

## Project Description

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Project Poseidon

### DISTRIBUTION

**Steering group:**

Rikard Land, Frank Lüders

**Project group:**

g2

**Others:**

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## 1. Background and Objectives

The long-term idea of the project is to develop a real underwater robot, which would help humans to explore the bottom of the sea for pollution sources, as barrels with poison. So the first step is to develop a robotic simulator, which would simulate the behavior of the robot in the water, which would be based on the real world. The software engineering, can contribute in this project by developing the software for the simulation.

The requirements of the software are obvious. The simulation must be realistic. The user can move the robot into the simulator and the sensors would provide to him all the necessary informations. The whole system must behave like the real environment. For example take for granted the natural phenomena, like the problems that it could find out by moving into the sea or the forces which affect on the robot. Furthermore, the simulator should provide the possibility to the user to simulate the behavior of his own robots, he can import his own robot model in the simulator, in order to see the its behavior.

The goals of our project are to develop the software, the realistic simulator for underwater robots, which would help latter the researchers to construct the real robot.

No. of requirements at project start:	5
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## 2. Organization

### 2.1 Project Manager

Arvanitidis Georgios

### 2.2 Project Group

Name	Period	Availability
Michel Uncini	2009-11-01- -2010-01-01	50%
Arvanitidis Georgios	2009-11-01- -2010-01-01	50%
Sergio Dominguez Fernandez	2009-11-01- -2010-01-01	50%
Ruben Navarro Arevalo	2009-11-01- -2010-01-01	50%
Samuele Sabbatini	2009-11-01- -2010-01-01	50%
Francesco Lilli	2009-11-01- -2010-01-01	50%

Notes:

### 2.3 Steering Group

Rikard Land, Frank Lüders

### 2.4 Customer

Lars Asplund

**3. Assumptions and Constraints**

TBD

**4. Deliverables**

To	Output	Planned week	Promised week	Late +	Delivered week	Rem
Customer	Requirements Specification	W47	W47	1		1
Customer	Software v#1 (validation)	W48	W48	1		2
Customer	Software v#2 (validation)	W50	W50	0		3
Customer	Software v#Alpha	W1	W1	0		4

**5. Inputs**

From	Required item	Required week	Promised week	Late +	Received week	Rem
Customer	Requirements Confirmation	W47	W47	1		1
Customer	Software v#1 Validation	W48	W48	1		2
Customer	Software v#2 Validation	W50	W50	0		3
Customer	Software v#Alpha Validation	W1	W1	0		4

**6. Communication**

Weekly meetings (2 times/week), Skype, mobile phones, Facebook.

**7. Worked Hours**

The allocated hours per person, taking holidays etc. into account, are:

Week	W44	W45	W46	W47	W48	W49	W50	W51	Total
<b>Planned working time per member</b>	20	17	20	20	20	20	20	20	<b>157</b>

Notes: 1. Christmas holidays.

**8. Quality Assurance**

TBD

## 9. Configuration Management

### 9.1 Reference Documents

<http://www.idt.mdh.se/kurser/cdt310/09/projects/templates/>

### 9.2 Responsibility

The project manager has the overall responsibility for the SCM.

The SCM group members are:

Arvanitidis Georgios

Francesco Lilli

Tasks of the SCM group:

- Creation and management of the project's software baseline library  
Responsible: Francesco Lilli
- Management of the access to the software baseline library  
Responsible: Arvanitidis Georgios
- Updates of the software baselines  
Responsible: Arvanitidis Georgios
- Creation of products from the software baseline library  
Responsible: Francesco Lilli
- Freezing of software baselines  
Responsible: Francesco Lilli

### 9.3 Resources

Planned resources for SCM activities: <#n> man-weeks.

Additional resources: TBD

### 9.4 Components, Tools and Products Used in the Project

The following SCM tools are used in the project:

- Subversion

The following development platforms are used in the project:

- Windows XP/Vista
- Mac OS X Leopard

The following tools are used in the project:

- StarUML
- Eclipse ( JmonkeyEngine, JmonkeyPhysics + ODE)

## 9.5 SCM Structures

The following intermediate and final software products/components (baselines) will be created: TBD

The following structure is used to store intermediate and final software products/components: TBD

The project documentation is saved in the following structures: .pdf files.

## 9.6 Metrics

The following SCM measurement are collected periodically during the project life:

- The number of changed and new lines of source code;
- The number of changed and new files of source code;
- The number of new and changed product documents;
- The total number of documents, of files and of lines of source code.

## 10. Project Plan

### 10.1 Time Schedule

Id	Milestone Description	Responsible	Finished week				Rem
			Plan	Forecast	Actual		
				Week +/-	Week +/-		
1	Project Description	Arvanitidis	W44	W44	1		
2	Requirement Specification	Dominguez	W45	W45	1		
3	Prototype	Lilli	W46	W46	1		
4	Design Description	Sabbatini	W47	W47	1		
5	Implementation version #1	Sabbatini	W48	W48	1		
6	Verification version #1	Navarro	W48	W48	1		
7	Validation version #1	Navarro	W48	W48	1		
8	Implementation version #2	Uncini	W49	W49	1		
9	Verification version #2	Uncini	W50	W50	1		
10	Validation version #2	Uncini	W50	W50	1		
11	Integration	Arvanitidis	W53	W53	1		
12	Verification alpha version	Arvanitidis	W53	W53	1		
13	Validation alpha version	Arvanitidis	W53	W53	1		

Comment: *Finished week: Plan* = original plan; *Actual* = week when it was actually available; *Forecast Week* indicates the estimated finished week; *Forecast* indicates changes in the estimation compared to the previous project report; *Actual* is the actual week delivered. “+/-” indicates the difference between Plan and Forecast or Actual, that is if Plan is 14 and Actual is 16, then Metr will be +2. To be filled in when the milestone is reported as completed; *Rem* is a remark index number.

## 10.2 Activity Plan

	W 44	W 45	W 46	W 47	W 48	W 49	W 50	W 51	W 52	W 53	W 1
Project Analysis											
Requirements Analysis		v1	v2								
Design			v1	v2							
Implementation				v1	v1	v2	vα	vα	vα	vα	
Verification					v1		v2				vα
Validation					v1		v2				vα
Integration											
Documentation							v1		v2		
Project Management											
Configuration Management											

## 10.3 Project risks

Risk	Potential Effect	Preventive / Corrective Action
Bad communication with customer	Delivered product not accepted by customer	Three different releases in order to have better feedback.
Bad communication with steering group	Project runs inefficiently	
Bad internal communication	Delay in deliverables	
A project member is sick	Some tasks are not done in time	
A project member leaves the project	Project scope must be decreased / some tasks need to be re-distributed to members	
A project member has insufficient skills for the task		Take responsibilities only on things that he can achieve.
Problems with tools and technology	Some tasks are not done in time	

## 10.4 Financial Plan

Planned cost (100%) = SEK 500 SEK/h.

Planned effort = 8 mw.

1 man-week(mw) = 10,000 Sek.

Activity	Volume (mw)	Cost	Comments
Project management			
Requirement management			
Configuration management			

## REVISION

Rev. ind.	Page (P) Chapt.(C)	Description	Date Initials
1	2,3,6	Changed the availability, Defined Deliverables & Working Hours, Updated Financial Plan, Defined some Risks.	2009-11-12