Subject: MCR-10039, Fix errors in branches.info,
                            pathname.gi.info, display_volume_log.info, and rdisk_.info

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Introduction

The info segment >doc>info>branches.info has two issues, there is a typo and two control arguments are missing documentation.

The info segment >doc>info>pathnames.gi.info references a non-existent info segment but is intended to reference one of a slightly different name.

The info segment >doc>privileged>display_volume_log.info does not document the -working_dir (-wd) control argument.

The info segment >doc>info>rdisk_.info   is lacking all the new documentation added in AG93-05 for the 3380 and 3381 disks. This information includes new control arguments and operational notes.

Problems

branches.info

As described in ticket http://multics-trac.swenson.org/ticket/14, at the end of this info segment appears the sentence: "A synonym for nonlinks is nonlinks". What was intended was: "A synonym for nonlinks is branches".   The info segment has both the name "branches.info" and "nonlinks.info". Both "nonlinks" and "branches" perform the same functionality.

In addition, while browsing the source code, it seems the "-inhibit_error" and "-no_inhibit_error" control arguments are not documented in the info segment.

pathname.gi.info

As described in ticket http://multics-trac.swenson.org/ticket/85, there is a reference to a non-existent info segment, "virtual_ptr.gi.info". The intended info segment reference is to "virtual_pointers.gi.info".

display_volume_log.info

As described in ticket http://multics-trac.swenson.org/ticket/92, the -working_dir (-wd) control argument is not documented. It is documented in the related

recover_volume_log.info segment. This information is useful when displaying volume logs for volumes that are not part of the current storage system.

<u>rdisk_.info</u>

As described in ticket <u>http://multics-trac.swenson.org/ticket/90</u>, this info segment is missing documentation of 3380 and 3381 devices. It also is missing related documentation, control arguments, and notes that were added in revision 05 of AG93.

Proposed Changes

Update >doc>info>branches.info to correct the typo as well as add documentation for the two missing control arguments:

```
-inhibit_error, -ihe
   does not display error messages if there are errors with the
   specified star_name.
-no_inhibit_error, -nihe
  displays error messages if there are errors with the specified
  star_name. (Default)
```

Update >doc>info>pathnames.gi.info to change the reference to virtual_ptr.gi.info to virtual_pointers.gi.info.

Update >doc>privileged>display_volume_log.info to add the following to the list of supported control arguments:

```
-working_dir, -wd
   specifies that the volume backup databases are to be found
   relative to the working directory.  The default is to look for them
   relative to the >daemon_dir_dir>volume_backup directory.  This control
   argument can be used to display volume logs for physical volumes that are
   not part of the currently mounted storage system.  This control
   argument is optional.
```

Update >doc>info>rdisk_.info to include the 3380 and 3381 disk device IDs for the MSU3380 and MSU3381 disk devices in the list of supported devices.

Also add documentation on the -device (-dv) control argument, which is critical to successfully writing to subvolumes on 3380 and 3381 devices. Also include the "Note" that informs the user that when -device is specified, rdisk_ will perform the same address conversions as done for file system i/o on the multi-volume devices. Without this control argument, no conversions are performed, and the disk is addresses without regard to subvolumes.

The new -device (-dv) documentation is below (and is taken largely from AG93-05) :

```
-device, -dv DEVICE_NAME
   indicates that disk drive DEVICE_NAME is to be attached. This is useful
   when attaching to drives that do not have removable media. DEVICE_NAME
   has the form of:

   dskX_NN{S}

   where:

   X
      is the subsystem name.
   NN
      is the device number.
   S
      is the subvolume name. Only valid for 3380 and 3381 devices. Valid
      subvolume names for the 3380 are a and b, and for the 3381, a, b, and
      c.
```

The addition to the Notes section follows:

```
When the -device option is given with a subvolume, rdisk_ will perform the
address conversions in the same manner as the file system I/O.  More than
one subvolume of a device may be attached by a process. The device may only
be attached to one process at any one time. If the subvolume name is not
given for a device that supports subvolumes, then rdisk_ will not convert
the addresses and the entire device may be accessed.
```

Testing of the Change

The info segments will be tested by ensuring that when invoked with the "help" command, the desired output is produced and that handling is as expected.

Bug References

- Reference URL of Multics Change Tickets: http://multics-trac.swenson.org/ticket/14, http://multics-trac.swenson.org/ticket/85, http://multics-trac.swenson.org/ticket/92, and http://multics-trac.swenson.org/ticket/90.

Documentation

This MCR represents the correction of two info segments. These changes will be referenced in the Software Release Bulletin (SRB) of the next Multics release.

Version History

Date	Revision	Author	Comment
2018-01-12	1.0	Eric Swenson	Initial version of MCR.