PACKAGE ID - 001328MLTPL00 XMGR5*

KWIC TITLE - Import Manipulate Plot RELAP5/MOD3 Data

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

COMPLETION DATE - 07/01/1998 **PUBLICATION DATE -** 07/01/1998

DESCRIPTION - XMGR5 was derived from an XY plotting tool called ACE/gr, which is copyrighted by Paul J. Turner and in the public domain. The interactive version of ACE/GR is xmgr, and includes a graphical interface to the X-windows system. Enhancements to xmgr have been developed which import, manipualate, and plot data from RELAP/MOD3, MELCOR, FRAPCON, and SINDA codes, and NRC databank files. capabilities, include two-phase property table lookup functions, an equation interpreter, arithmetic library functions, and units conversion. Plot titles, labels, legends, and narrative can be displayed using Latin or Cyrillic alphabets.

SOURCE CODE INCLUDED? - Yes

MEDIA QUANTITY - Media Directory; Software Abstract; Media Includes source Code, User's Guide;/1 CD Rom

METHOD OF SOLUTION - XMGR5 reads binary data from plot-restart files generated by RELAP5/MOD3 or other codes, and stores information in internal vectors, where it can be transformed using arithmetical manipulations and plotted in a graphical window. Ascii data can also be read directly as XY pairs or in a block format. a parser can read and interpret equations contained in script files, and store the results in vectors for later plotting. XMBR5 is interactive and menu-driven, with an X-windows system graphical interface coded using the Motif toolkit. Internet browser software (Mosaic or Netscape) is used for the help viewer.

COMPUTER - MLT-PLTFM

OPERATING SYSTEMS - UNIX, LINUX

PROGRAMMING LANGUAGES - ANSI C.

SOFTWARE LIMITATIONS - A maximum of 10 graphs can be displayed simultaneously with a maximum of 30 plot vectors per graph. The number of points per vector is set to 20000, but is limited by computer memory availability.

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SOURCE CODE AVAILABLE (Y/N) - Y

UNIQUE FEATURES - The inteface with RELAP%/MOD3 and other codes affords a unique user convenience. The menu-driven interface to X-windows is user-friendly and versatile, and allows rapid analysis and comparison of results from various sources. The script language permits automation of repetitive plots and reproducibility of results for quality control or audit purposes.

RELATED SOFTWARE - The code package comes with a file translator, R2DMX, that reads the RELAP5/MOD3 plot-restart file and writes the plot channel information in a platform-independent binary format.

OTHER PROG/OPER SYS INFO - Standard ANSI C file naming conventions are used. file.h Source header file; file.c Source code file written in ANSI C; file.f Source code file written in FORTRAN 77; file.o Object files; xmgr executable file; Makefile script to build the xmgr executable module. Other files. xmgrrc run commands file containing various plot window attributes; file.par parameter file containing the same information as xmgrrc; examples subdirectory containing ACE/gr sample problems; file.html internet browser file; file.ps Postscript output file; XMGR5.pdf XMGR5 user's manual.

HARDWARE REQS - Requires Motif toolkit or Lesstif (Free Software Foundation) for installation. Also requires the environmental library file named envrl.a and the file containing the two-phase fluid property information (these files are available from the RELAP5/MOD3 installation). Printing Cyrillic alphabet characters to postscript printer requires Ghostscript (Free Software Foundation) and associated Cyrillic fonts.

TIME REQUIREMENTS - NA

ABSTRACT STATUS - Released AS-IS 3/16/2000

SUBJECT CLASS CODE - Z

KEYWORDS -
COMPUTER PROGRAM DOCUMENTATION
X CODES
DATA

EDB SUBJECT CATEGORIES -
990200

SPONSOR - DOE

PACKAGE TYPE - AS - IS