

TrueReality

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REVISION HISTORY

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Chapter 1

TrueReality

1.1 TrueReality - a Nintendo 64 emulator for your PPC Amiga!

TrueReality Amiga PPC version 990517.2, 990605

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TrueReality is Copyright (c) 1998-99 Niki W. Waibel

Introduction

- What is this?

Requirements

- What does it require?

Features

- What can it do?

2D vs MESA version

- What is the difference?

Installation

- How to install?

Usage

- How do I use it?

Settings

- What can I set?

Speed

- How fast is it?

Disclaimer

- Who's responsible?

Development

- How is it done?

Bugs

- Are there any known bugs?

History

- What's new?

Future

- What will be added?

Contact

- How to contact me?

Thanks!

- Which have helped me?

Visit the homepage at <http://www.amidog.com/n64/>

1.2 TrueReality - Introduction

This is a Nintendo 64 emulator for Amigas equipped with a PPC board.

1.3 TrueReality - Requirements

Hardware:

- * Amiga 1200/3000/4000 with a PowerPC board
- * 16 MB of free RAM (more with large ROMs)
- * OS 3.0+

Software:

- * WarpUP
- * CGFX v3 or later for CGFX support

1.4 TrueReality - Features

This is what's being emulated:

- * ... (to be written)

1.5 TrueReality - 2D vs MESA version

Which version should I use?

I strongly recommend the MESA version if you got a graphics board with 3D hardware (as the C/BVision) since this version has got nice 3D graphics.

If you only got AGA, a slow graphics board, or a slow PPC, then the 2D version is the one for you. It do display all 2D stuff and has got 3D (wireframe) support as well.

NOTE: The MESA version has no 2D support, so the 2D demos/games available wont work on it, this is about to change but might take some time.

1.6 TrueReality - Installation

Just copy it to any place on your HD.

1.7 TrueReality - Usage

* Starting TR:

1. Open a CLI/Shell window and write TrueReality ROMNAME.
2. TR will now start, load the ROM, open a screen and start emulating.
3. TR probably changes the screenmode once or twice before any action will take place on screen, and please remember that NOT all ROMs work, check out <http://www.amidog.com/n64/> for a few screenshots of working ROMs.

* These keys are used (incl. what they do):

ESC - Quits TrueReality.

F8 - Refresh Visual (to force refreshing, normally done automatically).

Q - Start Button

W - A-Button

E - B-Button

8 (numeric keyboard) - C-Button UP

2 (numeric keyboard) - C-Button DOWN

4 (numeric keyboard) - C-Button LEFT

6 (numeric keyboard) - C-Button RIGHT

UP (arrow) - D-Button UP

DOWN (arrow) - D-Button DOWN

LEFT (arrow) - D-Button LEFT

RIGTH (arrow) - D-Button RIGHT

A - R-Button

S - L-Button

D - Z-Button

K - Stick Up
J - Stick Down
L - Stick Right
H - Stick Left

NOTE1: The stick is a simulated analogue one and thus do NOT return to zero when you release one of the buttons, you must return in manually by pressing the opposite one!

NOTE2: From 990322.1 release, the stick is also emulated with the mouse! Try it in PONG!

NOTE3: Demo ROMs can be found at <http://www.dextrose.com/>

1.8 TrueReality - Settings

* Config TR using the supplied prefs editor (TR-PE).

6bit/8bit (AGA) - 64/256 colors.
HAM6/HAM8 (AGA) - 4096/262144 colors (2xWidth HAM, PAL only).
HAM6+/HAM8+ (AGA) - As HAM6/HAM8, except in Lores (320*240, 4xWidth HAM, PAL only).

NOTE1: For CGFX modes, TrueReality automatically adjusts to the screendepth!

NOTE2: The HAM modes requires and automatically selects PAL screenmodes!

NOTE3: The 4xWidth HAM modes are often refered to as true 12/18bit.

1.9 TrueReality - Speed

* PONG.V64 - 30fps (8bit BVision), 25fps (16bit BVision) using 603e'200.
* ...

1.10 TrueReality - Disclaimer

Remember! You use this piece of software at your own risk!
I can never be held responsible for any sort of damage caused to your software or hardware by the use of this product!

Bugreports and suggestions might be sent to one of my addresses.

1.11 TrueReality - Development

The TrueReality PPC Amiga port is developed using:

```
v990203.x-v990216.2, A1300Ti -> 040/FPU/MMU'25, 603e'200, 2+128+0MB, AGA.  
v990322.1-          A1300Ti -> 040/FPU/MMU'25, 603e'200, 2+128+8MB, BVision.
```

1.12 TrueReality - Bugs

These are the known bugs:

- * None known.

1.13 TrueReality - Contact

Bugreports, suggestions, comments or anything else you may want to contact me about can preferably be sent by e-mail to:

n64@amidog.com

You may however also contact me by normal mail:

Mathias Roslund
Sveav. 2b, nb
S-702 14 Orebro
Sweden

1.14 TrueReality - Thanks!

I would like to thank the following persons:

- * Niki W. Waibel - For writing TrueReality and helping me porting it.

1.15 TrueReality - Future

These features are planned:

- * Better sound.
- * Analogue joystick support.
- * ...

1.16 TrueReality - History

- 990203.1 -990204
-Based on source 990203.
-Added FPS counter using PPC timer.
-Started working on this guide.
-990205
-Improved the speed of the graphics rendering (2 more fps in Pong.v64).
-More speed improvements, I got 1 more fps, now 14 in Pong.v64.
-The FPS counter is now also displayed in HAM8 modes.
- 990203.2 -990218
-Created a gadtools GUI for editing the preferences.
-Added option to turn fps counter on/off.
-Added 4 new AGA modes (only 2 of them are currently operational).
-In 6bit (it's back as an option) I get 16fps in PONG.v64, and by using HAM6 instead of HAM8 I get 11 fps using PONG.v64 (1 more fps).
-This version was never released.
- 990216.1 -990219
-Based on source 990216.
-Finished the two "+" modes (HAM6+/HAM8+).
- 990216.2 -990225
-Added mouse support, the mouse simulates an analogue controller, so you must move the mouse back to the start position to make it return to " ← zero".
-Sound is now also working! I've used AUDIO: to play it, but of some ← reason the frequency wont get a proper value, so I've locked it to 10kHz ← currently.
-A maximum of 5 IDCMP messages is now parsed for each frame, this is ← required for the mouse routines, since IDCMP_MOUSEMOVE gives a lot of messages.
- 990322.1 -990328
-Based on source 990322.
-Thanks to an old bug being removed, this version is now compiled with maximum optimizations.
-Due to maximum optimizations the filesize decreased by almost 60% and the speed in PONG.v64 increased from 16fps to 25fps (8bit WPA8 BVision) ← !
-The audio frequency will now get adjusted if required (default is 44100 ← Hz).
-990409
-Full CGFX support added! 8bit/16bit/32bit (ARGB) uses direct memory ← access and is therefore very fast, all other 15bit+ modes uses CGFX calls for displaying. The speed increase in 8bit was from 25fps to 29fps.
- 990322.2 -990410
-Removed serious bug! I did allocate the chunky buffer BEFORE checking ← which depth the screen had, so the first screen always was handled like 8bit. ← This made TR use memory which hadn't been allocated which would lead to a ← crash in many cases!
-

990509.1 -990504
-Based on source 990502.
-Finally! Thanks to the Mac porter there has been some bugfixes which makes 3D support possible! Some basic functions (draw line/triangle) are working.
-Compiled a special Just3D version, this version has no 2D support and will be CGFX only for maximum speed.

-990505
-It appears that there are some severe bugs in the 990502 release. According to the Mac porter, the bugs he had found wasn't all fixed. So nothing done today.

-990510
-Based on source 1990509.
-I got a new version today, now the CPU bugs appears to be fixed.
-Replaced the float linedrawing routine with a highly optimized Bresenham one.
-The Just3D version now has a screenmode requester and works in any 15 bit mode!
-Added double buffering to the Just3D version.

-990512
-Compiled the 2D+3D version and updated it.
-Fixed some bugs in the Bresenham routine.
-The keys are now always checked once per vblank (frame), so not you can always quit TR by pressing ESC.
-Just noticed that this release is slightly faster than the previous ones.

-990514
-Found a much better way to do double buffering than to move the double-height screen up and down and render on the non-visible part. Instead I'm using the MovePixelArray call of CGFX, this is not true double buffering, but since it's performed using the blitter, the speed is awesome, for example ultra increased from about 25fps to 40fps! (This only applies to the Just3D version).

990517.1 -990531
-Guess what!? I've found one of the problems with compiling for WarpUP, so now I've just made a fast version with no Amiga support... Although all MESA stuff is compiled in and linked without problems!
-More great news, the Mac OS porter has implemented some stuff which makes Mario 64 and similar commercial ROMs run! I'm getting this source this weekend (can't wait!).
I'll have to add all Amiga specific GL stuff until then!

-990601
-After several hours of hard work the MESA stuff is now finally working! It looks great which is very promising.

- 990602
- Improved the MESA support, I've however disabled all 2D stuff for speed ↔ reasons.
- The FPS counter now looks much nicer.
- CGFX is currently required, but any colordepth from 8bit to 32bit is ↔ supported.

990517.2 -990603

- Removed a bug when opening the screen.
 - 990605
 - Updated the 2D+3D (wireframe) release to the latest code revision. This ↔ version has just as good AGA support as before, but has been renamed to ↔ TrueReality2D.
 - Some CGFX related bugs has been fixed.
-