

Evaluation and Analysis of Multimedia Messaging Service (MMS) Framework in Message Delivery

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Abstract – *Multimedia Messaging Service (MMS) is a rich content message sending system that not only sends text but also sends image, voice, animation, video and combination of them. MMS can also be sent to mobile phone number and to external server in the form of email, where it can be sent in a more flexible and easier way. This paper investigates about how MMS can be sent to mobile phone number and to email server within MMS framework in message delivery. Information about the differences of MMS framework in message delivery to mobile phone number and to email server have been collected trying to use MMS which is provided by the mobile service providers in Indonesia. In this research work few indicators such as time, cost, bandwidth, and maximal data size have been used to measure the performance of the service providers in both cases (mobile and e-mail). The outcome of the proposed research indicates a potential development of the mobile and internet applications using MMS framework.*

Keywords: Multimedia Messaging Service, MMS, email, MMS message delivery

1 Introduction

Due to the rapid development of information and communication technology usage of mobile device will be a very common trend in the future world. The mobile device will not only become fashion but will also be a requirement for everybody. Therefore, the cellular operator should gear up this issue with their products encompassing advance facilities so that the customers necessarily do not need to move to another operator. The existing MMS can be used to develop various kinds of applications such as:

- a. Mobile to mobile applications, such as sending/receiving photos, greeting cards, voice mail, etc;
- b. Web-based applications to mobile such as download screensavers, games, ringtones, maps, etc;
- c. Internet to or from mobile devices such as mobile commerce, e-commerce, sending/receiving emails, telemedicine, etc.

Interoperability between email and MMS is simplified because a typical MMS message body follows the *Multipurpose Internet Mail Extensions* (MIME) specifications that consist of a header and a body [1]. The

header contains control information, while the body represents the message content. The body is encoded using the MIME multi-part encoding scheme and mostly uses a *multi-part/related* structure. Messages transferred within the MMS infrastructure are encoded in plain text, while messages sent to and from a User Agent are in binary format to reduce the size of the data during over-the-air transport [2]. However, this is not enough for MMS and email services to be fully interoperable [1]. Indeed, the headers of email are different from MMS, and then in a typical use of email contain multimedia contents such as high-resolution images or big documents (PDF files, power point, text document etc.) and email also cannot be suitable for a mobile terminal.

This paper tries to evaluate and analyze MMS framework in message delivery. Actually MMS can be developed and used to support many applications, especially mobile and Internet applications. With using MMS application, we can access some information broadly and flexibly from anywhere and anytime so that it can be efficient and effective for our daily activities. An investigation has been done on several cellular operators to know about the differences of sending MMS framework in message delivery to mobile phone number and to email server in the real world, therefore the idea can be used to develop MMS framework for internet applications which will be our future research. We will use MMS framework in message delivery to access internet applications in the form of web-based information system in mobile condition. By using MMS we can send message in the form of multimedia content, in mobile condition, sending to mobile phone number and email server with bigger data size comparing to any other mobile messaging services. We have prediction that mobile and internet technology will be popular in future including MMS. This is the reasons why we want to investigate the MMS. This paper is expected to give information about the exiting MMS framework in message delivery.

The systematic arrangement of the paper is as follows, section 2 discusses the existing MMS framework in message delivery. Evaluation and analysis of MMS framework in message delivery is presented in section 3 and conclusion in section 4.