

# Introduction

This document collects ideas and actions for the design of BALTEK.

## General design

Let us decouple the various aspect of the software in order achieved the following objectives:

- Playing against an AI.
- Playing against a remote player.
- Playing either on a desktop computer or a smart phone.
- Changing the visual aspect of the software.

Let us get inspiration from the **Model View Presenter (MVP)**



Let us translate such diagram into a table of events:

Step	View	Presenter	Model
1	sends user event		
2		receives user event	
3		requests model change	
4			updates model
5			send state-change event
6		receives state-change event	
7		request view change	

The previous objectives implies the following cluster of classes:

## Cluster for the state of game (Model)

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These classes represent:

- The boxes of the field: its geometry, the position for the goals.
- The blue and red players: their forces, their positions, their moves in the current turn.
- The position of the ball.
- The score.
- The usage of the sprint bonus for each team.
- The turn: blue team or red team.
- The remaining action points of the active team.

These classes know:

- How to initialize the state of the game.
- How to clone the state the game.
- How to move the players at their initial positions.
- The possible action of the active team: move of each player, move of the ball, reinitialize the players positions.
- How to note the played moves.

## Cluster for the Presenter

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These classes manage:

- The overall initialization of the software.
- The coordination between all other clusters.
- The captures of events.

## Cluster for the View

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These classes manage the drawing. Nothing else.

## Cluster for the AI

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These classes represent a virtual player.

From a given state of the game, the AI provides moves. An advanced AI might also used the previous

states of the game in order to provides the next moves.

## Cluster for the remote interaction

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These classes are responsible for:

- Initializing the remote connection.
- Transforming local event into remote event, and vice versa.