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BULK EMAIL SENDER WITH MULTIPLE ATTACHMENTS: THROUGH NON GPRS MOBILE

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ABSTRACT

Email is one of the mostly used utility of Internet for communication. A person can communicate with any other person with email in seconds. Also various important documents, images, scanned documents etc. can be sends as attachments. Emails can be sent using a Computer or Mobile The firm requirement to send Email from mobile is that it requires GPRS activation on Computer or Mobile. Naturally everyone cannot afford GPRS to be activated on their mobile device. Also email with attachments with a normal mobile device is not possible. In my previously published paper in International Journal of Scientific and Research Publications, Volume 3, Issue 10, October 2013 we explore the viability and present our system implementation to allow registered users to send email with their non-GPRS Mobile via SMS. Also Attachments can be sent with Email. That too will be sent from non-GPRS mobile

The current Idea is an enhancement to the previously published paper is to send multiple emails with multiple attachments. Also service can be used for sending multiple or Bulk SMS by just sending a single SMS.

KEYWORDS: Attachment, Email, GPRS, GSM, non-GPRS, SMS.

INTRODUCTION

Text messaging is one of the most utilized forms of electronic communication. Cheap phones with limited capabilities are often restricted to voice calls and SMS. Short Message Service, or text messaging is a major communication system worldwide; more than 2 billion mobile messages are sent. Text messaging is utilized in almost every field. It can be also be utilized in sending Emails and with modifications for sending Emails with attachments. Our effort in this paper is to make Email facility available through SMS. We developed a text messaging system for processing incoming SMS as request for sending email from user, processing SMS, authenticating sender's mobile Number against the database, retrieving documents information from database that are to be sent as an attachment and sending them as Email to the user email-Id specified in SMS.

The usability of such a system is likely to be very high as the users only need to know the mobile number of the server. There is no need to obtain, install and learn new software. Moreover sending SMS is cheap and reliable. With enhancement, it can be used as bulk Email Sender with multiple attachments just by sending a Single SMS.

Email is one of the mostly used utility of Internet for communication. A person can communicate with any other person with email in seconds. Also various important documents, images, scanned documents etc. can be sends as attachments. Emails can be sent using a Computer or Mobile The firm requirement to send Email from mobile is that it requires GPRS activation on Computer or Mobile.

Naturally everyone cannot afford GPRS to be activated on their mobile device. Also email with attachments with a normal mobile device is not possible.

Here we explore the viability and present our system implementation to allow registered users to send email with their non-GPRS Mobile via SMS. Also Attachments can be sent with Email. That too will be sent from non-GPRS mobile.

LITERATURE REVIEW

Here we will discuss about the findings by study and research that is critical and have an important value in the contribution of the whole project. It also gives some basic knowledge or theoretical base and is used

as a foundation to successfully achieve the main objectives. Most of the literatures are from the related articles, journals, books and previous works of the same fields. These literatures are then compiled and use as a guidance to the work of this project.

Definition of SMS

As we know email and SMS are important technology or services nowadays. With these to services all information or communication activities become fastest. Before these services, all people were using telephone to communicate with each other. Now they can use other services that are more effective and efficient than telephone. Text messaging is one of the simplest and most useful means of mobile communication. No one can doubt the popularity of text messaging and short messaging service (SMS) in particular - more than 50 billion SMS messages were sent across the world's GSM networks in the first quarter of 2001, a fivefold increase over the previous year – and there's no slowdown in sight SMS is an abbreviation of Short Message Service. There are several definitions describe the meaning of SMS, there are:-

"Short Message Service: Available on digital networks allowing message of up to 160 characters to be sent and received via the network operator's message Centre to your mobile phone."

Short message service (SMS) provides transfer of text messages with low-capacity and low-time performance on the GSM network. Each message can consist of up to 140 bytes and operates like a paging service with the added capability that messages can pass in both directions and confirmation can be provided to indicate that the sent message has been received. The messages are sent on the signaling channel and not the traffic channel, which is the channel for speech and data communication. Thus, the message can be received while the mobile phone users are in conversation."

(Puneet Gupta. 2000).

SMS stands for the Short Message Service. SMS was created when it was incorporated into the Global System for Mobiles (GSM) digital mobile phone standard. GSM is a digital mobile system that is widely used in Europe and other parts of the world. It operates at 800MHz, 900MHz, 1800MHz and 1900MHz, and Spear. SMS is the ability to send and receive text messages to and from mobile telephones.

The text can comprise of words or numbers or an alphanumeric combination of no more than 160 characters. The first short message (SM) was sent in December 1992 from a Personal Computer to a mobile phone on the Vodafone GSM network in the UK. Messages are sent to a SMS Centre (SMSC) and then delivered to the recipient's phone.

(Peersman,Cvetkovic, Griffths)

How SMS works?

SMS (Short Message Service) is originally available on digital GSM (Global System for Mobile Communications) networks allowing text messages of up to 160 characters to be sent or received. The concatenation mechanism of SMS permits messages longer than 140 bytes. If the phone is powered off or out of range, messages can be conveniently stored in the mobile network operators and are delivered at the next opportunity. SMS is the most reliable and popular message communication on mobile phones today. According to ITU (International Telecommunication Union), in China alone, SMS usage totaled to 250 billion in 2005. The significance of this technology leads to many applications development.

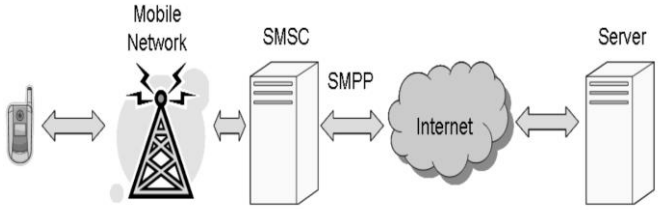

Figure 2.1 SMS Service API with SMPP

Typically, the exchange of SMS messages requires a SMSC (Short Message Service Center) to store and forward the messages and interact with the mobile network. Applications receive the messages directly from SMSC and send messages out to the SMSC. For a large operation of sending and receiving SMS messages, SMS messages can be sent to the mobile network operator using SMPP (Short Message Peer-to-Peer Protocol). SMPP is an open industry standard messaging protocol designed to simplify integration of data applications with wireless mobile networks.

Definition of Email:

Email is a shortened version of the two words 'electronic' and 'mail' and is the electronic version of the letter. Email is one of the most used and popular services on the Internet. Email enables text messages to be transferred from an individual to another individual or from an individual to a group of people. Documents (audio, video, pictures etc.) can be attached to email messages and sent with the text message.

Email can be sent and viewed various ways - the most common through a computer program, such as

'Outlook'. Email can be sent to anywhere in the world and viewed whenever the recipient logs onto the Internet and checks their 'mailbox' where emails are stored.
www.netalert.net.au

E-mail is electronic mail. It is the most popular form of communication on the Internet. It is a fast and economical way for anyone with a PC and a modem to keep in touch with friends, family members and business associates. E-mail allows you to combine the clarity of a written letter with the immediacy of a phone call. For deaf people, sending an e-mail is usually cheaper than the cost of a text phone call or a fax.
www.teachnet.ie/mhickey/wemail.html
E-mail stands for electronic mail. It is a messaging system used to communicate around a local office, between offices or over the Internet. E-mails are permanent that is they will be stored somewhere until deleted, usually by the recipient. From your office you can send E-mails to anyone with a PC and E-mail address within your building, to other offices in your company, and to anyone in India or the rest of the world with a valid Internet mail address.
Note that E-mail is designed for the delivery/reception of text-based messages, although other file formats, e.g. graphics files and spreadsheets etc. can be sent as attachments.

Importance of Cell PHONES:

Cell phones have become an integral part of the modern world, providing human connectivity in a way never before possible. A recent United Nations report (www.cellular-news. com/story/25833.php) estimated that the total number of mobile phone subscribers in the world now exceeds 2.68 billion. Around 80 percent of the world's population has mobile phone coverage, with 90 percent coverage forecast by 2010 (www.textually.org/ textually/archives/2006/10/013841.htm).
While most cell phones are used for their original intent—making telephone calls wirelessly—these devices are also loaded with other features that are often little used or even ignored. One feature that users have begun to fully exploit in recent years is the short message service or text messaging. This basic service allows the exchange of short text messages between subscribers. According to Wikipedia, the first commercial short text message was sent in1992(http://en.wikipedia.org/wiki/Short_message_ service).
The short message service has emerged as one of the most popular wireless services. SMS is far more than just a technology for teenage chat. Mobile marketing campaigns are already a very profitable business and growing rapidly.
SMS stands for Short Messaging Service. It is the technology that enables the sending and receiving of text between mobiles. It can hold data up to 160 characters if 7-bit character encoding is used (Latin characters like English) or 70 characters if 16-bit Unicode USC2 character encoding is used (Non Latin characters like Chinese, Hindi etc). Today 100% GSM (Global System for Mobile Communication) mobiles and CDMA (Code Division Multiple Access) mobiles support SMS services.

Problems with GPRS:

After the initial setup, accessing email through a cell phone becomes very convenient. It is having instant communication between co-workers increases productivity. It is recommended to limit GPRS email messages to text only, since GPRS costs are based on the amount of data sent.
The firm requirement to send Email from mobile is that it requires GPRS activation on Mobile. Naturally everyone cannot afford GPRS to be activated on their mobile device. Also email with attachments with a normal mobile device is not possible. Here we explore the viability and present our system implementation to allow registered users to send email with their non-GPRS Mobile via SMS. Also Attachments can be sent with Email. That too will be sent from non-GPRS mobile.
The system being developed allows the registered users to send Email or Emails with attachments from their non-GPRS mobile device. The system can serve as a Helpline for the users. The service being made available can be the system. The limitation of the system comes from the fact that the size of characters is limited to offered as either free or it can be paid that depends on the organization that will like to implement 160 characters. However this can be overcome by sending multiple SMS.
The usability of such a system is likely to be very high as the users only need to know the mobile number.

NEED AND SIGNIFICANCE OF PROPOSED RESEARCH WORK

The system being developed allows the registered users to send Email or Emails with attachments or Bulk Emails with multiple attachments from their non-GPRS mobile device just by sending a SMS.

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The system can serve as a Helpline for the users. The service being made available can be offered as either free or it can be paid that depends on the organization that will like to implement the system.
The limitation of the system comes from the fact that the size of SMS is limited to 160 characters. However this can be overcome by sending multiple SMS.

METHODOLOGY/ Planning of work

The purpose of the methodology is to give an experienced investigator enough information to replicate the study.

Text messaging is utilized in almost every field. It can be also be utilized in sending Emails and with modifications for sending Emails with attachments also with slight modification for sending bulk emails with multiple attachments. Our effort here is to make Email facility available through SMS. We developed a text messaging system for processing incoming SMS as request for sending email from user, processing SMS, authenticating sender's mobile Number against the database, retrieving documents information from database that are to be sent as an attachment and sending them as Email to the user email-Id specified in SMS.

The usability of such a system is likely to be very high as the users only need to know the mobile number of the server.

There is no need to obtain, install and learn new software. Moreover sending SMS is cheap and reliable.

This section focuses on the Methodology used for implementation of GSM Based Email Sender that is currently under development. This actual application consists of the following components:

1. A web front-end that allows USER to signup, login and update his/her profile as well as uploads documents that in future can be sent as attachments.

2. Also users in the role of an administrator can allow or disallow any Users from using this facility.

3. A database which stores the user signup and profile information as well as information of the various types of documents that are uploaded by various registered users.

4. A SMS processor that is capable of sending and receiving SMS to and from users.

EVALUATION OF EXPERIMENT

The system is developed as a Web Site. The developed application will be deployed on a space purchased on a web server; it should have a modem capable of sending and receiving SMS. It will have two users, one the Administrator for maintaining and configuring the application.

Administrator is also responsible for blocking and unblocking the users of the site. The other users are users who are going to use the services offered by the system. The users have to register on our site and must specify the mobile number that in future will be used to send and receive. The SMS received from registered mobile will only be used for send Emails.

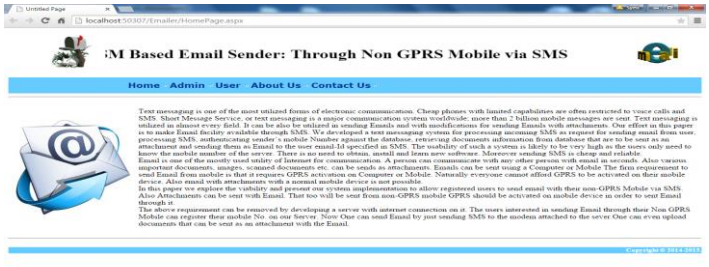

Figure 4.1 Web Interface

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Figure 4.2 New User signup

Figure 4.3 SMS sent on successful registration

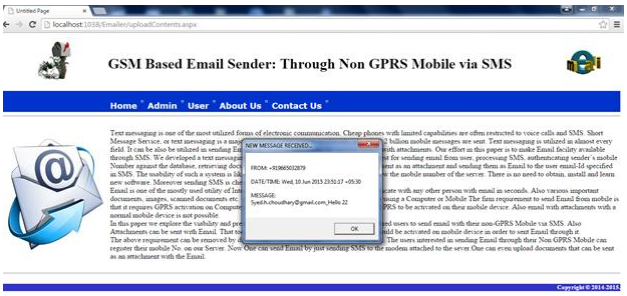

Figure 4.4 on Receiving SMS for Sending Email

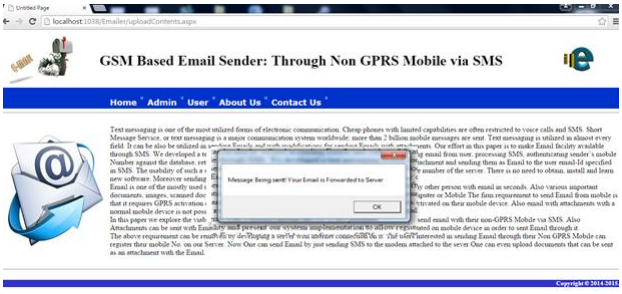

Figure 4.5 Forwarding Emails for User

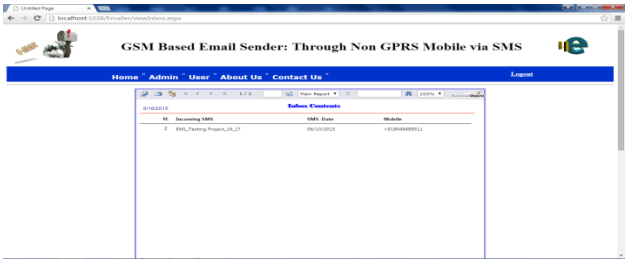

Figure 4.6 Administrator view Inbox Contents i.e. Incoming SMS

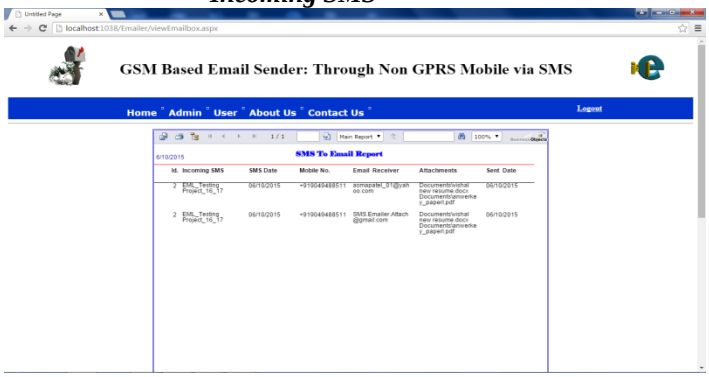

Figure 4.6 Administrator view Outbox Contents i.e. Outgoing Email

CONCLUSION

The system being developed allows the registered users to send Email or Emails with attachments from their non-GPRS mobile device. The system can serve as a Helpline for the users. The service being made available can be offered as either free or it can be paid that depends on the organization that will like to implement the system. The limitation of the system comes from the fact that the size of characters is limited to 160 characters. However this can be overcome by sending multiple SMS.

Advantages:

Registered Users with non-GPRS mobile can use the web site for sending Emails with or without attachments.

1. Registered users can upload their documents. In future, the users can download the same from the site in case of loss of documents.
2. It prevents anonymous users or unregistered users from using the service.
3. Ensures biased free Voting.

Dissadvantages:

1. Storage issues with increased users and with more uploaded contents.
2. System crashes if server running Application is down

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