

Pong **ARENA**

(a multiplayer gameconcept by Dennis Busch)

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History

So here is how this project started. On the 17th February 2007 (a saturday and also Silly-Joy-Day) while I was hanging around in #allegro on Freenode, waiting for the celebrations in #silly-joy to start, *CGamesPlay* informed the channel about an event called **MinorHack** that would take place that evening. A few minutes later I decided to participate. The rules of **MinorHack** are simple. Write a game in 60 minutes. The game must consist of just a single file of sourcecode and there will be one bonus rule picked from a pool of rules for each **MinorHack**. The rule for this one was to „use polar coordinates instead of rectangular ones“. Since I had planned to write a simple Pong clone for the event, this rule somewhat made it a bit challenging, so I decided to have a player in the middle of the screen with a paddle he could rotate around him to deflect a ball that would come flying at him from random directions. That was all that I managed to get done in those 60 minutes.

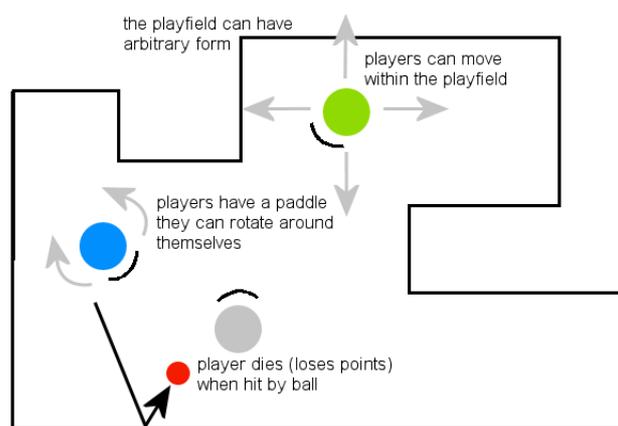
A day after this, I suddenly was inspired by that to make a ponglike multiplayer game and quickly slapped together a first concept image. I posted that image to the **Allegro.cc** forum and asked for thoughts.

I also posted it to the **Game Developers Refuge (GDR)**.

The responses were cool. Everybody seemed to like the idea and started contributing

more ideas and a fruitful brainstorming broke loose. Encouraged by that, I decided that I absolutely have to make this game, so here I am sitting at my computer on the 20th February 2007 at 6pm (gmt+1), writing this design document.

Pong ARENA (inspired by the MinorHack of 17th Feb 2007)
a multiplayer pong deathmatch gameconcept by Dennis Busch



more random brainstorming:

- +powerups(speed, ball splitter, shield, sticky paddle, ..)
- +doors, teleporters, traps
- +slippery floors
- +AI controlled bots
- +rotating playfield (while everything else continues on its' current path)

game modes:

- +time limit
- +last man standing
- +„frag“limit
- +destroy enemy base (by hitting it multiple times with the ball)

Basic gameplay (exemplary for simple time limited deathmatch):

Each player starts at a different spawn point. The ball also starts at some spawn points and accelerates into a specifically set or random direction. Each player's goal is to not get hit by the ball. For that purpose each player has a paddle that he can rotate around him (the paddle size could vary based on powerups or skill levels) which will deflect the ball when it hits it. The player that got hit the least times after the time is up wins. (Alternatively, the player who caused the most hits to other players could win.)

Contributors of ideas and thoughts

Allegro.cc members:

Kauhiz, Zaphos, OICW, Michael Faerber, X-G, Kikaru, CGamesPlay, BAF, Onewing, kazzmir, HardTranceFan and Thomas Fjellstrom

GDR members:

Bean, mikedoty, sonrisu

Not all ideas and thoughts made it into this document, just the ones that I liked and some were changed a bit. But even those thoughts and ideas that were not taken in directly still were important and provided a good base for additional parts of the concept.

Design and Concepts Overview

Main Game Elements

- playfields
- players
- balls
- power-ups
- power-downs
- items
- rulesets

Playfields

- spawn points (for players, balls, power-ups, power-downs)
- teleporters (teleport anything going into them to another teleporter)
- traps (pinball bumpers, crushers (, ball cannons)
- slippery floors, sticky floors (affect player movement)
- walls (balls bounce back from them, players can't travel through them)
- „doors“ (players can move over these areas but balls bounce back)
- canyons (players can not travel over these safely, they fall down and lose points / balls do not fall down if they travel over them)
- rotation (the whole playfield can rotate but the balls would continue to travel in their current directions (not be rotated together with the rest of the objects))
- breakable and unbreakable blocks (either static or travelling along paths)

Players

- are represented as a filled circle with an arc around them
- the arc represents the players' paddle
- can move around on the playfield (with some restrictions as described in the section *Playfields* above)
- can rotate their paddle clockwise and anticlockwise around their center
- can deflect incoming balls with their paddle
- can collect power-ups and power-downs that affect their movement and rotation speed but also their paddle size and their paddles' power (which will be used for calculating how fast the ball bounces back from it) and special capabilities of their paddle
- will lose points when hit by a ball
- will be pushed back a bit, depending on the speed that their paddle is hit by a ball

Balls

- are represented as filled circles (maybe with different icons on them)
- always continue to move in their current direction until they hit something and get deflected
- can have different effects on the players that deflect them
- are „owned“ by the last player that deflected them or by the player that first spawned them until it gets deflected by a different player
- can kill players or make them lose points
- can push players back, depending on their speed when they hit the players' paddle
- normal ball (will not have any additional effects on a player when he deflects it)
- freeze ball (will disallow a player to move for a specified timespan after he deflected it)
- fire ball (will make the players' paddle melt a bit, so that it becomes shorter)
- thunder ball (will negatively affect the players' movement capabilities for a specified timespan)
- bomb ball (will explode after a specific timespan or after bouncing back for a specified number of times, players near the explosion will be pushed away or die when they are too close to it (a number that goes with the ball will indicate the countdown to the explosion))
- homing ball (follows the nearest player)
- mirage ball (is fake and will travel through players without affecting them / will vanish after some time)

Power-Ups

- are collected by players and can affect players directly
- can affect the properties of the balls when they are deflected by a player who uses them
- increase players' rotation speed (limited by a maximum speed)
- increase players' movement speed (limited by a maximum speed)
- increase players' paddle size (limited by a maximum size)
- movement speed burst (allows a player to move quickly for a very short timespan)
- shield (makes a player invincible for some time)
- ball splitter (turns one ball into two or more when the player deflects it)
- sticky paddle (allows a player to decide when to release a ball from his paddle after it got stuck onto it)
- all types of ball changers (will change the ball into one of the different ball types after it bounces back from the players' paddle)
- ball angle randomizer (will randomly affect a balls' bounce off angle)
- some of them can be stored in the inventory of the player and be activated/used up at any time (ball changers, shield, speed burst, sticky paddle)

Power-Downs

- are collected by players or given to them when they try to deflect certain ball types or when they walk into a trap
- decrease players' rotation speed (limited by a minimum speed)
- decrease players' movement speed (limited by a minimum speed)
- decrease players' paddle size (limited by a minimum size)

Items

- are collectible objects used for alternative scoring models/rulesets
- (technically all power-ups and power-downs will also be Items)

Rulesets

- change the way players get and lose score
- change the way game objects are manipulated on each gameplay event
- Time Limit
- Kill Limit
- Last Man Standing
- Diamond Hunting

Design and Concepts Images

(wip)

Technical Details

(wip)

At the time of writing this (20th February 2007), this document is still work in progress.