Crash, Crumble and Stomp 2007 - Formal Game Proposal

TODO: we didn't settle for a working title yet...

1. Game description

Summary

Our game will be a multiplayer party game. Each player is represented by an alien-vehicle in form of a tremendous ball. The game world is restricted to an rectangular area which will not be too big. At the edges of this rectangular game world are holes. The goal of the game is to push the other players from the game platform into the abyss.

Game Setting and Background Story

Some strange aliens which are addicted to playing games are coming to earth. They play a game called (TODO...) which is similar to a battle royal in wrestling. These Aliens really love mass destruction so they cut out a part of a big city and lift it up to the sky to use it as theyr field. Directly around this playing field is "nothing" so that the gladiators in theyr fighting machines can fall out of it. In a certain distance to the field there is a stand arround it filled up with the audience which are fans of one of the particular players. They will also cheer up and show their affection for players which are perfoming well (i.e. players which raze all what's in theyr way).

Detailed Game Description

Rules of the game

Each player can control one of the balls. Up to 4 players can challenge each other. The ball of the player can't be controlled directly by the jostick of the pad but each player has control over the acceleration of the ball. This will lead to a somewhat indirect control over the ball which is important for the "feel" of the game.

Each ball has two main attributes, its mass and its power, which are crucial for the steering behaviour and the mess the ball can produce. The destruction vehicles are powered by dark matter, which is present everywhere in space, but cannot interact with normal matter expect for it's mass. A mainpart of the balls interior consists of dark-matter collectors, which absorb dark matter and constrain it to the body of the ball, increasing it's absolute mass. To cause more damage, the player must rise the mass of it's vehicle. On the other hand each ball has also a certain amount of power. Power is important to steer the ball. The bigger the mass of a ball the more power one needs to still be able to control the vehicle. Therefore one objective of the game is to have a good balance between power and mass which leads to a balance between the control a player has over its destruction device and the damage the ball causes on other players and the environment. The balls do have energy converters, which allow to transform some of the dark matter into energy, which gives temporarily more control over the vehicle (faster response) but also decreases the mass. Since dark matter can pervate every kind of normal matter, it's not possible to hold it completely inside the body of the ball. Therefore, with every collision - especially attacks from other players - some of the dark matter will be lost.
The gain of mass happens automatically over time (since the collectors absorb dark matter from the space), but very slow. The player can also gain more mass by collecting power-ups which get beamed into the field when objects get destroyed. To gain more power one also has to collect certain power-ups.

These leeds us to the possible power-ups which are in the game. The power-ups in the gamefield are hid-

den in the buildings of the city. (Remember, the game-field consists of a rectangular part of a city). A player has to destroy a building to uncover its hidden power-up. The building can be destroyed by a player by crushing into it with the ball or by using some of the weapon-power-ups (see below). The destruction of the building should look as realistic as possible together with a good graphical particle system. However - the destruction physics for the buildings are only eye-candies and not part of the gameplay itself, since we don't want to base our gameplay upon features we're not sure about how well they will work. A player can collect mass and power-power-ups as described before, as well as weapon-power-ups of which every one has it's unique gameplay feeling. The weapon power-up a player currently helds is displayed in its status bar visible for all players. With a button press a power-up can be consumed and its abilities are released immediately.

Here are some possible wapon power-ups (TODO: this list will be expanded):

Hook Shot: The hook shot is a chain with a grapple which can be shot at buildings or other players. this way one can cut corners or catapult other players. It will be quite challenging to implement the rope-physics which are necessary for this.

Fire Thrower: The ignition of this power-up results in a ring of fire around the player

Ice Ball: everything that gety into contact with the ball freezes suddenly. enemies which roll over a freezed surface loose control. Also, freezed buildings can be destroyed much faster. But the ball itself is also much more damageable.

Lord of the board: The player will double its size for a short moment of time, the size of all the other players will shrink. During this time the ball can do almost anything with other balls which are in its way.

Magnet: Magnets are fun! you can produce an adducent or repulsive magnetic field, which will affect yourself as well as your enemies.

Rocket Launcher: several rockets get shot up to the sky and launch into your target.

Energy Bumper: an energy-deflector arround the ball which can be expanded at the push of a button to bump away other vehicles.

EMP: The other players loose the control over theyr vehicles for a short instance and the balls roll around at random.

Bounce: You turn into a bouncing ball, which causes a lot of damage but is verry difficult to steer.

Game Display

The game is in 3D and played in a vertical top-down perspective in which you can see all players participating in the game (we want to avoid split screen, since we don't want that every one "plays a multiplayer game alone" but that the action is verry concentrated and the players are always in direct conflict). During the game the view direction of the camera will be fixed. But it can zoom in and out and change its position according to the positions of the balls. The main constraint is that always the whole action is visible on the screen.
When a player has won a game the camera can also move and show the audience and other parts of the game world.

The power and the mass status for every player are always displayed during the whole game as they are the most important elements to know for each player. These elements are shown as a status bar on the

edges of the screen.

Technical Elements

Particle Systems
One main technical element will be a particle system. There is alot of action on the screen, like buildings which are destroyed and the unleashing of some powerfull powerups. All these things can be displayed with particle systems. We need to develop a particle system which can handle all this cases. This will lead to a flexible system which can handle all of the required uses like rings of fire dust of destructioned things and react on spacewarps like near explosions, wind and so on. This systems will be scriptable most likely with XML.

Physical simulation
Another main part of the game consists in destruction of buildings. To accomplish this we need a physical simulation. But our main goal is to make this look good and not to make it act realisticly. Once the building is destroyed it will not have any impact on the game. We restrict ourself to this as we know that it is very hard to implement a physical system which works and is realistic. We will most likely build it up until it looks good enough for our purposes by playing around with it.

Crowd simulation
The game takes place in city. So it would be nice if there are cars driving and people running around. But as this is not important for the game itself it will rather be a nice to have feature on which we only will concetrate ourself if the rest of the game works well.

2. Development Schedule

Layered Plan of development

Functional minimum: We have a game board which somehow represents a city. There are at least 2 players which can move the balls around and pick up power-ups. The player can also push the other players around and of the game board which is the main goal of the game. So in this state the game is playable but will not look as good as expected. In fact this will also lack all other things a game needs like a proper state management

Low target: In addition to the above the game board will look more like a city. The particle system is implemented and it will look good if a player destroys a building. Also some of the weapon power-ups are implement and will work well. The player management works well in the sense that each player can select his name and its desired color.

Desired target: In this state the game board will look like a city. The sounds and the music are implemented and work well together with the rest of the game. The game is quite balanced and it will be enought fun to spent some time with it. Above that the game has implemented all the necessary screens and highscore tables. In a sentence the game is finished and looks like a game.

High target: The crowd simulation is implemented and the city will look like a living city moving cars and people. Also there is a rope-simulation implemented for the hookshot and the particle systems react on spacewarps and deflectors.

Extras: The physical simulation is expanded and the things which you can do with it like destroying buildings and throwing parts and/or cars to each other would have an impact on the gameplay itself

Timeline
TODO: We need to sit together once more to discuss that in detail

3. Assesement

The main strength of our game will be that it is fun to play. We want that some people can sit together start this game and have fun for half an hour and more. This will most certainly not be a game which you will want to play alone and invest a lot of time in it (It is even multiplayer only, remember ;-) This also requires that the game is very easy to pick up. Every one which want to participate in the game should be able to play it in less than a minute.
To test if we have achieved this goal we have to bring together 2 to 4 people give them the pads start the game and be quite for the rest of the time and watch our test-participants having fun!