NAME

mbnavadjustmerge – Tool to merge two MBnavadjust projects, either adding one to the first or outputting a new project combining both existing projects.

VERSION

Version 5.0

SYNOPSIS

mbnavadjustmerge --input=project-base [--input=project-add --output=project-output --add-crossing=file1:section1/file2:section2 --set-tie=file1:section1/file2:section2/xoffset/yoffset/zoffset --set-tie-xyz=file1:section1/file2:section2 --set-tie-xyonly=file1:section1/file2:section2 --set-tie-zonly=file1:section1/file2:section2 --set-ties-xyz-with-file=file --set-ties-xyonly-with-file=file --set-ties-zonly-with-file=file --set-ties-xyz-by-survey=survey --set-ties-xyonly-by-survey=survey --set-ties-zonly-by-survey=survey --set-ties-xyz-by-block=survey1/survey2 --set-ties-xyonly-by-block=survey1/survey2 --set-ties-zonly-by-block=survey1/survey2 --set-ties-zoffset-by-block=survey1/survey2/zoffset --skip-unset-crossings --verbose --help]

DESCRIPTION

MBnavadjustmerge is a command line program that merges two existing **MBnavadjust** projects or modifies a single **MBnavadjust** project.

MBnavadjust is an interactive graphical program used to adjust swath data navigation by matching bathymetric features in overlapping and crossing swaths. The primary purpose of **mbnavadjust** is to eliminate relative navigational errors in swath data obtained from poorly navigated sonars.

With respect to the merging function, if the **MBnavadjustmerge** user specifies two input projects and no output project, then the second project is added to the first. If an output project is specified, then the two projects are merged and the new combined project is output.

In order to make use of the project modification commands, a single input project must be specified, along with one or more of the modification commands. These can include adding crossings, setting tie z-offset values, setting tie offsets (even if no corresponding crossing already exists), setting tie modes (xy only, z only, xyz), and deleting ties.

AUTHORSHIP

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OPTIONS

–-input=project-base

–-input=project-add The **--input** option defines an existing, input **MBnavadjust** project. A project may be defined by a relative or absolute path to the project *.nvh file or the project *.dir directory. This option can be used twice to specify two input projects. The first use of **--input** defines the base input project, and the second defines the add input project. In the case where the **--output** option is used to define an output project, the two input projects will both be copied to the new output project (*project-base* first followed by *project-add*). If the **output** option is not specified, then the *project-base* project is used as the output, and the *project-add* project is added on to the *project-base* project. If only the base input project is specified, then that project will be modified according to one or more of the "add", "delete", "skip", or "set" commands.

--output=project-output
This option defines the new **MBnavadjust output project. The two input projects will both be copied to the new output project (***project-base* **first followed by** *project-add***). If the output option is not specified, then the** *project-base* **project is used as the output, and the** *project-add* **project is added on to the** *project-base* **project.**

--add-crossing=file1:section1/file2:section2
This option adds the specified crossing to the **MBnavadjust** project.

--set-tie=file1:section1/file2:section2/xoffset/yoffset/zoffset
This option adds the specified tie to the **MBnavadjust** project. If the corresponding crossing does not already exist, it will be created.

--set-tie-xyz=file1:section1/file2:section2
This option sets the mode of the existing specified tie in the **MBnavadjust** project to be "XYZ". This means all three coordinates of the tie will be used as constraints in the inversion for an optimal navigation model.

--set-tie-xyonly=file1:section1/file2:section2
This option sets the mode of the existing specified tie in the **MBnavadjust** project to be "XY". This means only the horizontal coordinates of the tie will be used as constraints in the inversion for an optimal navigation model.

--set-tie-zonly=file1:section1/file2:section2
This option sets the mode of the existing specified tie in the **MBnavadjust** project to be "Z". This means only the vertical coordinate of the tie will be used as a constraint in the inversion for an optimal navigation model.

--set-ties-xyz-with-file=file
This option sets the mode of all ties involved with the specified file in the **MBnavadjust** project to be "XYZ". This means all three coordinates of these ties will be used as constraints in the inversion for an optimal navigation model.

--set-ties-xyonly-with-file=file
This option sets the mode of all ties involved with the specified file in the **MBnavadjust** project to be "XY". This means only the horizontal coordinates of these ties will be used as constraints in the inversion for an optimal navigation model.

--set-ties-zonly-with-file=file
This option sets the mode of all ties involved with the specified file in the **MBnavadjust** project to be "Z". This means only the vertical coordinate of these ties will be used as constraints in the inversion for an optimal navigation model.

--set-ties-xyz-with-survey=survey
This option sets the mode of all ties involved with the specified survey in the **MBnavadjust** project to be "XYZ". This means all three coordinates of these ties will be used as constraints in the inversion for an optimal navigation model.

--set-ties-xyonly-with-survey=survey
This option sets the mode of all ties involved with the specified survey in the **MBnavadjust** project to be "XY". This means only the horizontal coordinates of these ties will be used as constraints in the inversion for an optimal navigation model.

--set-ties-zonly-with-survey=survey
This option sets the mode of all ties involved with the specified survey in the **MBnavadjust** project to be "Z". This means only the vertical coordinate of these ties will be used as constraints in the inversion for an optimal navigation model.

--set-ties-xyz-by-survey=survey
This option sets the mode of all ties between two sections in the specified survey in the **MBnavadjust** project to be "XYZ". This means all three coordinates of these ties will be used as constraints in the inversion for an optimal navigation model.

--set-ties-xyonly-by-survey=survey
This option sets the mode of all ties between two sections in the specified survey in the **MBnavadjust** project to be "XY". This means only the horizontal coordinates of these ties will be used as constraints in the inversion for an optimal navigation model.

--set-ties-zonly-by-survey=survey
This option sets the mode of all ties between two sections in the specified survey in the **MBnavadjust** project to be "Z". This means only the vertical coordinate of these ties will be used as constraints in the inversion for an optimal navigation model.

--set-ties-xyz-by-block=survey1/survey2
This option sets the mode of all ties between sections of the specified two surveys in the **MBnavadjust** project to be "XYZ". This means all three coordinates of these ties will be used as constraints in the inversion for an optimal navigation model.

--set-ties-xyonly-by-block=survey1/survey2
This option sets the mode of all ties between sections in the specified two surveys in the **MBnavadjust** project to be "XY". This means only the horizontal coordinates of these ties will be used as constraints in the inversion for an optimal navigation model.

--set-ties-zonly-by-block=survey1/survey2
This option sets the mode of all ties between sections in the specified two surveys in the **MBnavadjust** project to be "Z". This means only the vertical coordinate of these ties will be used as constraints in the inversion for an optimal navigation model.

--set-ties-zoffset-by-block=survey1/survey2/zoffset
This option resets the zoffset value of all ties between sections in the specified two surveys.

--skip-unset-crossings
This option sets all unset crossings in the input projects to be skipped. This does not apply to any new crossings between the two merged projects.

--verbose
This option increases the verbosity of **MBnavadjustmerge**, which means that more information than by default is output to the stderr stream of the shell.

--help This option causes **MBnavadjustmergeP to output a list of the possible command line options, and then exit.**

EXAMPLES

Suppose you have two AUV survey missions, 20140515m1 and 10140515m2, that overlap slightly. If you have used **MBnavadjust** to adjust the navigation of the two missions separately, you can use **MBnavadjustmerge** to merge the two **MBnavadjust** projects into a single new project without losing any of the ties made between overlapping sections in the existing projects. If the two existing projects are named "Navadjust20140515m1" and "Navadjust20140515m2", respectively, then there exist project files with a ".nvh" suffix and project directories with a ".dir" suffix. To create a new **MBnavadjust** project combining the two existing projects, the following will suffice:

```
mbnavadjustmerge --input=Navadjust20140515m1.nvh --input=Navadjust20140515m2.nvh --output=Navadjust20140515All.nvh
```

The new project Navadjust20140515All can be opened and analyzed further using **MBnavadjust**. When opening the new project, the user should first solve for a comprehensive navigation adjustment model by selecting the <Action->Invert Navigation> menu item, and then find the crossings between the two previously separate missions by selecting the <Action->Check For New Crossings> menu item.

If the **--skip-unset-crossings** option is added to the above command, then all unset crossings in the two input projects will be set to "skipped" mode in the output project.

SEE ALSO

mbsystem(1), **mbio**(1), **mbprocess**(1), **mbnavadjust**(1), **mbset**(1)

BUGS

It started out simple and bulletproof, but now it's too complicated to be bulletproof. Good luck.