

MUGLIB Software Fits Many User Needs

by Ed Hinkle

MUGLIB software is available to both members and nonmembers of the M Technology Association.

Software available through MUGLIB is donated to MTA by members of the M community. We distribute it as is, unsupported. Some of this software is well-documented and tested, some is not. Some is implementation-specific, some is not. If you have software you could contribute to MUGLIB, contact me at the MTA office (301-431-4070).

MUGLIB 15—VA FileMan Utilities

MUGLIB 15 contains two VA FileMan utilities, Electronic Data Dictionary and Header Line Processor.

EDD—Electronic Data Dictionary Version 3.0, by David Bolduc

The Electronic Data Dictionary is an easy-to-use utility for examining the Data Dictionaries of VA FileMan files and makes this (sometimes tedious) task almost trivial.

EDD's options include:

- Cross References—a listing of all the cross references for a file and whether they can be used as look-ups.
- Pointers to this file—lists all the files that point to this file.
- Pointers from this file—lists all the fields in a file that are pointers, and the files they point to.
- Groups—lists all the field groups, the shorthand way for you to call up several fields at once for Print or Entry/Edit purposes.
- Trace a field—displays the pathway to fields that are descendant from a multiple field.
- Individual field summary—lists the contents of the Data Dictionary for a selected field.
- Field Global location—lists all fields and their global location.
- Templates—lists Print, Sort, and Input templates.
- File description—describes (in narrative) the selected file.
- List Globals in ASCII order—lists your system's globals sorted in ASCII order, and includes file number and name for each file in each global.

Header Line Processor Version 11.1, by Greg Shorr

VA FileMan is an excellent tool for generating reports, but the process of "laying out" a standard columnar-style report can be tedious. Specifically, there is no convenient method to construct the header line that determines the overall appearance of the report. Knowledge of special report generation syntax is required. Existing formats can only be changed by starting from scratch or by repeatedly editing a print template. Most impor-

tantly, you cannot see what the header line will look like until it is printed. As a result, it is very difficult to "shape" the finished product by successive refinement.

The Header Line Processor enables you to interactively define and iteratively revise the header line of a columnar-style (vertical format) VA FileMan report. It isn't necessary to know VA FileMan's report generation syntax or to respond to any "THEN PRINT FIELD" queries. You can develop prototype reports, make incremental refinements without having to start from scratch, and store the finished product in a print template.

The Header Line Processor will only run in a standard Kernel environment; it requires Kernel 6.0 (or higher).

MUGLIB 16—NOUS Version 1.034

NOUS is an extension of ANS MUMPS that contains Prolog features. Prolog is an easy-to-learn but powerful language designed for logic programming and is especially suited for artificial intelligence applications. NOUS contains examples of applications that take advantage of this MUMPS-Prolog union.

Logic programming differs from traditional programming because it is declarative. Logic programs consist of facts and rules which relate the facts. This means that a program is

written by describing what is known and what is to be found out, rather than by having to describe all the steps in the computation.

This MUMPS-Prolog marriage provides friendly knowledge management through Prolog, as well as providing, in MUMPS, capabilities which a pure, logic-only Prolog lacks—data preparation, setting and killing of data, powerful and easy-to-use input/output facilities, and iterative execution.

The NOUS software package contains a prototype tutorial program driver which guides you through a course on NOUS, basically following the chapters of Clocksin and Mellish's popular book, *Programming in Prolog*. Forty programming examples are included.

Version 1.034 runs under MS-DOS V.2.1 or V.3.1 (other operating systems have not been tested). There should be at least a 300K-byte user area after loading MS-DOS. Our thanks to Dr. Ichiro Wakai of MUG-Japan for making NOUS 1.034 available to MTA.

MUGLIB 19

MUGLIB 19 contains VA FileMan utilities for user security and I/O handling when operating outside of the Kernel environment, and a %INDEX cross-reference utility program.

Kernel software (which includes VA FileMan) contains routines and several files which make VA FileMan easier to use—ZIS routines and DEVICE and TERMINAL TYPE files. Several people who are operating VA FileMan without benefit of the Kernel environment have mentioned that it took over an hour to write a version of the Kernel's %ZIS routine (with guidance from the "VA FileMan Programmer's Manual") so that VA FileMan could handle the I/O calls to all their devices. I've included these files and routines, from Kernel version 7, on this disk so that, if you have VA FileMan without the Kernel, it will be a little easier to set up and use.

- The ZIS routines, together with the DEVICE and TERMINAL TYPE

files, will make it easy to set up I/O parameters and select I/O devices.

- The TERMINAL TYPE file comes loaded with the I/O parameters of over 140 types of I/O devices.
- The routines on this disk also contain %INDEX, a programmer's utility to cross-reference a routine or package of routines. It lists all local, global, and naked global references in a routine; lists all references to tags within a routine; lists all external references to other routines; checks for syntax errors; and lists all routines which invoke, or are invoked by, a particular routine. This version of %INDEX is included in the Kernel.

MUGLIB 15, 16, and 19 are available on 5 1/4" or 3 1/2" disks at \$12 each for MTA members and \$22 each for nonmembers. **M**

Ed Hinkle handles computer operations for the M Technology Association.

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