



GSM Based Bulk Email Sender with Multiple Attachments: Through Non GPRS Mobile via SMS

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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 sent 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.

1. INTRODUCTION

Email is an abbreviated form of electronic mail. Email is usually sent from a computer to another computer via Internet (over world wide web/www). Email users can send text, pictures, sound or videos to each other using this service. Using some high End mobiles or Blackberry activated with GPRS users can also send/receive emails on/from their Mobiles.

General Packet Radio Service (GPRS) email is email that utilizes the GPRS protocol, which is used to connect mobile devices, such as cell phones, to the internet. Email data is transferred through a mobile phone network instead of a standard internet service provider. The GPRS protocol allows individuals to send and receive email from a cell phone, as long as it accesses a web based email service hosted on a Post Office Protocol (POP) server.

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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 single or multiple Attachments can be sent with Email. That too will be sent from non-GPRS mobile.

Email and short messaging technology are important services now, especially to a person who busy with their work. It is the fastest media of communication and at the same time one can electronically transfer important documents. The firm requirement is internet on PC and GPRS to be activated on mobile. My Research work will overcome this requirement and will allow email, email with attachments as well as bulk emails with multiple attachments to be sent by sending a single SMS from an ordinary mobile without the need of GPRS to be activated on the mobile.

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.

The Idea specified in this paper can be useful in office and college environment. For example, a HOD of a particular department can send emails to all the students of that department of the specified year. Also assignments can be attached with the email for the students. The main advantage is that it can be send just by sending a single SMS and that too from an ordinary NON-GPRS Mobile.

2. LITERATURE SURVEY

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.

The important IEEE paper that has played the important role in forming the topic is as under "Mobile Medicine: Providing Drug Related Information through Natural Language Queries via SMS" published IEEE International Advance Computing Conference (IACC 2009) Patiala, India, 6-7 March 2009.the authors were Akhil Langer, Bharat Kumar, Ankush Mittal and L.V. Subramaniam.

The above paper has given me the idea for implementing the GSM based Email Sender using SMS from a NON-GPRS Mobile. This will allow person having Non-GPRS Mobile not only to send Email but also Email with attachments. It was published paper in International Journal of Scientific and Research Publications, Volume 3, Issue 10, October 2013.

This paper is based on my previously published paper. The Idea is enhanced for bulk Email with multiple attachments.

3. SYSTEM IMPLEMENTATION

This section focuses on the implementation of GSM Based Bulk Email Sender with Multiple attachments 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. Also users in the role of an administrator can allow or disallow any Users from using this facility.
2. 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.
3. A SMS processor that is capable of sending and receiving SMS to and from users.
4. An Email processor that verifies Email Id's and verifies user's attachments and send to the user or group of users as per the received SMS.

4. WORKING SYSTEM OF SMS PROCESS

Figure below describes the working of the system being developed. It depicts that the user interested in sending Email from his/her non-GPRS mobile sends as SMS the message to be sent, the receiver's email-ID along with the optional document-Id that is to be attached with Email to the modem attached to the server which is capable of sending and receiving SMS. The server running Internet forwards the Email to the recipient.

Here the received message format will decide that a single Email or bulk emails has to be sent. The messages formats can be customized as per the need of the organization implementing the idea stated in the paper.

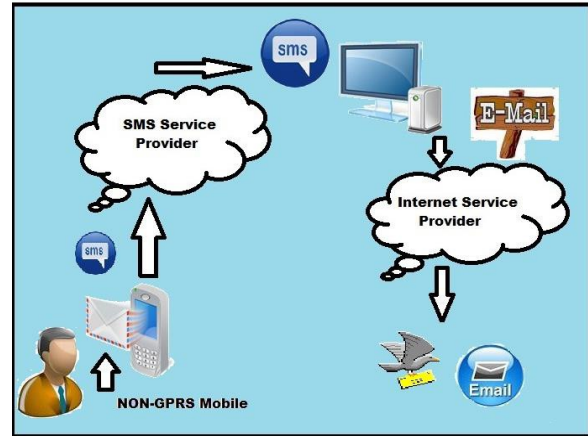


Figure 1: Working System of SMS Process Via Non GPRS Mobile

Advantages:

1. Registered Users with non-GPRS mobile can use the web site for sending Emails with or without attachments.
2. Registered users can upload their documents. In future, the users can download the same from the site in case of loss of documents.
3. It prevents anonymous users or unregistered users from using the service.
4. Also with a single SMS from ordinary mobile, will allow registered users to send multiple Emails with single or multiple attachments.

5. SIGNIFICANCE OF PROPOSED RESEARCH WORK

Therefore objectives of developing the described system are as follows:

1. To allow registered users to send email with their non-GPRS Mobile via SMS.

2. Also Attachments can be sent with Email. That too will be sent from non-GPRS mobile.
3. Users in the role of Administrator should be able to block or unblock users, configure and maintain the system.
4. 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.

Cheap phones with limited capabilities are often restricted to voice calls and SMS. The objective is to allow such users for simply sending Emails or even emails with attachments. Also bulk Emails with multiple attachments can be sent by just sending a single SMS.

6. EXPECTED OUTCOME

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.

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.

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