Game Proposal

Working Title: E

Team:

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Description

Our game will be network battle game. We will start by a 1 vs. 1 game, but want to keep it open to maybe support more players. It should be a fast game, with only a few minutes per battle.

The core of the game are the Energies. Energies will manifest themselves in their elemental forms (e.g. water, fire, earth,...) in the environment. They will usually not exist in a pure form but as a mixture. Water and fire might be steam (air), while fire and earth will result in lava. Every form has a physical and graphical representation within the game. Earth-energy might form hills or walls, water lakes and fire lava... The characters can acquire these energies by absorbing them actively. While absorbed by a character, the physical and graphical representation of the environment will change. The hill will vanish or even form a valley, the lake will run dry. At the same time, the initially plain and neutral character will change its appearance to resemble the kind of energy it acquired and will grow according to the amount he absorbed. Once energy has been obtained, it can be used by the character to attack its opponent, thus releasing again some of the energy. A character may also attack its opponent indirectly, by releasing bigger amounts of energy into the environment - thus again manifesting the energy physically. He might grow a wall to protect himself or flood an area to drown his opponent. An interesting element in the game will of course be how to combine what energies to achieve the desired result.

Special Graphic Features

Terraforming - the environment should be highly interactive, allowing the character to modify its shape actively by absorbing/releasing energies.

Energy effects - depending on the type of energy, the environment will be dynamically influenced. For example water should flow down the hills and erode them, while a fireball flying over the terrain might leave a burning trail.

Texture-blending - the texture of the environment as well as of the characters will be highly dynamic, since energies can be mixed and must therefore be blended together in a smart way.

Terrain - rendering - Large scale, real-time dynamic terrain rendering is a difficult task. We will try to achieve this via smart usage of on demand loading via a quad-tree.

Character morphing - we will not implement real morphing. The character will change its appearance mainly due to texture. But we think of adding a particle system to the character, which will be interpolated between the pure energy states.

Special Effects - Post-processing effects, such as smoke or fire will add enormously to the atmosphere in the Game. We will have to add a lot of them, depending on the underlying energies and the interaction between these energies. For example when water clashes onto fire, the result should be steamy explosions...

Distributed Terrain - Even though not directly a graphic feature, we will have to synchronize the terrain, the energies as well as the player continuously. Especially the energy synchronization might be critical, since it could render the whole system unstable.

Development Schedule

Layers

Work-package	Functional Minimum	Low Target	Desirable Target	High Target	Extras
Terrain	Plane	From heightmap	textured	animated textures, fractal noise	procedurally generated
Terra-forming		change height	change textures, diffusion	diffusion on GPU	Transparent Water
Camera	Static	Top View	Buffered, Tilted	Geometry clipmaps	arbitrary configuration
Network		TCP/IP connection	Windows Live Connect	Crossplatform multiplayer	More than 2 players, Teams
Player	Sphere	Static character	Animated Character	Energy effects (texture, growth)	
Audio		Mono Effects	3D-Sound Effects	Background sound	Procedural Sounds
Game-play	Kill each-other	Targeted shots	Energy interaction	Different attacks, well balanced	
Scene Elements			Some Scene Elements	Animated Scene Elements, Particle systems	Vegetation
Menu	Start Button	Navigation, Network	On Screen Displays	Fancy custom designed menu	
Special Effects			Sprites	Particle Systems, Full Screen postprocessing	
Appear-ance		Colored	Textured, blended	Animated textures	
Sky		Blue	Sky-box, static	Animated	Atmospheric effects
Collision	Player/Shots	Player/Terrain	Shots Terrain	Collision effects	
Artwork	Sketches	Character Model	Animations/Textures	Menu art, logo, artistic shaders	Intro Movie
Managem ent					

Project Plan

	Week 06 04.02-10.02	Week 07 11.02-17.02	Week 08 18.02-24.02	Week 09 25.02-02.03
Phases		Analysis Phase		
Targets			**Functional minimum (phase)**	
Reflection	First Brainstorming	Define Game Idea		
Management	Assign First Tasks (Readings)			Assign Todo Tasks
Product	Read up on xna	Install XNA	Terrain Plane	
	Read up on Game programming	XNA tests		Static Camera
	Read up on 3d Models / Animation/Sprites			Sphere as Player
	Read up on c#			
Project Stuff (off product)			Write Proposal draft	Create Presentaion
Milestones			Start of semester	
Deliverables				
Planing			Replan	
Exams (external)				

Week 10 03.03-09.03	Week 11 10.03-16.03	Week 12 17.03-23.03	Week 13 24.03-30.03
	Execution Phase		**Low target (phase)**
Reflect: What to do where are we?			Reflect: What to do where are we? Assign tasks to do
Gameplay: Kill each other			Form Height Map
	Collisions: Player Shots	Menu: Start Button	
			Camera: Top View
Write critiques	finalize prototypes	Finalize prototype for gameplay test	Write interim report
Rough draft of the proposal	Mutual critiques, formal proposal	Prototype	Gameplay testing
Draft/Presentation of proposal	Written critiques, final proposal Replan	Programmed prototypes	
			Midterms

Week 14 31.03-06.04	Week 15 07.04-13.04	Week 16 14.04-20.04	Week 17 21.04-27.04
			Desirable target (phase)
Reflect gameplay how to improve			Reflect: What to do where are we? Assign tasks to do
Static character	Targetet shots	Player terrain collision	Textured terrain
Change height	Navigation: Networkconnection	Character model	Change textures on diffusion
Audio mono effects	Colored apperance		Diffusion
TCP -IP connection	Blue sky		Buffered/Tilted camera
			Terrain shots collisions
Create demo	Create presentation		
		Interim report Report/ Presentation (Demo)	

Week 18 28.04-04.05	Week 19 05.05-11.05	Week 20 12.05-18.05	Week 21 19.05-25.05	Week 22 26.05-31.05
		Bugfixing Phase	**BUFFER for unexpected Problems High Target (phase)**	
		Reflect: What to do where are we? Assign tasks to do		
Windows Life Connect Animated character 3D Sound Effects Energy interaction Animated textures Create Alpha realease	Some scene elements On screen displays Sprites Textures Apperance/blend Static skybox Create Alpha 2.0 release	**Bugfixing**	Terrain: Animated Textures fractal Noise Terraforming diffusion on GPU Geometry clipmaps or Quadtree Collision effects Cross Platform Multiplayer Menu Art Energy effects Logo Create public presentation Artistic shaders	Background sound Gamplay: Different attacks well balanced Animaed scene Elements Particle systems Fancy custom designed menu Particle Effects/Full Postprocessing Animated textures
	Alpha Release Alpha Release of Game Replan	Playtesting In class Demo/ Alpha 2.0 of Game	Replan Lots of exams!	Public Presentation and Conclusion Game V1.0/Presentation/Final report

Tasks and Times

	Task	Time Required [h]	Due Date	Worker
Functional Minimum				
Terrain	Plane	1	Week 11	Thabo
Terraforming			Week 11	
Camera	Static	2	Week 11	Thabo
Network			Week 11	
Player	Sphere	2	Week 11	Hauri
Audio			Week 11	
Gameplay	Kill each-other	4	Week 11	Hauri
Scene Elements			Week 11	
Menu	Start Button	1	Week 11	Hauri
Special Effects			Week 11	
Appearance			Week 11	
Sky			Week 11	
Collision	Player/Shots	3	Week 11	Hauri
Artwork	Sketches	44	Week 11	Mario Thabo
Management	Assignment 1	12	3.03	All
	Assignment 2	12	18.03	All
	Read up on xna	10	Week 11	All
	Read up on Game programming	10	Week 11	All
	Read up on 3d Models / Animation/Sprites	10	Week 11	All
	Install XNA	6	Week 11	All
	XNA tests	10	Week 11	All
	First Brainstorming	11	Week 11	All
	Assign First Tasks(Readings)	2	Week 11	All
	Define Game Idea	20	Week 11	All
	Write Proposal draft	10	Week 11	All
	Assign Todo Tasks	2	Week 11	All
	Create Presentaion	5	Week 11	All
	Write Critiques	10	Week 11	All
	Refect: What to do where are we?	2	Week 11	All
	finalize Prototypes	8	Week 11	All
	Finalize prototype for gameplay test	8	Week 11	All
Low Target				
Terrain	From heightmap	6	Week 16	Thabo
Terraforming	change height	6	Week 16	Thabo
Camera	Top View	4	Week 16	Thabo
Network	TCP/IP connection	4	Week 16	Hauri
Player	Static character	10	Week 16	Mario
Audio	Mono Effects	4	Week 16	Hauri
Gameplay	Targeted shots	5	Week 16	Hauri
Scene Elements			Week 16	
Menu	Navigation, Network	3	Week 16	Hauri

Special Effects			Week 16	
Appearance	Colored	22	Week 16	Thabo Mario
Sky	Blue	1	Week 16	Thabo
Collision	Player/Terrain	3	Week 16	Mario
Artwork	Character Model	44	Week 16	Mario Thabo
Management	Assignment 3	12	5.05	All
	Assignment 4	12	12.05	
	Refect: What to do where are we?	2	Week 16	All
	Assign tasks to do	2	Week 16	All
	Write interim report	10	Week 16	All
	Gameplay Test	20	Week 16	All
	Reflect Gameplay how to improve	4	Week 16	All
	Create demo	10	Week 16	All
	Create Presentation	5	Week 16	All
Desirable Target				
Terrain	textured	5	Week 20	Thabo
Terraforming	change textures Diffusion	420	Week 20	Thabo
Camera	Buffered, Tilted	20	Week 20	Thabo
Network	Windows Live Connect	10	Week 20	Hauri
Player	Animated Character	20	Week 20	Mario
Audio	3D-Sound Effects	10	Week 20	Hauri
Gameplay	Energy interaction	66	Week 20	Thabo Mario
Scene Elements	Some Scene Elements	105	Week 20	Mario Thabo
Menu	On Screen Displays	55	Week 20	Mario Hauri
Special Effects	Sprites	10	Week 20	Hauri
Appearance	Textured, blended	5	Week 20	Thabo
Sky	Sky-box, static	3	Week 20	Thabo
Collision	Shots Terrain	2	Week 20	Mario
Artwork	Animations/Textures	105	Week 20	Mario Thabo
Management	Assignment 5	34	13.05	All
	Refect: What to do where are we?	2	Week 20	All
	Assign tasks to do	2	Week 20	All
	Bugfxing	inf	Week 20	All
	Create Alpha realease	5	Week 20	All
	Create Alpha 2.0 release	5	Week 20	All
High Target				
Terrain	animated textures fractal noise	15107	Week 22	Thabo Mario Thabo
Terraforming	diffusion on GPU	20	Week 22	Thabo

Camera	Geometry clipmaps	20	Week 22	Thabo
Network	Crossplatform multiplayer	10	Week 22	Hauri
Player	Energy effects (texture, growth)	10	Week 22	Mario
Audio	Background sound	8	Week 22	Hauri
Gameplay	Different attacks well balanced	3030	Week 22	All All
Scene Elements	Animated Scene Elements Particle systems	2010	Week 22	Mario Thabo
Menu	Fancy custom designed menu	10	Week 22	Mario
Special Effects	Particle Systems Full Screen postprocessing	3030	Week 22	All All
Appearance	Animated textures	1010	Week 22	Mario Thabo
Sky	Animated	55	Week 22	Mario Thabo
Collision	Collision effects	30	Week 22	All
Artwork	Menu art logo artistic shaders	10530	Week 22	Mario All
Management	Public Presentation Assignment 6	20	20.05	All
	Conclusion	20	Week 22	

Assessment

E offers fast multiplayer action, stunning graphics and highly interactive levels. On one hand, E allows different multiplayer games as team battle, capture the element and death matches, with a lot of cross-platform participants. On the other hand a fully alterable level with 8 mixable energies and a visually appealing representation.

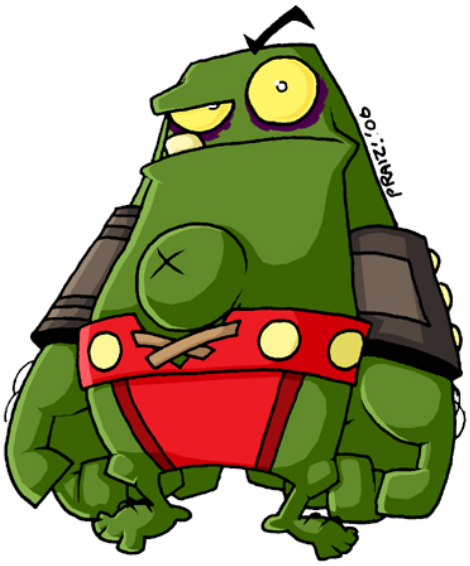
E targets especially occasional players, party gamers and fantasy fans.

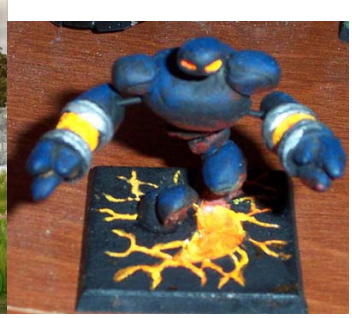
The Game should have a consistent and performant networking of player and terrain. Its graphics have to be convincing and, together with music and effects, create a intense mood. To ensure long term fun, different tactics must lead to success.

In a typical game, there are some more active players, which try to eliminate its enemies using their action skills, while some other try to win by building obstacles or even traps. One could build defensive earth walls and collect some fire energy in it to penetrate the enemies from inside with high, distance attacks. Or prepare a pit, where trapped enemies can be drown in a flush of water. These different kinds of fighting will require a very well balanced gameplay.

Artwork

Inspiration sources

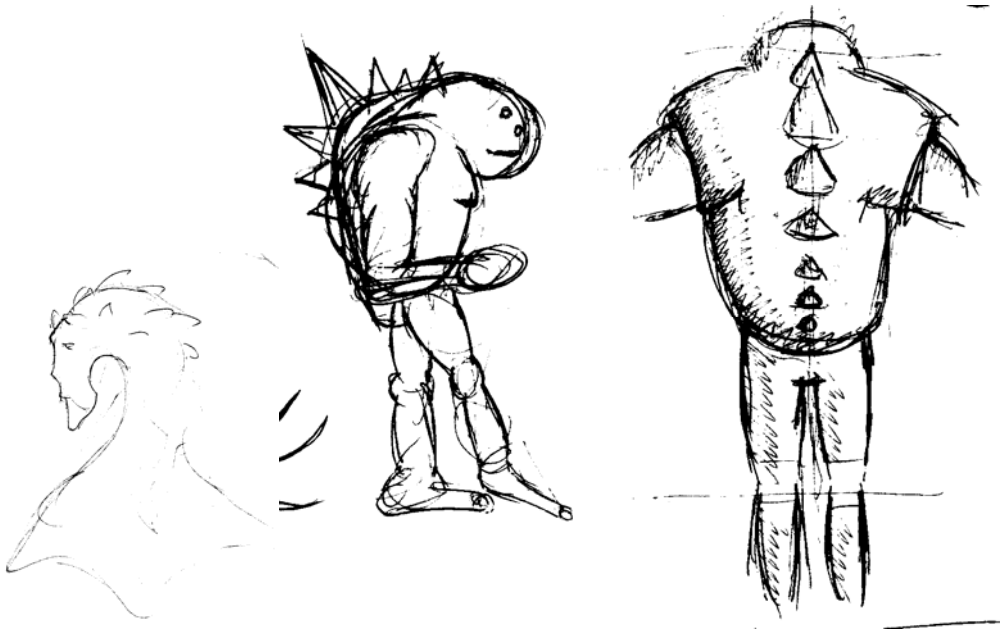


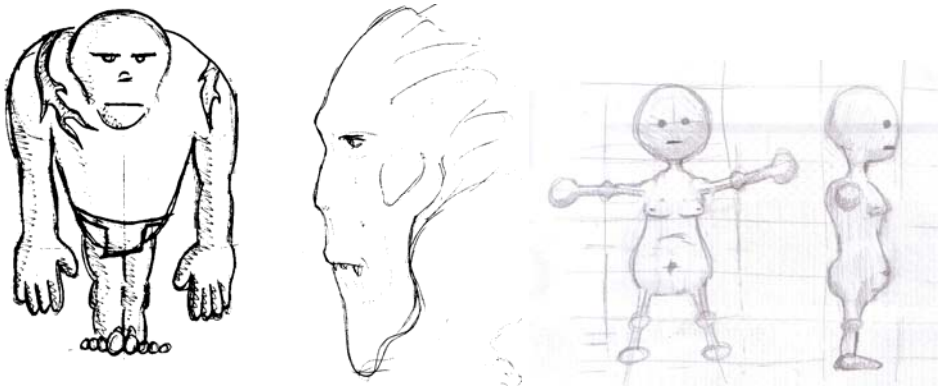


Drawings

The logo

The character





Screenshots