GAME REVIEW

Davin Moilanen

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Basic Information

- Title: Apparatus
  - https://market.android.com/details?id=com.bithack.apparatus
  - http://www.apparatusgame.com/
- Author: Bithack AB
  - http://bithack.se/
- Type: Physics-based puzzle
- Price: $2.87 on Android Market

Requirements and Installation

- Download size: 13 MB
- Install size: 14.86 MB
  - 1.07 MB internal storage after move to SD card
  - SD card stores level and auto-save data in .jar files
- O/S required: Android 1.6 and above
- Hardware requirements: Not stated
  - Works well on my HTC G2
  - Some reported problems on specific hardware
- Install is automatic – no manual steps

Overview

- Objective: Move a marble to a goal using provided components.
- Single player
- Player's role is to design an apparatus that will accomplish the objective.
- Analyze -> Implement -> Test [Repeat]
  - Review the problem and evaluate available resources
  - Manipulate resources (design mode – physics off)
  - Test the design (playback mode – physics on)

- Trailer: http://www.youtube.com/watch?v=tBkru6_BoPs

Screenshot
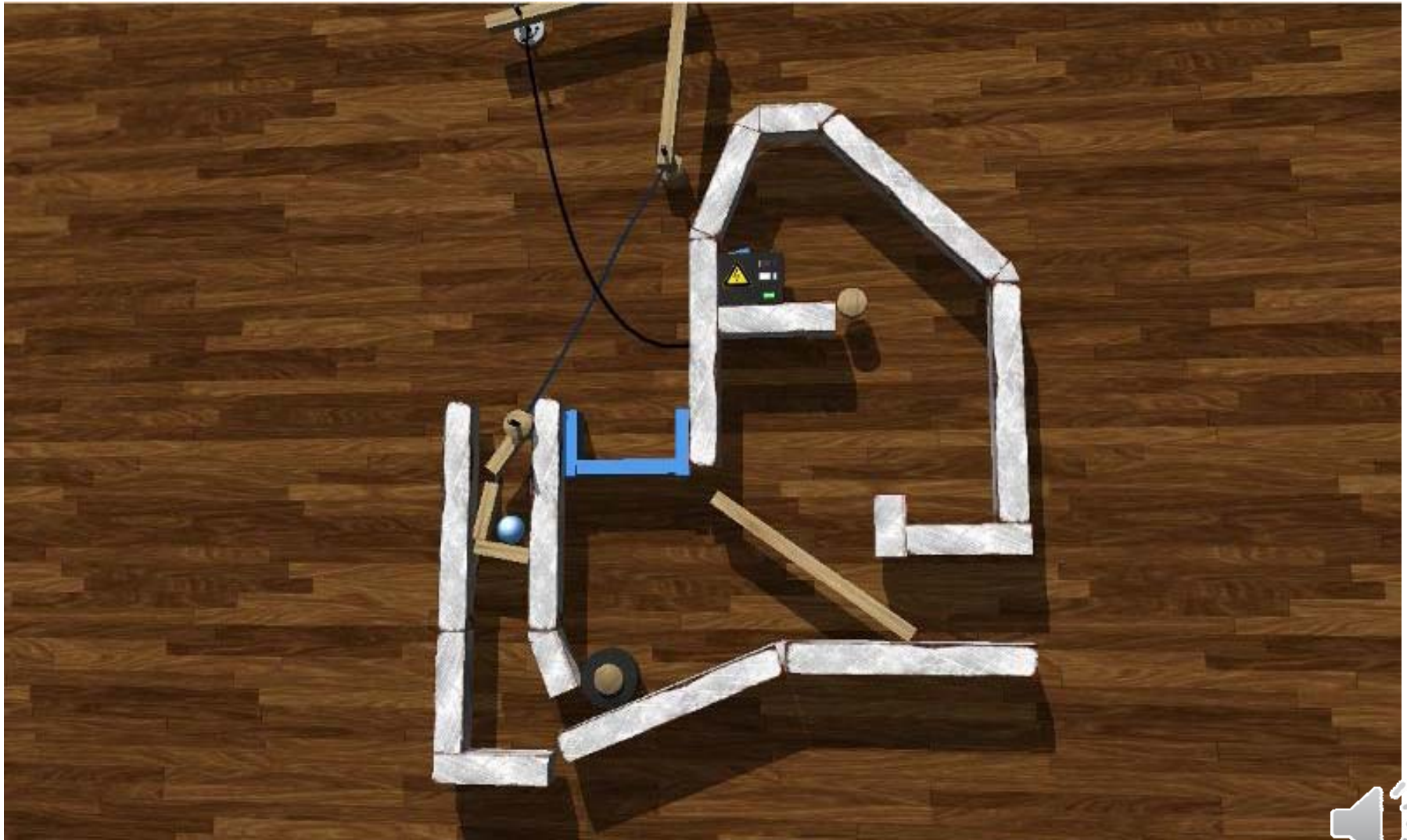
Game Modes

- Puzzle mode
  - 44 official levels currently available
    - Community levels available at http://www.apparatusgame.com/
  - Each level is self-contained
    - No locked levels
    - No story
    - No scoring
    - No time/attempt limit
- Sandbox Mode
  - Apparatus
    - Free build with unlimited materials
    - Publish apparatus to community
  - Building Challenge
    - Build your own challenge level
    - Publish level to community
 - Interactive Challenge: "Coming Soon"

Puzzle Mode – Design

- One or more blue marbles with fixed start locations
- A fixed goal (blue bucket) and zero or more fixed platforms
- One or more apparatus components, including wood blocks and discs, fixed/moveable motors, power boxes, power cords, elastic bands, switches, rocket engines, etc.
- Some components be manipulated, some are fixed.
- Manipulations include translation, rotation, nailing, pinning (rotation axis), plugging/unplugging power cables, change layer, etc.

Screenshot
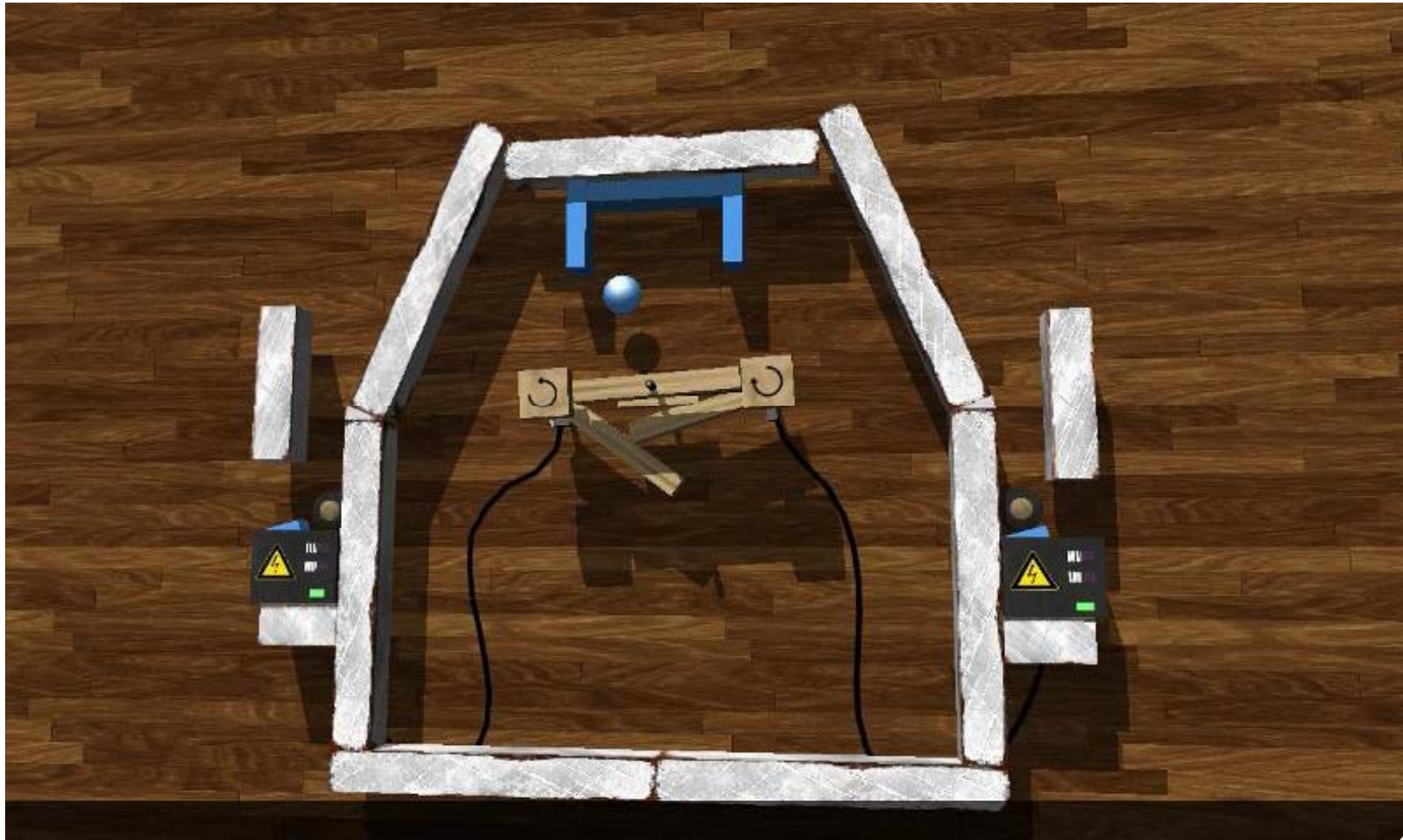
Puzzle Mode – Playback

- Physics are in effect: gravity, momentum, elasticity, etc.
- 2D range of motion with multiple "layers"
- No user interaction (in official levels)
- Playback can be stopped to return to design mode.
- If the objective is met, the level is marked "completed".

User Interface

- Touch screen WYSIWYG designer
- Intuitive interaction
  - Tap to select objects
  - Drag to move or rotate objects
  - Drag background to pan scene
  - Pinch zoom
- Multi-touch to "snap to grid" during move/rotate
- Context buttons are available based on object selection and placement.
- Playback button
- Phone "menu" and "back" buttons (off screen)
- Exploratory – minimal help in the form of YouTube videos

Aesthetics

- Sound
  - Basic sound effects (e.g. collisions)
  - One music track
  - Music/sound can be toggled on and off

- Graphics
  - 3D rendered
  - 3 or 4 different backgrounds
  - Graphics effects and quality can be changed via settings menu

- Not intended to be an immersive game
  - The puzzle is the main attraction

Bugs

- No real "bugs" in latest version
  - Some market comments indicate crashes on specific hardware
- Physics simulation is not 100% consistent
  - Run the same simulation twice and get different results

Game Review

- The good – great puzzle game
  - Challenging puzzles
  - Sense of satisfaction when a design works
  - Simulation is realistic enough to be fun to watch
  - Consequence- and cost-free mechanical engineering
  - Great "waiting room" game
- The bad – UI precision
  - If a game requires fine precision, it should support fine precision
  - The challenge of the game should not be dexterity
  - Touch screen makes precision even more problematic
  - Snap to grid granularity is too coarse
  - Fine adjustments of a complex apparatus are nearly impossible

Audience

- Content is appropriate for anyone
- Probably too challenging for very young users
- UI could discourage some users
- Fine motor skills and good eyesight required

Similar games

- Clever Contraptions
  - Somewhat less realistic physics
  - Cartoonish graphics
  - Wider variety of objects
  - Similar issues with precision, repeatability

- X Construction
  - Bridge builder game (similar to an older PC game)
  - Primitive graphics
  - Very unrealistic physics
  - Very few construction materials
  - Very limited freedom in placing materials

Summary

- Fun and challenging
- Recommended for those who like physics-based puzzle games (and have an Android device)
- UI needs some refinement
- Excellent value for the money