Levels

- **Level Design**: Level design is defined as the creation of environments, scenarios, or missions in an electronic game. A game developer should consider what function the level fulfills in the game. The level could introduce a new character or object, focus on a plot point (such as discovering a secret or preventing an attack), or create a mood through visuals or a storyline. The level's function should center around an idea that becomes a unifying theme.
- **Structure**: Levels can be used to structure a game into effective subdivisions, organize progression, and enhance gameplay. When designing levels, consider their goal, flow, duration, availability, relationships, and difficulty.
    - **Objectives**: Each level should have a set of objectives that the player understands. Sometimes developers ensure that players understand the objectives for each level by creating a briefing in the form of a cut-scene or interactive tutorial at the beginning of each level and by providing access to a status screen during the course of the game. The players might also be immediately thrown into the game's action, engaging in tasks that are easy to solve and situations that immediately illustrate the rules of the game in the context of the game's environment.
    - **Flow**: There are two things that the game developer should address while designing a level.
        1. You want to make sure that a player stays in a particular area of a level until he has accomplished the necessary objectives. For example, in open-world levels, there are no existing barriers to the player's movements. A player can then run past opponents rather than engage them in battle (which is sometimes a strategy in itself). This problem can be solved by creating natural barriers that are destroyed as a by-product of the player's progress in the level.
        2. You also want to prevent the player from returning to a particular area once the objectives associated with that area have been met. A method for doing this is to close off the area after the player has completed it (creating a one-way barrier, such as a door that locks after the player walks through it), which lets the player know that he is making progress.
    - **Duration**: This answers the question: "How much time should be spent on each level?". One universal rule seems to be that a player must complete at least one level of any game in a single session. For computer games, level duration should be fairly short, 15-minute spurts for children, to approximately two hours of continuous concentration for hardcore gamers. Console game levels usually run for about 45 minutes. If you'd prefer to develop a game with much longer sessions, make sure you provide milestones of achievement, such as advancement or task completion, on a regular basis.
    - **Availability**: You need to consider the various gameplay goals in the game and ensure that each level covers one primary goal. If you were to allow only one level to be available at a time, this would work for games that require first-person immersion. If you were to allow only a small number of open levels at a time, this could alleviate frustration for many role-playing game (RPG) players, who might have several quests to fulfill and need to shift their focus. If you were to allow many open levels at a time, many players might become confused—but these levels would work well in process sims and RTS games.
    - **Relationship**: This answers the question: "What are the relationships between levels in the game?". Think of each level as a scene or even an episode within a larger story. Levels in puzzle games are often related only through some increase in difficulty. Some levels are related through storylines—like traditional media such as television. In this episodic relationship, each level is self-contained, with its own internal plotline and conclusion.
    - **Progression**: This answers the question: "How do you pace the game's progression through level design?". You want to make sure that a game's difficulty slowly increases as it continues. Also, make sure that each level builds conflict in a series of arcs. Vary the pace of your levels—allowing the player to alternately struggle to stay alive, systematically explore the environment, and reflectively solve challenging puzzles. Always keep the player occupied with things to do. Challenge is a good thing, but do not make your levels so difficult that only experts can survive while other players die again and again.
- **Time**: Time can also be thought of with respect to real-world time. "Game time" can move slower, faster, or not any differently from real-world time. In many turn-based and action games, there is no concept of time passing at all. Everything idles or runs in a continuous loop until the player interacts with it in some way.
    - **Authentic**: Some games try to portray time authentically and use the passage of time as a gameplay characteristic. The cartridge for

Boktai, developed for the Game Boy Advance, contains a sensor that detects the amount of light where the game is being played. The object of the game is to drag vampires out of the darkness into the sunlight. The game must be played outside during the day, and weak sunlight negatively affects your character's energy level. You must enter the correct time of day to configure the game before playing.

- **Limited**: Time is sometimes implemented as a part of the setting of the game but not of the gameplay itself. Time creates an atmosphere and provides some variety, but it does not alter gameplay. Game time can feel artificial because players can do the same things at night that they can do in the daytime. However, there are a few games in which time is meaningful. Sometimes a player is put under pressure by being given a limited amount of real-world time to accomplish something. Example: In FarmVille, where a few hours can mean the difference between a bountiful harvest and a field of wilted crops.
- **Player-Adjusted**: In many sports games, players may modify the time associated with game levels. Players can sometimes play shorter (5–10 minute) quarters instead of the standard 15-minute quarters in a football game. It is important to provide time options to players when possible. Many players do not want to devote a whole hour to play a simulated football game.
- **Altered**: Several games incorporate altered time as an effect. Max Payne was the first game to use bullet time—the technique of going into slow motion while retaining the ability to move the camera's viewpoint at normal speed. (This technique was introduced in the film, The Matrix—and it was later used in games based on the franchise.) This same effect is seen in some action movies where the main character has the power to stop time during the game so that he can avoid being defeated by opponents.

- **Space**: Space incorporates the physical environment of the game—including its perspective, scale, boundaries, structures, terrain, objects, and style (color, texture, look, and feel).
  - **Camera & Perspective**: Camera systems are used in video games where their purpose is to show the action at the best possible angle; more generally, they are used in 3D virtual worlds when a third person point-of-view (POV) is required. POV is related to the perspective of the game world—or how the player views the game environment.
  - **Omnipresent**: In the omnipresent perspective, the player has the ability to view different parts of the game world and can take actions in many different locations of the world (even if parts are hidden at times). The omnipresent perspective allows players to look down at the game world from above.
  - **Aerial (Top-Down)**: The aerial (or top-down) perspective shows the player the game as seen from above—a bird's-eye view.
  - **Isometric**: In the isometric perspective, the player can look slightly across the landscape at a 30- to a 45-degree angle. In an isometric world, you can create many different angles of objects and then place those objects on the screen. This allows you to create reusable objects rather than having to render them in real-time. This perspective also makes the player feel closer and more involved with events than a top-down or aerial view.
  - **Side-Scrolling (or Flat/Side View)**: In 2D space, characters can run only from left to right or jump up and down. They cannot run toward the player or away from the player. Working around these limitations, classic 2D arcade games used *side-scrolling* navigation to create the illusion of space. The player character would travel from left to right horizontally across the screen as the background moved from right to left. In a technique known as *parallax scrolling*, the camera moves vertically or horizontally, with different layers moving at different speeds—which gives the feeling of depth.
  - **Terrain & Materials**: Environmental materials—such as metal, glass, sand, gravel, sky, and clouds—directly influence the look and feel of the game. A shading model defines how materials behave when they are lit. It combines the attributes of each material—such as texture, color, shininess, and translucency—with the attributes of light sources, including color and direction. Terrain refers to textures that appear on ground surfaces—such as dirt, grass, tile, and pavement.
  - **Radiosity & Effects**: Radiosity or lighting is just one effect that is used on game environments. Without the proper application of radiosity, players will not be able to navigate through the game environment— nor will they be able to see and interact with details that might determine whether they can progress through the game. Radiosity can also be used to give the effect of reflection (on water, glass, and other elements). Other environmental game effects include climate (rain, snow, lightning) and other natural movements (waves, wind, flotation) created through animation.
  - **Scale**: The scale of the game space includes the total size of physical space and relative sizes of the objects in the game. Since

simulation games try to emulate reality, the space and objects within this genre should be scaled to relative size.

- **Realism**: Actual photographic and land-height data is used to create a realistic model for most flight simulators. Consider how much detail you want to include in your game. As you add detail, you often must subtract speed and efficiency. Many simulation games attempt to model the real world—and players often rely on real-world common sense when playing them. But all games represent some abstraction and simplification of the real world.
- **Style**: The style of the game world influences everything from the character, interface, manual, and packaging. There are two main style forms that need to work together in the game: the style of the objects in the world, and the style of the artwork that will depict the world. For example, the neighborhood in the game could consist of Spanish-style homes, while the style of the art could be anime. As long as each style is consistently used for its purpose throughout the game, it will not detract from the gameplay.

  Many styles have been overused in games. Do not borrow a style or setting from another game, but instead try something new. Forget the same old villains and environments. Think about the emotion you would like the world to bring out in the player: awe, fear, excitement, amusement? This will help you formulate your style.

References:

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