Remote File Retrieving Through SMS

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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 search a file on remote desktop and mail it to user. Mobile users send required information through a SMS to a mobile gateway that forwards it to the generic application. Given the user-provided information, the generic application automatically searches the file on remote machine and mails it to the user. This paper is based on the concept of searching a file on remote machine by just sending a simple SMS.

Keywords-SMS;parser;FTP.

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I. INTRODUCTION

The exceptional growth of the mobile phone market has motivated the design of new forms of mobile information services. With the growth of Twitter, SMSGupShup and other social messaging networks, the past few years have witnessed a growing prevalence of Short-Messaging Service(SMS) based applications and services. SMS-based services are also increasingly common in developing regions. Despite the increasing power of mobile devices with the advent of "smart phones", a significant fraction of mobile devices in developing regions are still simple low-cost devices with limited processing and communication capabilities. Due to a combination of social and economic factors, voice and SMS will likely continue to remain the primary communication channels available for a non-trivial fraction of the population in developing regions.

For any SMS-based web service, efficient SMS-based search is an essential building block. SMS-based search is a rapidly growing global market with over 12 million subscribers as of July 2008. An SMS message is constrained to 140 bytes which drastically limits the amount of information in a search response. SMS-based search is also non-interactive due to the search response time; anecdotally, existing SMS-based search engines take on the order of tens of seconds to several minutes per response. Even without the 140-byte SMS size constraint, tailoring traditional web search to mobile devices is a challenging problem due to the small form factor and low bandwidth. Unlike desktop search, users on mobile devices rarely have the luxury of iteratively refining search queries or sifting through pages of results for the information they want. In this project, we address the problem of SMS-based search: how does a mobile user efficiently search the file on the remote machine and get that file on his email.

A. Purpose of this Project

The purpose of the project is to search a file on remote machine by just sending a simple SMS and get that file mail it to user if found. The application will be kind of desktop application where it will check for new incoming SMS. The application will first check whether the mobile number through which SMS has been sent is authorized to search the file or not. If not application will send back an acknowledgement saying that user is not authorized to search the file. If the user is authorized, than application will start the file search and if the file is found it will mail it user on the emailed that is received in SMS. While sending SMS user has to send the option, file name, file path (optional) and email id. Apart from file search and emailing the file, application also support uploading, downloading the file from any FTP server provided the details of FTP server is known.

B. Existing System

Today, most of the user files are scattered over multiple machines. In case if user forget to take the file in pen drive or email the file, user is left with no other option but calling home or respective location and explaining the person to navigate through the directory and mail the file. Now if the person is not computer educated or does not know to operate the computer and internet than the situation becomes more difficult. In this case the user may face many issues as he might not get the required file. Now to overcome this problem, many developers have come up with the mobile app which will remotely connect to your desktop and transfer the file. But these apps are limited to Smart Phones and they require active internet connection on their phones. Now if a user does not have a smart phone he will not be able to make use of all these apps.

C. Proposed System

The solution proposed is to search the file on remote machine using SMS. There are many android apps available for these purpose but android apps are limited to Smart

Phones and should have active internet connection on both the remote machine and smart phone. This is the biggest drawback where even if users possess a Smart Phone but no active internet connection will not be able to take the advantage of the app. To overcome this limitation of Smart Phone and active internet connection, our project uses a SMS as a medium to search a file on remote machine and if found, mails the file to user. In this case, active internet connection is required only at remote machine where the client is installed. The requirement of this project is a client must be installed on the Remote machine to facilitate receiving of SMS, parsing it, searching file and sending the file.

User need to send SMS in a specified format to a particular number. The format will include the name of the file to be search, the file location (optional), user mail address to where the file if found has to be mailed. On receiving the SMS, application will validate the format; parse the SMS to get all the required details. The application then using inbuilt email facility will mail the file to user. Apart from file search and emailing the file, application also support uploading, downloading the file from any FTP server provided the details of FTP server is known.

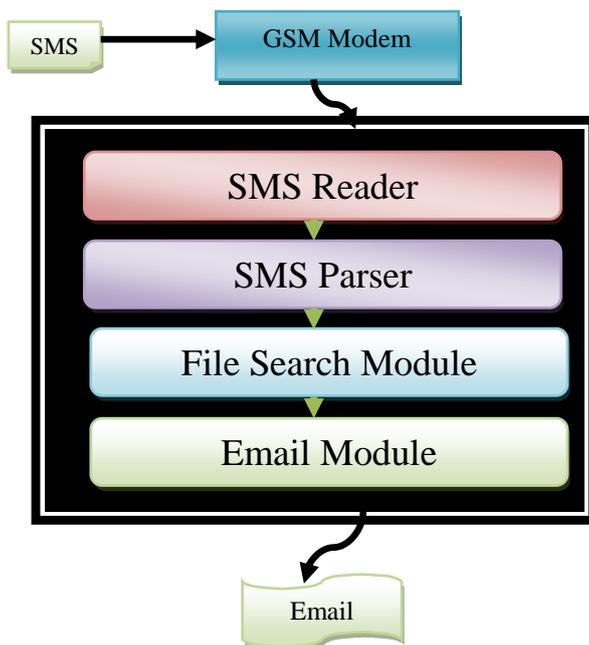## II. SCOPE OF THE PROJECT

Figure 2.1 System Architecture

A. SMS Module

Short Message Service (SMS) is a text messaging service component of phone, web, or mobile communication systems. It uses standardized communications protocols to allow fixed line or mobile phone devices to exchange short text messages.

Messages are sent to a short message service center (SMSC), which provides a "store and forward" mechanism.

It attempts to send messages to the SMSC's recipients. If a recipient is not reachable, the SMSC queues the message for later retry. Some SMSCs also provide a "forward and forget" option where transmission is tried only once. Both mobile terminated (MT, for messages sent *to* a mobile handset) and mobile originating (MO, for those sent *from* the mobile handset) operations are supported. Message delivery is "best effort," so there are no guarantees that a message will actually be delivered to its recipient, but delay or complete loss of a message is uncommon, typically affecting less than 5 percent of messages. Some providers allow users to request delivery reports, either via the SMS settings of most modern phones, or by prefixing each message with *0# or *N#. However, the exact meaning of confirmations varies from reaching the network, to being queued for sending, to being sent, to receiving a confirmation of receipt from the target device, and users are often not informed of the specific type of success being reported.

SMS is a stateless communication protocol in which every SMS message is considered entirely independent of other messages. Enterprise applications using SMS as a data bearer require that session management be maintained external to the protocol.

B. SMS Parser

Parsing is the process of analyzing a string of symbols, either in natural language or in computer languages, according to the rules of the formal grammar.

A Parser is a software component that takes input data and builds a data structure – often some kind of parse tree, abstract syntax tree or any hierarchical structure. Here it is use for separating the different components of the SMS received by the GSM modem. Different components present here are the file name, file location, senders mail id etc. e.g. is as shown below.
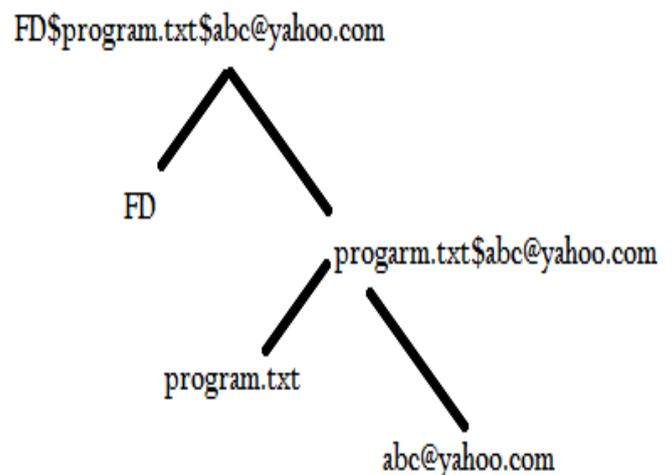

Figure 2.2 SMS Parser

C. FTP Module

File Transfer Protocol (FTP) is a standard network protocol used to transfer files from one host to another host over TCP-based network, such as the Internet.

Here in this project it is used for uploading or downloading the files present on the desired FTP Server and to do the necessary communication.

D. Mail Server

Within Internet message handling services (MHS), a message transfer agent or mail transfer agent (MTA) or mail relay is software that transfers electronic mail messages from one computer. An MTA implements both the client (sending) and server (receiving) portions of the Simple Mail Transfer Protocol.

A mail server is a computer that serves as an electronic post office for email. Mail exchanged across networks is passed between mail servers that run specially designed software. This software is built around agreed-upon, standardized protocols for handling mail messages and the graphics they might contain. Here its job is to do the necessary mailing activities.

III. FEATURES AND BENEFITS

- File search through SMS
- File emailing
- Getting File Info through SMS and Email
- Getting File location through SMS and Email
- Automated File searching
- Get file on email anytime anywhere
- Search and get required file on remote machine
- No active internet connection required on your phone
- Normal SMS charges
- No smart phone required
- Emails all the files as a result of search operation

V. CONCLUSION

In this project, a concept of searching a file on a remote machine through SMS is prescribed. User can search any type of file and get it mailed on his or her mail id. The requirement of this project is that the application must be installed on remote machine where the file needs to be searched and internet connection must be available for getting file mailed or uploading and downloading to FTP server.

In the initial phase of the project, Remote File Search using SMS will include searching, uploading and downloading of one file at a time. Future release of this application will allow multiple files to be searched, uploaded and downloaded.

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