

Subject: MCR10094, Fix loop in help_ displaying info on small terminal layouts (80x24)

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Ticket [#241](#) describes an issue with help_ displaying an info segment on a terminal with only a few short lines in its window layout (e.g., a vt102 with 24-lines each 80-characters long). The help_listen_util_ subroutine can go into an infinite loop when constructing the “More help?” prompt for the next sections of an info segment. Code checking whether the next paragraph of the info segment will fit on-screen continues examining the next paragraph of info, even when the previous loop determined that paragraph’s title will not fit within remaining screen space reserved for the “More help?” prompt.

Proposed Changes

The failing loop is shown in the cpa output below. The change only branches to the MORE_PGHS label if title for the section under consideration will fit in the prompt region. Otherwise, it stops looking at addition paragraphs and displays the prompt lines that do fit on-screen.

```
compare_ascii >ldd>sss>source>bound_info_rtns_.s.archive::help_listen_util_.pl1 ==
```

```
A538 TRY_TO_ADD_PROMPT_AND_MORE_PGHS:
A539   if prompt_add_will_fit(promptN, prompt_add, prompt(*), pI) then do;
A540     infoN = infoN + part_linesN;          /* - New part fits into prompt
                                              lines. Add paragraphs          */
A541     hi.iPgh_print_range.endP = part_endP; /* to end of print range.          */
A542   end;
A543   goto MORE_PGHS;
A544
Changed by B to:
B542 TRY_TO_ADD_PROMPT_AND_MORE_PGHS:
B543   if prompt_add_will_fit(promptN, prompt_add, prompt(*), pI) then do;
B544     infoN = infoN + part_linesN;          /* - New part fits into prompt
                                              lines. Add paragraphs          */
B545     hi.iPgh_print_range.endP = part_endP; /* to end of print range.          */
B546     goto MORE_PGHS;
B547   end;
B548   goto END_PROMPT;
```

In debugging this problem, several enhancements were made to trace code in the help_listen_util_.pl1 program. This tracing is enabled via the -debug N argument given in the help command. For example: help ls -db 1

Those changes will be retained as part of this bug repair. They are not shown in this MCR, since the code is not invoked unless the hidden -debug control arg is given in the help command, or in the help_args data passed to the help_ subroutine. These debugging enhancements will be reviewed during the code audit.

The change occurs in the program shown below:

Description:

- A) Fix ticket #241: help_listen_util_\$display_prompt loops on vt102 terminal type in command: help ls

Installation_directory: >udd>m>gd>w>hl;

Build_script: hl.mb;

Bound_obj: bound_info_rtns_ IN: sss UPDATE;
source: help_listen_util_.pl1 REPLACE compiler: pl1 -ot;

Testing

The change was tested by displaying the list.info segment using a variety of terminal setups, both with and without use of the video system, and with ASCII and vt102 setups with varying screen layouts. No loops were encountered when using the repaired code.

Documentation

This change does not modify the interface to the help command, or its help_ subroutine. Therefore, documentation changes are not provided as a part of this change.

Version History

Date	Revision	Author	Comment
2021-10-04	1.0	Gary Dixon	Version releases MCR for initial review and comments.