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To: Distribution

From: Roy Planalp, Bob May

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Subject: A Utility to Restore GCOS Files
            To the Multics Storage System

Introduction:

    There is need for a program to restore a GCOS FMS (File
Management Supervisor, formerly FILSYS) USER SAVE tape into the
Multics Storage System hierarchy. This MTB describes a facility
to perform this function.

General Description:

    The program is able to restore a GCOS catalog/file
structure, creating a Multics directory for each catalog and a
segment (or MSF) for each file. The contents of the file are
loaded exactly "as is" into the segment. Additionally, the FMS
cataloging information (permissions, IDS attributes, etc.) for
each entry is maintained. Permissions are mapped into Multics
ACLs, and attributes are set as added names on the branch for
that entry (See MTB 393, GCOS TSS). Hopefully, at a later date,
the attribute information will be incorporated into the directory
branch for each entry by means of a general "property list"
mechanism.

    The command description is complete for general RESTORE
operations; the initial implementation will do only a simple
user RESTORE using the -restore control_arg.

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Name: gcos_fms, gfms

     The gcos_fms command performs certain functions of the GCOS
File Management Supervisor (FMS) from Multics command level.
Only one user's User Master Catalog (UMC) can be restored from a
single USER SAVE tape per invocation.

Usage

     gcos_fms -volume volume_id {-control_args}

where:

1.   -volume volume_id
           is the name of the FMS SAVE tape volume.

2.   control_args
           can be chosen from the following:

      -control_file path, -cf path
           gives the pathname of an optional control file that
           contains FMS directives. The syntax of the control
           file is identical to that of the directives that
           follow the $FILSYS card in a FILSYS activity except
           that lowercase ASCII characters are used in place of
           uppercase BCD (refer to   the GCOS File Management
           Supervisor (FMS) manual, Order Number DD45).   The
           entryname of the control file must have a gfms suffix
           The suffix may be omitted in the command line. The
           -control_file and -restore .control_args may not be
           used together in the same command invocation.

           The following GCOS directive is allowed:
             restore (must be given)

           The following options to this directive are allowed:
             listopt
             doonly
             dontdo
             since

        -set_smc_dir_mode path, -ssdm path
        -set_umc_dir_mode, -sudm
        -set_working_dir_mode, -swdm
        -set_home_dir_mode, -shdm
        -reset_dir_mode, -rsdm

Refer to "Mapping of File Strings to Pathnames" in Section I (of the GCOS Environment Simulator Manual, AN05, update for MR7.0) for a description of these control arguments.

For example, if the argument used is

-set_smc_dir_mode >udd>FileDev

then a file J.P.JONES/WORK will have the following Multics pathname:

>udd>FileDev>j.p.jones>work

-check, -ck
causes no action to be performed on the storage system; however, the report file that would have resulted from the execution of the command is written, and the control file is checked for syntax. This is an effective way of producing a restore map without actually doing the restore.

-output_file path, -of path
writes the report from the execution of the command to a segment specified by path. Error messages are written to the file as well as error_output. If this argument is not specified, the report is written to to the user_output switch.

-brief, -of
does not write the report or the tape information line (see Note below).

-restore umc_name, -rest umc_name
perform the FMS USER RESTORE function on the UMC umc_name. This argument must be used if no control_file argument is given. The tape used must be a USER SAVE.

Note

The command prints a line at the user's console identifying the save type and date written. This output is inhibited with the -brief control_arg.