A Naïve Approach to Send Large Textual File using Mobile Phones

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Abstract— This paper is about sending large textual data without using Internet or Bluetooth to the remote area just like a normal day-to-day SMS (short message service) or using the concept of e-mail in which we could attach file and send it to recipient. This application would be beneficial to the users who possesses multimedia cell phones because in order to attach textual file it needs to be exist in the memory card (SD-card) only then it could be retrieved and send to the recipient but there is a limitation in this application is that only one textual file at a time can be send to the recipient. This application proved its mettle when the user got finished his internet balance and he needs to send an urgent textual file to the remote area cell phone but in a nominal charges which a SMS takes in single transmission to the concerned area means local SMS or remote SMS. And charges would be like per file per SMS charge. In such a harsh situation a user can easily able to send his/her file wherever he wants, in that case this application can proved to be a boon to the mankind.

Keywords—SMS; Compression; Contact; Send; Attach; SD-Card; Close

I.   Introduction

In this tight schedule people wants everything on time whether to reach to the destination or in communication, for communication they preferably goes for internet or mobile. Best source in internet to transfer data or text file is E-mail where user can send multiple file to the recipient of different extensions at the same time. And these facilities are provided in the Mobile phones in the same way we can use in computers. Like we do use in messengers and apps.

Even in mobile we can send files such as audio, video slides etc. too, means sending data becomes easy via MMS (Multi Media Services).In the same manner we can also send text file in confined format to the recipient without using internet or Bluetooth using this application where charges will be deducted as per service providers.

II.   Related Work

SMS (Short Messaging Service) is a popular service for transferring and exchange of short messages among mobile phones. MMS (Multimedia Messaging Service) is another application in mobile phones for creating, sending, receiving and storing messages that include text, images, audio, video clips. The growth of Information and Communication Technology (ICT), including mobile technology such as hand phone, PDA, Notebook etc. is becoming faster day by day. These technologies are supported by many Low-cost facilities such as, calling capabilities, caller Id, SMS, MMS, playing games, browsing internet etc. These Low-cost technologies can be used to develop a mobile application. Many applications have already been developed by using these facilities.

III.   Proposed Work

This paper proposes a SMS application through which a user can attach a file from the SD-Card (retrieve) just like E-mail and send it to the recipient to the remote area.
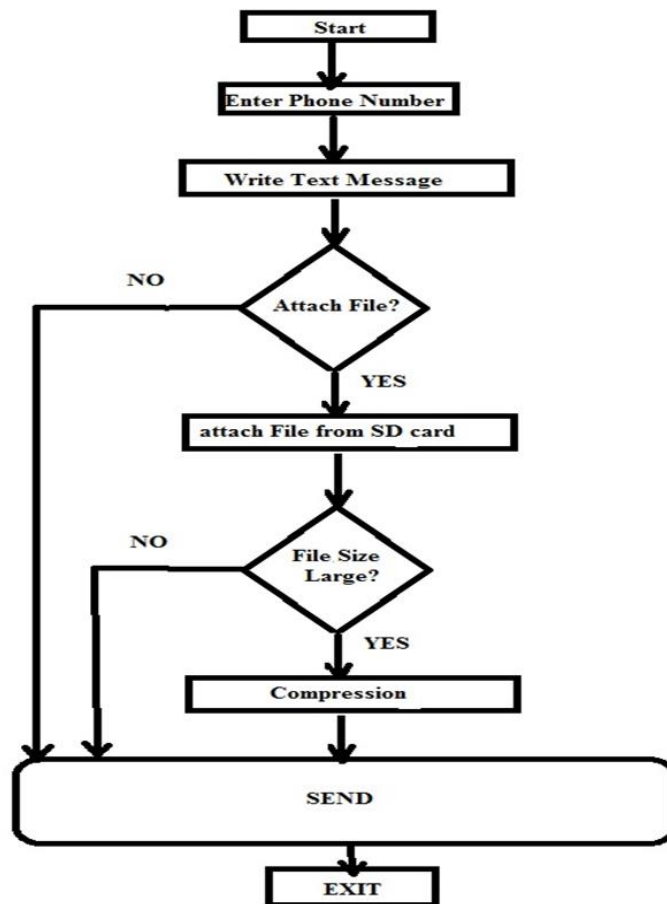

Figure: 1: SMS flowchart

And that file will be compressed using GZIP compression technique. Then the incoming message should be decompressed on the Receiver end in order to get the complete message. By collecting the defrag chunk of data in the receiver end.

In the current scenario MMS and SMS has many features through which one can send messages 160 words or 140 bytes of size per message and it can reach out its limit by multiple of 140 bytes up to 7 long message or could be more, whenever sender sends multiple messages at the same time. And if sender wants to send long file than he/she uses MMS, in which mobile phone user sends formatted text messages theoretically of any length plus graphics, images, audio, video etc. Whereas in MMS sender need to attach file just like we do in E-mail

The policy in which MMS and SMS application follows is MMS works on the E-mail paradigm. MMS is created based on stored-and-forward type of information delivery. In the similar manner SMS application user sends short and plain text messages to other mobile users.

IV.   Existing SMS working

SMS is the transfer and exchange of Short text messages between two mobile phones. The SMS is defined based on GSM digital mobile phones. According to GSM03.40 standard [1] the length of the exchanged message is 160 characters at most, which are saved in 140 bytes depending on how the information is saved according to the standards.

Currently in SMS user can send only 160 characters or 140 bytes in single message and it'll be multiple of it if sender sends SMS more than one. But SMS doesn't provide the facility which MMS possess like only short messages are allowed not long one, images, etc.

A. *SMS application Sender:*

To overcome the problem of sending short messages to the recipient one can send long messages with attachments of compressed file in it. All he has to do is just attach the file by taping it on attach button and retrieve the file from the SD-Card where he has saved the file from his mobile phone. The file will automatically be compressed and retrieved using GZIP technology only when user wants to attach it and want to send it to the recipient.

B. *SMS application Receiver:*

- Now once the receiver receives the message the user has to just open it up and it'll automatically stored into the SD-Card means hustle free task.

- And if the receiver wants to send the same message to other recipient (third party) then it's mandatory that other user must have this application installed in his mobile phone in order to decompress the incoming file into his SD-Card and it will be done via GZIP.

- It's safe to attach file which avoid intrusion of the other person.

C. *Compression:*

The Attach file which could be .txt, .pdf, doc etc. will be compressed through which a user can send much greater messages as compared to the current SMS facility.

It means that now user can send multiple characters instead of short messages and there is no need to have internet connection in the mobile phone to send Attached file.

The technique used for Compression is "GZIP compression technique" which is used to optimize the maximum character capacity of sms body every character in SMS is mostly encoded in 7 bit and maximum capacity of one SMS is only 1120 bit. This is a compression mechanism that works by converting a data message to a real code number between 0 and 1.

- It requires high precision and effective encoder-decoder to calculate and represents its code number (compressed data).

- Very limited data space like SMS, the need of additional memory space to save arithmetic coding probability is inefficient.

D. *Framework of SMS application:*

The layout of the proposed Application is like this:

Figure 2: Layout of Proposed Application

This layout is been developed for android operating system and has been tested in the inbuilt feature of eclipse called "emulator" which provides a virtual device to work in an environment like a mobile phone for the developer in order to test the Application and could figure out the pros and cons of apps. Means this application has been created for android O.S. and data is been tested programmatically because service providers doesn't provide the facility to send attach file via SMS.

E. Future Work:

1) Operating Systems Compatibility:

In order to send SMS for this application one need to have Android os but for future work we are working on other Operating systems also like SYMBIAN, MICROSOFT through which the sent SMS could be viewed at ease and without any problem.

2) Will try to make our own SMS protocol through which we can send our required application at any platform.

CONCLUSION

In this paper we proposed that sending .txt, .pdf, .doc etc types of files in Compressed form via SMS could prove to be boon for the world because one could send files even when there is shortage of internet balance, Government could send their guidelines over SMS to their employees, doctors could send guidelines to the catastrophic area, remote areas like villages, tsunami etc. even farmers could get information from fertilizers organizations And layman who doesn't know how to use Computer could easily send file through this application.

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