NAME

mbm_makedatalist − Macro to generate a datalist of the swath files in a specified directory.

VERSION

Version 5.0

SYNOPSIS

mbm_makedatalist [**−B***size* **−F***format* **−I***directory* **-L −O***datalist* **-P -S***suffix* **−T -H −V**]

DESCRIPTION

Mbm_makedatalist is a macro to generate an MB-System datalist file referencing all identifiable swath files in the specified target directory.

Datalists are fundamental structures in **MB-System** workflows because they allow programs to operate on sets of swath data files. Datalist files are text lists of swath data files and their format ids with each file entry taking up a single line. These lists may contain references to other datalists, making them recursive. Datalists may also contain comments and parsing directives that, for example, determine whether parsing returns references to raw or processed data files. See the **MB-System** manual page for details on the format and structure of datalists.

This macro is used to easily construct a datalist referencing swath files in a directory, often as part of setting up the **MB-System** processing environment for a new seafloor mapping dataset. By default, **mbm_makedatalist** tests all of the filenames in the local directory for adherence to the **MB-System** swath file naming convention (see the **mbsystem** manual page for details), and makes an output datalist including all of the files that can be recognized as swath data. This can include files with suffixes such as ".mb88", that are recognized as format 88 (Reson s7k) files, and files with recognized vendor format suffixes, such as "_raw.all" or ".all" for old and recent Kongsberg multibeam data, respectively. The suffix of the files to be considered can be specified with the **-S***suffix* option; under most circumstances this is the best approach as it prevents **mbm_makedatalist** from including files that are not intended for inclusion by the user yet satisfy one of the many recognized naming conventions. By default, **mbm_makedatalist** infers the format id of included files using the naming conventions. The format id can be specified using the **-F***format* option.

MB-System differentiates between raw and processed files by inserting the letter "p" into the processed file name immediately before the filename suffix. For instance, for Reson 7k data the raw files will have file suffix of *.mb88, and the processed files generated by **mbprocess** will end with *p.mb88. When using **mbm_makedatalist** to generate a datalist by specifying a suffix, processed files can be excluded from the datalist by also specifying the **-P** option. Thus it is possible to generate a datalist of raw files in a directory containing both raw and processed file.

The output datalist will be placed in the current working directory. The output datalist is named datalist.mb-1 by default, but can be specified with the **−O** option. If no target directory is specified with the **−I** option, then the current working directory is used. In order for swath files to be recognized and included in the datalist, they must conform to the MB-System swath file naming convention (see the **mbsystem** manual page for details).

Most seafloor mapping sonars and datalogging packages produce original swath data files with names constructed so that standard directory listings are in time order. However, Kongsberg multibeam data filenames usually start with a survey file number that restarts at 0001 whenever datalogging is stopped and restarted. Consequently, when data from multiple instances of logging are present in a single directory, the simple listing of files will not in general be in time order. If the file suffix is declared to be ".all", ".ALL", ".kmall", or ".KMALL" using the **-S** option, then **mbm_makedatalist** will attempt to sort the swath files into time order before generating the final datalist. This behavior can be disabled by specifying the **-T** option. Kongsberg dataloggers often create junk data files with names such as "9999.all" or "9999.ALL"; these filenames

are ignored.

MB-SYSTEM AUTHORSHIP

David W. Caress
Monterey Bay Aquarium Research Institute
Dale N. Chayes
Center for Coastal and Ocean Mapping
University of New Hampshire
Christian do Santos Ferreira
MARUM - Center for Marine Environmental Sciences
University of Bremen

OPTIONS

−B *size*
This option sets a size threshold in kilobytes below which a file will be ignored and not included in the output datalist file.

−F *format*
By default, **mbm_makedatalist** infers the format id of included files using the naming conventions. This option specifies the format id that is assigned.

−H This "help" flag cause the program to print out a description of its operation and then exit immediately.

−I *directory*
Sets the path of the target directory.

−L
Causes the last file in a directory listing to be omitted from the output datalist. The intent of this option is to exclude the most recent file in an actively data logging context, since the most recent file is still being logged. This presumes that filenames sort in time order as listed by the **ls** command, an assumption that does not hold for all file naming conditions or if the **-T** option has been used to disable time ordering.

−O *datalist*
Sets the name of the output datalist file. Default: datalist.mb-1

−P
Suppresses the inclusion of processed files in the output datalist (e.g. *p.mb88).

−S *suffix*
Sets the filename suffix of swath files considered for inclusion in the output datalist. Under most circumstances using this option explicitly is the best approach as it prevents **mbm_makedatalist** from including files that are not intended for inclusion by the user yet satisfy one of the many recognized naming conventions. If the file suffix declared with this option corresponds to one of the formats associated with Kongsberg multibeam sonar data, then **mbm_makedatalist** will attempt to sort the swath files into time order before generating the final datalist. This behavior applies to files with the ".all" or ".ALL" suffix used for raw logged Kongsberg files, and also to files with suffixes following the **MB-System** convention (e.g. ".mb56", ".mb57", ".mb58", ".mb59" suffixes). This behavior is disabled by the **-T** option.

−T
By default, when the **-S** option is used to specify a file suffix corresponding to Kongsberg multibeam data, **mbm_makedatalist** attempts to sort the data files into time order before outputting the datalist. This option disables that behavior.

−V The **−V** option causes **mbm_makedatalist** to print out status messages.

EXAMPLES

Suppose we have a set of swath files in a directory and we want to construct a datalist referring to those files. A simple directory listing shows four files:

```
20051019_154030.mb88
20051019_162540.mb88
20051019_171756.mb88
junk.txt
```

of which three are identifiable as swath files because of the ".mb88" file suffix. Running **mbm_makedatalist** in this directory with no arguments other than verbosity:

```
mbm_makedatalist −V
```

produces a datalist file named datalist.mb-1. The contents of this file are:

```
20051019_154030.mb88 88
20051019_162540.mb88 88
20051019_171756.mb88 88
```

where the file junk.txt has been ignored.

SEE ALSO

mbsystem(1), **mbdatalist**(1), **mbinfo**(1)

BUGS

Only fake bugs here.