Call Calendar

Project Plan Document

Version 0.1

Title:
Call Calendar

Course:
Distributed Software Development

Document:
Project Plan

Participants:
Biljana Stanić
Md. Abdur Razzaque
Hrvoje Pavlović
Marko Vuglec
Marko Veličković
Damian Marušić

Supervisors:
Federico Ciccozzi
Ivana Bosnić

Date:
3rd November 2014

Revision History

Date	Version	Description	Author
2014-11-03	0.01	Initial Draft	Biljana Stanić
2014-11-03	0.1	Initial Version	Biljana Stanić

Table of Contents

1. Introduction

1.1 Purpose of this document

The purpose of this document is to give a detailed insight about the project team members, project vision and certain goals that have to be fulfilled in order to have a good both software product and documentation at the end of the course. Furthermore, here will be presented development process that will be used during project development with clear figures that depict stages with particular milestones. In the end, types of communication, possible risks will be listed and explained.

1.2 Document organization

The document is organized as follows:

- Section 1, *Introduction,* describes purpose and audience of this document, scope, definitions and acronyms.
- Section 2, *Background and Objectives*, contains customers, supervisors, project vision.
- Section 3, *Organization and Communication*, introduces project group, meeting, weekly reports, means of communication.
- Section 4, *Development process,* describes team roles, activity work, milestones and division of work.
- Section 5, *Quality assurance*.
- Section 6, *Project risks*.

1.3 Intended Audience

The intended audience is:

- Team members;
- Local and remote supervisors.

1.4 Scope

As it is mentioned in the Section 1.1, this document provides information about the background and goals of the project, team members, communication during project devilment, development process, etc. This document will not contain further requirements analysis or decisions about the design of the system.

1.5 Definitions and acronyms

1.5.1 Acronyms and abbreviations

In the following table will be present and explained abbreviations that will be used in the document.

Acronym or abbreviation	Definitions
MDH	Mälardalen University, Västerås, Sweden
FER	Faculty of Electrical Engineering and Computing, Zagreb, Croatia
DSD	Distributed Software Development
ES	Embedded Systems
RECO	Research Coordination

Table 1. Abbreviations with their explanations

2. Background and Objectives

Mälardalen University consists of several departments, where one of them is the research center for Embedded Systems[1] (ES). ES is the most research-intensive profile at Mälardalen University and a national leader in Embedded Systems research. It has about 20% governmental funding for its projects. The rest, about 80 MSEK / 9 MEUR, needs to be attracted from external funding bodies, both national and international. All researchers have a responsibility to apply for external funding to support him/herself and colleagues in the research group. Research group leaders have a specific responsibility towards their groups.

As a support for all research groups, there is RECO, the division for Research Coordination. RECO constantly looks out for funding possibilities, helps the researchers with updated information about conditions, budget, consortia, and, also, helps putting the applications together. It is crucial to keep calls and deadlines in mind. RECO and the ES researchers would all benefit from a ”Call calendar” containing information about funding bodies, different calls and their respective deadlines.

2.1 Customer

Customers for the “Call Calendar” project are from research center Embedded Systems:

- Malin Rosqvist, Research Coordinator, Web project manager at ES

Email: malin.rosqvist@mdh.se
Web page: http://www.es.mdh.se/staff/215-Malin_Rosqvist

- Irfan Šlijvo, Web master & Presta shop developer at ES

Email: irfan.slijvo@mdh.se
Web page: http://www.es.mdh.se/staff/380-Irfan_Sljivo

2.2 Supervisors

The team has two supervisors, one local and one remote (based on the location of the team) situated in Sweden and Croatia. They are:

- Federico Ciccozzi

Email: federico.ciccozzi@mdh.se

- Ivana Bosnić

Email: ivana.bosnic@fer.hr

2.3 Project vision

The goal of this project is to extend current functionalities of existing system at ES. Currently, there are researchers profiles/areas of interest, funding bodies and funding programs. System is divided into back and front office. Back office is used to manage researchers, projects and funding agencies. In front office researchers profiles/areas of interest and funding bodies/programs are shown.

System will be upgraded so it could support adding funding agencies calls, as well as researches’ applications to specific calls. It will also match calls with researchers profiles/research interests in order to ensure maximum

[1] http://www.es.mdh.se

user satisfaction. Moreover, it will contain information about different calls and their respective topics, deadlines and links to more information. Alongside viewing available calls list, in front office, functionality of sorting and filtering calls will be added. Users will be able to get various generated reports about calls and applications as well.

3. Organization and Communication

People involved on the project can be divided into several groups, such as project supervisors, project customers and members of the team that will cooperate with each other from two distributed locations, in Sweden and Croatia. The organization of team members along with stakeholders is shown in the following figure.

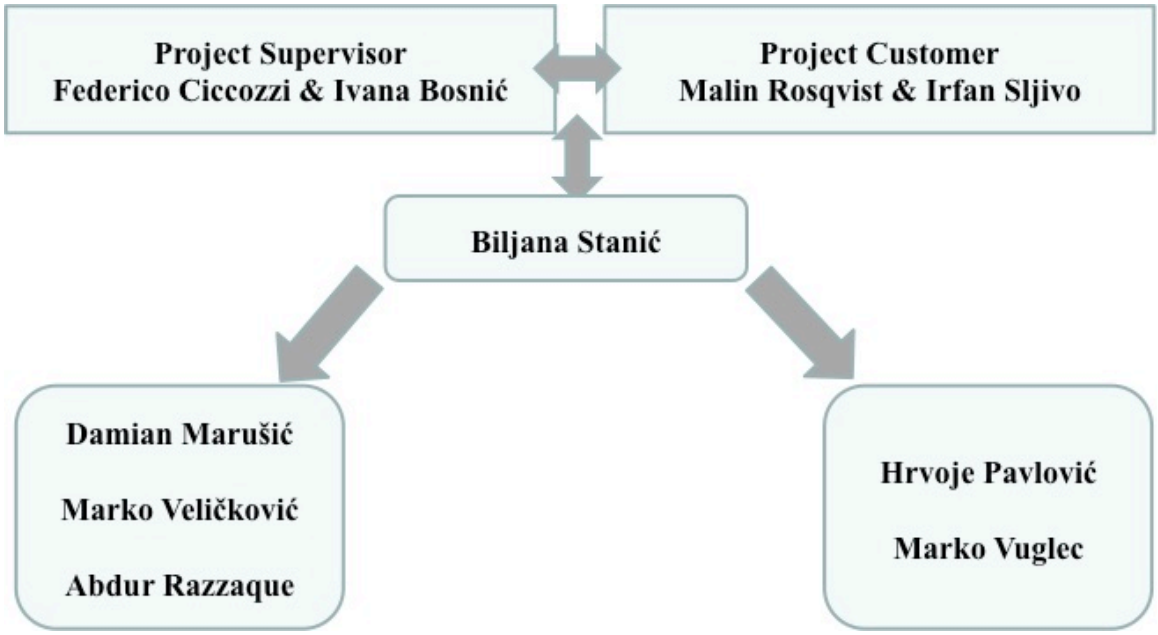

Figure 1. Organization of the team

Project supervisors and customers will be in a direct communication in order to give a certain feedback about the project. One team member will act as a link, in this case Biljana Stanić, and she will be responsible for the good cooperation of supervisors and customers, on the one side, and teams from Sweden and Croatia, on the other side. Other team members can replace Biljana when they agree that it is necessary for the benefit of the team.

3.1 Project group

As it was mentioned in the introductory part of the Organization and Communication Section, team members that will work on this project are located in Sweden (Mälardalen University) and Croatia (Faculty of Electrical Engineering and Computing). Each team member is enrolled in Master's program in Computer Science.

Name	Initial	Primary Role	Contact	University
Biljana Stanić	BS	SCRUM Master/ Developer	bsc13002@student.mdh.se	MDH
Abdur Razzaque	AR	Developer/*[2]	r4razzaque@gmail.com	MDH
Hrvoje Pavlović	HP	Developer/*	hrvoje.pavlovic@fer.hr	FER
Marko Vuglec	MV	Developer/*	marko.vuglec@gmail.com	FER
Marko Veličković	MVe	Developer/*	velickovicma@gmail.com	MDH
Damian Marušić	DM	Developer/*	dmc14001@student.mdh.se	MDH/FER**

Table 2. Team members

3.2 Meetings

Team meetings that require a detailed discussion about the project, in a form of video call, will be organized three times per week. The time will not be fixed; team members will arrange meetings in accordance with their obligations. Besides that, members have to briefly write a short report about the daily status of the project or to share possible issues. This way, we ensure that each team member is interacting and gives a contribution to the project development. Each decision from the meetings is documented and it can be found in "Minutes of Meeting" reports. Each team member has to write for at least one "Minutes of Meeting" document, so we could have the proper allocation of work. The document has to be checked by each team member.

3.3 Weekly reports

In weekly reports, the team will summarize what was done during the week. Each team member has to write for at least one "Weekly reports" document, so we could have the proper allocation of work. The document has to be checked by each team member.

3.4 Communication

The communication between team members will be carried out in several ways, according to the demand of the situation. In the following figure will be shown all types of communication within the team. Here will be reported work hours for the each team member.

2 *Team member will be once Project Owner during project development

**Damian's home institution is FER, but he is currently enrolled as exchange student at MDH.

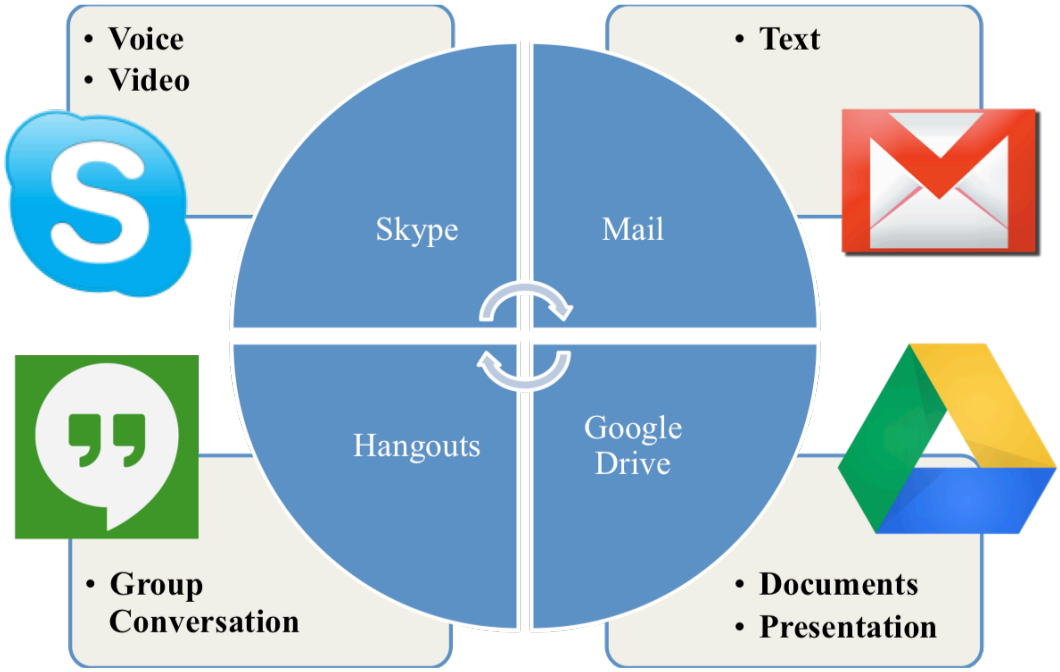

Figure 2. Types of communication

Skype[3] will be mainly used for the detailed group discussion and also for the communication with the local and remote supervisors. This will seemingly create an impression that teams are not that far away from each other and this is the best way to clear up all doubts within the team.

Emails will be used for the communication with the customer or for sharing certain files among team members.

Google Hangouts[4] will serve as an alternative for the Skype, when some team member is not able to be online on the Skype.

Google Drive[5] will be used for storing and sharing documents and presentations that have to be produced during project development.

It is possible that in near future, team will use other means of communication, such as Viber[6], Whatsapp[7], etc.

Code from the implementation, that will be accessible for both team members and supervisors, will be stored on the Github[8] repository. One of the team members will be the Github administrator.

4. Development process

The team agreed to use SCRUM[9] as the development process. There are a few reasons for this decision. First,

[3] http://www.skype.com/en/
[4] https://www.google.com/+/learnmore/hangouts/
[5] https://drive.google.com/#my-drive
[6] http://www.viber.com/
[7] http://www.whatsapp.com/
[8] https://github.com/
[9] http://en.wikipedia.org/wiki/Scrum_(software_development)

with SCRUM team will be able to deliver quickly the most important features, based on their priority. It is agile, with more relaxed organization, which brings benefits of defining only a few roles in the team. In that kind of environment each team member will be able to help to solve someone else's problem, without justifying that he/she is not in charge for that part of the implementation. In each iteration, in the case of SCRUM, sprint, will be delivered either part of the product (application) or some document/presentation.

4.1 Team roles

There are three main roles that can be recognized in the SCRUM development process.

SCRUM Master
SCRUM Master is responsible for removing all obstacles within group members in order to deliver products or to simply finish some task on time. He/she as to be sure that the SCRUM process is used on the right way. This role can rotate among team members.

Project Owner
This is the key stakeholder what knows the best what has to be developed. Project owner has to ensure that the team will deliver good part of/whole product after each sprint, writes priorities for user stories. This role can be combined with the role of the SCRUM Master.

Developers
Development team that is responsible for delivering parts or the whole product.

4.2 Activity plan

The team has accepted two-week iterations, sprints. The main reason for this decision is because we believe it is better to have more frequent meetings and more sprints during the process. This way it will be reduced misunderstandings or of any delays. Each sprint will contain several meetings. Sprint planning meeting will indicate the start of the certain sprint. There will be decided what has to be done (which tasks), priorities of the tasks and to define test cases. Team members will finish their duties either as individual or as a part of the smaller group, depending on the complexity of the task. Also, there will be organized daily meetings where team members have to discuss what was done, what has to be done and to share experiences or possible problems that occur during a task development. Before the end of the second week, it will be organized sprint review meeting and retrospective meeting, where will be summarized the progress of the team.

There will be 6 iterations, sprints, where after each of them will be delivered some part of the product or required document/ presentation. In the following figure is depicted a plan for the development.

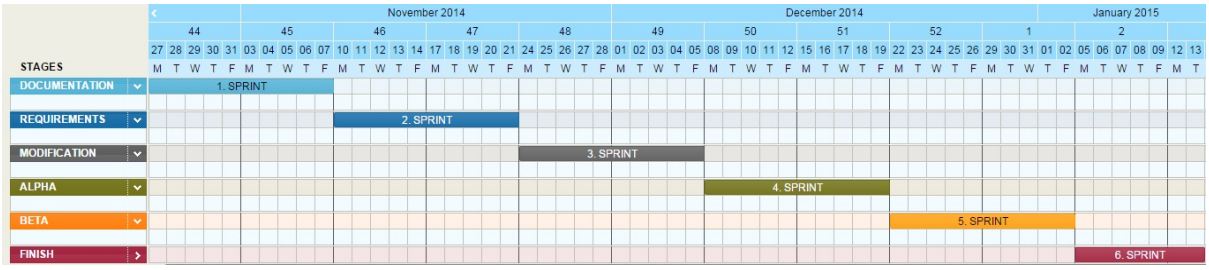

Figure 3. Sprints during development process

4.3 Milestones and division of work

The team is planning after each sprint to deliver either product or document/presentation.
Furthermore will be presented tasks and final products after every sprint.

Sprint 1:
Mirror server configuration:

- Setup a mirror server;
- Secure the mirror server;
- Link the mirror server to the Github;
- Restore a database;
- Restore files;
- Project Plan Document;

Final delivery: Mirror server with configured and working Prestashop with the database, supplied by the customers. Server will be configured with the Github.
Tests: Verify existence of the server, verify web login, basic functionality by comparing with the real server, to add something on the Github and verify that if it is on the server, get the database from the Github and compare it to the database dump on the server.

Mirror server security:

- Secure server with iptables;
- Secure web server with .htacess password protection.

Final delivery: Secured server
Tests: Check server for open ports, check server logs to see if there is any break of the security.

Documentation:
Tests: Verify documentation to check if it is following "*Documantation_instructions*" file

Customer requirements divided into tasks:

- Define database changes according to the customer's requirements;
- Define model changes;
- Define controller changes;
- Define view changes

Sprint 2
Modify the database according to customer's requirements.
Tests: Compare the database structure and against user requirements and project plan.

Expend forms and define forms for inputting data
Tests: Input some test data (defined later) and verify if it is correctly stored in the database.

User requirements document
Design description document

Sprint 3
Create forms for displaying data according to the project plan
Tests: Verify all data is the same like in the database

Create custom filters
Tests: Test every filter and verify if it is returning correct data.

Alpha stage
Tests: Verify complete functionalities with user requirements.

Sprint 4

Beta stage
Tests: Verify complete functionalities with user requirements after improvements.

Sprint 5
Final product.
Acceptance Plan document.

Sprint 6
Deliver final versions of the product and documentation.

5. Quality assurance

The quality assurance will be provided by organizing and attending daily meetings, sprint review meeting and retrospective meeting where will be shared experiences during particular sprint. Every experience will be documented. Having different roles in the team will make sure that project owner and scrum master are controlling progress of the team. Different means of communication tools will ensure to availability of each team member at any time during project development. Created Github repository will contain implementation files that will be accessible why team members, supervisors and customers.

6. Project Risks

In the following table will be listed all risks, from different dimensions, that were identified as possible threats during project development.

Dimension	Possibility	Risks	Preventive Action
Requirements	High	Wrong interpretation of requirements	Determine a list of frozen requirements that will be delivered and contact with customers, and ask them for feedback. Get acceptance of requirements from the customer early in the project.
Planning & control	High	Poor communication with the customer	Try to insist on more frequent meetings and Discuss requirements in details.
Team	High	Problems with system consolidation	Team members should possess a clear definition of component functionalities and well defined interfaces between components.
Planning & control	High	Unrealistic schedule	Estimate tasks carefully, and let the team know if you are unable to complete a task so it can be rescheduled or distributed.
Requirements	High	Resource shortfalls	To improve the amount, data has to be retrieved from the existing system.
Team	Medium	Lack of technical knowledge	Choosing technologies that majority is familiar with and distributes the work to team members considering their knowledge.
Planning & control	Medium	Bad communication between members	Try to communicate through several channels between team members.
Team	Medium	Member(s) not fulfilling their tasks on time	Inform other members that you are behind schedule. Try to contact someone that is working on other task similar or related to yours to help you.
Technology	Medium	Losing data	Always have a backup of all the files that have been created during the project.
Planning & control	Medium	Final product doesn't meet the requirements	Regular weekly meeting with the customers and project supervisors.
Team	Low	Lack of motivation	Constant communication between team members and

			solving problems together.
Planning & control	Low	Distribution issues between the group members	Define precise roles of the team members, fixed dates for group meetings and try to have sprints together.
Team	Low	Team member leaves the project	Making sure that always at least two team members work together on important parts of the project. In case any team member is unavailable, distribute the workload among other team members.

Table 3. Project risks

Summarizing the content of the table, it can be seen that the majority of issues can occur because the poor communication between group members, from the one side, and customer, from the other side. It is recommended for the team to find different means of communication where they will be connect and be able to share experiences. Product owner and scrum master have to make sure that the team does not lose the motivation during the project development. And in the situations when some team member lives his group, responsible team members have to ensure the correct division of the work.

List of Tables

List of Figures