

PACKAGE ID - 001089IBMPC00 PAGES

KWIC TITLE - Procurement Agent Guided Expert System

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LIMITATION CODE -UNL **AUDIENCE CODE** - UNL

COMPLETION DATE - 03/01/1996 **PUBLICATION DATE** - 03/01/1996

DESCRIPTION - Menu-driven expert system designed to produce customized, professionally-formatted, contractual documents in 5 minutes or less. Prior to PAGES, Procurement Agents (PA's) spent up to 2 hours manually editing procurement documents, e.g., Requests for Proposals, Subcontracts, Master Task Agreements. This resulted in inconsistent application of rules and regulations, human error, excessive clerical effort, and inconsistent document content and format. Implementation of PAGES solved these problems by providing a time-saving universal method of document production, while ensuring consistent application of rules and regulations, and standardized formats. The system operates in two simple steps (1) Query and (2) Build. The Query phase includes customized menus, programmed in a hierarchical logic structure, designed to minimize the user's interface with the system. (For example, if the user selected goods as the acquisition type, questions pertaining to services would not be displayed). This multi-dimensional modeling approach ensures that the system prompts are relevant to the user's scenario. After spending 2-3 minutes answering questions (by keystroke response), the system automatically builds the required document(s), by retrieving and editing applicable form(s), inserting text, and maintaining proper formatting.

PACKAGE CONTENTS - Media Directory; Software Abstract; Instructions (2 pages); Media Includes Source Code;

SOURCE CODE INCLUDED? - Yes

MEDIA QUANTITY - 6 3.5 Diskettes

METHOD OF SOLUTION - Implemented a three step process: (1) established the knowledge base, by identifying all possible scenarios and relevant applicability criteria; (2) designed the query logic; and (3) computerized the system. The query logic was completed by drafting questions based on the applicability criteria in step 1, assigning a unique variable name to each question, analyzing dependent relationships and partitioning output into fragments (files). A master document was then scripted with mathematical algorithms that relate variable contents, or combinations thereof, to produce the defined section of output. To computerize the system, two sets of files were created; text and macro. Outputs defined by filename, were formatted and saved as data to be

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METHOD OF SOLUTION - (CONT) retrived into the final document. Macro files include those programmed to prompt the user (based on the query logic) and build the document (based on the scripted master document).

COMPUTER - IBM PC

OPERATING SYSTEMS - DOS

PROGRAMMING LANGUAGES - WordPerfect 5.1 Macros

SOFTWARE LIMITATIONS - Non-database environment prevents the ability to store separate variable contents for each execution, i.e., the variable contents change with each execution. The software does not include the capability for the user to move to a previous question, if it was answered incorrectly.

SOURCE CODE AVAILABLE (Y/N) - Y

UNIQUE FEATURES - Ensures consistent compliance to rules and regulations, increases productivity, simple to operate. Multi-dimensional logic structure accomodates change easily, without the need for programming.

OTHER PROG/OPER SYS INFO - In WordPerfect 5.1, press the Alt-F10 key (Macro) followed by PAGES. The system will then automatically prompt the user with menus. Controls are built such that only displayed menu items can be displayed, e.g., a Yes/No question will only allow a Y or N. Menus include helpful notes, which are automatically displayed to assist the user. After answering all questions, the system creates the output by retrieving applicable text files (from the network), inserting data, formatting, and automatically saving it under a unique network directory.

HARDWARE REQS - All files are WordPerfect 5.1 text or macro files with a total size of approximately 8 MB.

TIME REQUIREMENTS - 3-5 minutes

ABSTRACT STATUS - Submitted 4/23/96. Released screened 6/17/96.

SUBJECT CLASS CODE - M

KEYWORDS -

COMPUTER PROGRAM DOCUMENTATION
P CODES
EXPERT SYSTEMS
PROCUREMENT
DATA PROCESSING
MATHEMATICAL LOGIC
QUALITY ASSURANCE

E S T S C
ENERGY SCIENCE & TECHNOLOGY SOFTWARE CENTER
SOFTWARE ABSTRACT

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STANDARDIZATION

EDB SUBJECT CATEGORIES -
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SPONSOR - DOE/EM

PACKAGE TYPE - SCREENED