



Development of Games

Appendix 3 to lecture 18

Trends in Character Design

June 4, 2002



Game Trends

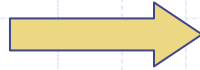
Dumb characters

Single-player

Static worlds

Short-term

Bounded resource



Intelligent characters

Multi-player (or character)

Dynamic, evolving worlds

Long-term (persistent)

Unlimited resource



Issues

- ◆ What will the next generation allow us to do that we can't do now?
- ◆ What new problems are we going to have?
- ◆ What kinds of skills will be needed that aren't being trained?



Intelligence

- ◆ Character is totally scripted
- ◆ Completely dependent on user for impetus
- ◆ No autonomy



Manny, *Grim Fandango*



Intelligence

- ◆ You play with a team of intelligent allies



Halo



Intelligence

- ◆ Creature learns by experimenting, by observation, and through rewards and punishments



Black and White



Degrees of Freedom

◆ Embodiment

◆ Identity

◆ Personality

◆ Goals

◆ Perceptions

◆ Autonomy



~ player

representation of
player

controlled by player

guided by player

influenced by player



Intelligence: Issues

What will increased character intelligence allow us to do that we can't do (or do well) now?

- ◆ Adapt to the player's preferences, knowledge, skill level
- ◆ Function in a changing world
- ◆ Minions can do more work for the player
- ◆ Avatar can be more autonomous



Intelligence: Issues

What new problems are going to come up with more intelligent characters?

- ◆ If character can decide, it can decide badly
- ◆ Expectations raised that can't be met?
- ◆ Unpredictable behaviors
- ◆ Uncontrollable characters
- ◆ Art → simulation



Intelligence: Issues





Single-Player Games

- ◆ Player is the central character (the hero)
- ◆ All characters interact with and support the player's single, main thread



Ultima I



Multiplayer Games

- ◆ Many NPCs scattered around large world
- ◆ Many players, no single thread, no guarantee of avatar's persona



Asheron's Call



Multiplayer: Issues

What can we do with characters in multiplayer games that we can't do now?

- ◆ Characters set the tone of the world; teach the player how to behave
- ◆ Form basis for conflict (or harmony) between players
- ◆ Serve as rewards/special advantages for particular players
- ◆ Provide detail for simulation (vs. depth for story)



Multiplayer: Issues

What problems are characters in multiplayer games going to have?

- ◆ May be forced into fixed roles (e.g., can't move around) → unbelievable
- ◆ Can't change too much in response to a single player
- ◆ Overwhelmed by too many interactors
- ◆ Limited power for physical or psychological detail



Static Games

- ◆ There is a single story (or finite variations on one story)
- ◆ All content is known and planned in advance

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      T ) FORWARD 0 ) ABILITY 0 ) STATUS
      R ) RIGHT T ) SIGHT I ) PICK I ) CLUSTER
      K ) KICK I ) DEFECT 0 ) FEED

SPELLS : LIGHT
        PROTECT

PS - TREBOR SUX

# CHA INT WIS DEX CON SPO INT WIS STA STA
 4190 1000 1100 1100 1100 00000000 100 100 100
TREBOR SUX 1100 1100 1100 1100 00000000 100 100 100
CLUSTER 1100 1100 1100 1100 00000000 100 100 100
WISDOM 1100 1100 1100 1100 00000000 100 100 100
RIGHT 1100 1100 1100 1100 00000000 100 100 100
KICK 1100 1100 1100 1100 00000000 100 100 100

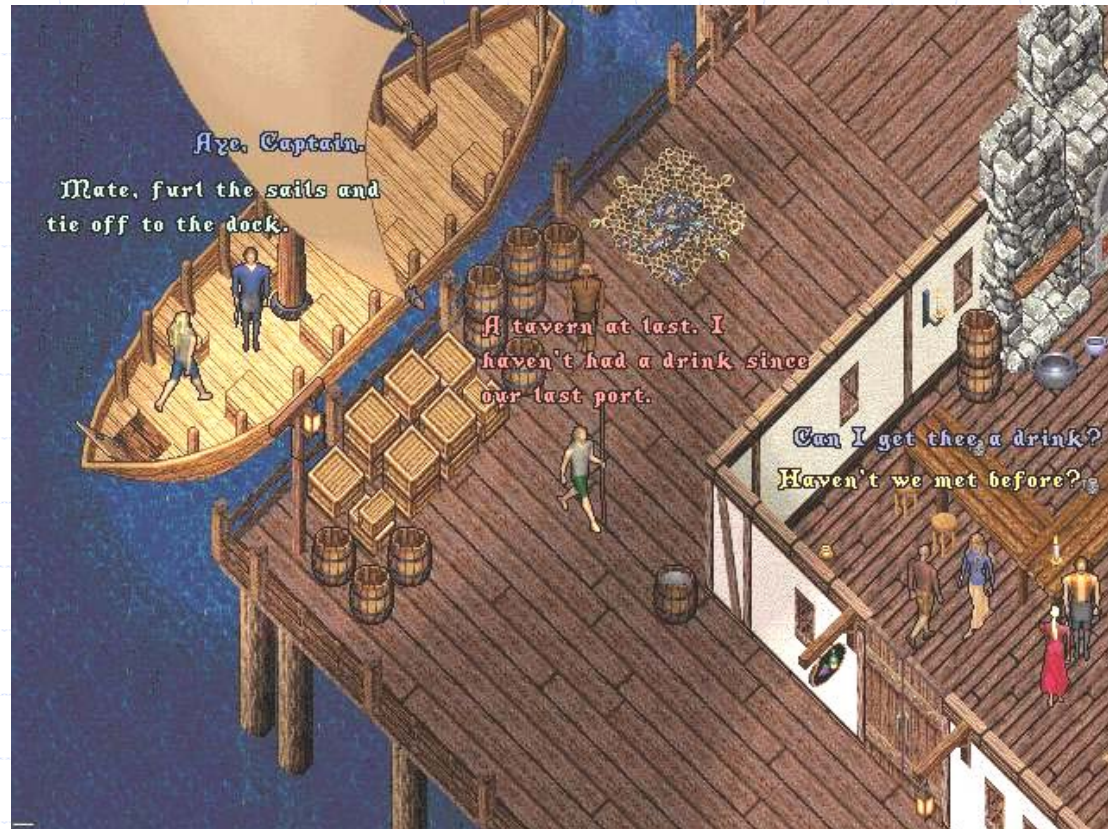
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Wizardry I



Evolving Games

- ◆ Game world is extended periodically



Ultima Online



Evolving Games

- ◆ Game world is extended periodically
- ◆ May or may not be online
- ◆ Rules, structure, content may all change



Elder Scrolls III: Morrowind



Evolving Games: Issues

What can we do with characters in dynamic, evolving games that we can't do now?

- ◆ Characters can grow over time
- ◆ Population can change (add or remove characters) to further story
- ◆ Can improve the game (by adding explanations, extending areas, etc.)



Evolving Games: Issues

What problems are characters in multiplayer games going to have?

- ◆ Expectations of change
- ◆ Necessity of change
- ◆ Change may weaken the game experience

