

GAYMCUBE

A GameCube Documentation

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Chapter 1

Files

1.1 The DOL file format

The DOL file format is the format of the main executable for both GameCube and Wii games. There is a header in the file describing how the executable is laid out. The file consists of a header, up to 7 code sections and up to 11 data sections. The values in the header are all 32 bit, big endian values. The header is structured as follows: [1, DOL]

Start	End	Length	Description
0x0	0x3	4	Offset to start of text0
0x4	0x1b	6 * 4	Offsets for text1 - text6
0x1c	0x47	11 * 4	Offsets for data0 - data10
0x48	0x4B	4	Loading address for text0
0x4C	0x8F	6 * 4 + 11 * 4	Loading addresses for text1 - text6 and data0 - data10
0x90	0xD7	7 * 4 + 11 * 4	Section sizes for text0 - text6 and data0 - data10
0xD8	0xDB	4	BSS address (“block starting symbol”, section cleared to 0)
0xDC	0xDF	4	BSS size
0xE0	0xE3	4	Entry point
0xE4	0xFF		Padding

1.2 The Aploader

GameCube games don't come as simple DOL executables, but rather they are disk images. The executable and the data is extracted by the IPL (Internal Program Loader). The IPL reads some data from the disk, information on where the relevant aploader functions are, and then repeatedly calls these until all the data is read.

Bibliography

- [1] WiiBrew. <https://wiibrew.org/wiki/>. Various subpages.
- [2] GameCube DSP User's Manual. https://github.com/dolphin-emu/dolphin/blob/52fb2fad4016a58aacfbcf11bdf517f4680cd1fb/docs/DSP/GameCube_DSP_Users_Manual/GameCube_DSP_Users_Manual.tex, September 2005.
- [3] Yet Another GameCube Documentation. <https://www.gc-forever.com/yagcd/>, September 2006.