
Increase Director 4 Compatibility by enabling Full Support for Total Distortion and Journey Man Project

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Synopsis

As part of my GSoC proposal, I propose to fix bugs and officially add full support for two innovative and exciting games, "Total Distortion" and "The Journeyman Project". My primary objective will be to ensure that these games are thoroughly tested, any bugs are identified and fixed, and both games are ready for production-level release by the end of the project timeline.

Possible Mentor(s):

1. Sev, save me!
- 2.

Benefits to Community

1. **Increased access to classic games:** Both "Total Distortion" and "The Journeyman Project" are older games that were released in the 1990s. By adding support for these games, players will be able to play them on modern

operating systems and hardware. This will provide increased access to these classic games, which is important for preserving gaming history.

2. **Increased community engagement:** Both of these games have a dedicated fan base, and by adding compatibility support, we can help to re-engage these fans and foster community engagement. This can lead to valuable discussions and insights that can be used to improve the ScummVM even further.
3. **Better/stable engine:** Adding support for "Total Distortion" and "The Journeyman Project" to the Director engine will not only benefit these two games, but it will also improve the engine itself and increase the chances of porting other games based upon the same engine. Doing so will require fixing any bugs or compatibility issues with the Director engine. This can lead to an overall improvement in the engine's stability and performance, benefiting all games that use the engine.
4. **Increased interest in the engine:** By adding compatibility support for popular and well-known games like "Total Distortion" and "The Journeyman Project", we can generate more interest in the Director engine. This can attract more developers to use the engine and increase its popularity and relevance among developers.

My Work so Far

I want to share my experience implementing the load/save feature in Total Distortion([pr link here](#)). One of the challenges I faced was implementing Xlib, which was called when the feature was accessed. To do this, I had to trace back the code and decompile Lingo scripts to understand how they worked.

After I had a better understanding of the code, I was able to implement Xlib and integrate it with the load/save feature. This required careful testing and debugging to ensure that the feature worked as expected. In the process of implementing this feature, I also found other bugs that were related to it, such as a *FileIO path delimiter bug*. I fixed these bugs and added more features that support loading and saving, such as *setting the value of "the result" after a function call return*.

Implementing loading and saving in Total Distortion gave me a greater understanding of what is needed to be done in the Director engine, how it works, and more specifically about Lingo scripts and their workings. Overall, this was a great learning experience that allowed me to develop my skills as a developer.

Deliverables

- ★ **Total Distortion:** Bug fixing and ensuring Total Distortion is compatible with ScummVM's requirements include identifying and fixing bugs, prioritizing issues, regression testing, and rigorous testing for official support, I will be dividing this into stages and levels of the game, which are:
 - Halls of Distortion and Sky Maze
 - Vid halls
 - Hell's Garage
 - Sonic Cementry
 - L.A. Stage
- ★ **The Journeyman Project:** Bug fixing and ensuring The Journeyman Project is compatible with ScummVM's requirements includes identifying and fixing bugs, prioritizing issues, regression testing, and rigorous testing for official support. Includes support upto:
 - Caldoria Heights: Beginning
 - Temporal Security Annex
 - Prehistoric Era - Historical Log Disk
 - Morimoto Mars Colony
 - World Science Center, Australia
 - NORAD VI
 - Caldoria Heights: Finale
- ★ **Meet Mediaband (Stretch goal):** If time permits, then improve support for the director 5 engine by fixing bugs for meet media band! (includes)
 - House Jam
 - UnDo Me
 - Tekno
 - Archives
 - Swag Shop, Kid's Room & Smart bar

Project Schedule

- ★ **Community Bonding (May 4 - May 28):**
 - Get myself accustomed to the codebase and discuss the design of the module.
 - Try and resolve existing issues or bugs to get familiar with the workflow.
 - Talk to mentors every day, and submit patches that give a general idea of the Macromedia director engine and thus prepare for the official coding period!
- ★ **Coding**
 - **Phase 1: Adding Support for Total Distortion (May 29 - June 19)**

- Week 1 (May 29 - June 4): Halls of Distortion and Sky Maze
 - Dream gun not working, no bullets shown!
 - “Label #.brm not found!!” after using elevator and game stuck.
 - Crash when powering aquarium (on top floor)
 - Game stuck when no guitar and fighting a guitar warrior!
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- Week 2 (June 5 - June 11): Vid halls
 - Crash after burned by flame torch and moving (*virtual bool Common::SeekableSubReadStream::seek(int64, int): Assertion ‘_pos <= _end’ failed.*)
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- Week 3 (June 12 - June 18): Hell’s Garage & Sonic Cementry
- **Phase 2: Adding Support for the other part left! (June 19 - July 10)**
 - Week 4 (June 19 - June 25): Buffer week
 - Week 5 (June 26 - July 2): L.A. Stage
 - Week 6 (July 3 - July 10): Buffer time for fixing misc. bugs/optimizing/writing blogs etc!
- **Evaluation 1: Midterm evaluation (July 10 - July 14)**
- **Phase 3: Adding Support for The Journeyman Project (July 14 - August 3)**
 - Week 7 (July 14 - July 20): Caldoria Heights: Beginning & Temporal Security Annex
 - Week 8 (July 21 - July 27): Prehistoric Era - Historical Log Disk & Morimoto Mars Colony
 - Week 9 (July 28 - August 3): World Science Center, Australia & NORAD VI
- **Phase 4: Final Support for The Journeyman Project (August 4 - August 3)**
 - Week 10 (August 4 - August 10): Caldoria Heights: Finale
 - Week 11 (August 11 - August 17): Meet Mediaband and Director 5 compatibility!
 - Week 12 (August 18 - August 21): Conduct final tests to ensure that the game is ready for release. (Buffer time)
- **Stretch Goals: Adding support for Director 5 and Meet Mediaband**
 - If time permits, then work on adding support for meet media band and hence improve the compatibility of director 5!
- **Evaluation 2: Final evaluation (August 21 - 28)**

Availability

I can commit 40 or more hours weekly to achieve my goals and deliverables. If need be, I can spend more time getting things done.

- Work Timings for weekdays (4 - 5 hours daily) 10 pm IST to 2 am IST (4:30 pm UTC to 8:30 pm UTC)
- Work Timings for weekends (7 - 8 hours daily) 10 am IST to 6 pm IST (4:30 am UTC to 12.30 pm UTC)

Examination and Time Commitments:

I will be having university exams from May 6th to June 2nd, and during this time, I may be less active than usual. However, I am committed to keeping up with my responsibilities and will do my best to cover all milestones and work beforehand.

Pre GSoC:

I will start my work on the Director engine and testing these games in the month of April, my goal would be to reach phase 1 and get an early headstart!

Pull Requests:

- I. [DIRECTOR: Set 'the result' for calls, Normalise xlib calls for mac delimiters \(:. @:\), Working Saves for TD!](#)
- II. [SLUDGE: Added support for impulse tracker files using libmikmod!](#)
- III. [SAGA2: Fix Wrong spellID crash when using spells from inventory!](#)
- IV. [GLK:SCOTT: Fix assert failed after calling Scott::fatal\(\)](#)

Who am I (Whois)?

I am currently a third-year computer science student with a specialization in gaming and animation. I am passionate about creating software that can make a positive impact and have worked on a multitude of projects using various programming languages. Additionally, I am a quick learner and eager to continue developing my skills. I am proud to have won several hackathons, including national-level hackathons, and have participated in international ones as well.

Why Me?

I have a strong interest in contributing to ScummVM because of my love for old-school games, particularly Dragon's Blade. I have been a fan of this game since I was young and have always wanted to port it to my Windows system since it was not originally supported. When I discovered ScummVM and learned about their mission, I became excited about the opportunity to contribute to the project!

I believe that I have the technical skills to work on this project as well. I have experience with the C++ language and have created my own game engine using SDL2, which I have even published to the Play Store. Overall, I am an accomplished individual with a strong passion for game development, and I am eager to contribute my skills to the ScummVM project.

- Links to Shapes2D (Game) - [Github](#), [Playstore](#)
- DevNakes (Game, SDL2) - [Github](#), [Online Play](#)

Post GSoC

I plan to contribute further to other projects as well. I also want to review submissions on Director 5 and 7 engines and help contribute. Other engines which I want to work on include ADL2 and SLUDGE. Eventually, I wish to contribute to the core ScummVM and support the new backend as well.