**SUMMARY OF CHAPTER 12**

This chapter focused on the importance of including the element of puzzle in your videogame. Provide some sort of mental challenge. Make the user stop and think. Puzzles integrated into environment, instead of stopping play and being explicit. Should be congruous with game and its environment by making puzzle elements be natural part of game. Puzzle has dominant strategy, game doesn’t or shouldn’t.

**10 principles of puzzle design:**

1. **Make goal easily understood**
2. **Make it easy to get started**
3. **Give a sense of progress**
4. **Give a sense of solvability**
5. **Increase difficulty gradually**

The puzzle should be solvable in mini-steps or stages, with difficulty gradually increasing. This is to motivate the non-diehard players.

1. **Parallelism lets the player rest**

Provide different types of puzzles for users, so that if they are stuck on one, they can take a break by working on a different puzzle.

1. **Pyramid structure extends interest**

Answers to simpler puzzles may provide clues as to answer about the final, more difficult puzzle.

1. **Hints extend interest**

Provide hints for novice players stuck so that they don’t lose interest.

1. **Give the answer**

Provide the answer to your game too.

1. **Perceptual shifts are a double edged sword**

Don’t let the game be either about understanding the puzzle completely or not understanding at all. Majority of audience will lose interest due to this. Instead, keep stages.

Our game is based on maneuvering a vehicle through traffic, obstacles and hostile opponents, so we definitely do not have much space for puzzles. The game demands quick reaction speed and dexterity from the user.

However, we can provide alternate paths to the user to avoid obstacles, each with their own risks and rewards. Some paths may initially seem alright but actually end up in a collision e.g. a crossing a ramp over an obstacle, and the user’s vehicle landing right before another obstacle. In this way, the whole game has elements of quick ‘stop-and-think’ moments integrated into the game environment, so it may be considered as a puzzle.

Furthermore, we can add further elements into the game to increase the ‘stop-and-think’ aspect of the game: night mode and fog mode.

In night mode, only the bike’s bright headlights and the road’s dim light poles will be able to illuminate the road and make the obstacles visible. Thus, there will always be a dark region on the road where figuring out the oncoming obstacles or traffic will be impossible or at least difficult. This night mode may be integrated into the standard game mode temporarily, alternating between day and night, or this may be an entire mode in itself in our 2nd semester to increase the challenge.

Similarly, fog mode may be implemented such as to completely obscure visibility except for areas very close to user’s vehicle. For this challenge to be balanced, all vehicles on the road including the user’s will have to slow down. This may be implemented for some seconds in the standard mode.

This way, we can have a challenging chronological style of the game. The game starts in day mode, comprising majority of a day’s cycle. After staying in that mode for a few minutes, it then shifts to night mode for half a minute, then to foggy night mode for a few seconds. This will hopefully keep the user on their toes.