop Lecture Notes/Conference Proceedings (as applicable), morning coffee, lunch and afternoon tea. There is no charge for associates of delegates, and they are welcome at all events in the Social Programme. They may not, however, attend any of the technical sessions or appear as joint authors on papers.

	Early US$	Late US$
Workshop only	250	295
Conference only	250	295
Workshop and Conference	350	395

The early rate applies to all fees received by 1st June 1984.

All full-time *bona fide* research students with a letter of introduction from their supervisor may claim a US$100 discount.

All correspondence should be addressed to:

PROTEXT I Organising Committee/Boole Press Ltd,
P.O. Box 5, 51 Sandycove Road,
Dun Laoghaire, Co. Dublin,
Ireland.

Announcing NASECODE IV

The Fourth International Conference
on the Numerical Analysis of Semiconductor Devices
and Integrated Circuits

19th to 21st June, 1985, in Dublin, Ireland
under the auspices of
the Numerical Analysis Group
and co-sponsored by the

Commission of the European Communities
Electron Devices Society of the IEEE
Institute for Numerical Computation and Analysis
*Technical Group on Semiconductor and Semiconductor Devices of the IECE
Irish Mathematical Society

* applied for

Contributed papers are solicited from engineers, physicists and mathematicians on any topic relevant to the numerical analysis, modelling and optimisation of electronic, opto-electronic and quantum electronic semiconductor devices and integrated circuits.

A special feature of the conference will be a number of public debates led by distinguished personalities holding different views on key technical issues.

Contributed Papers

THE DEADLINE FOR THE RECEIPT OF ABSTRACTS AND PRELIMINARY VERSIONS OF 20-MINUTE CONTRIBUTED PAPERS IS 1ST FEBRUARY, 1985.

Short Course

A Short Course of relevance to the Conference will be held in association with NASECODE IV on 17th and 18th June, 1985.

All publications associated with NASECODE I, NASECODE II and NASECODE III Conferences held in 1979, 1981 and 1983 respectively and the Lecture Notes of the NASECODE II and NASECODE III Short Courses are available from Boole Press Limited.

All correspondence concerning the Conference and/or Short Course should be addressed to:

NASECODE Organising Committee, c/o Boole Press Limited,
P.O. Box 5, 51 Sandycove Road, Dun Laoghaire, Co. Dublin.
Ireland.

WORDS

TRILLION. On 7 June the *Standard*, reporting on 'America's ballooning budget deficit,' wrote that Federal government spending last year was 'running at $1.5 trillion a year... (A trillion has 12 noughts)'. Twelve? Surely a trillion is a million times a million: 18 noughts. Then I remembered how in 1974 Mr Callaghan, then Prime Minister, had given his blessing in a parliamentary answer to the American billion (nine noughts) against ours (12 noughts).

The struggle has been going on for some time. According to the OED, two Frenchmen of the late 1400s and early 1500s, N. Chuquet and Etienne de la Roche, explained billion, trillion etc as 'successive powers of a million [i.e. six noughts for each jump], the trillion being the third power of a million ... as always used in England.' Then, in the mid-1600s, the 'erroneous custom' was established in France of 'calling a thousand millions a billion and a million millions a trillion, an entire perversion of the nomenclature of Chuquet and de la Roche, an error unfortunately followed by some in the US.'

Unfortunately or not, the Americans seem to be winning. Trillion with 12 noughts, says the forthcoming Vol. IV of A Supplement to the OED, 'is increasingly common in British usage.' (Incidentally, a centillion, a million to the power of 100, has - English style - 600 noughts, which would fill at least 12 of these lines.)

From *The Observer*, Sunday 17 June, 1984. (Compare with "Word Conservation", *I.M.S. Newsletter*, No. 7 (March 1983), page 88.