

Thank you for your support

Hello, and thanks for purchasing ATE, the Atlas Tile Editor. You have supported independent game development. Lost Astronaut Studios is a self-funded exploration of game development. As of 2017 it has yet to make a profit, so your support is greatly appreciated in offsetting the tremendous cost in time and resources required to make tools like this.

Workspaces, Files and Folders:

Exported tiles can be saved by changing the default output path. The default one is a folder located in My Documents called "ATE"

ATE is located in your local steam folder "ATE" and your workspaces are stored in:

```
ATE/data/workspaces/
```

The sample workspace is located in:

```
ATE/data/workspaces/main/
```

Each workspace folder has the following folders in it:

atlases/	Where to put your atlas sprite sheets
bumpmaps/	for keeping bump map textures*
films/	for keeping film frames*
mulligans/	for keeping mulligan textures*
music/	for keeping music files (FLAC)*
particles/	for keeping particle textures*
scripts/	for keeping Alacrity Scripts*
sounds/	for keeping <10 second 32 bit stereo WAV files (samples)*
textures/	for keeping texture maps*
tiles/	for keeping completed tiles*

(* this feature is not yet completed, but will be after Early Access is over)

In the workspace/main folder, a series of text files are used to store information about your atlases and atlas tile sets.

These text files are:

atlases.txt	Describes the atlas sprite sheets
atlastilesets.txt	Describes the atlas tilesets you've created
workspace.txt	Contains information about your workspace

Importing New Sprite Sheet Atlases

Until the atlas importer is complete, you can manually add an atlas by copying the file to the `atlases/` folder in the workspace, and then add the following block to the `atlases.txt` file:

```
atlas {  
  name atlas2  
  texture "data/workspaces/main/atlases/atlas2.png"  
  grid  
  mirrored  
  nearest  
  rows 20  
  columns 20  
  dontGenElements  
}
```

If the `atlases.txt` file does not exist, you can merely create it using `notepad.exe` or equivalent text editor. Change the `highlighted` areas to adjust to your settings in your sprite sheet. You can do this multiple times, simply by adding multiple blocks to the file.

Simply change the rows and columns numbers based on your grid-style sprite sheet. You can name your atlas, but it must have no spaces, commas, equals or other special symbols (alphanumeric only).

- The keyword “mirrored” allows you to automatically mirror your atlas 4 ways.
- The keyword “grid” is required for rows and columns to work. Otherwise, individual sections of the atlas sprite sheet must be selected using a rectangle, however it’s best not to do that by hand. Instead use the importer.
- The keyword “dontGenElements” is an optimization keyword for not generating individual elements for each sprite selection. It’s best to just leave it in.
- The keyword “nearest” tells the atlas loader to use nearest neighbor for enlargement. Omitting this keyword will attempt bicubic resizing, which can result in blurring.

Resolution Limits

Note that the upward limits of atlas sizes in pixel dimensions are limited by hardware. For general knowledge, 4096 x 4096 was the maximum texture size standard in 2010. Today, it’s much larger (16384 x 16384 or larger) but that is true only for the newest hardware.

The exporter currently supports only up to 1024 x 1024 individual tile baking (though it may increase to 2048 x 2048 when possible). For low-resolution games, this is fine. However, you can certainly use high resolution source atlases to maximize the output quality of the exporter.

Backing up regularly: notes on the Steam folder

It's kind of dangerous to keep your work inside the Steam folder. If you accidentally remove local content, your work may be lost. It's best to back up by zipping up your workspace folder on a regular basis, and keeping the ZIP files in My Documents. You can then share your workspace with other game developers on the same team, or unzip it next time you install ATE on a different device, or reinstall it on the same device.

Please note that uninstalling ATE from Steam does not remove the *My Documents/ATE* folder, so this is a safe place to keep your backup files.

Using the editor:

Alt-F4 quits the editor immediately, without saving, on any screen. It will not prompt you if you have recent changes.

Alt-TAB will exit the editor window. The editor "captures" the mouse cursor, so this is the only way out of the window unless you quit.

It all starts when you click "EDIT" from the main menu.

The next screen is a list of your current workspaces. On this screen you can also initialize a new workspace.

To create a new workspace: Mouse over the text area in the lower right corner. Type a simple alpha-numeric name without spaces or special characters (numbers and letters only), this will name the workspaces/ folder. Once you type in enough information, click the "Create Workspace" button.

Once you've selected your workspace, you may at this point want to add an atlas to the workspace. You can do so by creating the *atlases.txt* text file and copying your atlas to the *atlases/* subfolder. You can do this multiple times, simply by adding multiple blocks to the file.

You will need to then restart (without saving) the ATE to load the atlases. In the future, this will happen through the atlas importer.

When you first enter a workspace, you will see a screen that, eventually, will be a main navigation screen for accessing the various stretch features of this editor (particle generators, 3D tiles, isometric tiles, atlas tiles), but for now there is only one button "Atlas Tiles" located bottom right. Click this to edit atlas tilesets.

When you click the “+ TILESET” button, you then immediately pick the atlas for creating the individual tiles. There is only one atlas per tileset, but you can have multiple tilesets that use the same atlas.

Once you’ve selected the atlas, make sure to give your atlas tileset a good name that is unique and follows the “alphanumeric only” convention. This helps when looking up tiles in a game, though not all game engines will require this, and it’s relevant only to games that are going to be using the native ATE format, or a JSON format, as this name will be used to identify the tilesets when exporting for HTML.

Now you should be on a screen that has a “+ TILE” button. Clicking this will create a new tile.

If you have already created a tile, LEFT-CLICK the tile to edit it. RIGHT-CLICK the tile to duplicate it, adding it to the tileset. This allows you to create one or more variations of previously designed work.

Once on the editor screen, you have these major features:



Layered Grid Drawing

To select what to draw, click in the Atlas Palette. This will set your active Brush.

LEFT CLICK on the Tile Painting / Editor will draw in the grid.

When you select a layer, you draw on that layer.

- Layer 1 - 2 x 2 grid
- Layer 2 - 4 x 4 grid
- Layer 3 - 8 x 8 grid
- Layer 4 - 16 x 16 grid

Once a layer is selected, you will draw on that grid based on the currently selected. Layer 1 is in "back", layer 4 is in "front" -- this way you can draw most reusable tiles.

RIGHT CLICK to remove something you drew on the grid. LEFT CLICK to draw something. Tinier tiles are drawn in front of the larger ones.

Freehand Drawing

Draw / Drop Square Tool and the Object Inspector and Added Square List

If you toggle the box ON next to “Draw Square”, when you click + drag you will draw a square that can be rotated. You can fine tune the rotation and position of the last drawn or selected square in the “Object Inspector Area” and you can select others in the Added Square List, which shows a particular layer’s list of squares (or, when no layers are selected, then the top list of squares).

If you want to insert many of the same size and rotation, you can “paint” with a square by toggling the box ON next to “Drop Square”, and the last dropped square’s rotation and size will be used.

- If you are using the Draw/Drop square tool, it will draw behind the current layer.
- If you deselect all layers, the Draw/Drop square tool will draw on top of the entire stack.

Tile Info Area

In this area you can “Save” which saves all tilesets and tiles in them.

You can also name the tile by moving the mouse over the text box, then typing. It’s again best to use alphanumeric names only. Each tile should have a unique name. A name is autogenerated for you.

Height Map

When you click the height map button (a tile-sized button), you should navigate to a special heightmap atlas tileset in your workspace. Once you find the height map, you can then click “Select this Height Map and Return to Editor” -- it’s best not to modify the height map during the selection process, unless you’ve made a copy, as other tiles might be using it.

Export Options

The “Bake to PNG” button appears here.

In the future “Bake to CSS/JSON” may also appear here.

About Height Maps and Normal Maps

A sample one has been provided for you. You can copy that atlas from the “main” sample workspace, or, you can create your own.

The goal of the height map atlas is to provide a variety of topographies to describe a heightmap for using bump or normal mapping in a game. Your goal is to match the height map to the color map as precisely as possible.

Exporting the height map. When you “Bake to PNG” you will see this heightmap exported alongside the color map.

Note: It’s also recommended that, in the game engine, you overwrite the original tile 10% opacity over the height map before converting it to a normal map, but the height map portion will be converted to a normal map without this added detail. (In the future, there may be an option to automatically do this.) Doing this increases the chance for detail, but is not mathematically accurate, though it generally looks OK.