TRON VR

VIRTUAL UNREALITY

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HIGH-SPEED 3D COMPETITIONS

• http://www.fltron.com/
• High-speed light-cycle competitions
• Held in 3d
• A futuristic setting, with clean, minimalistic design elements
• Feel the competitive rush of racing for your life
TRON 3D

• Goal: to create a clean, well-designed, competitive 3D game that functions well in real-time

• Although many attempts have been made to bring this game into 3D, they have generally been unsuccessful (e.g. slow, not interactive, single player only, poor graphics)

  — http://armagetronad.org/index.php

• This is an opportunity to take an already exciting game, and make it even more immersive and fun
our competitors

- Several 2D versions of Tron game already exist
- Some WebGL versions also exist on the internet
- Making it first person, immersive in VR, and (potentially) multiplayer would completely transform the player’s experience
Technical Approach

- Player object in constant motion along a grid
  - allows for turns based on head orientation and click
- Dynamically generate rigid-body trail behind player as player moves
  - Synchronize player death with wall and/or trail collision
- Have multiple player objects moving and generating light trails on single client
- Allow for multiple players to play against each other
  - have central server synchronizing player and light trail positions dynamically
- Performance Concerns
  - Accurate collision modeling, accurate synchronization
  - Fast trail generation, responsive bike handling
Feedback Pls

• Is this cool enough?
• Would you play this?
• What other similar projects should we look at?
  – We have looked at collision-based shooter games, other racing games and previous versions of Tron
• How would you think about extending this?
  – Voice Mode, Multiplayer Lobbies?
Timeline of Project

• <Feb 12>: Have player move along grid vertices by turning head and clicking.
• <Feb 19>: Generating light trail behind player.
• Collisions.
• <Feb 21>: Generate opponent trail.
• <Feb 23>: Dynamic opponent movement.
• <Mar 1>: Multiplayer (STRETCH)
• First demo could be player moving around, crashing into own trail.
• <March 8>: Final Demo Stretch Goal → Have multiplayer functionality working reliably well