



Supplementary Specification for Functional Requirements

Authors: George, Linh, Troy, Kerim, Rasa

Revision History

Date	Version	Description	Author
3/23/2020	Version 1.0	Initial release	Clue-Dunit Team

Supplementary Specification

1. Objective: The purpose of this document is to document functional requirements for Clue-Less game that are not amenable to use cases in a supplementary specification document
2. Scope: This supplementary Specification applies to Clue-Less game, TARGET version, which will be developed by Clue-Dunit team.
3. Related Documents:
 - Supplementary Specification for Use Cases
 - Clue Rules for the basic Clue rules
<https://www.hasbro.com/common/instruct/clueins.pdf>

Requirements

This section enumerates the requirements derived predominately from the modified Clue rules (requirement G.1 is not derived from the Clue rules)

- G.1. Clue-less shall be a client-server game.
- G.2. Clue-less shall support between 3 and 6 players

Team Clue-Dunit

Supplementary Specification for Functional Requirements

- G.3. Play shall start with Miss Scarlet, or the first person clock-wise from Miss Scarlet if Miss Scarlet is inactive.
- G.4. Play shall proceed in a clock-wise direction
- G.5. Inactive players shall stay in their remain in their home square, unless moved by a suggestion (vide infra)
- G.6. Clue-less shall have nine rooms layed out in s 3x3 grid with halls between rooms. (See Figure 3 on page 6)
- G.7. There shall be hidden passages between opposite corner rooms.
- G.8. One suspect shall be chosen randomly, and their card placed in the case file.
- G.9. One weapon shall be chosen randomly, and that card placed in the case file.
- G.10. One room shall be chosen randomly, and that card placed in the case file.
- G.11. The case file (now containing one suspect, one weapon, and one room) will be hidden from the players.
- G.12. The remaining cards shall be combined, reshuffled and distributed to the players.
- G.13. A hall shall hold at most one person.
- G.14. A player first move shall be to the hallway adjacent to their home square.
- G.15. On a player turn they shall
 - G.15.1 Make an accusation if they wish (see G.17)
 - G.15.2 Shall attempt to move
 - (a) A player may move from a room to an unoccupied hall
 - (b) A player may move from a hall to a room.
 - (c) If the player is in a corner room, they may move to the adjacent corner room.
 - G.15.3 If the player cannot move, they forfeit their turn.
 - G.15.4 On entering a room, a player shall make a suggestion (see G.16)
- G.16. To make a suggestion
 - (a) A player shall be able to make a suggestion only after entering a room.
 - (b) The room the player is in must be part of the suggestion.
 - (c) To make a suggestion a player shall name a suspect and a weapon.
 - (d) The named suspect and the weapon token shall be moved to the room
 - (e) To disprove a suggestion, start with the player to the left of the player making the suggestion.
 - (f) That player examines the card he has (see G.12), if he has any of the suggested cards he shall secretly show exactly one of the matching cards to the player making the suggestion (and only that player). The suggestion is disproven at this point.
 - (g) This shall continue until the suggestion is disproven, or all players have a chance to disprove the suggestion.
- G.17. To make an accusation the player shall

- (a) A player can make an accusation anytime during their turn.
- (b) To make an accusation “I accuse suspect of committing the crime in room with weapon”.
- (c) The player making the accusation will consult the case file (see) secretly.
- (d) If the player is correct they win the game.
- (e) If the player is wrong they secretly return the cards to the case file, they lose in this case.
- (f) A losing player shall make no further moves in the game, but remain involved in the investigation

Server

The server component of the Clue-less game system is responsible for managing players and running the game. The requirement for the server is outline below.

- S.1. The server shall be able to support at least three simultaneous connections (G.2).
- S.2. The server shall respond to a connect attempt within 7 seconds.
- S.3. Due to not being able to predict a priori when a play will connect, or how many players will connect the server shall maintain a queue of players waiting for a game.
- S.4. The server shall manage the queue (S.3) to start a game when at least three players are in the queue.
- S.5. If the number of players in the queue is less than six, the server shall implement a count-down time to allow additional players to connect to the server prior to starting a game.
- S.6. The server shall maintain the state of the game.
- S.7. The server shall inform each play of when their turn is.
- S.8. The server shall broadcast changes of state, (player location, player suggestion) to all players in near real-time.
- S.9. The server shall ask each player, in turn (if they can disprove a suggestion.
- S.10. The server shall show the content of the case file () to the player making an accusation.
- S.11. The server shall verify if the accusation is valid on not.
- S.12. The server shall broadcast the result of an accusation to all players in near real-time.

Client

- C.1. The client shall remain responsive to user input.
- C.2. The client shall display status message from the server.
- C.3. The client shall display state updates from the server.
- C.4. The client shall be able to connect to the server.
- C.5. The client shall allow the player to perform all action during a turn (see G.15)
- C.6. The client shall be able to send player actions to the server.
- C.7. The client shall be able to display a Graphical User Interface (GUI) representing the board and cards