

Overview

This document is targeted at people who want to modify the stars data that is used in the sky rendering. This assumes some familiarity with generating binary files.

- Data file: Build\Engine\EngineAssets\Sky\stars.dat
- Loader code file: CRESky.cpp, function CStars::LoadData

File Format

The file has a simple binary format, and you can easily write the data you want in there yourself with some tool.

All types stored in little-endian format, float32 in IEEE-754 format.

The file starts with a header. The header is immediately followed by entries for each star (the number of entries is stored in the header).

Layout and types are as follows:

Header (12 bytes)

Name	Offset	Type	Value
Tag	0	uint32	0x52415453 (ASCII: STAR)
Version	4	uint32	0x00010001
NumStars	8	uint32	Number of star entries in the file

Entry (12 bytes)

Name	Offset	Type	Value
RightAscension	0	float32	in radians
Declination	4	float32	in radians
Red	8	uint8	star color, red channel
Green	9	uint8	star color, green channel
Blue	10	uint8	star color, blue channel
Magnitude	11	uint8	brightness, normalized range

Typically, you can use existing star catalogs to populate this information for you, or you can use the one that is provided in the SDK (which is based of real-world information).