SMS to E-mail Convertor

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Abstract— In the last few years, SMS (Short Message Service) has made a big impact on the way we communicate. Instead of communicating over the phone using voice, people rather prefer SMS not only for messaging but also for information exchange. This project proposes a method of building an extendable generic application which can be used to provide email facility using mobile SMS as well as SMS alert on receiving any email.

Key words: SMS, E-mail and S.E.C.

I. INTRODUCTION

SMS has shown a significant resiliency protocol in the market that is bombarded with media that all add to daily communications. SMS is a form of highly personal, immediate communication with high reach capability, low cost and high retention levels. SMS is now accessible in many ways as a business tool. Consumers have been 1st in adopting SMS as a mean of communication, popularizing the need of sending messages from one place to another.[1]

There are a variety of business applications like

- Mobile commerce and transactions.
- Internal communication among staffs.
- Billing information updates.
- Field service and engineering.

II. EXISTING SYSTEM

Advance technology and a remarkable change in the field of communication. SMS and the E-Mail are separate modules.

In today's world of the 21st century mobile cell phones are at a great use and more and more features are added making communication possible from any corner of the world thus making an individual reliable and independent which happens to be our first module making destination reach to our door steps.[1]

Mobile has fused with another astonishing module called email over the recent years, which happens to be our second module.

Email is nothing else but Electronic mail where in users can interact with each other by sending documents, attachments and letters, complains, information which are vital and need a proper security. Mobile has established the module of E-mail as one of its primary feature, requiring active internet connection.

The existing system has been built on Android platform that is SMS to E-mail Buddy but is yet to be implemented. Cell phone which operates on Symbian that is low budget phones does not have this feature of the internet. There is no existing system as of now but the reverse way that is E-mail to SMS has been implemented of late.[2]

A. Advantages of Existing System:

- Messages are sent worldwide.
- Local SMS charges are less.
- Confidential files are sent via E-mail.
- Active internet connection provides a quick transmission of an E-mail.

B. Drawbacks of Existing System:

- Requires an internet connection.
- No proper e-mail notification.
- Low network causes an issue.
- Expensive data pack.
- In India, internet is out of reach for many people

III. PROPOSED SYSTEM

The solution proposed is to link the email and SMS facilities. The state of the art of mobile computing technology can be incorporated with mailboxes as a solution. The interface module and the GSM modem can be incorporated by linking the user's mailbox with short messaging system for sending an email and receiving notifications. User can send an email without having access to internet through SMS. User will send a SMS in required format to an SMS Application which will interpret the message and checks the validity of SMS and forwards it to SMS Parser. The parser will decode the SMS and convert it into required Email format and send it to Email application. The email application will send the email to the respective recipient. The Email application will have access to internet. Apart from this, user will also receive email notification and SMS when they receive any mail on their registered email id. This will enables users to send an email without having access to internet and be notified whenever a new mail is delivered. Mails delivered into the user's mailbox, the system will automatically generate an alert which is sent in the form of a short message system that typically details the real time of mail delivery. The system is designed to ease human life by sending short messaging system to notify the users about important new mails reaching their mailbox. This is likely to be a fast growing and popular application for short messaging system and email towards mankind.
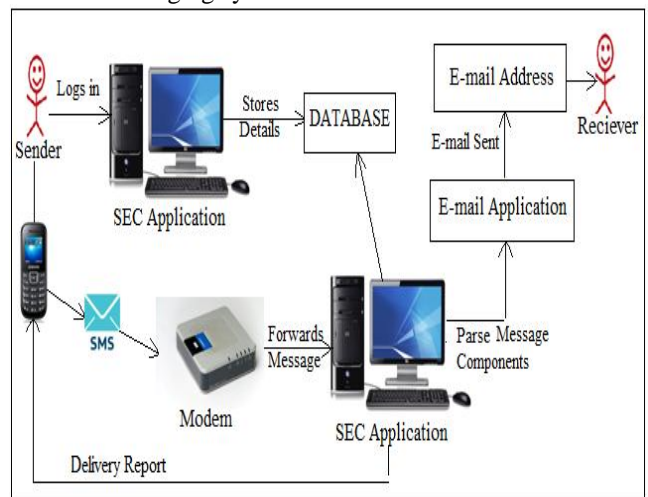

Fig. 1: System Architecture

IV. REQUIREMENT ANALYSIS

A. Hardware:
- Pentium 4 or above Processor.
- 1GB RAM.
- 40GB HDD.
- Ethernet Port.
- Mobile Phone.

B. Software:
- Windows 2000/XP/vista/windows 7.
- NET Framework 3.5 or above.
- Microsoft Visual Studio 2008.
- GSM modem driver.

V. IMPLEMENTATION

A. .NET Framework:

Visual Basic works on the .NET Framework. This Framework combines all the platforms which supports coding languages for example PHP,C#, ASP.NET, VB.NET,etc. It is used to make windows applications, desktop applications, websites and web portals/ web application. This project is a web application and it runs on the latest framework that is .NET version 4.5. .NET provides added classes to the programmer in order to make an application work. In this project the use of ASP.NET along with C# is implemented. [4]

B. C#:

C# is intended to be a simple, modern, general-purpose, object-oriented programming language. Its development team is led by Anders Hejlsberg. The most recent version is C# 5.0, which was released on August 15, 2012.

The C# language is intended to be a simple, modern, general-purpose, object-oriented programming language.

The language, and implementations thereof, should provide support for software engineering principles such as strong type checking, array bounds checking, detection of attempts to use uninitialized variables, and automatic garbage collection. Software robustness, durability, and programmer productivity are important

C# is intended to be suitable for writing applications for both hosted and embedded systems, ranging from the very large that use sophisticated operating systems, down to the very small having dedicated functions. Although C# applications are intended to be economical with regard to memory and processing power requirements, the language was not intended to compete directly on performance and size with C or assembly language.[6]

C. Modem:

A modem (modulator-demodulator) is a device that modulates an analog carrier signal to encode digital information and demodulates the signal to decode the transmitted information. The goal is to produce a signal that can be transmitted easily and decoded to reproduce the original digital data. Modems can be used with any means of transmitting analog signals.[4]

In this case, modem will act as a SMS gate way whenever the user sends a message, it passes through the modem, the modem then converts the SMS into machine readable format and forwards it to the SMS parser and the process continues.

The modem is a hardware device which will be used to receive and send the message. The role of the modem is to receive the message and forward it to the E-mail application. The sending and receiving of the Modem is controlled by the AT Commands.

D. AT Commands:

AT commands are used to control MODEMs. AT is the abbreviation for Attention. These commands come from Hayes commands that were used by the Hayes smart modems. The Hayes commands started with AT to indicate the attention from the MODEM. The dial up and wireless MODEMs (devices that involve machine to machine communication) need AT commands to interact with a computer. These include the Hayes command set as a subset, along with other extended AT commands.[4]

AT commands with a GSM/GPRS MODEM or mobile phone can be used to access following information and services:
- Information and configuration pertaining to mobile device or MODEM and SIM card.
- SMS services.
- MMS services.
- Fax services.
- Data and Voice link over mobile network

E. Database (MS Access):

The database is the backend of the application. It stores all the users' information which is essential when a user logs in for the very 1st time. Later on for an existing user the database stores the number of messages a user has sent and received. When the user enters the e-mail ID and password for any changes the application checks the credentials in the database, if the credentials are found true only then the application allows the users to go through. The user after performing a relevant change in his profile, the credentials are updated and saved in the backend.
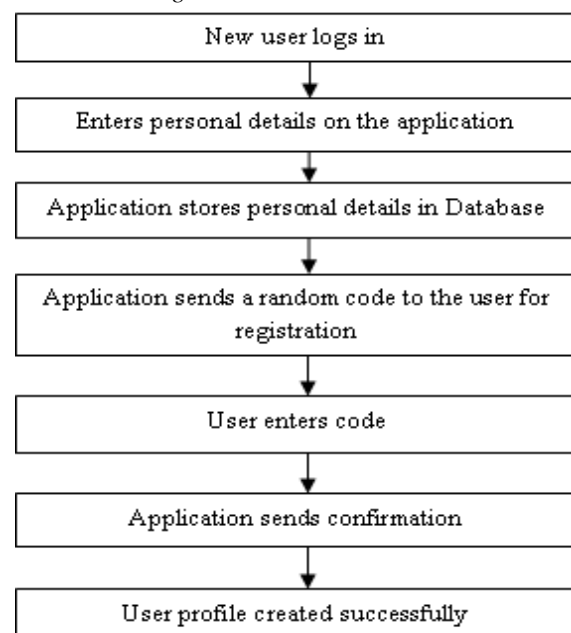
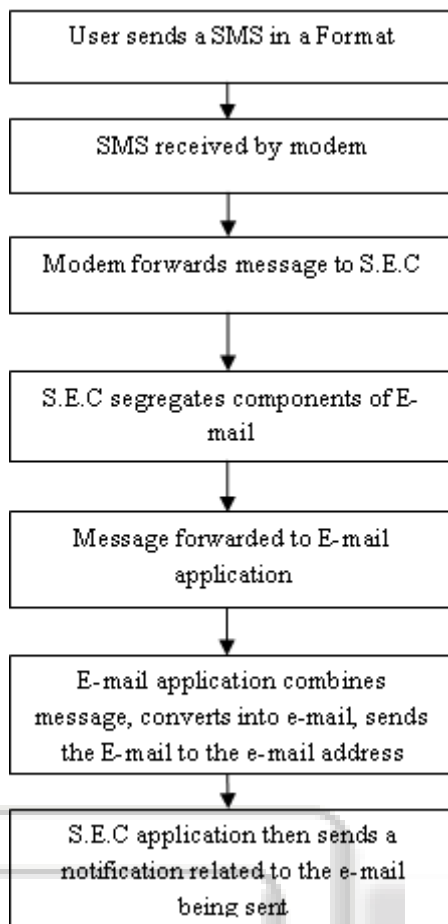### F. Flowchart Diagram:

Fig. 2: Registration

Fig. 3: Working of S.E.C.

VI. CONCLUSION

The main objective of the application is to remove the drawbacks of E-mail that is an active internet connection. Thus we conclude that in the case of an emergency and in the absence of an internet connection we can send an E-mail with the help of an SMS that is on normal sim balance. Even a normal phone which does not have the facility of an internet can send an E-mail with just a click away. The notification that the E-mail has sent to the receiver is notified to the sender via SMS.

In short an attempt has been made to simplify technology related to the field of telecommunication by linking the SMS and the E-mail.

VII. FUTURE SCOPE

1) Extension of message length.
2) Attachments for E-mail for example photos, presentations, videos etc.

VIII. ACKNOWLEDGMENT

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