

Extracting RSS feeds using SMS

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Abstract: - In the recent years two exponentially growing technologies are web services and mobile based services. With tremendous growth of data over internet structuring of data has become challenging issue when needed data to the user is scattered across multiple web sites. Technologies like XML have proven their importance to understand the meaning of data in HTML page. Using XML data across multiple sources can be aggregated according to users requirement using RSS aggregators and now a days is wide popular for site containing information updating frequently. On other hand is growing tremendously, and most popular service used through mobile is SMS. SMS is cost effective service with respect to service provider. Several request reply protocols are designed which combines web service and sms data and provide access to data across internet through sms, but such application can be used for specific domain and website. When multiple site data need to be accessed through sms as per the interest of user there is no platform available for such service. In this paper we propose the Framework which fetch the rss feeds located across multiple servers through sms.

Index Terms— rss, sms, aggregation, parsing,

1. LITERATURE REVIEW

In the recent years traditional request reply protocols have become common on mobile and computer system. Lot many works where small notification can play important role in end users life prefers sms channel to interact with users or customers e.g. marketing of product, banking transaction or birth availability in railway or airline reservation system.[2][6] Through sms, effort are being made to invoke web services in order to get connected to the web data through mobile services like bluetooth.[7] short range of Bluetooth imposes restriction on accessing data in short distance range. So in this paper a new framework is proposed to get rss contents through gsm network using sms channel which doesn't have any distance range restriction.

2. INTRODUCTION

Lack of information has always been a major source of frustration for customers for whom data is valued. Measure source of data in now day is web sites scattered across globe. Several types of users are interested in different areas and to access data in their interesting area they need to surf across multiple sites. E.g. some customers interested in news in particular area, like sports, science, technologies etc. some users may want notification of jobs. Most of the time data which is of user's interest is not located on single web site and is scattered across several sites. E.g. News of interest can be available on several news sites, notification of stock can also be received from several sites. Surfing multiple sites for each expected category of information is time consuming. Restriction for accessing such information is availability of internet.

Over the years multidimensional growth of technologies has increased the importance of telecommunication field tremen-

dously as it is supplementary technology for all other technologies. Information flow in any organization affects the growth rate of organization. Variety of services provided by telecommunication field has become tremendous popular over the recent years and one of those is SMS.

Although most handheld devices are not having gprs connectivity due to low cost low configuration device models, every mobile subscriber is having gsm/cdma network connectivity. And through this they can use sms service to transfer small piece of textual information. For such class of user we design the framework through which user is able to access rss feed using sms service.

Although there is restriction of 160 character transmission through single sms, majority of time user is interested in small piece of information like news headers, cricket score, notification from certain site regarding launch of new product etc. in such cases his/her requirement can be fulfilled with proposed framework.

For communicating information present in computer most preferably on new web server through sms, new request reply protocols need to be designed. e.g. if new stock broker site is launched updates on that site can be received through sms if we register for that site which is having sms request reply protocol pre implemented. Traditional request reply protocol implemented for several applications e.g. Retrieving account information from bank through m banking, retrieving product and scheme alert from advertizing/shopping sites etc. in such communication user is associated with single web server to get response sms.

Now a days technologies like xml have become vast popular which enables to extract meaning of data from simple HTML web pages and using xml several supplementary technologies

have been designed for convenient access of data across several web servers as per the requirement of end users. One such technology is RSS feed which enables user to aggregate data from multiple web sources that can be categorized and users can register for such sites once and any update in those category of data will be notified to the user automatically by rss aggregator.

In proposed architecture users response can be from any of the web site whose rss feed he/she has subscribed, so web interface is scaled to larger system and user is free to receive response from any subscribed site as per his requirement through simple sms.

Converging rss feed technology with the sms can enable user to access data across several web servers through sms. To access this service user need not have any gprs service on his mobile. With any of the low cost handset this service can made available to user. So generic platform can be designed in which instead of constructing request reply protocol for every new organization, it needs to make data available in web server in the form of rss feed which can be transferred to users who are interested in that data. These users register for site and can have access to web based data through sms.

With this platform user can get latest news through sms, cricket score, and technological updates from sites who have exported their data in the form rss feeds. Platform work in convenient way when required data to user is small in volume, when data volume grows number of sms for transmitting data may not be cost effective. But with mobility feature considering the customers need for data without gprs connectivity, if it can be made available without registering for any new request reply protocol, framework will be best mean of communication.

We evaluate the framework that allows interaction with web services from mobile device using SMS as a communication channel.

3. WORKING METHODOLOGY

3.1 Endorsed Technology:

3.1.1 RSS FEED:

RSS (Rich Site Summary) is a format for delivering regularly changing web content. Many news-related sites, weblogs and other online publishers syndicate their content as an RSS Feed to whoever wants it.

Feed Reader or News Aggregator software allows you to grab the RSS feeds from various sites and display them for you to read and use. Eg. RSS is best solution to configure web page to load the information that is of interest to user. RSS aggregator software used to aggregate that information.

RSS aggregator can be part of the various popular web sites like yahoo, rediff home pages. User can subscribe to different rss feeds from different site belonging to same category eg. News feed can be subscribed from time of India and espnsite .rss aggregator check the update from all such site at regular interval and in case of any update new news will be collected and fed to the application/browser. In this way user can have

flexibility to read news from different sites without browsing individual site.

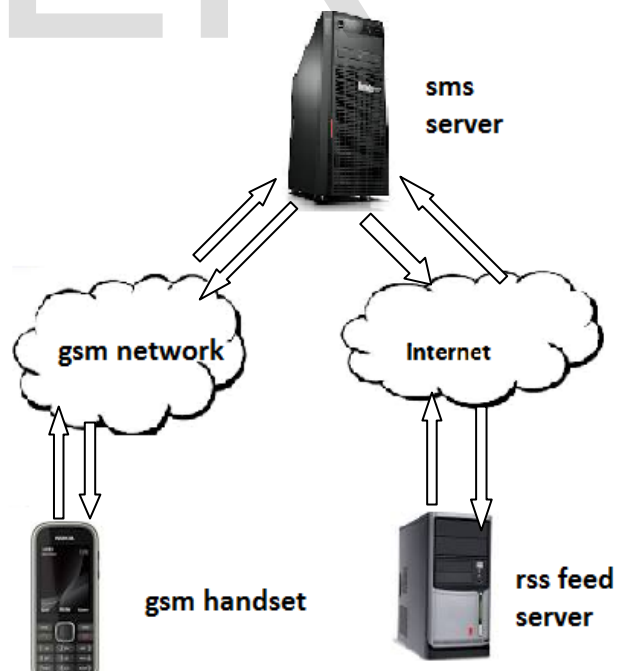
A website willing to publish their content using RSS, creates one RSS feed and keeps it on an web server.[3] RSS Feeds can be created manually or with software.[3] A website visitor will subscribe to read your RSS feed. An RSS feed will be read by a RSS feed reader.[3]

3.1.2 SMS:

SMS(ShortMessageService),commonly referredtoas "textmessaging,"is a service for sending short messages of upto160characters (224characters ifusing a5-bitmode)to mobile devices,including cellularphones,smartphonesand PDAs.Today, text messaging is the most widely used mobile data service, with 74% of all mobile phone users worldwide, or 2.4 billion out of 3.3 billion phone subscribers, at end of 2007 being active users of the Short Message Service.[4] In countries such as Finland, Sweden and Norway, over 85% of the population use SMS. The European average is about 80%, and North America is rapidly catching up with over 60% active users of SMS by end of 2008.[4] The largest average usage of the service by mobile phone subscribers is in the Philip-pines, with an average of 27 texts sent per day by subscriber.[1][4]

Userscansendmessages fromacomputerby connecting computer to GSM modem by .SMSgatewaysareWebsitesthatallowuserstosend messages topeoplewithinthecellservedbythatgateway. They also serveas international gatewaysforuserswith roaming capability.[5]

3.2 Proposed System Architecture:



In this framework we have implemented the SMS server application which is continuously listening to the request in the form of sms from any gsm subscribed user. Sms server is con-

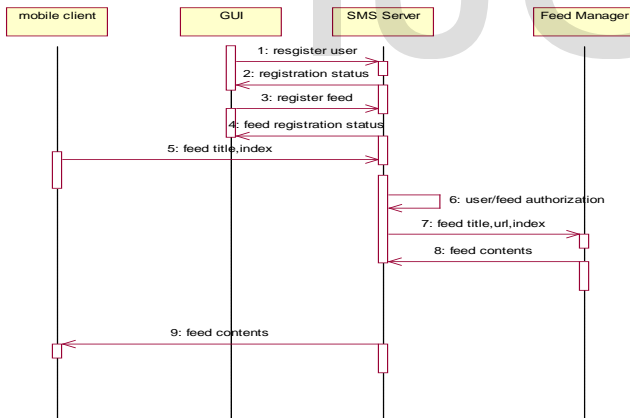
nected to the gsm network by gsm modem. When request is received by server it is parsed and validated. User registration information is verified, once authentication is successful sms server parses request for rss feed to feed analyzer which is part of same system.

Feed analyzer receives feed string and index, application authorizes the subscription of feed with user registration information. Every feed is registered for current user; feed analyzer invokes feed parser application.

3.3 Algorithm:

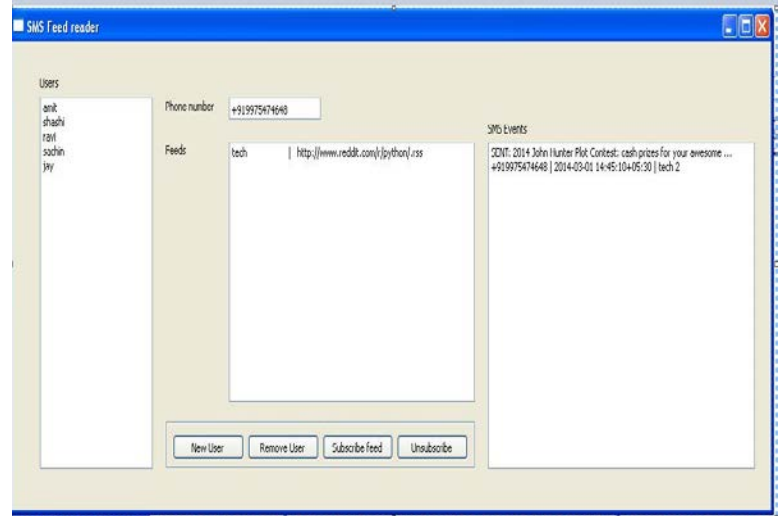
1. Listen for sms request
2. Sms received
3. Validate user
4. If user is valid
 - a. feed title and index is parsed
 - b. If feed is registered
 - i. Invoke feed parser module
 - ii. Extract feed from registered site
 - iii. Pass feed contents to sender
 - c. Else
 - i. Pass invalid feed request message to sender
5. Else
 - a. Pass invalid user message to sender

3.4 INTERACTION DIAGRAM:



In normal scenarios i.e. discarding the failures in system (invalid user or invalid feed access) the system works as follows. Sms server has GUI module, server application and feed manager and it is passively running system. Through GUI administrator user can create new user and register user for feeds. When mobile client generates request for feed information it pass feed title and index to the sms server , sms server validates user and feed information if validation succeed it passes request to feed parser which parses and return information about feed in string format which is passed to the mobile client over gsm network by sms server.

3.5 Project Snapshots:



3.6 Efficiency:

Sms server efficiency is measure of time required to receive feed after sending sms request for feed from gsm handset. Feed retrieval time depends on basically 3 factors.

- Propagation delay in gsm network.
 - User validation and feed validation at sms server
 - Propagation delay across internet.
- Since propagation delay in gsm network and inte net cannot be altered for present infrastructure. Feed parsing, user validation and feed validation are speeded up by light weight json data format for storing information about feed and user instead of using databases which consumes more memory for loading their system file itself. Python sms API uses asynchronous thread model which doesn't block users request in case operations on previous user is pending. Feed retrieval time is given by expression

$$\text{Retrieval time} = G(t) + P(t) + I(t)$$

G(t) : propagation delay in GSM network

P(t) : user validation and feed validation time at SMS server.

I(t) : propagation delay in internet

4. FEATURE SCOPE

Current techniques fetch with specific index, searching techniques can be improved to fetch feed with the rank decided from the following criteria's.

1. Ranking can be decided by the factor like read or unread feeds.
2. Synonymous can be found for user interested words and feed containing those words in content field can assigned higher rank.
3. Rank may be assigned based upon number of hits to a website so that feeds from popular sites may be chosen first for end user.

5. CONCLUSION

Convergence of two technologies i.e. sms and rich site summery can ease the task of user willing to access web information without gprs connectivity. With support to rss format for dynamic contents in site can be made available through sms to user without designing separate request reply protocol mechanism for newly generated sites.

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