Group Members

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Project Title

Athena

Date of Submission

Wednesday, May 19, 2010

Proposal Version

Version 1.1

Background

Over the past five years, more emphasis has been put on security, especially when it comes to sending messages over the Internet. Many people have fallen victim to their information being stolen by an unauthorized listener. There are many ways to secure your data when it comes to data transmission such as IM and email. This application will simplify the operation and use of such technology. The Athena application will make the complicated process of securing IM chat and email efficient and user-friendly. There will be no difference in the setup of the program from any other Instant Messaging client that one has used in the past. A person's information, whether it be a message they are trying to send to their significant other or a Department of Defense document, is very important, and our application will remove the risk of a third party being able to see this information, thus providing a powerful tool for professional and business communication technology.

Project Objective

The primary purpose of Athena is to provide a secure and powerful instant messaging tool to both personal and business clients, largely to preserve the

quality and integrity of transmission and exchange of data. While the standard Athena framework has been developed and implemented in Version 1.0 released in the spring of 2010, Athena's engineers have several important features to add to the initial design. Due to Athena's emphasis on professional business communication, the ability to have encrypted group chat sessions will be implemented in the next version. This will provide a type of instant-message-based conference call through a secure server connection with exclusive members of a group. Also, the ability to encrypt and transfer data files and/or images to online clients via the secure server will also be implemented in the new version. These features are the primary development objectives to be met for the next version of Athena to be released in August of 2010.

In addition to these major requirements, the interface and visual configuration of Athena will be improved, and data encryption, transfer, and reliability will be made more efficient and streamline. Real-time client status updates will be added to the contact list, and several UI enhancements will be made throughout the development stage of the next version. Also, additional user preferences may be added to the next version as well, pending future agreement between Athena engineers on the discussion of requirement priority within the Preference Interface. No instant messaging application available today has the dynamic blend of user functionality and personalization combined with powerful data security that Athena will have upon its next version release.

Due to the major requirement additions and software upgrades planned for Athena, the next scheduled version will be Athena 1.1.

Project Outline

- Encrypted group chat
- Encrypted file and image transfer
- Real-time contact list updates
- User interface navigation and configuration enhancement
- Addition of personalization and security features, such as application themes, sounds, etc.
- Direct-Protect with AES encryption

Description of Deliverables

Upon completion of Athena 1.1, the software will have the ability to create group communication sessions with Athena's encryption standards that are used for client-to-client instant messaging as well. The software will have the ability to transfer files and images to a user's associated online clients, and will be able to receive files and images from clients on a user's contact list. The contact list in the Communication Interface will have the ability to update the user when a contact logs in or out, is available or away, or is currently attending a group communication session.

The user interface will have some general look and feel improvements, but the priority of aesthetic enhancements is of a lower degree than the

aforementioned requirements, so detailed specifications regarding interface improvements will be discussed and implemented throughout the development stage of Athena 1.1. The Athena software will also have the ability to select several new themes for the software interface, and a new selection of notification sounds for messages and other interface events. Finally, the Athena software will give the user the ability to switch to a faster encryption method for transferring larger data messages or files. This encryption setting will be called "Direct-Protect" and will use AES encryption standards, designed specifically for larger data encryption and transmission.

Any documentation assigned for version and requirement update will be submitted upon completion of Athena 1.1 in accordance with completed components. Any other requirements and features of the software not mentioned above are included in the official Software Requirements Specification and Software Design Specification documents for the Athena software.

Evaluation Criteria

The successful completion of Athena 1.1 should be evaluated based on the following criteria:

- Ability for the user to initiate, join or leave an encrypted group communication session
- Ability for the user to send encrypted files or images to an online client
- Ability for the user contact list to provide real-time updates on client contact activity, including but not limited to online/offline status, available/busy status, and group session status
- Ability for the user to select from multiple interface themes and apply a theme to the software if desired
- Ability for the user to select from various sounds for notifications related to messaging, group sessions, and contact list status update activity
- Ability for the user to select "Direct-Protect" AES encryption method for faster transmission of large data files or messages if desired

Version 1.1 of the Athena software is expected to contain all of these features, fully implemented and functional on all compatible platforms.

Resource Plan

The resources required for the development and implementation of Athena 1.1 will not change from the resources used for initial development. A testing computer with Windows, Linux and Mac OS will be required to test platform compatibility. For software development, Eclipse Galileo will be the primary programming environment for coding and testing. GitHub will be the online code repository used for synchronization of development materials between engineers. Any information or updates related to development of Athena 1.1 will also be

posted on the blog section of the project website, www.athenachat.org. All development, design and testing materials are already accessible and established for the Athena engineers.

    Due to the scheduled updates to software only and given that Athena is a free, open-source application, no financial costs are expected for the release of version 1.1 of Athena.

Project Plan and Timeline

Please see the Gantt Chart on the following page for a proposed project plan and timeline schedule. All proposal requirements are expected to be completed in accordance with the project timeline.

	ⓘ	Task Name	Duration	Start	Finish	Predece
1		Project Proposal	3 days	Mon 1/25/10	Wed 1/27/10	
2	▦	Team Meeting 1	15 mins	Tue 5/25/10	Tue 5/25/10	
3	▦	Team Meeting 2	15 mins	Tue 6/1/10	Tue 6/1/10	2
4	▦	Team Meeting 3	15 mins	Tue 6/8/10	Tue 6/8/10	3
5	▦	Team Meeting 4	15 mins	Tue 6/15/10	Tue 6/15/10	4
6	▦	Team Meeting 5	15 mins	Tue 6/22/10	Tue 6/22/10	5
7	▦	Team Meeting 6	15 mins	Tue 6/29/10	Tue 6/29/10	6
8	▦	Team Meeting 7	15 mins	Tue 7/13/10	Tue 7/13/10	7
9	▦	Team Meeting 8	15 mins	Tue 7/20/10	Tue 7/20/10	8
10	▦	Team Meeting 9	15 mins	Tue 7/27/10	Tue 7/27/10	9
11	▦	Athena 1.1 Development	44 days	Mon 5/24/10	Thu 7/22/10	
12	▦	Athena 1.1 Implementation and Testing	9 days	Mon 7/26/10	Thu 8/5/10	11
13	▦	Scheduled Release of Athena 1.1	2 days	Mon 1/25/10	Tue 1/26/10	

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May 2010										June 2010									July 2010									August 2010							
29	2	5	8	11	14	17	20	23	26	29	1	4	7	10	13	16	19	22	25	28	1	4	7	10	13	16	19	22	25	28	31	3	6	9	12	15	18	21

Athena 1.1 Development

Athena 1.1 Implementation and Testing

Scheduled Release of Athena 1.1