NOTICE: When government or other drawings, specifications or other data are used for any purpose other than in connection with a definitely related government procurement operation, the U. S. Government thereby incurs no responsibility, nor any obligation whatsoever; and the fact that the Government may have formulated, furnished, or in any way supplied the said drawings, specifications, or other data is not to be regarded by implication or otherwise as in any manner licensing the holder or any other person or corporation, or conveying any rights or permission to manufacture, use or sell any patented invention that may in any way be related thereto.
A BIBLIOGRAPHY ON THE USE OF SIMULATION IN MANAGEMENT ANALYSIS

MAR 6, 1963

10 November 1959

SYSTEM DEVELOPMENT CORPORATION SANTA MONICA, CALIF.
A BIBLIOGRAPHY ON THE USE OF SIMULATION IN MANAGEMENT ANALYSIS

by D. G. Malcolm

Introduction

Computer simulation, as a problem-solving technique, is now proving to be of increasing value as part of research and design methods directed towards attaining a better understanding and improved control of the operations of complex business and military organization. In System Simulation the computer is typically utilized in problem-solving associated with the specific tasks of designing better systems, understanding the workings of operative systems, and studying man-machine interactions.

Literature dealing with System Simulation is appearing more frequently, but still sporadic enough to warrant the collection here of a number of individual titles which have proved of special interest.

This Bibliography represents a fair sampling of simulation literature to date. For the convenience of the user, industrial and military applications have been kept separate. Finally, a number of titles on simulation training games and exercises have been included.

*Indebted to Joyce Olson of Booz, Allen, and Hamilton, Chicago, Ill., and William A. Stewart, System Development Corporation, for their assistance.
S U1, X A ION- INDUSTRIAL


COHEN, K. J., Determining the best possible inventory levels, Industrial Quality Control, 15:4-10, October 1958.


EMERY, J. C., Simulation Techniques in Inventory Control and Distribution, American Management Association, Special Report No. 10, 1956.

FESSLER, M. E., C. B. SAUNDERS, and J. D. STEELE, Proceedings of the National Symposium on Management Games, [Center for Research in Business, University of Kansas, May 1959].


DOBRYN, S., Let's pretend - a game for marketing men, Industrial Marketing, June 1958.


GREENBERGER, M., Computer Simulation of the United States Social Economy, Ph.D. Thesis, Harvard University, December 1957.


HOLLAND, E., Analog Simulation of an Economy Beginning to Develop, Massachusetts Institute of Technology, Center for International Studies, paper presented before the Econometric Society, Boston, August 26, 1958.


ISRAEL, D. R., Simulation techniques for the test and
evaluation of real-time computer programs, Association

JACKSON, J. R., Research in production scheduling, Proceedings
of the Eighth Annual Institute of Industrial Engineering,
University of California at Los Angeles, 1956, pp. 34-36.

------, Simulation research on job shop production, Naval

JACKSON, R. R. D., and D. G. NICKOLS, Economics of the
hiring of private wires in Great Britain; a simulation

JENNINGS, M. H., Computer simulation of peak hour bus
operation, Report of System Simulation Symposium, New York,

------, Loading and scheduling by simulation, Operations
Research Reconsidered, American Management Association,

------, and J. H. DICKINS, Computer simulation of peak hour
operations in a bus terminal, Management Science, 5:106-120,
October 1958.

JONES, H. G., and A. M. LEE, Monte Carlo methods in heavy
industry, Operational Research Quarterly, 6:106-116,
September 1955.

------, W. M. DAVIES and P. D. DICKERSON, The study of
materials handling systems by a lead-shot analog,
Journal of the Iron and Steel Institute, 180:255-262,
July 1955.

KOZNETSKY, G., and P. KIRCHER, Electronic Computers and Manage-

LAKIN, H. M., Computer synthesis can simplify roll-flow setup, American Machinist, 103:116-117, June 1959.


, The Use of Simulation in Management Analysis -
A Survey and Bibliography, SP-88, System Development
Corp., Santa Monica, 1958.

, ed., Report of System Simulation Symposium,
[Co-sponsored by AIE, ORSA, and TIMS, New York],

MARTIN, E. W., Jr., The widening potential of the computer,

MINAS, J. S., and L. G. MITTEN, Hub operation scheduling

MOREHOUSE, N. F., R. H. STROTZ, and S. J. HORWITZ, An
electro-analog method for investigating problems in
economic dynamics: inventory oscillations, Econometrica,
18:313-328, October 1950.

MORGENSTERN, O., Experiment and large scale computation in
economics, Economic Activity Analysis, Oskar MORGENSTERN,

MORSE, P. M., The Value of War-Gaming Methods in Non-
Military Problems, Operations Research Society of
America, Third Annual Meeting, November 1954.

MOSHMAN, J., Application of sequential estimation to
computer simulation and Monte-Carlo procedures,
Association for Computing Machinery Journal, 5:343-
357, October 1958.

NAAR, J., Simulation of Vehicular Flow, Civil Engineering
Department, Massachusetts Institute of Technology,

NORMAN, R. A., Operations research in business system
analysis - a realistic appraisal, American Management
Association - Report No. 10 - Operations Research
Reconsidered.

PAUL, R. J. A., Analogue simulation in system design, Control, 1:276-278, December 1958.


ROSENSTIEHL, P., La simulation - une méthode scientifique de recherche adaptée à l'étude des systèmes dynamiques de structure complexe [Simulation - a scientific method of research designed for the study of complex dynamic systems], Automation (Paris), 5:73, 75-79, March 1959.


YANCE, J. V., *Simulation of a Model of Production and Prices (Shoe Model 2)*, paper presented before the Econometric Society, Boston, August 1958.

SIMULATION-MILITARY


United States Navy, Symposium III on Simulation and Computing Techniques, BuAer and NADC, New York, October 1953.


GAMES-INDUSTRIAL


———, UCLA Executive Game No. 1: Computational Model, Management Sciences Research Project, Discussion Paper No. 64, University of California at Los Angeles, February 1958.


GAMES-MILITARY


———, War games and operations research, Philosophy of Science, Vol. 22, No. 4, October 1955.

HAMBURGER, W., Monopologs, An Inventory Management Game, The RAND Corporation, RM-1579, Santa Monica, August 1955.


REHKOP, J., Experience with the Management-Decision Simulation Game - Monopologs, The RAND Corporation, P-1131, Santa Monica, July 1957.


DM: jck
System Development Corporation,
Santa Monica, California
BIBLIOGRAPHY ON THE USE OF
SIMULATION IN MANAGEMENT ANALYSIS.
Scientific rept., SP-126, by
Unclassified report

DESCRIPTORS: Bibliographies. Simulation.

Revises the bibliography appended to
SP-88 (The Use of Simulation in Management
Analysis -- A Survey and Bibliography, by