BIBLIOGRAPHY FOR KNOWLEDGE REPRESENTATION

MERLIN


PRODUCTION SYSTEMS


Uses production system BG.


Describes in complete detail a Floyd production system for realizing the syntax phase of an ALGOL 60 compiler in regular use on the G20 at Carnegie Institute of Technology (1960's).


Proposed (as a purely descriptive notation, not a programming language) a production system for handling syntax analysis.


Models interaction in a three man bargaining situation in terms of a set of productions. Copies of thesis not available except through University Microfilms.


Chap. 1 is a general introduction to Markov Algorithms, which is used to introduce many basic programming concepts. Chap. 2 also contains an example of a Floyd-Evans production system.
for parsing.

Gascon, J., and G. Baylor, B.G. Manual MCP #13, Department of Psychologie, Universite de Montreal, July 1973. BG is a simple production system designed specifically for weight seriation. It is coded in Lisp.


Klahr, D., Production systems for Quantification, Unpublished working paper, Graduate School of Industrial Administration, Carnegie-Mellon University, 1972.


Klahr, D., A production system for counting, subitizing and adding. In W. G. Chase (ed.), Visual Information Processing, Academic Press, 1973a, pp 527-546. This paper is an attempt to put in production system form some models described in D. Klahr Quantification processes in the same volume.


Minsky, M., Computation: Finite and Infinite Machines, Prentice-Hall, 1967. Chap. 12 is on Post production systems, which are a simple form of production systems used mostly for the analysis of computability.

A summary of Moran (1974)


Early version of production systems for cryptarithmetic.


Introduction to computer production system, PSG. (Contains a PS for cryptarithmetic as an example.) Explores a particular task of stimulus encoding to see how production systems would handle it.


Basic introductory paper on productions systems as models of the human immediate processor. Uses PSG. Contains detailed treatment of Sternberg paradigm.


A short working paper consisting entirely of production systems and example runs for a model described in a talk to Math Psychology Meeting, Montreal Sep 73. Models Sternberg (as in Newell 1973a) and some elementary arithmetic tasks (inequalities, additions, multiplication). Done with PSG with STM-order for conflict resolution.


First use of production system as psychological model, in an analysis of chess.


Contains an extensive general treatment of productions in the context of problem solving. Includes detailed treatment of cryptarithmetic task. Much general background on information processing theories. Incorporates both Newell and Simon (1965) and Nowell (1967).


Uses production systems to model length seriation behavior of children. Detailed treatment of non-verbal (i.e., TV) protocols. Not yet available.


PROTOCOL ANALYSIS


HAM


ELINOR


TEACHABLE LANGUAGE COMPREHENDER (TLC)


FRAME-SYSTEMS


Winograd, T., Five lectures on artificial intelligence. AI Memo No. 246, Computer Science Department, Stanford University, September, 1974

MYCIN


Shortliffe, E. H., Davis, R., Axline, S., Buchanan, B., Green, C., and Cohen, S., Computer-based consultations in clinical therapeutics: exploration and rule acquisition capabilities of the MYCIN system. Stanford School of Medicine, Division of Clinical Pharmacology, May, 1974.


CONCEPTUAL DEPENDENCY


Goldman, N. M., Computer generation of natural language from a deep conceptual base. Centro di Documentazione della Fondazione Dalle Molle per gli studi linguistici e di comunicazione internazionale,

Heidorn, George E., Natural language inputs to a simulation programming system. Information Systems Program of the Office of Naval Research, Naval Postgraduate Studies, Monterey, California, 1963.


PROcedural Embedding


PLANNER/QA4


ACTOR FORMALISM


SEMANTIC NETWORKS/MISCELLANEOUS


Intelligence, 1973, pp. 344-351.


HEARSAY SPEECH SYSTEM


Erman, L. D., and Reddy, D. R., Speech recognition in a telephone


Communication and Processsing, Boston, 1972, pp. 334-337.


FORMAL REPRESENTATION OF RULES


Finley, M. R., Jr., An experimental study of the formation and development of Hebbian cell assemblies by means of a neural network


Uhr, L., and Vossler, C., A pattern-recognition program that