# 900 Entertainment

software | film | ideas



# Straight Down Beach Volleyball

Bring the heat, team-up with friends, own the beach!

# beach volleyball in the cloud

```
in the spirit of the classic 8-bit/16-bit titles we love
   Kings of the Beach, Super Spikes V'Ball, Power Spikes,
   Sega Great Volleyball, Dig 'n Spike
recruit teammates from your social networks
   Facebook, Twitter, Google+
   become a legend
everything's online
   your entire career kept in-sync
extensible
   all code on GitHub
```

# goals

- 1. realistic gameplay
- 2. quick, fun & free
- 3. play on any device
- 4. play offline
- 5. open source

# roadmap

Phase 1: in Chrome Web Store

Phase 2: integration process of the process of the phase of the phase

Phase 3: gerver backend

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Androidios clients

# dynamics

# two-player cooperative

play with friends, with random partners, or solo play in Chrome, on iOS and/or Android, or in a Hangout earn points based on your record

#### best of 3 sets

rally scoring, first team to 15 (win by 2)

# players alternate serving duties

switch sides every 5 points

a side can't touch the ball more than 3 times per attempt

a single player can't touch ball consecutively contact off a block doesn't count

# aesthetics

#### animation

serve, run, pass/dig, set, hit, block ball movement

# audio

events, effects, soundscapes

# POV

courtside 3rd-person perspective @ 33.33° (isometric) parallax beach scene

# **HUD** scoreboard

game-set-match score

# mechanics

# user input

keyboard, mouse, touch, voice, gestures

# physics

targeting serves/hits

ball motion/velocity/gravity/bouncing

#### collision detection

"sweet spot" hits, mishits (early/late), misses passing/digging, blocking effects

# scoring

set/match, player records, leaderboard

# (more) mechanics

#### Al

auto-guiding sets/digs to teammates' position fuzzy logic for hitting/blocking/digging/serving power CPU skill level (opponents, single-player teammate) ball-as-AI agent

# social

graph integration (Facebook, Google+, Twitter) crowd support via Hangout "cheering boost"

# storage

game logs saved to Google Drive offline sync

# (even more) mechanics

#### authentication

OAuth 2, Facebook Connect

# gaming server

handles all physics, logic & rule enforcement authoritative

# instant replay

records/plays back significant rally-ending moments

# gamification

track aggregate points, reward system

# mobile clients

```
iOS
  iPhone, iPad
Android
  Froyo or higher
HTML5 ported to native platforms
  via PhoneGap
  listed in iTunes & Google Play
  listed in Chrome Web Store
```

# game server

#### state machine

handles multiplayer simulations

running on Node.js using socket.io lib

communicates over WebSockets

authoritative

dead reckoning

multiplayer expansion

two human players vs. two human players

# desperately seeking algorithms...

#### attack/defense resolution

hitter & blocker of equal ability both have perfect timing/position on a ball. what result?

- defense always wins
- randomized outcome
  - kill, tool, roof, soft block, blocked back
- supports need for mapped player ratings
  - power, vert, defense, speed
  - gamification tie-in

#### collision detection

adjust for ball hitting "sand" given skewed POV angle

# LET US PLAY.

(Now all I have to do is build the damn thing.)



Questions? Comments? Suggestions? Criticisms?