FiSSION Game Engine Project

Public Demo v0.01

By:

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Introduction

FiSSION is a homebrew 3D game engine being developed for the Nintendo Wii. Its goal is to allow homebrew developers the opportunity to develop studio-quality games without the massive upfront investment of writing a game engine to support their content. This is a very early demonstration build of this project, which allows users to select and browse game levels, rendered real-time in 3D.

Background

FiSSION originally started out as "Hydra," a project with similar goals but targeted at XNA on the Xbox 360, a little over a year ago. It was a two-person endeavor shared between myself and a like-minded friend, and we made a lot of progress in the first few months of development. Unfortunately, my friend eventually lost interest, and lack of any good project management system made it almost impossible for me to continue the project on my own. Then, after becoming interested in the Wii, and some encouragement from another friend, I decided to pick the idea back up, this time incarnated as project "FiSSION." Although I am now coding it mainly on my own, I must give my friend some credit for keeping me motivated. It has since been only a few months, and, despite some trouble working with the Wii's poorly documented software, the project is progressing at a surprisingly fast pace. With that said, I am proud to announce this first public demo release, which, if nothing else, at least proves that I have made my way into the Wii game development scene. All in all, I am really hoping for this project to turn into something relatively extraordinary, especially given that no console has really seen something like this before.

The Demo

I'd like to start off by warning everyone that this is nothing more that a very early demo release of a work still very much in progress. Likewise, it is intended to do no more than illustrate a concept and show that this project has a lot of future potential. It is not by any means a playable game. Furthermore, as all projects are when in the very early stages

of development, this release is very unpolished and under-tested, to say the least. In fact, there is no real guarantee that it will even work the way it is supposed to on any console other than my own, and you should conceder yourself lucky if you don't run into any unforeseen problems. With that said though, I am hoping that everything will work as it should in what is to be my engine's first field-run.

The application starts with a main menu screen that allows the user to choose a map (game level) and a sky graphic to be displayed and rendered in 3D. Once the engine is loaded, the user can browse around the map from the in-game equivalent of a flying camera, controlled in a fashion similar to using the "noclip" cheat in an FPS game. The user may then return to the menu and choose another map and/or sky to load and browse.

Controls

The demo is currently controlled exclusively through a USB mouse and keyboard attached to the Wii's rear USB ports. There is currently no support for the traditional Wii peripherals such as the Gamecube controller or Wii Remote. I had planned for rudimentary support for the Wiimote and Nunchuck to be available in this demo, but things were not working as they were supposed to and I decided not to delay this release trying to get them working at the moment. Ultimately, this means that you MUST have a USB mouse and keyboard available to be able to do anything at all with this demo. If you are not able to find one, I'm afraid you will either have to borrow one, or wait for a later release of the engine that implements support for standard Wii peripherals.

The following mouse / keyboard controls are used in this demo:

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- Arrow keys – Moves the cursor in the menu
- Enter – Selects an item in the menu
- W/A/S/D – Moves the flying camera around the map
- Mouse – Points / rotates the camera
- R – Resets the camera to its default position
- Esc – In map – Returns to the menu
        - In menu – Returns to the launcher
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Additionally, the reset button on the console may be used to return to the loader at any time (even, in many cases, if the application has crashed).

Installing

To install and run this application, simply copy the "apps" and "data" directories from the downloaded archive to the root of an SD memory card formatted with the FAT file-system. All SD cards supported by the Homebrew Channel, including SDHC cards, should be suitable for running this application. Once the files are copied, simply launch the "FiSSION Game Engine Project" program from the Homebrew Channel menu. As stated earlier, the application can be exited at any time by pressing the reset button on the Wii console.

Known Issues / Troubleshooting

The following is a list of problems that you may (but hopefully won't) encounter when running this demo, and a list of steps that can be taken to work around these issues:

- The demo does not appear in the Homebrew Channel menu, crashes immediately, or crashes while loading a part of the content.

  o Reboot the Wii and try loading the demo again.

  o Make sure you are using the latest version of the Homebrew Channel. Older versions had known compatibility issues with certain SD cards.

  o Back up your data if necessary, then fully format the SD card with the FAT file-system. Re-copy the application directories from the archive to the card, reboot the Wii, and try loading the demo again.

  o Repeat step 3 using a different SD card.

  o Re-download the archive and repeat step 3.

  o Repeat step 3 on a different computer and/or under a different operating system.

- The demo does not respond to input from the mouse and/or keyboard.

  o Unplug BOTH peripherals and fully shutdown the Wii. Turn the Wii on and load the Homebrew Channel without either peripheral connected. Then plug in both peripherals while still in the Homebrew Channel menu and launch the application. Be sure to plug the peripherals directly into the Wii; do not go through any extension cables or USB hubs.

  o Repeat step 1 again, switching the respective ports the mouse and keyboard are plugged into.

  o Repeat step 1 using a different mouse and/or keyboard.

If you believe that any problems you experience, whether or not listed above, are the result of a programming error in the software, feel free to contact me explaining the error so that I can fix it. Keep in mind though that it is unlikely that I will be able to solve any errors related to specific hardware, especially if I do not own the hardware in question, or it is non-standard.

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Commercial Use

As you can see, the only thing I'm really not allowing people to do with FiSSION is make money off of it. Still, if you or your company is sincerely interested in commercial applications for FiSSION, I'd be more than happy to conceder making specific business arrangements. The only requirement I have is that such arrangements must not restrict my ability to continue developing and distributing FiSSION on my own. I will NOT enter into any exclusive contracts. Otherwise, feel free to contact me with any offers. In all honesty, I'd take it as quite an honor to see FiSSION become part of a mass-marketed product.

Included Content

As stated above, the FiSSION project is strictly a game engine, not a game. Likewise, it currently contains no original creative content, only code. Still, because a game engine can only be demonstrated when it has content to work with, I have included two test maps, "Zanzibar" and "Blood Gulch," taken from the "Halo" series of FPS video games by Microsoft / Bungie, and converted to work with the FiSSION engine. These maps are copyrighted property of Microsoft / Bungie, and I take no credit for them whatsoever. I believe that their use in demonstrating the abilities of the FiSSION game engine project qualifies as "fair use" on the following grounds:

- The content is provided purely to display the functionality of the FiSSION project, and is provided in a format suitable for no other purpose.

- The content is being used solely for non-commercial purposes. No profit is being made from the content or from the software with which it is being used.

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Furthermore, the images used to create the sky graphics are the original work of Colin Lowndes ("cloudtop") and Jockum Skoglund ("miramar" and "stormydays.")

Source Code / Helping FiSSION

As you may have noticed, source code has not been included with this release. I ultimately plan on making this an open-source project, but I have decided that releasing the source code at this point would be counterproductive. The source is currently very messy, completely uncommented, and basically, anyone else would go crazy trying to read it. Furthermore, I simply don't need nor want any other developers working on this project right now. I'm having a hard enough time keeping the code organized enough for myself. Still, if anyone is interested in knowing something specific about the internals of FiSSION, I'd be glad to explain it and provide the relevant code.

And finally, there is one big thing everyone can do to help FiSSION: tell your friends! If you thought the demo was interesting, or you think that this project has potential, spread the word and give your feedback. The most important thing I need right now is motivation and support from the game development community, so that, at very least, I know that my work is appreciated and that I'm not wasting my time. If you have anything to say, I'd love to hear from you on WiiBrew or by email (see above.) Thank you, everyone, for your interest.