ROBOSOCCER Project Plan

Hofbauer, Markus Jiang, He Meyer, Kevin Schmidt, Benedikt Wirnshofer, Florian

April 20, 2014

Table of contents

- Definition of Project Objectives
- 2 Framework and Procedure
- 3 Tasks
- 4 Resource Plan
- 5 Time Schedule
- 6 Cost Plan
- 7 Implementation



Definition of Project Objectives

Win the ROBOSOCCER Championship

Required Objectives

- Implementation of low and mid-level robot controls.
- Implementation of an advanced artificial intelligence.
- Obey the ROBOSOCCER rules.
- Implementation of a penalty shoot-out mode.

Team Members

- Hofbauer Markus
- Jiang He
- Meyer Kevin
- Schmidt Benedikt
- Wirnshofer Florian

Team Organisation

Internal Communication

- Team Discussion Board (phpBB: https://forum.kevin-meyer.de)
- Email

Meeting on a weekly basis.

Additional meetings on demand.

Hardware

- Three Pololu 3Pi robots per team.
- Image acquisition using a camera above the playground.
- Localization based on computer vision algorithms.
- Communication via dedicated real-time server and a BLUETOOTH interface.



Software

- Target & Development-OS: LINUX
- IDE: QT CREATOR
- **Version Control**: GIT (hosted on https://bitbucket.org)
- Build System: CMAKE

Tasks I

Project strategy is based on the spiral model with the following milestones:

Deadline: 07.05.2014

- Kick-off Position
- Goalkeeper
- Penalty Shooting

Deadline: 04.06.2014

- Collision Avoidance
- Ball Control
- Player Interactions

Tasks II

Deadline: 25.06.2014

Strategy and Tactics

Deadline: 02.07.2014

ROBOSOCCER Championship

Resource Plan I

PM Schmidt Benedikt

- Communication with the contact person and the tutor of the course.
- General team coordination.
- Monitor realization of project plan.

QM Wirnshofer Florian

- Ensure sufficient unit tests.
- Continuous testing on hardware.
- Balance quality aspiration and effort.

Resource Plan II

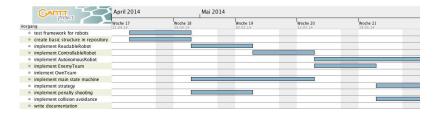
CM Meyer Kevin

- Communication with the contact person and the tutor of the course.
- General team coordination.
- Monitor realization of project plan.

SD Hofbauer Markus, Jiang He

- Design and verify code structure.
- Ensure building code.
- Choose and connect external libraries.

Time Schedule



GANTT project	oche 22 5.05.14	Woche 23 02.06.14	Woche 24 09.06.14	Woche 25 16.06.14	Woche 26 23.06.14
 test framework for robots 					
 create basic structure in repository 					
 implement ReadableRobot 					
implement ControllableRobot					
 implement AutonomousRobot 					
implement EnemyTeam					
imlement OwnTeam					
implement main state machine					
implement strategy					
 implement penalty shooting 					
implement collision avoidance					
write documentation					



Cost Plan

Implementation