Game Project Momentum

Bernhard Buss

Claudia Kuster

Jürgen Fornaro

Game Programming Lab

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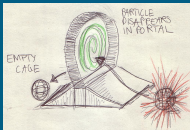
Momentum – Overview

- What is the game setting?
  a warp drive
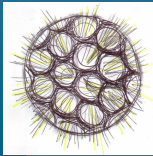
- Who is the player?
  a quantum particle inside the warp drive

- What is his goal?
  reach the portal to the warp core matrix

- What is his motivation?
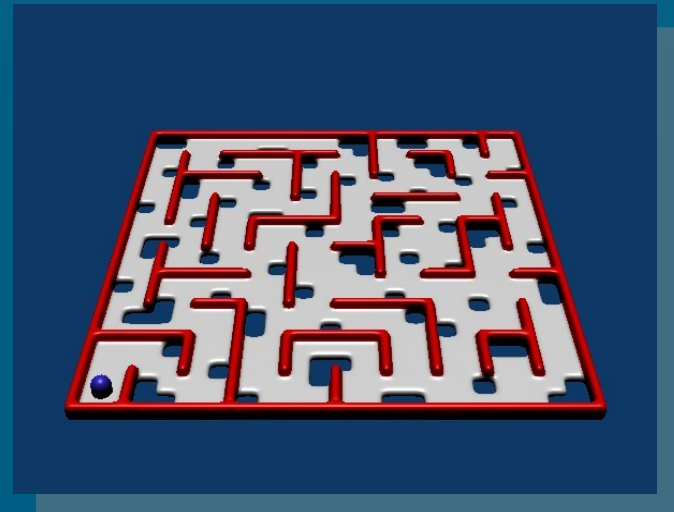 the competition with other particles

Game Modes

- Classic SP Balancing

- Classic MP Cooperative Balancing

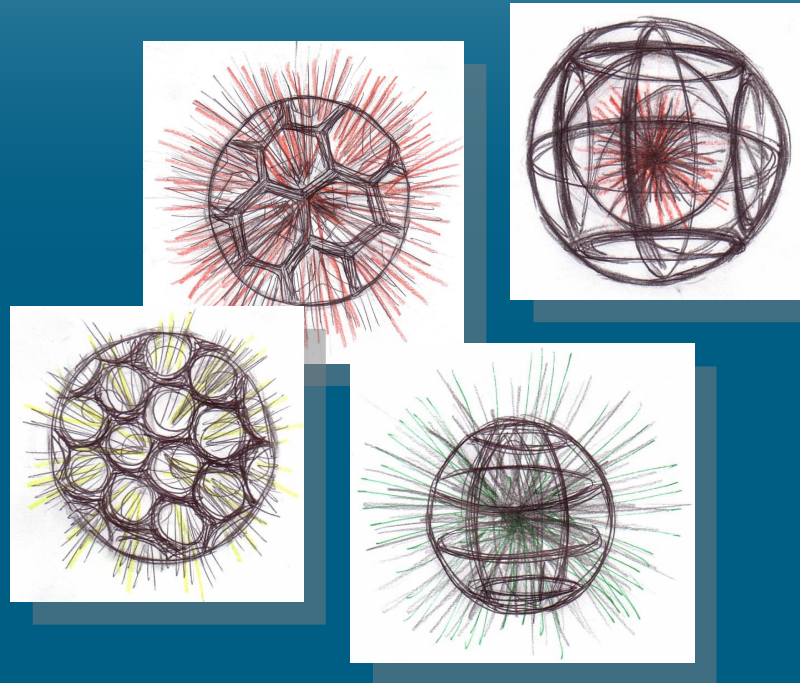- Momentum SP Training

- Momentum MP Race

Game Modes – Classic

- balance the board

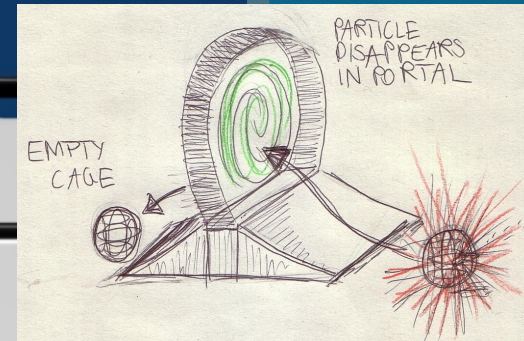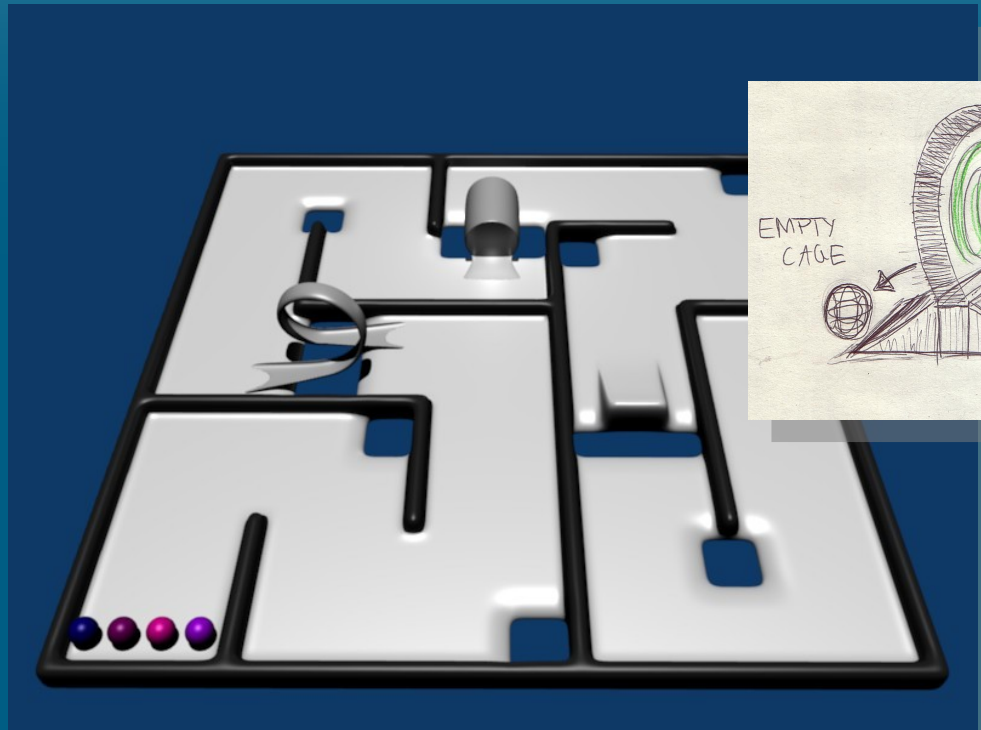- direct the ball through the maze

Game Modes - Momentum

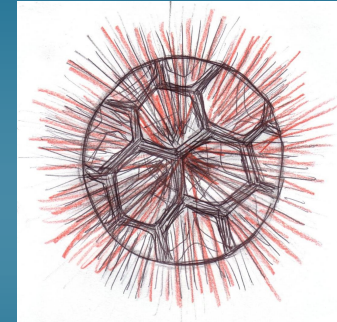- momentum balls: cage with enclosed quantum particle

Game Modes – Momentum (2)

- race against other particles

- control ball directly

Momentum Energy

- energy of the balls rotation

- stored within the quantum particle

- enables special moves (jumps, speed ups)

- increases collision impact on other balls

- gained by moving the ball in the maze

- lost by colliding with obstacles

Technical Aspects

- realistic rotating ball physics

- convincing particle simulation

- glowing & fire effects

Where the fun comes from

- competing in a race

- training personal skills and mastering challenging levels

- experimenting with the momentum energy and real world physics

- intuitive and easy to learn

- multiplayer game on one screen encourages social interaction

Development Schedule – Idea

- physics engine – import game boards defined by geometry built in DCC tool

- development at physics engine - support increasingly complex boards

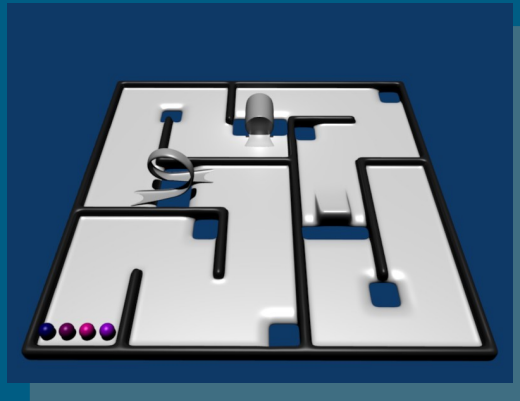- concurrently add artwork and rendering skills (shadowing, particles…)

Functional Minimum

- ~ game prototype (XNA)

- flat game board

- simple opaque ball (c,r)
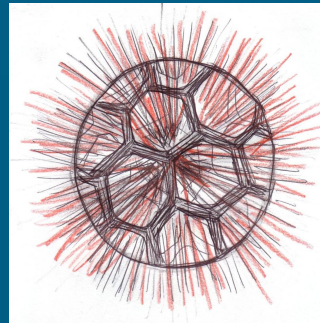
- single player

- no artwork

Low Target

- enhanced boards: maze, loops, ramps

- single player momentum effects

- momentum visualized with progress bar

- artwork: texturing, basic sound

- rendering: shadowing

Desired Target

- multiplayer mode (cooperative, competitive)

- momentum: particle simulation

Tools

- XNA 2.0

- Xbox 360

- C#

- Visual Studio 2005 / VS C# Express

- Blender (3D)

- Gimp (2D)