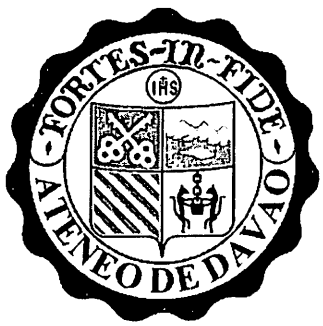
EXTENDING AN OPEN SOURCE MOBILE INSTANT MESSAGING APPLICATION WITH VIDEO CAPABILITIES



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ABSTRACT

The team is proposing to modify an existing open-source mobile IM application. The modification that the team is proposing will allow the IM application to have video capabilities. Thus, the mobile users can stream live video directly on their mobile phone through the IM application.

Keywords:

Open-Source, Mobile IM application, Video Capabilities

CHAPTER 1

INTRODUCTION

1.1 Background of the Study

Instant Messaging (IM) or also known as "Chatting" has already been an everyday trend in most online fanatics. People find ways to avail internet services in order to socialize in such online networks. As years passed beginning from the birth of the internet, chatting has evolved vastly. Additional functionalities have made it even more addictive and interesting. One of which is the ability of a certain user to view his chat mate in real-time video which is possible through a webcam. Today, Instant Messaging clients like Yahoo Messenger, Windows Messenger, and the like are still continuously upgrading their functionalities to improve the services offered to their users. However, these instant messaging clients are proprietary. Thus, only chosen developers hired by the company itself are allowed and has been given the appropriate right to modify and improve the capabilities of the said applications. Because of this, a lot of open-source Instant Messaging clients have been released which will allow developers to modify or improve whichever application they chose. This has given us an idea to extend the capability of an open-source mobile instant messaging application for a mobile phone to allow users to view their chat mates in real-time.

1.2 Technology Application Text

The present study seeks to answer the following general problem:

- How will an existing open-source mobile IM be extended with video capabilities?

Specifically, it seeks to answer the following questions:

- What are the open-source mobile IMs available?
- How does the chosen mobile IM work?
- What will be the platform of the application?
- How will a live video be streamed through the mobile IM?

1.3 Objectives of the Study

The general objective of this research is to extend an existing open-source mobile IM application to have video capabilities.

The specific objectives are:

- To survey and assess open source mobile IMs available in the internet.
- To be able to study the codes of the chosen IM application that the project team will integrate
- To study Java ME platform as well as its toolkits, profiles, and configurations
- To be familiar with the IDE that the project team will use in the development of the project
- To study on how video streaming on mobile phones work
- To stream live video through the mobile IM.

1.4 Significance of the Study

This study is significant to Instant Messaging Application developers because this will emphasize the importance of integrating the capability of mobile phones in becoming a free source of communication with the use of open-source IM applications. Plus, with the extended video capabilities, mobile IM applications will be very useful in so many ways. This study, if implemented, will also be beneficial to the community. With the fact that the Philippines is the texting capital of the world, this study will make cell phone users substitute mobile IM over SMS(Short Mobile Service) thus allowing people to save money for every message they send. With the extended video capabilities, mobile IM is surely better than the SMS. The results may show a good comparison between open-source and the commercial IM applications, which may be a key point in influencing developers to build strategies on how the integration of better open-source applications will be met.

1.5 Scope and Limitations of the Study

The study will generally focus on providing an existing open-source mobile IM application with video capabilities. The open source mobile IM application should be able to run in a Symbian OS environment because it offers large memory storage necessary for the application to work well. The mobile application should allow two way video transmissions between users. The user should be able to have two-way video transmission while using the IM application. Java Micro Edition (ME) will be used as platform in developing the application.

1.6 Definition of Terms

Symbian OS – is an operating system designed for mobile phones.

Open-source – is an approach to design, development, and distribution offering practical accessibility to a product's source

GNU General Public License – is a widely used free software license.

Java ME – is the most ubiquitous application platform for mobile phones(formerly know as Java 2 Micro Edition or J2ME)

CLDC – is a specification of a framework for Java ME applications targeted at devices with very limited resources

MIDP – sits on top of a configuration to complete the runtime environment

S60 – is a software platform for mobile phones that runs on Symbian OS

IDE – is a software application that provides comprehensive facilities to computer programmers for software development

NetBeans – is a type of an IDE

SDK – is a set of development tools that allows software engineer to create applications

SMS – is a communication service using standardized communications protocols allowing the interchange of short text messages between mobile phones.

Copyleft – describes the practice of using copyright law to remove restrictions on distributing copies and modified versions of a work and requiring that the same freedoms be preserve in modified versions.

API or Application Programming Interface – is a set of routines, data structures, object classes and/or protocols provided by libraries and/or operating system services in order to support the building of applications.