Name

mimesort - Sorts vertex information in the TMD file. This enables the application of a smaller-sized difference file for MIMe after mimefilt, contributing to the high-speed movement of MIMe animations.

Date

July 19, 1995, Version 1.3e

Syntax

```
mimesort [options] [base-model.tmd model1.tmd [model2.tmd [model3.tmd ...]]]
```

Explanation

Vertex information in the TMD file is sorted to enable the application of a smaller-sized difference file for MIMe created by mimefilt. The run time needed for MIMe animations can be calculated in a shorter period.

mimesort changes the order of vertex information. This requires that all files to be applied to mimefilt be applied to mimesort. If only part of the files have been applied to mimesort, vertices become out of sync between TMD files, making it impossible to create a correct difference file.

A wild card can be used as an argument.

Up to 32 variation model files (TMD files other than base-model) can be specified. If the number of variation model files exceeds 14, however, the specified models from the 15th onward are not used for sorting. As only the first 14 models are used as information for sorting, vertex information is rearranged on the models from the 15th onward. In other words, the variation model files from the 15th onward may possibly be made inefficient during output.
(See remarks to obtain as good results as possible.)

[Options]

[-d directory]

Specifies an output directory for saving a sorted TMD files.
The default is "..\STMD". An output directory must have been created.

[-v]

A set of vertices before and after sorting can be standard-output so that the sorting process may be checked. If this option has not been specified, no information is output.
The following gives the meaning of output.

```
file:  (vertex: a/b)
        file:  File name
        a:  Number of vertices included in a difference file
        b:  Total number of vertices

.....*****++*+++++++++*****.............
        . : Vertex not included in a difference file as there is no difference
        + : Vertex included in a difference file although there is no difference
        * : Vertex included in a difference file as there is difference
```

[-stdin]

Loads a model file name from the standard input. Entering only a line feed results in the termination of loading.

Example 1: Manual file name input

```
C:\> mimesort -stdin
Source model:  md1.tmd[RET]   <- Enter the source model file name.
Variation model #1: md2.tmd[RET]   <- Enter the file name of variation model 1.
Variation model #2: md3.tmd[RET]   <- Enter the file name of variation model 2.
Variation model #3: [RET]   <- End of input
(Omitted)
```

Example 2: Automatic input. The -v option is also used.

```
C:\> type list
md1.tmd
md2.tmd
md3.tmd
                  <- The end blank line is required.

C:\> mimesort -stdin -v < list > output
(Omitted)
```

Supplementary information
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The sorting of data (including normal data) other than vertex data is not supported.

A difference file is not always made to be smaller-sized.
Effect can be checked by means of vertex information output by the -v option. Applying data before and after mimesort to mimefilt to compare the size of difference files allows the identification of more efficient data.

A TMD file to be entered must be able to be applied to mimefilt.
Furthermore, mimesort cannot be applied to a TMD file containing two or more objects.

A wild card can be used as the file name. The start item must be the base file, however. Should a variation model file be developed at the position of the source model file, the desired result of sorting cannot be acquired.
 Check the message output during execution, "base files=", to make sure that the wild card is developed as expected.

Even though a sub-directory has been specified in a file for the source model or a variation model, a file is created right under the output directory. Thus, the file with the same name in a different directory must not be specified for input.

The current directory must not be specified as the output directory. If the current directory has been specified, the input file is overwritten and destroyed by the output file.

Note that the MS-DOS command line incurs restriction on the number of characters.

Remarks
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[Notes on handling more than 14 variation model files]

The use of MIMe for key frame animations where key frames for models are arranged in time series may often result in an enormous number of MIMe parameters. The concurrent application of too many parameters to a model consumes much time and memory, however. The replacement of the base model for key frame animations at places where only few key frames are correlated with one another leads to efficiency enhancement.

Should more than 14 variation model files be specified, the files from the 15th onward are not used as sorting information, with only vertex order rearranged according to the result of sorting the first 14 files. (This is because integrity for mimefilt is maintained.) Therefore, the following files should be specified as the files from the 15th onward.

o Files for which less effects of sorting are expected

If nearly all vertices are moved, sorting effects are lowered.

o There is another same file (under the standpoint of vertex movement).

If original vertexs provides the following results as viewed in -v, file2 is not distinguished from file3 in the point of vertex movement. If file2 has been specified in any of the first 14 files, therefore, file3 may be specified in any of the subsequent files.

```
file1:  *++***...
file2:  ..**++*..
file3:  ..**++*..
file4:  ....**+**

file20: ..*****..
```

o Low importance

Files seldom used, or not subjected to high temporal restriction

Restrictions

Version 1.0

Can only sort vertex data.
There is only one type of sorting algorithm.
There is a maximum of 15 files consisting of
base*1 + variant*14 that can be handled.

Changes

Changes in version 1.1

Bugs on handling the TMD file having a large primitive section have been corrected.

Also for 15 to 32 variation model files, vertices are rearranged.

Changes in version 1.2

The -stdin option enables the standard input of a model file name.

Changes in version 1.3

The bug that a primitive other than triangle polygons cannot be handled properly has been corrected.