Project Name:

LetsTalk

ET1446: SOFTWARE DEVELOPMENT FOR TELECOMMUNICATION SYSTEMS

This is a project proposal for company XtremeSecurity, where we describe the product/services that we will develop for the customer. The aim of the project is to build an enterprise chat system for them, meeting their special requests.

PROJECT PROPOSAL V1.0

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PROJECT PROPOSAL

PREFACE

This document contains a project proposal to create a chat client called "**LetsTalk**" for XtremeSecurity. This proposal contours the project which is to be executed by team "**SWAT Kats**".

In the following we will first provide a glossary with a list of abbreviation in chapter 2. After that, the environment as well as the problem are described in section 3. Section 4 contains our solution for the described problem, while section 5 states some limitations that our product will not include. Finally, a rough time plan is given in section 6.

VERSION HISTORY OF THIS DOCUMENT:

Release v1.0 on 2015-04-13

- Initial release

GLOSSARY AND ABBREVIATIONS

In this section are defined technical terms that are in this document in alphabetical order.

- **Dev Team**: Developer Team
- **e.g**. : exempli gratia – for example
- **etc**. : et cetera
- **FTP**: File Transfer Protocol
- **GUI**: Graphical User Interface
- **IP**: Internet Protocol.
- **Metadata**: information about a certain item's content
- **SQL**: Structured Query Language.
- **WBS**: Work Breakdown Structure.

BACKGROUND

We are required to design a communicating tool among the employees of the company XtremeSecurity and satisfy the specific needs of its travelling salesmen.

The employees will be able to communicate over an encrypted network and share binary files as needed. The main purpose is to provide our clients with the means of fast, efficient and reliable communication over the distance with the goal to help them increase their time utility.

The salesmen often require access to the latest marketing materials, white papers, company brochures and user manuals in order to showcase the products to potential customers. Proper update of new plans in the respective sector of sales is the top priority for them to present best plan to their

clients. The work office of XtremeSecurity is situated in Stockholm and are supposed to travel to different destinations to meet with their clients. They are required to convince their clients over some package and may need some details from their center office. Support Engineers out on the field may also need more data from their headquarters to show it to their clients. Our product "**LetsTalk**" will resolve the issue of carrying around the updated soft copy of various packages to be shown to their clients.

PROPOSED SOLUTION

The project aims to provide the customer with a secure fully functional communication system. The customer for the project is a company, which wants its employees to properly communicate and work together. We will provide all the various collaboration tools that allow its employees to have secure communication from different geographic locations.

The communication involves text messages and exchange binary files of arbitrary size to access certain documents such as the latest marketing materials, white papers, company brochures and user manuals in order to showcase the products to potential customers. The customer also needs on field engineers to be able to securely download patches and service packs to resolve customer issues on location.

A central database is required to store user information metadata associated with each sent or received message, so that every user can see the date and time a message was sent, the name of the sender and recipient, if the message was read by the recipient and when it was read and can browse the history of their conversations with various peers. To provide fast service the messages should be sent to offline users as e-mails to reduce the delay. User can see a message status (read/unread, message time stamp). A call record, timestamped information about the sender and receiver of messages, their corresponding IP addresses, along with metadata such as message size, type (message or file) should be kept in a SQL database and only authorized users (administrators) should be able to access it. The customer requirement also includes an administrative role : delete a user ,block and unblock a user , emergency broadcast message like some crash problem. The administrator can view statistics of records graphically as tables/graphs (GUI) available on main database server (SQL).

The project will establish a secure chat for authorized employees .The administrative access will be granted by authentication based on username/e-mail address and password. To ensure the security of confidential client data the chat messages will be encrypted. FTP is used to enable file sharing with live-status (used/remaining time for upload/download) .A user can temporarily block a user from the address book and an address book for the users will be displayed with associated status (offline, available, idle, busy: available & busy are handled manually by user, whereas offline & idle by the system).
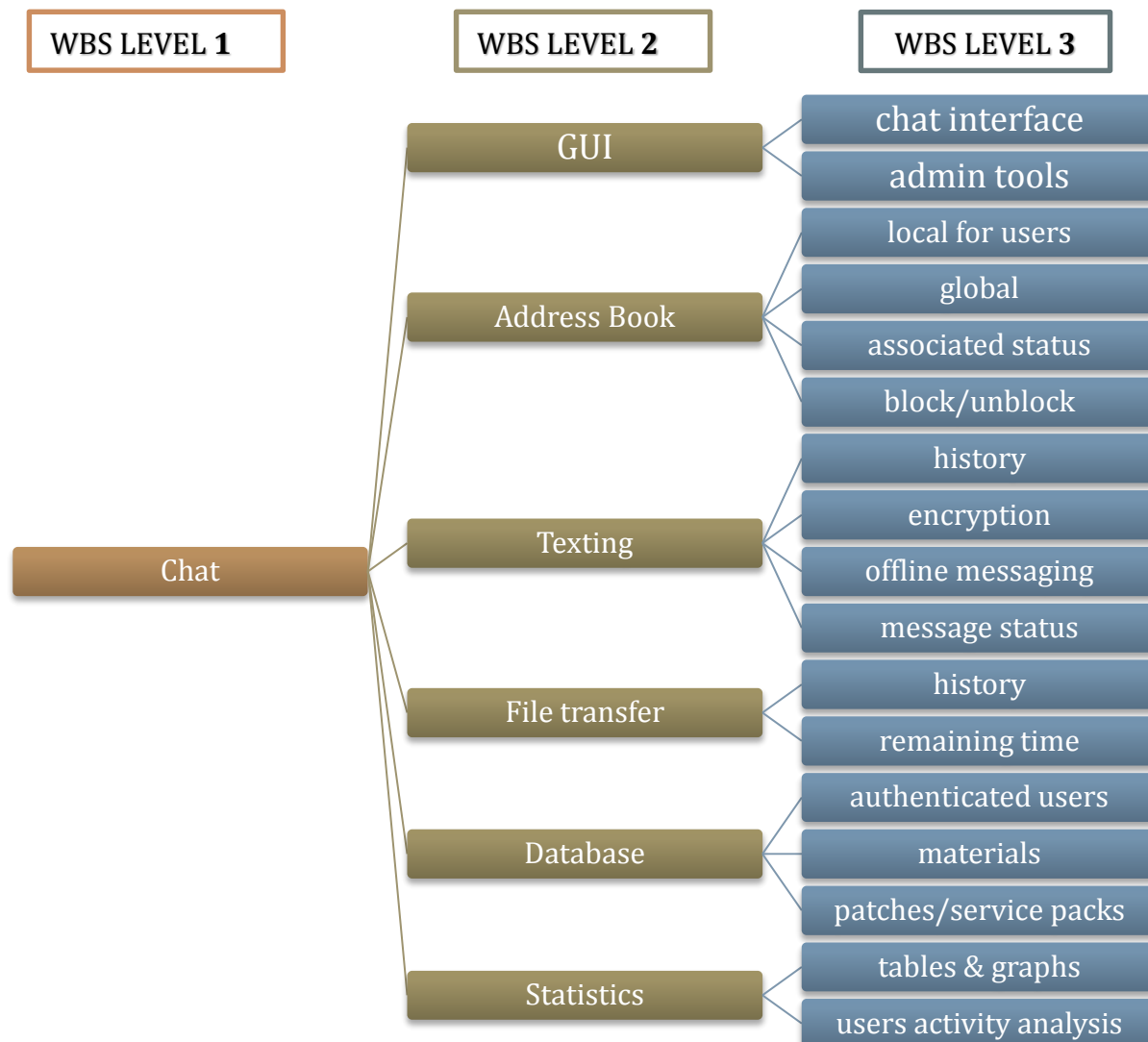
LIMITATIONS

Although the chat messages are sent instantaneously, this is no realtime client. Since messages and files are usually transmitted over the internet, delays of various lengths can occur. Furthermore in extreme cases (e.g. internet connection lost), messages or files can also be lost, transmission is never guaranteed and transmission time may vary.

The client is not supposed to support any acoustic support or emoticons in the chat. Only private chats, are supported (no group-chats or broadcast options).

TIME PLAN

After describing the background, our proposed solution and its limitations it is time to present the time plan of the project. We have developed a WBS structure that shows the whole picture of the project, broken into small parts. Also, we have written down all the milestones and tollgates that this project will follow within the time budget.

WBS LEVEL 1	WBS LEVEL 2	WBS LEVEL 3
	GUI	chat interface
		admin tools
	Address Book	local for users
		global
		associated status
		block/unblock
	Texting	history
		encryption
		offline messaging
Chat		message status
	File transfer	history
		remaining time
	Database	authenticated users
		materials
		patches/service packs
	Statistics	tables & graphs
		users activity analysis

MILESTONE (blue) / TOLLGATE (green)	Deliverable	Receiver	Time	Importance
Authentication creation -> Login for users in Database	Documentation	Dev Team	Week **1**: 13-19/4	Mandatory
Sign up for new users	Software	Dev Team	Week **1**: 13-19/4	Mandatory
Login process →To show how will be the login process.	Software	CEO/Customer	Week **1**: 13-19/4	Mandatory
Deciding the encryption library/Protocols	Documentation	Dev Team	Week **1**: 13-19/4	Mandatory
Implementing them on chats	Software	Dev Team	Week **1**: 13-19/4	Mandatory
Encryption → To show how will be the encryption in the login process and messages exchange.	Software	CEO/Customer	Week **1**: 13-19/4	Mandatory
Adding File upload/download feature	Software	Dev Team	Week **2**: 20-26/4	Mandatory
GUI for file upload/download	Software	Dev Team	Week **2**: 20-26/4	Mandatory
Drag Drop the files	Software	Dev Team	Week **2**: 20-26/4	Additional
Basic GUI for the chat	Software	Dev Team	Week **2**: 20-26/4	Mandatory
Chatting and files → chat GUI, files exchange function.	Software	CEO/Customer	Week **2**: 20-26/4	Mandatory
Advanced GUI -> Emoticons, thumbnails etc.	Software	Dev Team	Week **3**: 27/4-3/5	Additional
Making and regularly Updating Tables and Charts	Software	Dev Team	Week **3**: 27/4-3/5	Mandatory
Message appearing on the screen of both users when sent	Software	Dev Team	Week **3**: 27/4-3/5	Mandatory
Broadcasting the message	Software	Dev Team	Week **3**: 27/4-3/5	Additional
Group Chat	Software	Dev Team	Week **3**: 27/4-3/5	Additional
Advanced Chat → advance version of chat with more features than the first version.	Software	CEO/Customer	Week **3**: 27/4-3/5	Mandatory
Creating a Database for marketing materials, white papers etc.	Software	Dev Team	Week **4**: 4-10/5	Mandatory
Connecting the database to view the file list to download	Software	Dev Team	Week **4**: 4-10/5	Mandatory
Creating the Download feature from the database	Software	Dev Team	Week **4**: 4-10/5	Mandatory
Database → create and integrate a database in the main program.	Software	CEO/Customer	Week **4**: 4-10/5	Mandatory

Creating the address book (Just the availability of the address book for the user)	Software	Dev Team	Week **5**: 11-17/5	Mandatory
Adding the other users in the address book	Software	Dev Team	Week **5**: 11-17/5	Mandatory
Changing the state of the user in others address book (offline, busy etc.)	Software	Dev Team	Week **5**: 11-17/5	Mandatory
Blocking / Unblocking in the address book	Software	Dev Team	Week **5**: 11-17/5	Mandatory
Displaying other users based on chat history	Software	Dev Team	Week **5**: 11-17/5	Additional
Address book → create, manage and integrate an address book in the main program.	Software	CEO/Customer	Week **5**: 11-17/5	Mandatory
Developing the message status function	Software	Dev Team	Week **6**: 18-24/5	Mandatory
Connecting the email to chat (for offline)	Software	Dev Team	Week **6**: 18-24/5	Mandatory
Sending the email automatically	Software	Dev Team	Week **6**: 18-24/5	Mandatory
Offline chat → develop a tool for show message status and manage messages to offline users.	Software	CEO/Customer	Week **6**: 18-24/5	Mandatory
Creating own Encryption Library	Software	Dev Team	Week **6**: 18-24/5	Additional
Profile of the user (should be accessible by other users)	Software	Dev Team	Week **6**: 18-24/5	Additional
Spell Check	Software	Dev Team	Week **6**: 18-24/5	Additional
Final Release of Chat → (Beta) version of the program. Show to CEO/Customer. Explain the support provided.	Software and documentation.	CEO/Customer	**28-May**	Mandatory

CONCLUSION

Taking into account the analytical presentation of our proposal and the great experience of our group in developing such projects in the optimal time and quality, we believe that "SWAT Kats" can provide the best and most secure solution for your company. We will be waiting for your feedback and collaboration.

SWAT Kats