

VISION DOCUMENT

Introduction:

In this project we aim to build a computerized version of the Ricochet Robots board game. This will allow a human to play Ricochet Robots on a computer with AI, or with other humans.

Problem statement:

Currently it is only possible to play Ricochet Robots in person, with the board and pieces on hand. Our version will allow the game to be played on a computer, eliminating the possibility of losing pieces and carrying a board game around, as well as opening some other functionalities such as playing against AI and saving/loading game states.

Stakeholders & Key Interests:

Stakeholders	Key Interest
Players	Playing the game.
IT Staff	Maintenance of the system, educating users.

Users & User-Level Goals:

Users	User-Level Goals
Player	Choose players, choose AI difficulty, choose board complexity, start a new game, load a game, save a game, make a bid, verify a route, check score.

Summary of System Features:

- ◇ The system shall allow play against AI
- ◇ The system shall allow AI difficulty adjustments
- ◇ The system shall allow board complexity adjustments
- ◇ The system shall allow saving and loading a game
- ◇ The system shall allow bidding
- ◇ The system shall do route verification
- ◇ The system shall track scores

- ◇ The system shall set up and display a board
- ◇ The system shall allow provision of hints
- ◇ The system shall be compatible with colour-vision-deficient users
- ◇ The system shall allow for networked play (future update)

Project Risks:

It may be difficult to design an AI for the system due to the potential complexity of optimal routes and the overall number of possibilities.

Preparing the system to be extended into networked play may also be difficult due to the group's lack of experience building networked systems.