



# Messenger Final Report

Version 2.0

## Revision History

<b>Date</b>	<b>Version</b>	<b>Description</b>	<b>Author</b>
2004-12-24	1.0	Initial Draft	Zahid
2005-01-16	1.1	Change the Milestones (4) + Work-hours (7.1) + Some paragraphs layout.	Jonas
2005-01-17	1.2	Made some smaller changes.	Jonas
2005-01-18	1.3	Added personal experience chapter + Some correction of text.	Jonas
2005-01-19	1.4	Added Background and Objectives + personal experience.	Marko
2005-01-19	1.5	Personal experience.	Irfan
2005-01-19	1.6	Some rext is modified in section 6.1, + personal experience +missing reports hours are added.	Zahid
2005-01-19	1.7	Corrected the look of the doc, the Table of Contents and so on.	Jonas
2005-01-21	1.8	Added my experience.	Zdenek
2005-01-21	1.9	I have changed some text under my experience heading.	Irfan
2005-01-21	2.0	<ul style="list-style-type: none"> <li>- Final cut of the report.</li> <li>- Some changes and adding remarks at the Requirement Compliance Matrix and Milestones.</li> <li>- Corrected spelling and formatted the text, pics and look.</li> </ul>	Jonas

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## 1. Introduction

Some communication between members in a software project leaves traces (such as emails or protocols from meetings) that make it possible to retrieve information later on e.g. what was agreed. Other communication channels leave no trace (e.g. informal meetings, telephone conversations, and chat sessions over the Internet). If something is agreed upon in when communicating through such channels, this information will be lost and can give rise to conflicts later. The task of this project is therefore to store relevant chat sessions in a way so that this information can be easily retrieved later.

### 1.1 Purpose of this document

The purpose of this document is results and outcomes of the project. This document is a part of a document series intended to describe and document the project details and forthcoming. No one of the documents in this series will give a full view of the project. This document however is the first overview.

### 1.2 Intended Audience

Our intended audience is:

- Steering Group
- customer
- Class fellows

### 1.3 Scope

The task of this project is to store relevant chat sessions in a way so that this information can be easily retrieved later. The Project outputs will be development of a small software desktop and web based application that runs locally at client machine and connects to the server somehow to, and captures the different messengers used for chats on client machine.

This project will identify the possibilities of making messenger programs context aware, and define an architecture that supports a number of instant messenger programs, and implement a general framework, database graphical user interface and specific components needed for different messengers.

### 1.4 Definitions and acronyms

#### 1.4.1 Definitions

Keyword	Definitions
Eclipse	IDE used for developing user

#### 1.4.2 Acronyms and abbreviations

Acronym or abbreviation	Definitions
GUI	Graphical user Interface

## 1.5 References

### 1.5.1 Related documents

Document Identity/ Title	File name
Project description	ProjectDescription.doc
Requirements definition	RequirementsDefinition.doc
Design description	Design description.doc
User manual	User manual.doc

## 2. Background and Objectives

In projects like the one we participated, where software is developed in distributed environment most of the contacts between team members goes through instant messenger programs. There are several reasons for this:

- Intuitive and simple to use
- Enables communication between theoretically unlimited number of users
  - Mostly applicable for middle sized teams (5-10 team members) and appropriate for use because work on project is divided in smaller parts done by middle sized teams
- Provides means of real time communication
- Minimal hardware and software requirements
- Low cost

None of instant messengers has an ability to automatically store conversations to some central repository. Central repository is especially good for this kind of project related correspondence because all team members have access to all the relevant information concerning the meetings. It also enables team management to have overall view of the project, and therefore they can reallocate resources accordingly. This maximizes work efficiency, cuts project costs and reduces possibility of delay. All this leads to an idea of developing an application that will automatically attach itself to a conversation, capture all messages and then store them to a centralized database together with all chat related information. This application also has to enable chat search through the conversation stored on the database. Search has to be performed according to different search criteria.

Application has to provide an easy to use and intuitive user interface.

Overall requirements of the Messenger project are as follows:

- Built upon existing messenger tools
- Allow easy integration with new/other/new version of messengers.
  - These two requirements are met by building the application from modules specific for certain messenger. The core of the program remains the same, messenger specific modules can easily be written separately for each instant messenger.
- When conversation is finished, save it to central database.
- Store chat sessions for later retrieval and any related information such as date, time, project members involved.
  - These two requirements are met by carefully designing and building a database that contains all relative chat related information e.g. date, time etc.
- Build a tool for project management
  - Building a web interface that provides means to manage project related information and also provides search engine completes this requirement. By using web interface team member can access project information without messenger client program.

### 3. Organization

#### 3.1 Project Manager

Jonas Wadsten

#### 3.2 Project Group

Name	Responsibility
Jonas Wadsten	Project leader + Documentation + Web + Database
Irfan Tahir	Source-code + Database
Zdenek Svoboda	Web interface + documentation + testing
Zahid Mukhtar	Chief of documentation + UML
Marko Bejuk	Testing + Documentation of technical
Tihana Knaffl	Source code (The source-code master)

#### 3.3 Steering Group

Rikard Land

#### 3.4 Customer

Rikard Land

#### 3.5 Others

Class fellows

## 4. Milestones

The milestones of the project are checkpoints for controlling that the project is on time. There are only a few delayed milestones, and overall the project is on time. The first milestone was one week late due to some startup issues depending on communication techniques, i.e., how to communicate between Zagreb and Västerås. The following milestones were met until after the Christmas vacations. Due to the vacations the project stalled for a week, and a few milestones were delayed, however it did not affect the project in all. Below is a summary of all milestones, when they were planned to be met, and when they were actually met.

Id	Milestone Description	Responsible Dept./Initials	Finished week				Metr.	Rem.
			Plan	Forecast		Actual		
				Week	+/-			
M001	Project description & plan completed	Jonas + Zahid	45	46	+2	48		
M002	Project design completed	Zahid	47	47	0	47		
M003	Database design	Irfan + Jonas	47	48	+1	49		
M004	Interface (web/client)	Zdenek + Tihana	49	49	-1	48		
M005	Revised Project design completed (if necessary)	Zahid	50	50	+1	51		
M006	Messenger-client ready by 90%	Tihana	51	51				R-4-1
M007	Final project report	Zahid	3	3	0	3		
M008	Source code document	Tihana	3	3				R-4-2
M009	User documentation	Zahid	3	3		3		R-4-3
M010	Installation procedure	Tihana	3	3				R-4-2
M011	Testing approved	Marko	3	3				R-4-2

### 4.1 Remarks

Remark Id	Description
R-4-1	The documentation took longer than we thought because of the fact that we could only re-use 15% of the old source-code and 5% of the old documentation. So this mile-stone never was realized.
R-4-2	Not done because of coding of the client is not finished or closed to finished (50% done).
R-4-3	Is going to be delivered but not completed because of the client is not completed.

## 5. Project Results

### 5.1 Requirements

#### 5.1.1 Requirement Compliance Matrix

Id	Requirement Description	Completed %	Rem
M-1	Web interface	95	R-5-1
M-2	Search functionality: Allow searches based on user names, keywords, dates, etc. in a user-friendly user interface.	50	R-5-2
M-3	Store chat sessions for later retrieval	50	R-5-2
M-4	Add/Delete information of project and members	80	R-5-1
M-5	start/stop recording	50	R-5-2
M-6	Update project/member information	100	
M-7	Security implementation	100	
M-8	Robust	100	
M-9	non-intrusive	100	
M-10	Honor privacy	100	

Completed: Yes (completely implemented)

No (not implemented at all)

Partially (partially implemented, more description under Remarks subsection)

Unknown (completion status not known)

Dropped (requirement was dropped during the course of the project)

#### 5.1.2 Requirements Compliance Summary

Total number of requirements	10
Number of requirements implemented	5
Requirements partially fulfilled	5
Requirements not fulfilled	0
Requirements dropped	0

#### 5.1.3 Remarks

Remark Id	Description
R-5-1	Some problem with sql-queries (on web-interface) that we cant fix. When they are fixed M-1 and M-4 is 100%.
R-5-2	We are half-way with the client. It is possible for next course (students) to finish this client with our documentation, source-code and the experience that they can find in the conversations and Minutes of Meetings and other things that is available from course homepage.

## 5.2 Work Products and Deliverables

To	Output	Planned week	Promised week	Late +/-	Delivered week	Rem
Steering group	Project description & Project Plan	45	45	+1	46	
Steering group	Requirement Specification	45	45	+1	46	
Steering group	Design	47	48	+2	48	
Steering group	Final Implementation	03	03	0	No delivery	
Steering group	Final Testing of Product	03	03	0	No delivery	
Customer	Final Product	03	03	0	No delivery	
Customer	Final Report	03	03	0	No delivery	

## 6. Project Experiences

We have learned a lot from the valuable experiences of the project as the project is a real time application and we have use a new technologies to develop this real time application .We have faced other difficulties concerned to management of the team at the distributed environment placing different members at different geographical locations so we had to work distributed at the crucial phase of the project but we managed it in well manner. The learning phase of new technology was very interesting. In addition, we learned a lot during the course and project development. For example, presentations, discussions, face others with patience during discussions, team activity and overview and detailed information with implementation etc.

### 6.1 Positive Experiences

#### 6.1.1 White board design session

In start, we faced a problem about the initial concept about the system. We had not any clear vision what we have to do and what is the scope of our project? The requirements from the Customer were not clear. We decided to sit together and found an accurate solution on the white board and in online meeting with Zagreb members. Classes and components were drawn on the white board. We discussed with Teacher and found more accurate way to solve the problem. During the discussion with teacher, every one picked the new ideas and placed their own comments. This way of communication helped us in designing a new system.

#### 6.1.2 Sitting together

During the requirement and design phase we were working together. At the time of the code implementation we worked at different locations and our project leader synchronization and versioning control. Other team members were also very careful in putting the new versions of files.

In case of any ambiguity we preferred to consult books or search on Internet instead of asking teacher and other guys. This thing developed a good book reading habits that will be helpful in near future. At home we were not in need to go to eat something whenever we felt hungry.

### **6.1.3 Large amount of motivation**

We managed to get the quite high team spirit and everyone involved into a project was doing his best.

### **6.1.4 Transparency**

A lot of motivation was raised since the complete project was well defined at the beginning and since everyone knew exactly what was expected from them and what should their output be. Without each team member knowing exact requirements team spirit could have been lost.

### **6.1.5 Culture**

As the project/course team members belong to different countries, it was a good chance to know about others cultures.

### **6.1.6 Teacher's and Guest's Lectures**

The teachers are very polite, friendly, humorous and co-operative. They have professional expertise in the course and lecture style is clearly understandable. The series of guest lectures is very good and I gained many useful points from experiences of guest speakers.

## **6.2 Improvement Possibilities**

### **6.2.1 Unclear requirements**

A lot of time at the start of the project was lost trying to figure out what the product was supposed to look like and function. The requirements were quite general and vague in the start. All of this took a few weeks of time at the start of the project. That time could have been used better for coding more features and testing more bugs. Even then different opinions and misunderstandings caused by different views on the requirements continued to some extent during the whole project.

### **6.2.2 Diverging schedules**

Since all participants have had other activities besides the DSD course, it has sometimes been somewhat hard to schedule meetings off scheduled time, especially during the exam periods

### **6.2.3 Less productivity**

There was a lot of learning with less output as many project team members were sitting and working on different locations.

## **7. Personal experience of the project and this course**

### **7.1 Jonas Experience**

As a project leader I have had a different view of the project. Feeling the pressure of being marked by others performances is a way that I feel is wrong way of doing it. It could be really frustrating when you want to do a good job and that you are depending on 5 other people. Some people can say that this is similar to reality but compared to my real life experience no-one gets his or hers grades from others performances. This type of work in a project is far from real life.

The closest you can get to real life in this project are the people and the different cultures you get to know during a project that stretch over several countries borders. Learning from other people and getting a view how life is in their country is a good experience and very educational.

But when you look at people and their experience in working together, communicating and agreeing with each other, level of maturity and understanding in working in projects and basic things like (for projects in Sweden anyway) showing up on time (even more important with DSD projects), chat about one thing at a time in messengers, read mails that people send to each other, read the minutes of meeting after the meeting (to keep track on what everyone agree upon), if you miss a meeting look up the information that exists from the missed meeting, do what they agree to do during the meetings, keep the project leader and other people responsible up to date through CVS, email and results, not deleting or writing over some one else's work before communicating with each other.

They are all key feature and very basic things to keep in mind for me when working in a project. If people lack this understanding the project will at a certain time develop an frustration and a feeling that people do what they feel like and don't care of the others or the consequences of their acts within the group that is hard to get away from. It is about thinking a head, putting your self in the other persons shoes and communicate with each other.

A lesson I have learnt from this is that I will never ever again work as project leader in the university world. Especially when you are dependent of others performances for your own grade (my future) and when you don't have anything to do but to ask others to their work to make them do what it is needed for the course. It feels like teachers are putting their own responsibility on the project leader. Especially when project leaders don't have any responsibility with giving the marks for the rest of the group plus that the effect of letting the teacher know how it really is going could effect your own grade.

### **7.2 Zahids Experience**

As it is my responsibility to produce the documents so I have written my experiences under the section 6.1

### 7.3 Irfans Experience

It was very good opportunity to learn new techniques which can be used in Distributed Software development environment. I got many ways to communicate with other team members.i.e. Chat messengers, online conferences, live discussions etc. This thing gave me a broad vision that how one should behave, work and discuss the things in distributed environment. During the course and project development, I learned many new tools, techniques, languages and technologies. e.g. UML, VC++, software engineering phases, CVS etc.

As the project/course team members belong to different countries, it was a good chance to know about others cultures. I think it is the basic requirement for every team member to learn little about others cultures so that they can discuss and behave in more friendly way.

After attending the course and during the project development, I was very confident to use my distributed software development experience in another course (Component Technologies) in this term. I am happy to claim that we (team members in Component Technologies) designed and developed the project successfully while we all were sitting on three different locations.

The teachers are very polite, friendly, humorous and co-operative. They have professional expertise in the course and lecture style is clearly understandable. The series of guest lectures is very good and I gained many useful points from experiences of guest speakers.

There was a lot of learning with less output as many project team members were sitting and working on different locations.

Cultural learning is very important in distributed software development as I learned in this course. We discussed so many things related to other's culture.

I am very thankful to all team members for their great help and cooperation especially our project leader helped us a lot with patience and cool mind.

I would like to request that teachers should call the students one by one and ask if they have any problem during the project development and they should know which student is working on what and what he/she has done individually in the project.

At the end, I would like to say that everyone worked hard in this project and will learn from mistakes in future which happened in this project.

### 7.4 Zdenek's Experience

As a team member I enjoyed working on this project. Like all of us I found new techniques of communicating with the other members e.g. Chat messengers, online conferences, live discussions etc. This showed me how useful is eye-to-eye contact and discussion and how hard is to replace this with alternative way of communicating. I learned new programs and their tools such as CVS.

Very interesting part for me was knowing other people in the group and their national background. Meet people from different countries and with different customs was nice and gave me good feeling. Even though some customs were totally new to me I tried to understand them and be open-minded.

What I really appreciate about lectures were guest speakers. Hopefully, for the next years, the number of these lectures will grow. The teachers are nice and friendly to all the students. The contents of the lectures were informing and

fresh-aired by the guests.

Another part that appeared after Christmas was distributed development to 4 countries. This made me more isolated and more dependent on messengers or minutes of meetings. From this I gained that it is necessary to keep in touch and more communicate with the others by email, messengers etc.

“Cultural learning is very important in distributed software development as I learned in this course. Team members should use polite and decent words during meetings and discussions. They must know that what kind of words can crash others mind and what kind of words should be used according to his/her cultural background. But unfortunately, sometimes management used bad words, which were hardly bearable by me.” In this point I totally agree with Irfan’s point of view.

I think that the project at the end was successful. Some small disturbances did occurred but I suppose that this happens everywhere.

### **Markos Experience**

As a team member I didn’t have an unbiased overall view of the whole project. I can only write my impressions. I can’t say that I had some unpleasant experiences while working on this project. This class and projects done within it had a mission to SIMULATE real working distributed environment. As I understood it was intended to show us how projects are done in the real world. My opinion is that it really resembled working on a project in a real life. It is my experience that things never go smoothly and you definitely can’t think of all the things that can go wrong. However all experiences, good and bad contribute to reality of the project. If there have been some bad experiences we can exploit them in our advantage (everything that doesn’t kill you makes you stronger right?). We have to look back on the project and see what we’ve done wrong and what we’ve done well. We can probably learn more from mistakes made then from things done good. I would like to point out a few things. When we started this project I’m sure no one knew how much work it will take to finish it. The problem was also that we all had other classes (some of them were very demanding) and we had to cooperate all duties. The amount of work probably demoralized us and led to tail off in project development. I personally had problems with inexperience in software development topics. This class demanded a lot of studying. I spent a big amount of time reading and educating myself but with little output. However in this class I’ve learned a lot and it was a great experience. Hopefully it will help me a lot in real working environment, because it gave me a good inside look at how things are done in projects like this one.

I would also like to say that regardless of the encountered difficulties and differences of opinion I really enjoyed working with all my team members. I understand that when doing creative work difference in opinions is inevitable so it didn’t bother me much. All five!! ☺

### **7.5 Tihanas Experience**

Text of your personal experience

## 8. Financials

Because of lack of information and knowledge in this area we are just giving you the hours spent in the project, per person and week.

### 8.1 Work per Member

Member	W45+46	W 47	W 48	W49	W50	W 51	W 52	W 53	W 01	W 02	Total
Tihana	30	17	17	7	18	21	-	-	-	-	110
Marko	31	28	21	28	32	23	-	-	27	-	200
Zahid	40	26	27	15	20	10	12	11	25	22	208
Irfan	36	26	21	12	17	-	6	22	-	7	147
Zdenek	17	26	21	20	20	-	9	-	-	17	130
Jonas	31	34	28	12	20	31	15	18	15	27	231
<b>Total</b>	185	157	135	94	94	75	30	51	42	71	934