

TRON VR



VIRTUAL UNREALITY

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HIGH-SPEED 3D COMPETITIONS

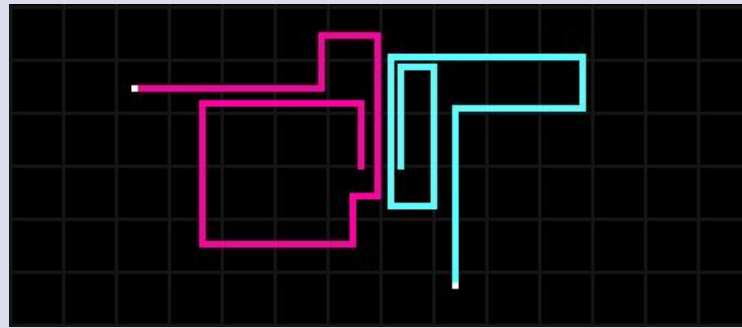
- <http://www.fltron.com/>
- High-speed light-cycle competitions
- Held in 3d
- A futuristic setting, with clean, minimalistic design elements
- Feel the competitive rush of racing for your life



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

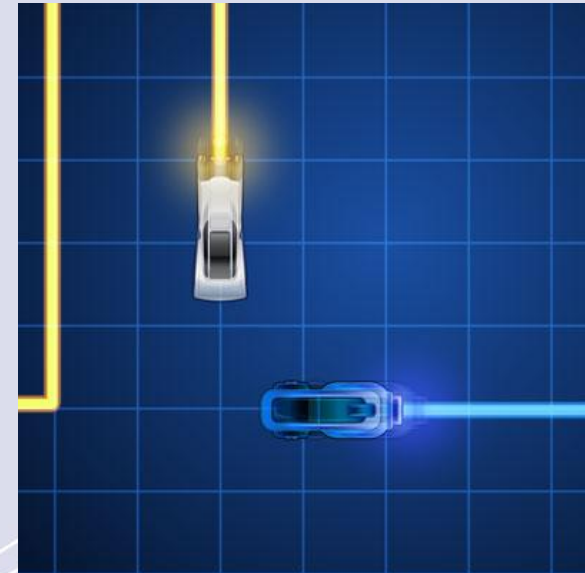
our competitors



- 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
- Proton Pulse: 3D Brickbreaker <https://youtu.be/ZnL6Hyxw5yA?t=112>
- Cycle Blob: 3D, non-VR lightcycle-based game <http://cycleblob.com/>

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