Conclusions

The approach developed in this paper of using a data base structure and a query language through which the user can execute a wide range of power system analysis programs in both an interactive and a batch mode, has proved to be effective in the planning and the operation of the South African Power Network.

This concept of computation has increased the productivit of engineering effort substantially and has permitted rapi analysis of system problems that were often solved without proper analysis due to the difficulty of reaching solutions within practical limits of time and effort.

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Conferences and courses

The fourth international conference on Software Engineering, sponsored by the IEEE Computer Society, the European Research Office, the Association for Computing Machinery and Gesellschaft für Informatik, will be held in Munich, Germany from 17–19 September 1979.

Engineering is a discipline that permits systematic application of pragmatic experience and scientific knowledge to create and operate systems that serve the purpose of mankind. In that spirit, software engineering is the collection of methods, procedures, techniques and tools which assist the process of specifying, developing and maintaining large programs and software systems.

The fourth international conference on Software Engineering will bring together researchers and practitioners to discuss the state of software engineering and its further progress. It is expected that the broad survey sessions will provide an overview of the software engineering field, why it emerged, where it now stands, where it should go, where it is going, its structure and what it has to offer.

Among the members of the programme committee are A. Ershov of the USSR, W. M. Turski of Poland, J. Buxton, D. Cook, M. A. Jackson and M. M. Lehman of the UK as well as representatives from Canada, France, Germany, Israel, Italy, Japan, Sweden and USA.

Further details are available from
Professor F. L. Bauer, Chairman
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Barer Strasse 38-40/5
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Professor M. M. Lehman,
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The 9th annual institute in computer science will be held at the University of California, Santa Cruz during July and August 1979.

From 9–20 July, an advanced course in computing systems reliability will be given by Brian Randell, Tom Anderson, W. C. Carter, J. J. Horning, P. M. Melliar-Smith, M. L. Shooman and others. This is a repeat of last summer's programme given at Newcastle upon Tyne.

Franklin DeRemer and Thomas Pennello will give a course on compiler construction from 23 July to 3 August, with David Gries giving an introduction to programming methodology from 6–10 August.

Programming Methodology will be the title of a lecture series from 13–24 August, with D. Gries, F. DeRemer, D. Knuth, J. W. Backus, R. M. Burstall, C. A. R. Hoare, O. J. Dahl, W. M. McKeeman, N. Wirth, J. Buxton, W. M. Turski, M. M. Lehman, E. W. Dijkstra, M. Jackson and B. Randell among the lecturers.

For a brochure write to,
Department CS-3, University of California Extension Santa Cruz, California 95064, USA
or phone Joleen Kelsey at (408) 429-2614.

A course on information systems, organisational choice and social values has been organised by EEC CNR CREST, to be held at the University of Pisa from 9–20 April 1979.

The course will review methodologies, experiences and developments related to the implementation of MIS both in private and public organisations. Subject areas which will be included are technologies (hardware and software) for the development of information systems, methods for analysing the systems, organisational implications. The socio-technical approach to the analysis, design and evaluation of MIS will be emphasised. The aim is to give participants the opportunity to understand all the relevant aspects of MIS design in a workshop environment.

The lectures will be given in English. The tutorial staff will include Enid Mumford, Frank Land, K. Nygaard, J. Peoncelle, J. Berleur, U. Briefs and H. Seckmann.

For further information, the detailed course programme and applications, write to the course director, Professor G. Travers, Istituto di Matematica Finanziaria, Via della Fagiola 7, Pisa, Italia before the end of February 1979.

A post-experience course on digital simulation applied to chemical reactor design, sponsored by the Institution of Chemical Engineers, will be held at the University of Bradford from 2–5 April, 1979.

The course adopts a novel dynamical approach to chemical reactor design, based on the use of an interactive digital simulation language with graphical display. Basic reactor topics include non-ideal mixing, stability and control. The application of the simulation techniques to complex tubular reactors, biochemical and polymerisation reactors and reactor-process interactions will also be discussed.

Digital simulation provides a *simple* and direct approach to system dynamics and is a technique with which all process engineers should be familiar. All that is required is the ability to express the model equations as simple programming statements; the calculation procedure being effected directly by the computer. The techniques are easy to learn and should be of general application. Ample time will be provided for practical work directly at the computer using prepared examples, unfortunately restricting attendance to 20. Any prior lack of computing experience will be no disadvantage.

Further details may be obtained from
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