
CGMB534 Game Design

*Chapter 4:
Game Worlds*

Objectives

- Know the various dimensions of a game world and understand how they affect the player's experience of the game
- Define a physical model for your game world, including its dimensionality, scale, and what happens at the boundaries
- Explain the relationship between game time and real time and decide how time will behave in your game

Objectives (Cont.)

- Create the culture and environment of a game world, set the level of detail, and define a visual and auditory style
- Know some of the techniques for influencing the player's emotions

Objectives (Cont.)

- Be aware of how the ethics of a game world can differ from the ethics of the real world and the implications for public acceptance of your game
- Understand the multidimensional nature of *realism* as it applies to games and how it affects the player's expectations about the experience the game will give her

What Is a Game World?

- Imaginary place in which the events of the game occur
- Presented by images and sounds
- Not all games have a game world
- A game world can have a culture, an aesthetic, a set of moral values, and other dimensions

The Purposes of a Game World

- Entertain
- Create and sustain interest
- Sell the game

The Dimensions of a Game World

- Physical
- Temporal
- Environmental
- Emotional
- Ethical

Physical Dimension

- Simulated physical space
- Characterized by dimensionality, scale, and boundaries

Physical Dimension (Cont.)

- **Spatial dimensionality**
 - 2D, 2.5D, 3D, 4D
 - 3D is common when the player uses an avatar
- **Scale**
 - Absolute size of the space and relative size of objects and people
 - Affected by perspective
- **Boundaries**
 - How to establish a credible “edge of the world”?

Temporal Dimension

- Defines the way that time is treated in the game world and how it differs from time in the real world
 - Variable time—game time usually runs faster than real time, and jumps or changes rate
 - Anomalous time—time can move at different speeds simultaneously in different parts of the game
 - In some games, the player can adjust the speed of time in the game

Environmental Dimension

- Describes the world's appearance and its atmosphere
- Forms the basis for creating art and audio
- Includes cultural context and physical surroundings

Environmental Dimension (Cont.)

■ Cultural context

- Beliefs, attitudes, values, political and religious institutions, and social organization of people in the game world
- Influences every manmade item in the world
- User interface and backstory should harmonize with the culture

Environmental Dimension (Cont.)

- Physical surroundings
 - Include every manmade object, natural object, and sound in the game world
 - Set the tone and mood
 - Try to make surroundings unique
- Include as much detail as possible until it hurts gameplay
- Style includes both:
 - Content of the world itself
 - How that content is presented to the player

Emotional Dimension

- Emotions created in the player
- Emotions can be caused in several ways
 - Facing challenges
 - Interacting with the characters
- Striving for fun can limit emotional range of games
- Avoid “paint-by-numbers” emotional content

Ethical Dimension

- Defines right and wrong in the game world
- Part of the culture and history in the game world
- Build richer, more involving games by giving players tough moral choices to make
- Avoid violence for its own sake; give it a purpose and context
- If game world ethics are unrealistic, make visuals unrealistic also

Realism

- All games, no matter how realistic, require some simplification
- Degree of realism of any aspect of a game can be found on a continuum from highly representational to highly abstract
- Level of realism differs in individual game components

Summary

- You should now understand
 - Defining the purpose of a game world
 - Creating the physical dimension
 - Defining the passage of time
 - Establishing the environment
 - Creating emotions in the player
 - Determining ethics in the game world
 - Establishing levels of realism