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ABSTRACT and CONTENTS

This document specifies the calling and processing conventions for programs called by the utility. The information is sufficient to write any command.

1. Command Names

A command is a program image file (see PIF/S-21) of a specified type. Thus any MICS program may be run as a command if subsequent conventions are followed. The utility expects the program file-type to be one of 'TCMD' or 'PCMD' for temporary and permanent commands. See document CMP/W-6 for the distinction.

2. Standard Entry Points

The first three sub-process entry points have a standard meaning. Entry point 0 is used for the sub-process trap entry. Entry point 1 is used for interrupt entry. Entry point 2 is the initial entry point, and entry point 3 is the continuation point. Other entry points may be used freely.

3. Use of Access Keys and Capabilities

When a file is ATTACHED, the user number of the MIB in which the file is found is copied to the UNO field of the new sub-process if CUNF is non-zero. This gives the sub-process the capabilities of the file's owner, including access to other files in the same MIB. The utility normally calls a command with its TAK set to the user number of the process (PRUNO) and COPYTAK set. Thus the called sub-process can copy its caller's TAK to access the user's files.

For unusually privileged programs, this combination of access keys provides all the power needed to unlock the system. The privileged program using its owner's access key can perform its task without giving the program's caller any of its powers. The program can also use its caller's TAK to determine just what access the caller has to the program's services.