

Use Case Descriptions:

Player Matchmaking

Match Players Based on Experience Level

Iteration: 1, modified March 5 by Irith

Primary Actor: Game Platform

Goal in Context: Match a player with another player whose experience level is close to theirs.

Preconditions:

- The platform includes matchmaking functionality.
- The player has an assigned experience level.
- There are available players with similar experience levels.

Trigger: A player initiates a matchmaking request.

Scenario:

1. The player requests to find a match.
2. The platform searches for available opponents with a similar experience level.
3. If multiple suitable opponents are found, one is selected randomly.
4. The players are placed into a match.

Exceptions:

- If no suitable match is found, the platform expands the search range or increases wait time before attempting another match.

Priority: Essential

When Available: First increment

Frequency of Use: Many times a day

Channel to Actor: Via device

Secondary Actors: Players

Channels to Secondary Actors: Via device and platform

Adjust Matchmaking Based on Session Intensity

Iteration: 1, modified March 5 by Irith

Primary Actor: Game Platform

Goal in Context: Ensure dynamic matchmaking by adjusting matchmaking preferences based on a player's session intensity.

Preconditions:

- The platform includes matchmaking functionality.
- The player has an assigned session intensity score.
- There are available opponents with varying experience levels.

Trigger: A player initiates a matchmaking request.

Scenario:

1. The player requests to find a match.
2. The platform retrieves the player's experience level and session intensity.
3. The platform calculates the effective matchmaking level as $(\text{experience level} \times \text{session intensity})$.
4. The platform searches for opponents with experience levels within an acceptable range of the effective matchmaking level.
5. A suitable opponent is selected and matched with the player.

Exceptions:

- If no suitable match is found, the platform gradually broadens the search criteria.

Priority: Medium-High

When Available: First increment

Frequency of Use: Many times a day

Channel to Actor: Via device

Secondary Actors: Players

Channels to Secondary Actors: Via device and platform

Handle Matchmaking for Highly Skilled Players

Iteration: 1, modified March 5 by Irith

Primary Actor: Game Platform

Goal in Context: Ensure highly skilled players can still find matches without excessive wait times.

Preconditions:

- The platform includes matchmaking functionality.
- The player has an assigned experience level and session intensity.
- The player is among the top-ranked players with limited opponents available.

Trigger: A highly skilled player initiates a matchmaking request.

Scenario:

1. The player requests a match.
2. The platform attempts to find an opponent with a similar experience level.
3. If no immediate match is found, the platform gradually expands the matchmaking criteria:
 - Increasing the acceptable range of experience levels.
 - Prioritizing players with high session intensity to maintain a challenge.
4. Once a match is found, the players are paired, and the game begins.

Exceptions:

- If no match is found after an extended period, the platform may offer alternative options, such as AI opponents or matchmaking across regions.

Priority: High

When Available: First increment

Frequency of Use: Multiple times a day

Channel to Actor: Via device

Secondary Actors: Players

Channels to Secondary Actors: Via device and platform