offs from core titles, which led to a nearly 50% drop in revenue [2] , leading to a step back for further expansion in 2010. Despite these setbacks, the music video game market continues to expand, introducing dance-based games that incorporated motion control from Kinect, and Rocksmith, that allows the players to play the songs using a real guitar.

Music-based video games have strong emphasis on music in the game, and the player's enjoyment of the video game is directly related to the specific music that is being played during gameplay. Since player tastes for music vary widely, if a song is enjoyed by one player, it might be unappealing to a majority of other players, making the music preferences fragmented according to the different players.

Most music-based video games are created upon the music of a specific popular artist or from a collection of music from a variety of artists for a "general audience" of video game players. But there are video games that are customizable to the point that the player can choose which music should be played by downloading content, in order to reach more players.

Also, some music video games have multiplayer mechanics, either cooperative gameplay or competitive gameplay, improving the video game experience for the players.

Playing this type of game is normally synonymous of performing a show. And one of the type of shows that is highly appreciated is the show of fireworks. But among this type of firework shows, the ones where there is music and the music is synchronized with the explosions give a better experience.

Considering the situation in which music-based video games are, in our work, we intend to tackle the issues that arise when building a music video game by making use of knowledge from areas of computer engineering and the area of game design, in order to create a fun video game where the gameplay is influenced by the music that is being played using the theme of fireworks.

1.2 Goals

The main objective of this work is the development of a music-based video game, where the music or song influences the gameplay with the theme of syncronized fireworks. We also develop a level editor for a easy level creation. We intend our game to:

- Have a song sincronized with the gameplay.

- Have a particle system for simulating firework explosions.

- Have a fluid, lag-free performance.

- Verify that the music can influence the game experience of the video game.

- Be influenced by existing video games.

The challenge will be to design such a videogame that can be appealing to a large audience.

1.3 Document Structure

The rest of the document is organized as follows: