Database Ideas For Computer Games

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Computer Games (I)

- Virtual environment
- $7B in sales in 2005

Lots of opportunities for database research
Computer Games (II)

- Game AI
- NPC

- Three groups of actors
  - Players
  - Game programmers
  - Game designers

- Boundary between players and game designers is closing
  - User-created content
Game AI

Two approaches:

- **Complex behavior**: Only a few NPCs
  - Rules engines for sports games, NLP for character interaction

- **Simple behavior**: A large number of NPC
  - Strategy games, massively multiplayer online games, open world games
  - Too many NPCs → need simple, but not simplistic approach
  - Creating AI is labor-intensive
Sample Research Questions

- Can we replace today’s NPC scripts with a declarative scripting language?
- Can we then use query processing techniques to efficiently implement such games?
Final Thoughts

- Lots of traditional and non-traditional database problems here
- Requires expertise from DB, systems, HCl, PL, algorithms

- Attraction for the next generation of students?