

To: Distribution
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Date: June 1, 1975
Subject: New Version of the Help Command

INTRODUCTION

The help command currently installed in Multics provides users with sequential access to an info segment named in the command invocation. The data base of info segments used with help now has many gaps and reflects the careless application of many different conventions.

There have been several proposals for new versions of help which would allow the user to search the info segment by context or to search for particular keywords. The peruse_text command was an attempt to allow the user non-sequential access to an information data base. Partly because of the difficulty of structuring and maintaining the data base, the current collection of pt segments is very out of date. At MIT, an author-maintained command, "list_help" has been installed which lists the names of info segments which contain a given character string.

In the time since the help command was first written, it has become apparent that making the block-delimiting character non-printing was a bad idea. The use of the 006 character to separate blocks was nice in that one could look at the whole segment as text, with print or dprint, but the hard copy then did not show where the command would pause, which made auditing of modifications to info segments difficult. With MCS, the 006 character prints, but it looks ugly.

This document proposes a new version of the help command and a new format for info segments designed to remedy the problems described above, and to provide the system with a facility which allows the user quick and concise access to the answer to his question.

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NEW_HELP_COMMAND

The new help command has the following new features:

1. The command accepts the star convention for the names of info segments.
2. The block-delimiting character is an empty line, instead of the 006 character.
3. The user may ask help to search for a paragraph containing given character strings.
4. If a paragraph starts with a phrase followed by a colon, help assumes that this is the title of a section. The section title is used in the query, and can be searched for. An example of the new query format is:

7 lines titled Arguments follow. More help?
If searching for both strings and paragraphs is requested, paragraph search is done first.

5. When the user is asked "More help?" the reply may be one of

yes
no
quit
rest
skip
search xxx yyy
section SSS

Searching in any invocation of help on an info segment goes forward only.

The new help command has a special check for 006 characters; if the info segment has any, it is treated like an old-style info segment.

INFO_SEGMENTS

New rules for the construction of info segments accompany the new help command.

The Syntax of Info Segments

There are three kinds of info segments: command descriptions, subroutine descriptions, and all others. Rules for the first two types are strict so that the user can search efficiently for particular items.

TITLE

Some rules apply to all three types of info segments. The first line in every info segment must be a vrief title line, beginning with the date of the last modification. This line should be appropriate for a table of contents; for command or subroutine descriptions it will give the name(s) of the program, including abbreviations.

PARAGRAPHS

Info segments consist of a series of paragraphs separated by empty lines. The help command pauses at the end of every paragraph and asks, "More help?" so paragraphs should be neither too long, nfor too short. Ten lines is the recommended maximum length for most paragraphs.

SECTIONS

A section of an info segment consists of one or more paragraphs grouped under a title. The title is on the first line of the section; it ends with a colon, and is followed by the rest of the first paragraph. Subsequent paragraphs in the section have no titles, that is, no colon is allowed on the first line or the first line must begin with a space. The help command allows the user to print only a specified section of an info segment, or to obtain a list of the section titles in an info segment.

COMMAND DESCRIPTIONS

For command descriptions, the following sections must be present:

Function
Syntax

If the command has arguments or control arguments then the following sections are required:

Arguments
Control Arguments

If other sections are necessary they may be provided. The following names may be used:

Notes
Examples
References

Other section names may be used only with the permission of the info segment censor.

The "Function" section should be a terse one- or two-line description of what the command does.

The "Syntax" section gives a sample invocation of the command.

The "Arguments" section gives a one-line description of each argument to the command. The "Control Arguments" section gives a one-line description of each control argument. If an argument is too complicated to explain in one line, or if the command takes special action when an argument is not specified, put "See Notes" or "See Section" at the end of the line and add a longer paragraph or section at the bottom of the segment.

Subroutine Descriptions

For subroutines, the following sections are required:

Function
Syntax
Arguments

where the "Syntax" and "Arguments" sections are provided for each entry point.

EXAMPLE

The following is an example of a new-style info segment.

05/14/75 help

Function: help prints out system information segments.
For a list of useful info segments type
help doc

Syntax: help topic -control_args-

Arguments:

1) topic is the name of an info segment. Star convention accepted.

help searches for info segments in the directories

>doc>iis
>doc>info

In that order, unless -pathname is specified.

Control Arguments:

-pathname xxx, -pn xxx: xxx is a pathname. help won't search.
-list, -ls: only print title lines of segments found
-section Section, -sc Section: look only at named sections
-search strings, -sh strings: print paragraphs containing strings

Paragraphs: each info segment is divided into paragraphs delimited by blank lines. After each paragraph, help asks More help? The user may reply

yes print next block
no no more from this seg
rest all the rest of this seg
skip skip next block and proceed
quit exit from help
search strings search forward for strings
section Section search forward for Section

Notes: everything in the command after -search is taken to be a search string, so it must be the last control argument.

CHECKING_FORMAT_INFO_SEGMENTS

A new program, validate_info_seg, will be provided as a library maintenance tool. Given the name of an info segment (or starname), it will check the info segment(s) to make sure that certain mechanical rules are obeyed. If any violations are found the program prints a comment.

The rules checked are:

1. Only ASCII graphic characters plus newline are allowed. In particular, underlining is forbidden (since many terminals produce illegible underlined output).
2. Maximum line length is 72 characters.
3. The title must begin with a date in the form mm/dd/yy and be followed by text.
4. The section names used must be among those listed in this document. Sections titled "Function" and "Syntax" must appear.
5. Paragraphs must not be longer than ten lines.

The info segment censor has the power to accept an info segment even though it does not pass validate_info_seg's tests.