MULTICS Technical Bulletin

To: MTB Distribution
From: A.R. Downing
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Subject: Multics MR8.0--copy_dump_tape/verify_tape_copy

INTRODUCTION

The purpose of this MTB is to describe the proposed software for producing and verifying dump tape copies. It is intended that the new package essentially duplicate the functionality of the current package. The current package has short comings in design and maintainability, but provides the desired functionality for producing release tape copies. The requirement to upgrade the old software stems from the fact that the currently used package is written in a style and fashion which no longer meets Multics coding standards for maintainability or support. For example, the current implementation utilizes the old tape_dim, and the obsolete ios_i/o interface.

The new implementation will utilize the tape_mult_dim, and the iox_i/o interface. The use of iox_ and tape_mult_ is in keeping with current Multics supported software standards.

FUNCTION

The copy_dump_tape command makes tape copies of an original dump tape called the master. The command copies files onto as many reels of tape as is necessary. If an end of tape condition occurs while a file is being copied, then that file is rewritten at the beginning of the next tape reel.

The verify_tape_copy command compares the tape copies against the master tape or against any of the other copies made from the master tape.

Both copy_dump_tape and verify_tape_copy process one record at a time from each of the two reels mounted. Copy_dump_tape reads a record and then immediately writes out onto the copy reel currently mounted. Verify_tape_copy reads a record from each tape and compares them before going on to the next pair. Temporary buffers are created in the user's working directory. Records are read into, and written from these temporary buffers. When the tape copying or verifying is completed, the temporary buffers are deleted from the user's working directory. There must be sufficient quota on that directory to permit the growth of each of the two buffers to 255 records to handle the largest possible segments. Both commands are provided with cleanup handlers to

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restore the user's process as is the requirement of all supported Multics commands and tools.
Name: copy_dump_tape, cdt

This command provides the method to generate tape copies of an original master tape.

Usage

    copy_dump_tape {control_args}

where control_args are selected from -in or -out. If -in or -out is not provided, the command will query the user for tape labels. For example: copy_dump_tape -in 11 12 13 -out 01 02 03
Name: verify_tape_copy, vtc

This command provides the method to verify tape copies of an original master tape.

Usage

verify_tape_copy {-control_args}

where control_args are selected from -master or -copy. If -master or -copy are not specified, the user is queried for the tape labels of the master and copy tapes. For example:

verify_tape_copy -master M1 M2 M3 -copy C1 C2 C3