

Engine File Formats

Hallgeir Lien

May 1, 2007

Abstract

This document describes the various file formats used in the game engine by Hallgeir Lien.

Contents

1	Sprites	4
1.1	Sprite header	4
1.2	Animation data	4
1.3	Frame data	4
2	Objects	5
3	Maps	5
3.1	Map header	5
3.2	Textures	5
3.3	Object data	6

1 Sprites

- Extension: .spr

Sprites are basically made up by a texture, and a number of animations, with a number of frames of different lengths. The sprite files can be seen as a 3-part file: Header, which got the texture information + number of animations, animation data part which got info about every animation (number of frames etc.), and finally the frame data part which describes the actual frames.

1.1 Sprite header

Description	Data type	Size	Information
Identifier	string	3	Should be "str".
Sprite name length	int	4	
Sprite name	string	?	Length is decided by last entry.
Texture name length	int	4	
Texture name	string	?	Length is decided by last entry.
Number of animations	int	4	The total number of animations
Animation data	*	?	Description below.

1.2 Animation data

Description	Data type	Size	Information
Animation name length	int	4	
Animation name	string	?	Length decided by last entry.
Number of frames	int	4	Total number of frames in the animation
Frame data	*	?	Description below.

1.3 Frame data

Description	Data type	Size	Information
X	int	4	X position on the image of the upper left corner of the frame
Y	int	4	Y position on the image of the upper left corner of the frame
Delay	double	8	Time before the next frame, in seconds
Next frame	int	4	The next frame

2 Objects

- Extension: .obj

This is the object description file format. Basically it is these files that describe the different types of objects, like what sprite they should use, who controls them [if any], and all that.

Description	Data type	Size	Information
Identifier	string	3	Should be “obj”.
Object name length	int	4	
Object name	string	?	Name of object
Sprite name length	int	4	
Sprite name	string	?	Name of the sprite

3 Maps

- Extension: .map

The maps are the “main” storage objects. They contain everything, objects, texture IDs and everything.

3.1 Map header

Description	Data type	Size	Information
Identifier	string	3	Should be “map”.
Number of textures	int	4	
Textures	*	?	See below.
Number of objects	int	4	
Object data	*	?	See below.

3.2 Textures

Description	Data type	Size	Information
Texture path length	int	4	
Texture path	string	?	Path to bitmap to load
Texture name length	int	4	
Texture name	string	?	Name of texture

3.3 Object data

Description	Data type	Size	Information
X	int	4	X position of object
Y	int	4	Y position of object
Object name length	int	4	
Object name	string	?	Path to .obj file