Mosaic master file

The L3DT *mosaic master file* (*.mmf) is an ASCII file that describes the size and number of map files within a mosaic map.

A typical MMF might look like this:

```
L3DT Mosaic master file
#MosaicName: Alpha1
#MosaicType: 24bit
#FileExt: bmp
#nPxlsX: 4096
#nPxlsY: 2048
#nMapsX: 8
#nMapsY: 4
#SubMapSize: 512
#HorizScale: 1.00
#TileState: 0 OK
#TileState: 1 OK
#TileState: 2 OK
#TileState: 3 OK
#TileState: 4 OK
#TileState: 5 OK
#TileState: 6 OK
#TileState: 7 OK
#TileState: 8 OK
#TileState: 9 OK
#TileState: 10 OK
#TileState: 11 OK
#TileState: 12 OK
#TileState: 13 OK
#TileState: 14 OK
#TileState: 15 OK
#TileState: 16 OK
#TileState: 17 OK
#TileState: 18 OK
#TileState: 19 OK
#TileState: 20 OK
#TileState: 21 OK
#TileState: 22 OK
#TileState: 23 OK
#TileState: 24 OK
#TileState: 25 OK
#TileState: 26 OK
#TileState: 27 OK
#TileState: 28 OK
#TileState: 29 OK
#TileState: 30 OK
#TileState: 31 OK
#EOF
```

#MosaicName

For L3DT to load a mosaic map, it must know where to put it. Thus the MMF includes a member called *MosaicName*, which is a string that identifies the map into which the mosaic will be loaded. Below are listed the *MosaicNames* recognised by the L3DT mosaic-loader:

Name	What is it?
“HF”	The heightfield

“WM”	The water map
“WS”	The salinity map
“AM”	The attributes map
“TN”	The terrain normals map
“LM”	The light map
“TX”	The texture map

If the map is not intended to be loaded in L3DT, then the *MosaicName* can be anything you like.

#MosaicType

The *MosaicType* member specifies how the data should be interpreted when loading. Valid types are listed below:

Type	What is it?
“HF”	A heightfield
“WM”	A water map
“AM”	An attributes map
“TN”	A terrain normals map
“BYTE”	An 8-bit map
“WORD”	A 16-bit map
“24bit”	A 24-bit map (probably an image)
“DWORD”	A 32-bit map (possibly RGBA)
“LM”	A light map (legacy; now use “24bit”)
“TX”	A texture map (legacy; now use “24bit”)

Please not that while the *MosaicType* string is often the same value as the *MosaicName* string, this is not the case in general. For example, the heightfield has a name of “HF” and a type of “HF”, while the salinity map has a name of “WS” and a type of “HF” (the salinity map is actually stored as a heightfield within L3DT).

#FileExt

The following mosaic tile file extensions are supported:

FileExt	What is it?
hff	An L3DT heightfield file
ter	A Terragen terrain file
wmf	An L3DT water map file
amf	An L3DT attributes map file
bmp	A bitmap image
jpg	A JPEG image
png	A PNG image
raw	A raw binary file

Additional formats may now be supported by plugins.

#nPxlsX and #nPxlsY

The width of the map is given by *nPxlsX*, and the height by *nPxlsY*. Both are measured in pixels.

#nMapsX and #nMapsY

nMapsX and *nMapsY* state the number of mosaic tiles in the *x* and *y* axes, respectively. In the above example, the mosaic is an 8×4 grid of tiles, for a total of 32 tiles.

#SubMapSize

The *SubMapSize* value describes the side-length of the tiles in the mosaic, and is measured in pixels. A mosaic tile is always square.

#HorizScale

The *HorizScale* member specifies the 'real-world' pixel-spacing of the map, and is measured in metres/pixel.

#TileState

It is possible that some tiles in a mosaic will be missing. For example, the water map will not save tiles in which no water has been flooded. A list of *TileStates* are included in the MFF to specify whether tiles are present or absent. The syntax is:

```
#TileState:<tab>[TileIndex]<tab>[TileState]
```

Where *TileIndex* is the linear index of a tile, given by y × nMapsX + x, and *TileState* is a string that is either "OK" (the tile is present) or "FREE" (the tile is absent). Pixels in absent tiles are assumed to have a value of 0.

The ordering of tiles in a mosaic map is explained on the mosaic algorithms page.