

examined to see if it could be applied to the analysis of computer schemes.

On computer systems with many external interfaces, it has been found that theory could not be applied directly because:

- (a) to reduce the calculations to manageable proportions unrealistic simplifications would have to be made,
- (b) the statistical distribution of events in such schemes was of a type not handled by the published theories,

(c) the theory did not provide information on the computing characteristics during bursts of activity after a system disturbance (non-equilibrium points).

6. Acknowledgements

The work was carried out at the Central Electricity Research Laboratories and the paper is published by permission of the Central Electricity Generating Board.

References

- BREWER, C., CHARLES, G. F., PARISH, C. C. M., PREWETT, J. N., SALTHOUSE, D. C., and TERRY, B. J. (1968a). Performance of a Predictive automatic load-dispatching system, *Proc. IEE*, Vol. 115, No. 10, pp. 1577-1586.
- BREWER, C., FROST, J., and PARISH, C. C. M. (1968b). Control room in an experimental load-dispatching system for the power-supply industry, *Proc. IEE*, Vol. 115, No. 2, pp. 318-323.
- CHANG, W. (1970). Single Server Queuing, *IBM System Journal*, No. 1.
- COX, D. R., and SMITH, W. L. (1968). *Queues*, Methuen (London).
- FELLER, W. (1968). *An introduction to probability theory and its applications*, 1, Wiley International, New York.
- KLEINROCK, L., MONTEZ, R. R., and HZU, J. (1971). *Tight bounds on the average response time for time shared computer systems*, IFIP Congress, Ljubljana, Yugoslavia.
- PARISH, C. C. M. (1972). *Software for on-line computer aids in grid control*, Fourth Power Systems Computation Conference, Grenoble.
- PREWETT, J. N. (1972). *Applying algorithms to load-dispatching*, Computers in Power System Operation and Control IEE. Conf. Bournemouth.
- BISHOP, P., and PARISH, C. C. M. (1973). A job scheduler for computer-aided power system control, (to be published).
- PARISH, C. C. M., and WHITE, D. (1973). Simulation of the processing load in a computer-aided scheme, (to be published).

Short notices

The International Directory of Computer and Information System Services 1974, 1974; 636 pages. (Europa Publications, £8-00)

This directory is published for the Intergovernmental Bureau for Informatics in Italy. In the foreword the Director of IBI-ICC says that the purpose of the book is to help users of informatics to locate computer and information services which are available. It does not seem to have heard of either The British Computer Society, the National Computing Centre or the Association for Computing Machinery, besides listing personnel at companies who left years ago, and some companies that have ceased to exist.

Apart from these minor defects, it has a comprehensive listing of establishments broken down into National Centres (under which appears Computer Power), Educational and Training Institutions, Universities and Colleges, Government Establishments or Agencies, Research Institutions, Consultants, and Service Bureaux.

ICP Quarterly, a catalog of saleable computer software, published quarterly, \$100 per annum (in UK contact London Information (Rowse Muir) Ltd, Index House, Ascot, Berks SL5 7EU).

A comprehensive catalogue, in two volumes, giving systems related software (Volume 1) and applications software (Volume 2).

Information is presented under several headings, e.g. program description, alphabetical index, hardware index, etc.

The October 1974 edition is being placed in the BCS Library.

New Journals

International Journal of General Systems, edited by George J. Klir, published by Gordon and Breach Science Publishers. Contents of Volume 1, Number 1 (1974): Editorial, Obituaries: W. Ross Ashby and Ludwig von Bertalanffy.

Information flows in hierarchical systems, Roger C. Conant
A theory of system complexity, Arthur E. Ferdinand
Toward integration of two system theories by Mesarovic and Wymore, Sirajul Islam
Human Knowledge, The Role of Models, Metaphors, and Analogies, Danielle Mihram and G. Arthur Mihram
On the Design of Stable and Reliable Institutions, Robert Rosen
Economics and General Systems, Kenneth E. Boulding
The General Systems Depository, its Mission and Operation, Joseph V. Cornacchio

Engineering Optimization, edited by Andrew B. Templeman published by Gordon and Breach. Contents of Volume 1, number 1 (1974):

Engineering optimization—scope and aims, Andrew B. Templeman
The application of optimization techniques in the professional practice, V. P. Lane
The optimum design of concrete structures, D. Bond
Optimality conditions for trusses with nonzero minimum cross-sections, Geir A. Gunnlaugsson
Heuristic approaches to road network optimization, A. D. Pearman
The CIRIA optimization study of sewage treatment, K. Bowden and D. E. Wright
Michell framework for uniform load between fixed supports, W. S. Hemp