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08-13-20 11:05 PM

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New reply

Sparsite

take your dumb self out of here. thank you.

Level: 31



Posts: 194/270 EXP: 174454 Next: 10909

Since: 05-20-16

Last post: 1357 days ago Last view: 1217 days ago Posted on 10-13-16 09:57 PM (rev. 4 of 11-19-16 12:12 AM)

Link | Quote | #78711

This thread is for Zelda DS hacking. There are currently no tools for hacking this game specifically, except old documents from Ray and Freeze. Gericom also programmed a ZCB collision generator. However, these guys aren't hacking the Zelda DS games anymore.

Gericom handed his ZCB generator code over to me, and apparently Ray and Freeze programmed an unreleased editor that could edit ZMB files. I'll probably end up coding my own editor though. It will also double as an importer since I have Gericom's ZCB generator source code which converts OBJ files into Zelda specific ZCB collision files. (However it may cause some lag problems with bigger models since the format is not entirely known.)

Rav and Freeze's old notes

Editing these games are weird, because when you LZ decompress them to edit them, they will crash the game. If you LZ compress them after editing them, it only works in Desmume.

If anyone knows whats causing this error, it would be a huge help, otherwise hacking will be very limited.

Zelda: PH D-Pad Patch - https://gbatemp.net/threads/legend-of-zelda-phantom-hourglass-d-pad-patch.375388/

Zelda: SS D-Pad Patch - http://www.romhacking.net/hacks/2235/ Source Code: https://github.com/StraDaMa/Legend-of-Zelda-Spirit-Tracks-D-Pad-Patch

These fix all the control issues people have with this game. The touch screen is eliminated, but its also still an option if you wish to play like that.

Zelda DS Specific File Formats:

-ZCB: Collision (Zelda Collision Binary)

-ZMB: Level Data like object positions and header (Zelda Map Binary)

-ZEB: Enviorment Coloring (Zelda Enviorment Binary)

-ZOB: Object/NPC Type File

-ZAB: Unknown

Tools:

Hex Editing - NSMBe5

EveryFileExplorer - Replacing Files
Music Viewing/Exporting - MKDS CM
ZCB Collision Generation - MKDS CM>File>New>ZCB
NSBMD 3D Model Generation - MKDS CM>File>New>NSBMD
Animation Viewing - MKDS CM
Tinke - 2D Graphics Viewing

Basic Data Locations:
Map Data - root/Map
Sea Textures - root/Enviornment/Sea
Skyboxes - root/Enviornment/VRBox
Mist - root/Enviornment/Filter
Text - root/English/Message
Player Animations - root/Player
Ship Textures - root/Ship
Intro Slides - root/Event/Kamishibai/kami1

For testing purposes:

Mercay Island Starting Point: isle_main/map00.bin/nsbmd/isle_main_00.nsbmd

This is the first level of the game, so you can test stuff like imports here.

ASM hacking hasn't been looked into very much, but I've found some basic stuff like the main green rupee behavoir at 0213B1B0.

ASMR:
quietly whispers
move r0 r7
push r4 to r14
load register r4 into r0

poudink



Level: 42



Posts: 123/529 EXP: 490652 Next: 30710 Since: 03-01-16

Last post: 1 day ago Last view: 10 hours ago

From: Québec (Canada)

Posted on 10-14-16 12:48 PM

POP

Link | Quote | #78722

I know that they achieved model importing, we can see videos of it on their channel. It's spirit track, but I'm pretty sure both games are very similar.

Nothing to say, so jadnjkfmnjamnfjkldnajfnjkanfjdksan jsdnvj m.

[insert quote here]

Posted on 10-14-16 01:23 PM

Link | Quote | #78723

Normal user

You might have already tried this, but it threw me off before; in EFE - did you do

Level: 55

Posts: 682/815 EXP: 1252658 Next: 61531

Since: 09-06-12

Last post: 340 days ago Last view: 82 days ago File>Save?

Sparsite

take your dumb self out of here. thank you.

Level: 31



Posts: 195/270 EXP: 174454 Next: 10909

Since: 05-20-16

Last post: 1357 days ago Last view: 1217 days ago Posted on 10-14-16 03:53 PM (rev. 2 of 10-14-16 03:54 PM)

Link | Quote | #78728

Posted by poudink

I know that they achieved model importing, we can see videos of it on their channel. It's spirit track, but I'm pretty sure both games are very similar.

To clear things up, im aware about the zcb format being collsion, gericom programmed a ZCB generator and put it in MKDS CM so level importing isnt a problem. Im concerned about the ZMB files. These are the files that contain objects, warps, etc. And this is important to document otherwise custom levels wont function properly. zab and zob files may or may not be involved with the functionality of zmbs, but I dont think so.

Posted by Hiccup

You might have already tried this, but it threw me off before; in EFE - did you do File>Save?

Yes, I have clicked it. Click it 1 or 100 times the thing doesnt save my new zmb/zcb/zab/zob files.

ASMR:

quietly whispers move r0 r7 push r4 to r14 load register r4 into r0 POP

cros107

Member Actually not active

Level: 22



Posts: 57/120 EXP: 52195 Next: 6155

Since: 04-20-16

From: Melbourne, Australia

Last post: 985 days ago Last view: 534 days ago Posted on 10-15-16 09:32 AM

Link | Quote | #78761

IIRC, ray and freeze just did model importing, and didn't mess around with objects.

Anyway, try editing files in NSMBe. It should work a charm if you're just doing hex editing, and it should save just fine.

I was going to suggest getting in touch with ray or freeze via social media or NSMBHD, but they seem to have quit the internet. Not sure what you should do about that.

No, not doing SM64DS hacking, just here for the waffles.

ASMR:
quietly whispers
move r0 r7
push r4 to r14
load register r4 into r0

Sparsite

take your dumb self out of here. thank you.

Level: 31



Posts: 215/270 EXP: 174454 Next: 10909

Since: 05-20-16

Last post: 1357 days ago Last view: 1217 days ago Posted on 10-25-16 09:35 PM (rev. 3 of 10-26-16 08:09 PM)

Link | Quote | #79183

Not sure if anyone has found this this crash screen before but it was not mentioned on The Cutting Room Floor.

I was digging in the decompressed ARM9.bin and found debug screen text (exactly like the SM64DS crash screen text which is also in ARM9.bin)

If anyone knows of this or has a vid of this crash screen, post it. Pretty cool if it hadn't been found yet though.

00057580	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	
00057590	00	00	00	00	4 A	61	70	61	6E	65	73	65	00	00	00	00	Japanese
000575A0	45	6E	67	6C	69	73	68	00	47	65	72	6D	61	6E	00	00	English.German
000575B0	46	72	65	6E	63	68	00	00	49	74	61	6C	69	61	6E	00	FrenchItalian.
000575C0	53	70	61	6E	69	73	68	00	55	53	00	00	00	00	00	00	Spanish.US
000575D0	00	00	00	00	91	C0	02	02	95	C0	02	02	00	00	00	00	àà
000575E0	A5	CO	02	02	Α9	C0	02	02	AD	C0	02	02	В1	C0	02	02	¥À@ÀÀ±À
000575F0	4 D	61	73	74	65	72	52	6F	6D	00	00	00	25	73	20	25	MasterRom%s %
00057600	73	00	00	00	4 A	75	6C	20	32	36	20	32	30	30	37	00	sJul 26 2007.
00057610	31	33	3A	35	31	3A	33	36	00	00	00	00	53	79	73	46	13:51:36SysF
00057620	69	6C	65	2E	63	70	70	00	83	81	83	82	83	8A	83	4B	ile.cppK
00057630	83	69	83	43	2E	66	69	6C	65	00	00	00	83	56	83	6A	.i.C.fileV.j
00057640	00	00	00	00	83	49	83	4 C	00	00	00	00	83	6C	83	8B	I.L1
00057650	00	00	00	00	69	64	20	70	72	69	20	73	74	61	74	65	id pri state
00057660	20	61	64	64	72	65	73	73	00	00	00	00	2D	2D	2D	2D	address
00057670	2 D	2D	2D	2D	2D	2D	2D	2D	2D	2D	2D	2D	2D	2D	2D	2D	
00057680	00	00	00	00	25	30	32	64	3A	25	63	25	32	64	20	25	%02d: %c %2d %
00057690	73	20	30	78	25	30	38	58	25	63	0A	00	53	79	73	4 E	s 0x%08X%cSysN
000576A0	65	77	2E	63	70	70	00	00	83	81	83	82	83	8A	83	4B	ew.cppK
000576B0	83	69	83	43	2E	25	73	00	00	00	00	00	4 E	50	43	00	.i.C.%sNPC.
000576C0	4 D	61	70	4 F	62	6A	00	00	45	76	65	6E	74	00	00	00	MapObjEvent
000576D0	83	52	81	5B	83	58	3A	00	83	52	81	5B	83	58	83	69	.R.[.X:R.[.X.i
000576E0	83	56	00	00	41	73	73	65	72	74	00	00	46	49	4 C	45	.VAssertFILE
000576F0	3A		73	00	4 C	49	4 E	45	3A	25	64	00	28	4 C	61	73	:%s.LINE:%d.(Las
00057700	74	46	69	6C	65	29	00	00	83	8C	83	43	83	4B	83	43	tFile)C.K.C
00057710	83		83	85	83	45	28	25	64		25	64	29	00	00	00	.`E(%d,%d)
00057720	83		83	43	83	4B	83	43	20	83	6E	83	62	83		83	C.K.C .n.b.Z.
00057730	43	00	00	00	52	25	30	32	64	20	20	3D	20	30	78	25	CR\$02d = 0x\$
00057740	30	38	58	00	53	50	20	20	20	3D	20	30	78	25	30	38	08X.SP = 0x % 08
00057750	58	00	00	00		52	20	20	20	3D	20	30	78	25	30	38	XLR = 0x \$ 08
00057760	58	00	00	00	50	43	20	20	20	3D	20	30	78	25	30	38	XPC = 0x\$08
00057770	58	00	00	00	43	50	53	52	20	3D	20	30	78	25	30	38	XCPSR = 0x % 08
00057780	58	00	00	00	53	50	53	52	20	3D	20	30	78	25	30	38	XSPSR = 0x %08
00057790	58	00	00	00	43	50	31	35	20	3D	20	30	78	25	30	38	XCP15 = 0x % 08
000577A0	58	00	00	00	53	50	00	00	25	30	38	58	00	00	00	00	XSP%08X
000577B0	25	30	38	58	00	00	00	00	00	00	00	00	00	00	00	00	%08X
000577C0	EC	01	03	02	D0	01	03	02	9D	01	03	02	C9	01	03	02	iĐÉ
000577D0	CD	01	03	02	00	00	00	00	00	00	00	00	1C	02	03	02	Í

This was also not mentioned anywhere on the cutting room floor, but spirit tracks had the debug font mentioned on it's TCRF page, so I'm assuming no one has found this yet. Debug font is located at root/menu/UI_main/DbgFntm.bin

[image]

ASMR:

quietly whispers
move r0 r7
push r4 to r14
load register r4 into r0

take your dumb self out of here. thank you.

Level: 31



Posts: 216/270 EXP: 174454 Next: 10909

Since: 05-20-16

Last post: 1357 days ago Last view: 1217 days ago UPDATE: Ok, so, I was finally able to figure things out, somewhat.

The documentation Ray and Freeze posted was correct, except you need to re LZ compress the file once you modify the decompressed version, otherwise it crashes.

However, this only works for Desmume, no\$gba wont even boot if its recompressed but desmume does it just fine.

Anyone have any ideas on getting it to run in no\$gba debugger? Otherwise, hacking will be limited and I want to do some ASM hacking with this game.

ASMR:

quietly whispers move r0 r7 push r4 to r14

load register r4 into r0

POF

Sparsite

take your dumb self out of here. thank you.

Level: 31



Posts: 239/270 EXP: 174454 Next: 10909

Since: 05-20-16

Last post: 1357 days ago Last view: 1217 days ago

Posted on 11-06-16 11:29 PM (rev. 2 of 11-06-16 11:29 PM)

Link | Quote | #79551

Things are making progress. I've got a very early build of a ZMB editor I made from scratch. I still have to fix some bugs, but it works!

There's no way to actually replace the ZMB files though, because EFE and MKDS CM don't actually save the new ZMB file. I'm going to talk to Gericom about opening these bin files (compressed NARC files) and see if he can fix the save button.

ASMR:

quietly whispers
move r0 r7
push r4 to r14

load register r4 into r0

POP

Platinatic



Koopa Cat in his spare time

Level: 22



Posts: 80/117 EXP: 53413 Next: 4937

Since: 09-28-15 From: over there!

Posted on 11-07-16 02:07 PM

Link | Quote | #79556

I don't know if you know about this, but saving in EFE is a little weird. You have to press save in every window in order to save the changes. So pressing save in a subfolder of a file isn't enough, you have to press save on the window that opened when you opened the file (an intire rom, for example).

Saving works, but it's just not convenient.

Last post: 808 days ago Last view: 21 days ago

take your dumb self out of here.

thank you.

Level: 31



Posts: 240/270 EXP: 174454 Next: 10909

Since: 05-20-16

Last post: 1357 days ago Last view: 1217 days ago

Posted on 11-07-16 03:27 PM

Link | Quote | #79557

I don't know if you know about this, but saving in EFE is a little

You have to press save in every window in order to save the changes.

So pressing save in a subfolder of a file isn't enough, you have to press save on the window that opened when you opened the file (an intire rom, for example).

Saving works, but it's just not convenient.

Oh, thanks. It seems to be working now. Now the ZMB editor will actually be useful for now (I want to eventually integrate it so it edits the ZMB files just by opening the ROM itself).

ASMR:

quietly whispers move r0 r7 push r4 to r14

load register r4 into r0

POP

Posted on 11-09-16 05:42 PM

Link | Quote | #79604

take your dumb self out of here. thank you.

Level: 31



Posts: 243/270 EXP: 174454 Next: 10909

Since: 05-20-16

Last post: 1357 days ago Last view: 1217 days ago

Does anyone know if its possible to kill Linebeck in Phantom Hourglass? Theres a model just above linebeck's model called linedead.bin, it just contains a model.nsbmd and its a model of him lying face down, dead.

Creepy pasta time.

Interestingly, his assets are titled "Lineback" even though his name is spelt Linebeck.

ASMR:

quietly whispers move r0 r7 push r4 to r14

load register r4 into r0

POP

Posted on 11-13-16 11:02 PM (rev. 2 of 11-13-16 11:02 PM)

Link | Quote | #79698

take your dumb self out of here. thank you.

Level: 31

Latest progress: I've been digging through the games code documenting stuff. I've been trying to swap the top screen and the bottom screen. I've done it in real time modifying the memory, but I need to make some sort of patch.

I need to swap Bit 15 of the Graphics Power Control Register.

//Swapping Screens

Bit 15 at 0x04000304 tells the DS what screen is the main screen.

Default: 111100000010 Swapped: 111100000000



Posts: 255/270 EXP: 174454 Next: 10909

Since: 05-20-16

Last post: 1357 days ago Last view: 1217 days ago

```
0202F0BC writes to reg when you pull your map with select+down
0202FB08 is writing to the reg, storing a 2 byte value
0202EFF8 writes to it
01FFBBE8 writing back
0202EFE8 writing back
on loading file:
021047BC
021047BE - the only call, this is in thumb mode
```

other general game stuff:

```
ROM Map:
020AE2E4 - Increment Rupee counter when green ruppee collected
020198F8 - Something that loads the level geometry
0213EEAC sets health
020A7D54 take damage
0213F538 calls take damage
0210F4A4 calls entire take damage function (somewhere above/below
respawns link on land)
0210F2DC check if health is equal to 0
0210F2E0 branch to display gameover screen
0210F2F8 display gameover screen
0210F0B8
0201CC40 messes with rotation
```

ASMR:

quietly whispers move r0 r7 push r4 to r14 load register r4 into r0 POP

Posted on 11-20-16 04:48 PM (rev. 5 of 11-20-16 05:06 PM)

Link | Quote | #79806

take your dumb self out of here. thank you.



Posts: 261/270 EXP: 174454 Next: 10909

Since: 05-20-16

Last post: 1357 days ago Last view: 1217 days ago New progress. Decided to fully understand most of the formats before I work on an editor. I will probably trash my current one because its probably pretty messy and inefficient.

Notes:

BOPM (Map Objects)

0x4: Header

0x8: Length of section (reversed ex. a length of 1090 would be 90 10 00 00)

0x9: Number of Map Objects

0x12: Padding

Each Map Object is 28 bytes long

Byte 1: Map Object ID

Map Object IDs:

00 = Tree

01 = Two Horizontal Grass Patches

02 = Boulder 03 = Blue Pot 04 = Fence Post

05 = Brown Floor Switch

06 = Game Crash (Bad Parameter Maybe?)

07 = Grey and Blue Stone Door

08 = Small Stone Slab

09 = Large Wooden/Stone Key Door

0A = Wooden Treasure Chest

0B = Unknown/Nothing

OC = Entering the area spawns a treasure chest (Conditional Treasure Chest Spawn?)

0D = Game Crash

0E = Blue Pot Again

0F = Game Crash

10 = Game Crash

11 = Red Campfire

12 = Game crash

13 = Game Crash

14 = Game Crash

15 = Stone Triangle Base With Pyramid and Entrance

16 = Game Crash

17 = Game Crash

18 = Game Crash

1F = Sign

2F = Main Island NPC House

88 = Stone Pyramid With Front Entrance

3C = Collisionless Vertical Grass Tile

This is where I think the ZOB files come in to play. ZOB files seem to be an object bank of sorts. Similar to SM64DS, there are objects such as Pots or Trees that are always loaded into memory.

There are 4 ZOB files with every map.bin file: motype_XX_0 and motype_XX_1 (XX is just the numbers from the map.bin) MO meaning Map Objects within the BOPM Header.

Next, there are npctype_XX_0 and npctype_XX_1. These seem to correspond with all the NPC's used in the map.bin's ZMB file.

I think these ZOB files may be the reason that the game is crashing with those certain object IDs.

The game also has some unexpected map objects. All the houses, fences, etc. which are completely static are map objects. Maybe they get moved around in different acts later in the game? Or maybe the game puts certain effects on them like anit-aliasing. Not sure though. ACPN objects have X/Y positions and Y rotations of 2 bytes, but this is what the map objects look like.

3C 00 00 00 22 25 00 00 01 00 00 02 00 03 00 01 01 00 00 00 00 00 FF 01 00 00

Still unsure about the BMOR section, all I could find out was this:

BMOR (Unknown) 0x4: BMOR Header

0x8: Size of Section (reversed) 0x12: Number of entries in section?

Looked a little bit at the MOOR header:

MOOR (Room)

This is what stores the level area data such as music, skybox, etc.

0x4: Header 0x19: Music ID

Music Reference List - http://zeldauniverse.net/media/music/phantom-hourglass-original-soundtrack/

Music IDs:

shibboleet	Posted on 10-15-16 10:46 AM	Link Quote #78777
Fire Mario DROP TABLE users;	if you want, send me a zmb in a pm and I can take a quick pe a	eek.
Level: 116		
Posts: 4242/4660 EXP: 17305813 Next: 18280		
Since: 07-07-12		
Last post: 102 days ago Last view: 4 days ago		

take your dumb self out of here.



Posts: 201/270 EXP: 174454 Next: 10909

Since: 05-20-16

Last post: 1357 days ago

Posted on 10-15-16 01:54 PM (rev. 2 of 10-15-16 01:57 PM)

Link | Quote | #78785

IIRC, ray and freeze just did model importing, and didn't mess around with objects.

Anyway, try editing files in NSMBe. It should work a charm if you're just doing hex editing, and it should save just fine.

I was going to suggest getting in touch with ray or freeze via social media or NSMBHD, but they seem to have quit the internet. Not sure what you should do about that.

The Legend of Zelda Spirit Tracks - First Hack ever!



They also said they programmed a buggy, but unreleased editor that will edit ZMB files and it can move around objects.

if you want, send me a zmb in a pm and I can take a quick peek.

Here is the link to the ZMB/ZOB files for the starting level. (ZOB shouldn't matter but just incase)

00 - Overworld

01 - Dunegon

02 - Duplicate Overworld

03 - Mercay Island

04 - Inside House

05 - Duplicate Inside House

08 - Duplicate Mercay Island

Also, I figured out that the one ZEB file used called envcolor.ZEB has several headers inside th file such as OAES and ONGD followed by (most likely) enviornment/vertex coloring data.

Other things I still need to look at: EMAC Header (Camera), RYLP Header (Player), and PRAW Header (Warp)

ASMR:

quietly whispers
move r0 r7
push r4 to r14
load register r4 into r0
POP

shibboleet	Posted on 11-20-16 05:06 PM	Link Quote #79808
G	little endian is ass	
Fire Mario DROP TABLE users;		
Level: 116		
Posts: 4277/4660 EXP: 17305813 Next: 18280		
Since: 07-07-12		
Last post: 102 days ago Last view: 4 days ago		

Sparsite

take your dumb self out of here.

hank you.

Level: 31



Posts: 263/270 EXP: 174454 Next: 10909

Since: 05-20-16

Last post: 1357 days ago Last view: 1217 days ago Posted on 11-20-16 05:18 PM (rev. 3 of 11-20-16 06:16 PM)

Posted by shibboleet

little endian is ass

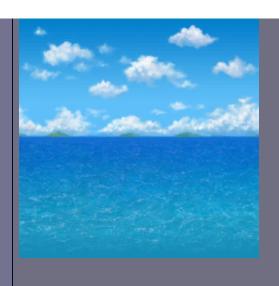
Agreed.

More stuff found, that is not on The Cutting Room Floor.

The root/Map folder contains a NSBMD and NSBTX texture of an SM64DS skybox. It has the same name: vr01

Link | Quote | #79809

Most likely used for testing purposes.



quietly whispers
move r0 r7
push r4 to r14
load register r4 into r0
POP

Newcomer Normal user

Level: 3

Posts: 1/2 EXP: 103 Next: 25

Since: 12-23-16

Last post: 1318 days ago Last view: 1318 days ago Posted on 12-23-16 09:45 AM

Link | Quote | #80534

Hey, nice to see a topic for hacking Phantom Hourglass and Spirit Tracks.

Here is all I can say about ZCB Files (Zelda Collision):

Phantom Hourglass and Spirit Tracks ZCB are differents.

I already tried to import a map from ST into PH, model and textures worked great in-game but I fell through the floor. So I used the ZCB generator and same result meaning Gericom ZCB generator is only for ST.

While a ZCB file is in a Hex Editor,

0x0C mean the numbers of differents sections (04 for Phantom Hourglass, 05 for Spirit Tracks)

List of sections:

- -BXTV
- -BLCP
- -BMRN (Spirit Tracks only)
- -BIRT
- -BDRG

Another weird thing in Phantom Hourglass ZCB The BDRG section of every maps don't have the right size.

Example:

If I open dngn_flame_00.zcb (Fire Temple first floor) in a Hex Editor, I can see the total file size at 0x08 is DC5A. When I check with CTRL+A file size is only 6970.

BDRG section is wrong, it say 57EC instead of 2280.

shibboleet

&

Fire Mario DROP TABLE users;

Level: 116

Posts: 4316/4660

Posted on 12-23-16 10:13 AM (rev. 2 of 12-23-16 10:13 AM)

Link | Quote | #80535

well if you're looking at collision, look for pairs of 3 that are floats. Those are the vertices. Try looking for the triangles as well. That's what I did for Double Dash, and was able to build a viewer from that.

a

EXP: 17305813 Next: 18280 Since: 07-07-12 Last post: 102 days ago

Natsu235 Posted on 01-03-17 07:25 AM Link | Quote | #80738 Newcomer I don't have enough knowledge to build a tool. Normal user Btw any way to replace ST double tap for rolling with PH? Level: 3 Posts: 2/2 EXP: 103 Next: 25 Since: 12-23-16 Last post: 1318 days ago Last view: 1318 days ago

Main - Misc. ROM hacking - Zelda DS Hacking [HELP]

New reply



Last view: 4 days ago

Acmimboard 2.064 (2018-07-20)

Page rendered in 0.036 seconds. (20 fokto of memor)

Acmim
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