

LinkAnalysisTool	Version: 1.6
Project Plan	Date: 2011-01-13

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Revision History

Date	Version	Description	Author
2010-09-30	1.0	Initial Draft	Dominik Rojković
2010-10-01	1.1	Add new details and data	Dominik Rojković
2010-10-12	1.2	On assumptions and constraints chapter, technological and work distribution subchapters changed; Deliverables updated; Time schedule updated	Dominik Rojković
2010-11-06	1.3	Project group subchapter updated; Technological subchapter updated; Interpersonal subchapter updated; Work Distribution subchapter updated; Inputs chapter updated; Project risks chapter updated; Communication chapter updated;	Dominik Rojković
2010-12-18	1.4	Definitions and acronyms subchapter updated; Organization chapter revised; Environmental subchapter revised; Work distribution subchapter updated; Deliverables chapter updated; Inputs chapter updated; Minor changes in project risks chapter;	Dominik Rojković
2010-12-20	1.5	Project plan chapter revised: - time schedule updated, - added explanation in activity plan subchapter	Dominik Rojković
2011-01-13	1.6	Technological subchapter revised & updated; Environmental subchapter revised; Work distribution subchapter updated; Deliverables chapter revised; Inputs & Project Risks chapters minor revised; Configuration management chapter revised; Time schedule revised & updated; Activity plan minor revised;	Dominik Rojković

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1. Introduction

1.1 Purpose of this document

This document describes project plan to make a successful project. Also, it describes whole project organization, project structure and timelines.

1.2 Intended Audience

The intended audience is:

- All *LinkAnalysisTool*'s team members,
- The supervisor,
- The customer,
- Future developers.

1.3 Scope

Scope of this document includes organization details, project structure, milestones, activity plan, list of deliverables and its deadlines, risks, etc.

1.4 Definitions and acronyms

1.4.1 Definitions

Keyword	Definitions
Visualize Transactions	Graphically represent the calls or data transfer between different users.
Search Depth	No of hops from a certain user or Subscriber
Activity Matrix	A table representing certain transactions over a period of Time
Glassfish	GlassFish is an open source application server project led by Sun Microsystems for the Java EE platform.
PostgreSQL	PostgreSQL is a DBMS (Database Management System)

1.4.2 Acronyms and abbreviations

Acronym or abbreviation	Definitions
MoM	“Minute of Meeting” document
GG	Project’s Google groups
SVN	Subversion
LAT	Link Analysis Tool
HTML	HTML stands for HyperText Markup Language It is the predominant markup language for web pages. A markup language is a set of markup tags, and HTML uses markup tags to describe web pages.
CSS	Cascading Style Sheets (CSS) is a style sheet language used to describe the presentation semantics (the look and formatting) of a

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	document written in a markup language. Its the most common application is to style web pages written in HTML and XHTML, but the language can also be applied to any kind of XML document, including SVG and XUL.
JSP	Java Server Pages (JSP) is a Java technology that helps software developers serve dynamically generated web pages based on HTML, XML, or other document types. Released in 1999 as Sun's answer to ASP and PHP, JSP was designed to address the perception that the Java programming environment didn't provide developers with enough support for the Web.
JSF	Java Server Faces (JSF) is a Java-based Web application framework intended to simplify development integration of web-based user interfaces. JSF is a request-driven MVC web framework based on component driven UI design model, using XML files called view templates or Facelets views. Requests are processed by the FacesServlet, which loads the appropriate view template, builds a component tree, processes events, and renders the response (typically HTML) to the client.
SQL	Structured Query Language (SQL) is a database computer language designed for managing data in relational database management systems (RDBMS), and originally based upon relational algebra. Its scope includes data insert, query, update and delete, schema creation and modification, and data access control.
JS	JavaScript (JS) is an interpreted programming language that is mostly used to turn static web pages into dynamic and interactive pages after a web browser has finished downloading a web page. The primary use of JavaScript is to write functions that are embedded in or included from HTML pages and that interact with the Document Object Model (DOM) of the page.
AJAX	AJAX = Asynchronous JavaScript and XML. It is not a new programming language, but a new way to use existing standards. AJAX is the art of exchanging data with a server, and update parts of a web page - without reloading the whole page.
DB	A database (DB) consists of an organized collection of data for one or more uses

1.5 References

1. The World Wide Web Consortium (W3C) - <http://www.w3.org/>
2. W3Schools - <http://www.w3schools.com/>
3. Wikipedia, the free encyclopedia - <http://en.wikipedia.org/>
4. Oracle - <http://www.oracle.com/>
5. GlassFish Community - <http://glassfish.java.net/>

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2. Organization

2.1 Project management

Supervisor – Igor Čavrak
Customer – Branko Beslać
Project leader – Dominik Rojković
Team leader – Hassan Aziz Khan

Project leader and team leader are responsible for the project management. They have to insure good implementation of this plan and make revision of plan if needed.

2.2 Project group

Name	Initials	Responsibility (roles)
Adrien Olivier	AO	Database communication developer
Rashid Khan	RK	Matrix developer
Seyed Morteza Hosseini	SMH	Testing, making use cases and scenarios, documentation
Hassan Aziz Khan	HAK	Team leader, documentation
Petar Dučić	PD	Interface designer, domain layer developer, integration
Petar Butković	PB	SVN manager, system manager, application layer developer, integration, matrix co-developer
Dominik Rojković	DR	Project leader, Graph & JS developer, documentation, system (server) co-manager

2.3 Steering group

Supervisor: Doc.dr.sc. Igor Čavrak

2.4 Customer

The customer is Mr. Branko Beslać M.Sc., Kapsch TIS Ltd.

2.5 Others

Prof.dr.sc. Mario Žagar
 Prof.dr.sc. Ivica Crnković

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3. Assumptions and constraints

3.1 Technological

The project will be based on these technologies:

- HTML, CSS, JSF, JSP – for web pages
- Servlets – for client authentication, DB connection, Algorithms, Data conversions
- JavaScript – for developing Graphs & Matrix
- Group of technologies called AJAX – for asynchronous communication
- SQL – DB queries

3.2 Environmental

Installing Glassfish on team member's computer and using server PostgreSQL database is required for development and testing.

Server for running application will be Linux based, with Glassfish web server and PostgreSQL database installed. This kind of server and client with common web browser is good for remote testing and deployment.

3.3 Interpersonal

Team members should communicate interpersonal as much as possible so team will be stronger. Face to face communication is not possible between all people because team is distributed in two locations, one in Västerås, Sweden and other in Zagreb, Croatia. Internet communication, based on Skype, is of crucial importance for our team to work as one.

Relationship between people at different locations has to be established and maintained using all available interpersonal communication technologies.

3.4 Work distribution

Project work is divided to several main parts:

Development:

- Backend development include:
 - Database module
 - Client authentication
 - Servlets for procession AJAX calls
 - Servlets for data conversion
 - JSF integration module which include JSP web pages
- Frontend interface which include:
 - Web page development
 - Web page design
 - Graphic representation of DB data
 - Matrix statistics
 - AJAX calls

Support:

- Documentations
- Testing
- SVN and server maintenance

People are going to work on parts for which they have knowledge and satisfy them.

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3.5 Causal relationships

None

3.6 Time

Deadlines are highly compressed which causes less time for work on each.

Team member are encouraged to make as good organization of their time as they can. Also, good discipline is essential.

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4. Deliverables

To	Output	Planned week	Promised week	Late +/-	Delivered week	Rem
Project management	Week Report	40 (2010) - 02 (2011)	40 (2010) - 02 (2011)	-	-	1
Steering group	Summary Week Report	41 (2010) - 03 (2011)	41 (2010) - 03 (2011)	-	-	2
Steering group	Minutes of Meeting	40 (2010) - 02 (2011)	40 (2010) - 02 (2011)	-	-	3
Steering group	Revisions of existing documents	40 (2010) - 02 (2011)	40 (2010) - 02 (2011)	-	-	4
Steering group	Project plan document	40	40	0	40	
Steering group	Requirements Definition document	40	40	0	40	
Steering group	Design Description document	41	41	0	41	
Steering group	Acceptance test plan	50	50	0	50	
Steering group	Test report	1 (2011)	2 (2011)	0	2	
Steering group	Final Project Report	2 (2011)	2 (2011)	0	2	
Steering group	Final versions of all project documents	2 (2011)	2 (2011)	0	2	
Steering group	Final product and documentation	2 (2011)	2 (2011)	0	2	

4.1.1 Remarks

Remark Id	Description
1	Every week, starting from W40 th 2010 to W2 nd 2011, all team members will send weekly report.
2	Every week, starting from W41 th 2010 to W2 nd 2011, summary weekly report will be delivered.
3	After (important) meeting, MoM document will be delivered.
4	Deliver on major changes

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5. Inputs

From	Required item	Planned week	Promised week	Late +/-	Delivered week	Rem
Customer	User Requirements	37	37	0	37	
Customer	Database Tables doc.	38	38	0	38	
Customer	Details about project	39	39	0	39	
Customer	SQL scripts for creating PostgreSQL tables with partitions	42	42	0	42	
Customer	DB tables data (huge amount)	43	43	0	43	
Customer	Instructions for indexing tables for faster search	43	43	0	43	1
Supervisor	Server free space updated	43	43	0	43	
Marin Orlić	Support on configuration Glassfish web server	49	49	0	49	

5.1.1 Remarks

Remark Id	Description
1	Additional instruction received on week 49

6. Project risks

Possibility	Risk	Preventive action
High	Miscommunication	Have frequently meetings; Speak English slowly and clearly; Always be sure that conversational partner understood you
High	Failure to comply with the deadlines	Good organization and monitoring members' activity
High	Impractical deadlines	Good organization of project and people time.
Medium	Lack of experience, knowledge	Study the topic of the project part you work on; "Practice makes perfect." "Knowledge is power."
Medium	Problems with implementations	Examine issues; Redefinition of the project design, use different technologies or different approaches
Medium	Uneven distribution of work load	Help each other; Redistribution of work

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7. Communication

Interpersonal communication is of crucial importance in this project due to team distribution. Official language is English in every communication.

Communication is organized through formal meetings and informal talk and chat. *General Policies'* document introduces and describes these formal and informal communications in detail.

People are in formal contact frequently through 3 different types of meeting.

These three types are:

- General meetings – which is attended by all team members,
- Local meetings – which is organized every week locally, one in Sweden and in Croatia and
- Leaders meetings –meeting is reserved for leadership of the project.

Also, for good interconnection, other communication tools are used. These tools include Google Groups, Skype, Doodle, SVN, etc.

All team members are encouraged to be proactive and initiatory.

8. Configuration management

Software configuration management (SCM) is the task of tracking and controlling changes in the software. Configuration management practices include revision control and the establishment of baselines.

Tracking code and document revisions are accomplished using SVN repository. SVN introduction is available in *GoogleGroup* topic.

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9. Project plan

9.1 Time schedule

Id	Milestone Description	Responsible Dept./Initials	Finished week				Metr.	Rem.
			Plan	Forecast		Actual		
				Week	+/-			
M001	Project vision	DR, HAK	39	39	0	39	0	
M002	Project plan	DR	40	40	0	40	0	
M003	Requirements Definition	HAK	40	40	0	40	0	
M004	Design Description	RK, DR	41	41	0	41	0	
M005	Prototyping–Iteration1	RK, PD	44	44	0	44	0	
M006	Milestone - Alpha prototype	RK, PD	44	44	0	44	0	
M007	Prototyping–Iteration2	PB, PD, AO, DR	47	47	0	47	0	
M008	Milestone - Beta prototype	PB, PD, AO, DR	47	47	0	47	0	
M009	Implementation	DR, RK, AO, PB	51	51	0	51	0	
M010	Milestone – Release candidate	DR, RK, AO, PB	51	51	0	51	0	
M011	Testing	SMH	01 (2011)	01 (2011)	0	01 (2011)	0	
M012	Final Project Report, final versions of existing documents, other project-related documentation	HAK, DR, SMH	02 (2011)	02 (2011)	0	01 (2011)	0	
M013	Final product	RK, PB, PD, AO	02 (2011)	02 (2011)	0	01 (2011)	0	

9.1.1 Remarks

Remark Id	Description

9.2 Activity plan

Activities in the project are divided in four main parts. These parts are periods of different project activities. Requirement analysis is general name of **first** period's activities. **Second** working period consists of designing the application (the link analysis tool) and prototyping (first development). Activity of **third** period is implementation of the designed application and minor changes in design if needed. The **last** period of working on the project is wide testing the developed application. Documentation is made through **all stages**, also.

These periods with belonging activities are visually presented in following table and Gantt chart (Image 1).

Activity	w38	w39	w40	w41	w42	w43	w44	w45	w46	w47	w48	w49	w50	w51	w52	w1	w2
Requirement Analysis	■	■	■	■													
Design				■	■	■	■	■	■								
Prototyping				■	■	■	■	■	■	■							■
Implementation										■	■	■	■	■	■		
Testing														■	■	■	■
Documentation	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■

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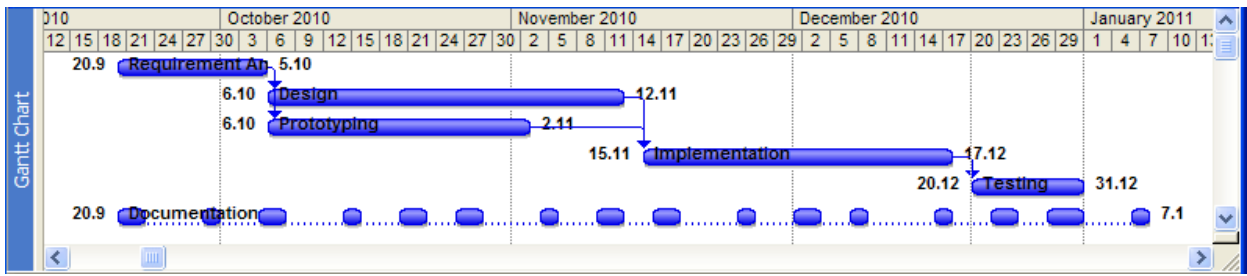


Image 1: Gantt Chart for Link Analysis Tool project activities

9.3 Financial Plan

Activity	Volume (days)	Cost	Rem.
Requirements Engineering	3 × 12	\$2.160	1
Application Design	3 × 28	\$5.040	1
Prototyping	4 × 20	\$4.800	1
Implementation	4 × 25	\$6.000	1
Testing & bug fixing	5 × 10	\$3.000	1
Documentation and maintenance	2 × 42	\$5.040	1

Planned effort (man-days)	Man-day cost	Planned project cost (100%)
434	\$60	\$26.040

9.3.1 Remarks

Remark Id	Description
1	Man-day includes 3 working hours.