

SMS Report

PAKISTAN TELECOMMUNICATION AUTHORITY

Strategy and Development Division

SMS TRAFFIC IN PAKISTAN DURING 2010

December 22, 2011

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This report provides an in-depth analysis of the SMS traffic during 2010 of all the GSM Cellular Operators in Pakistan. It includes the total SMS traffic being generated in Pakistan, monthly usage trend, inter-operator and intra-operator traffic volume. The report assumes a 80/20 split of 'Bundled' and 'Flat' rate SMS, estimates an average cost of an SMS and also arrives at the total revenues generated by the operators from SMS during the Year 2010. The scope of this document is to measure the SMS usage in the country, understand the trend and use the data for future policy formation for further growth of the industry.

During the year 2010, the total SMS generated in Pakistan were 175.4 billion¹, a 15.66% growth from the 2009. Alternately, during 2010 there was an increase of 23.75 billion SMS as compared to 2009.

Total cellular subscribers increased by almost 5.1% to reach 102.78 million² by end2010 . As per the estimates; total revenue generated from SMS this year, is approximately Rs. 22.5 billion³.

The analyses indicate that 4.7⁴ SMS are being sent by each mobile subscriber per day i.e. (Approximately 5 SMS/day/subscriber) or 142 SMS per subscriber per month approximately.

As per Portio's research Report 'Mobile Messaging Features 2011-2015'⁵, Asia Pacific (AP) contributed 42.9% of the Worldwide Person to Person(P2P) SMS traffic. Only five countries in this region i.e. China, Philippine, Indonesia, Pakistan and India make Asia Pacific to dominate the Worldwide P2P SMS traffic and its revenues, due to its large subscriber base and also heavy texting trends and techniques.

As per this report, in year 2010 Asia Pacific's total SMS were amounted to be around Three Trillion (3 Trillion) and is all set to reach almost 5.6 Trillion by end 2015. This amounts to total Y-on-Y SMS increase in Asia Pacific by 17.33%.

The revenues generated during 2010 in Asia Pacific from SMS traffic stood at USD 45.2 Billion, that makes 39.5% of worldwide revenues, and forecasted to reach USD 65.8 Billion by end2015 which is estimated to be 41.4% of world wide SMS revenue, accounting for a Y-on-Y increase of 9.11% during the next five years.

Pakistan -Traffic in Y2010 (Approximate)	
Total SMS in Year-2010	175.393 Billion
Total No. Of Subscribers (Subs) end-2010	102,777,387
SMS per Subscriber per Month (SMS/Month/Subs)	142
SMS per Subscriber per day (SMS/Day/Subs)	Approx 5

Table 1

The increasing trends of SMS traffic and associated revenues in Pakistan seem to be in line with Asia Pacific trends. The SMS traffic growth in Pakistan was 15.66% during 2010 in line with AP's forecasted growth of 17.33 % per annum from 2010 to 2015.

¹ As per operators' data

² PTA data obtained from CMTOs.

³ As per the operator's data of total SMS, flat rates (advertized), approximations for bundled packages, number of international SMS data provided by operators and advertized international SMS rates.

⁴ Table given below

⁵ <http://www.scribd.com/doc/55346564/Mobile-Messaging-Futures-2011-2015-Portio-Research-Ltd-EXTRACT-India>

Operator Status Y2010			
Operators (CMOs)	Subscriber share %⁶	SMS Share %⁷	SMS per Day/ Subscriber / Operator
Mobilink	30.94%	23.32%	4
Ufone	19.73%	29.05%	7
Telenor	24.03%	25.68%	5
Warid	17.04%	11.66%	3
Zong	8.27%	10.28%	6

Table 2

In this paper, all calculations are based on the Mobile originated SMS only (same as sent or generated SMS) during the year.

If we compute the Total SMS Activity(TSA)⁸ of the subscribers during the year, that figure (Sent plus Received) would approximately be 350.785 billion (twice the 175.393).

It is worth mentioning here that for the year 2009, the analysis was based on the six months data provided by CMTOs. The analysis for 2010 is based on 12 months data i.e. from January 2010 to December 2010, so the percentage error is reduced due to minimum estimations in the analysis. The cost analysis of SMS for 2009 was done on the basis of the average SMS cost and in this report, it has been done on the basis of the minimum cost.

1. Year Wise SMS Traffic Growth in Pakistan for the past five Years.

The growth observed during year 2010 is 15.66%. During 2006 to 2009; there was a tremendous rise in traffic, the Y-O-Y percentage growth was more than 90%. This enormous growth was due to two main factors:

- the exponential growth of mobile subscribers after deregulation in the country.
- the falling SMS prices and bundled SMS offers.

The bundled SMS offer had lead the rural and bottom of pyramid segments to use the SMS service instead of voice calls. This led to an exponential rise in the percentage growth trend.

For 2010, the Percentage difference trendline seems to be relatively less exponential (Fig A), which depicts that the other parameters like the mobile penetration, affordability, awareness and many other factors have reached around their optimal and are subject to less change as compared to previous years.

⁶ Subscribers as of Dec-2010,

⁷ From operators' data provided to PTA

⁸ Note: Total SMS Activity of the subscriber may be defined as the total of all the SMS sent and SMS received by a subscriber during the period.

It appears that there is a need for some attractive Value added services over SMS to keep the SMS traffic growing exponentially.

For the attractive value added services(VAS), many mobile network operators Worldwide have started to focus on Application-to-Person (A2P) & Person-to-Application (P2A) SMS. It is anticipated that A2P could significantly increase the revenue for mobile operators as compared to P2P SMS⁹.

Another possible way is, attractive commercial agreements between the cellular operators and content providers to provide attractive content through SMS. Many other innovative VAS over SMS are being explored worldwide to earn revenues.

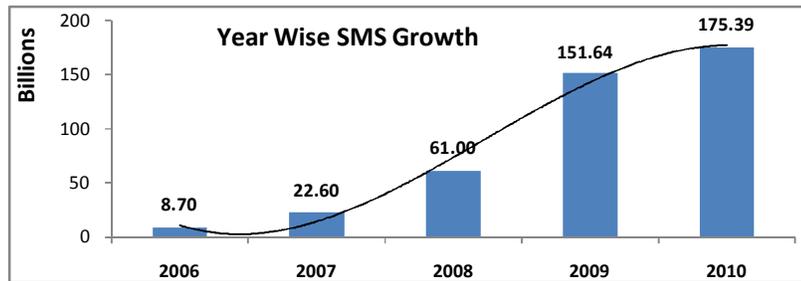


FIG A

2. Philippines Case study, the Texting Capital¹⁰

Philippine is the acknowledged SMS capital of the world and was reported to be generating the highest proportion of non-voice revenues in the world during 2009. A glimpse over the SMS activities of Filipinos show that there are far more activities over SMS than just chatting or giving some message or information over the SMS. Some of the activities over SMS are:-

- The President sends instructions to members of his Cabinet and other subordinates via SMS.
- A poetry writing contest via SMS “to popularize and continue the tradition of the country’s oldest forms of poetry by using modern technology”.
- TV talent search contest allow viewers to vote for the winner using SMS.
- Farmers use SMS to find higher prices for their products.

2.1 Text Games

The text games are some time called as text gambling in Philippines. Initially in 2001, the mobile operators started the games by asking the subscriber few questions and on correct reply, subscriber was offered gifts in the form of free minutes etc. Later on this business was expanded from mobile companies to a mobile value added content providers (M-VAS), who send multiple choice questions (MCQs) to subscribers on the platform/ network of CMOs.

SMS game developers enter into a revenue sharing scheme, where the network provider gets anywhere from 65-70% of the amount paid for every transaction.

⁹ As per Juniper report.

¹⁰ <http://unpan1.un.org/intradoc/groups/public/documents/Other/UNPAN024834.pdf>. The details mentioned in Philippines case study are part of this particular report.

The attraction of these text games is the prize money. This has led the state gaming agency—*Philippine Amusement and Gaming Corporation or PAGCOR*—to declare that these text games are forms of gambling and not simply sales promotion and because these are games of chance, they fall under PAGCOR’s regulatory supervision. Some text games are also developed for TV viewers.

2.2 Smart Money

The SMART-Money-Card is a pre-paid re-loadable payment card linked through engaging the three service providing entities, i.e. to the SMART (Mobile operator), MasterCard (Financial service) electronic payment system and the bank.

Cardholders simply load their SMART Money card with cash value by debiting their personal bank accounts through SMART's Mobile Banking Service (MBS) or over-the-counter loading at selected merchants. Once loaded, the SMART Money Card is then processed and accepted for payment transactions in any MasterCard affiliated merchant with Electronic Terminals, like any other debit card.

SMART Money solves the payments problem in m-commerce by leveraging on the pre-existing telecoms network and e-payment system (like MasterCard).

2.3 m-Government

An area of e-Government where the Philippines is arguably among the world leaders is, m-Government. Half of the 26 Departments and Commissions of the national government that were surveyed by the Congressional Oversight Committee on e-Commerce have SMS based Services.

These SMS based services give citizens an easy and inexpensive way to bring their concerns to government. Citizens who used to send (snail) mail and telegrams to the President, now have a new channel to bring their concerns to the highest official of the land.

2.4 Battle Against Crime

SMS is also being used to encourage Filipinos to help in the battle against crime. The government, through the Department of Interior and Local Government (DILG), has a centralized emergency and crime reporting service called ‘Text 117’.

2.5 Health

SMS is also deployed in public health service. During any epidemic of disease spread, the Department of Health (DOH) establishes Hotline for people who want to know more about the disease or send a report about it or to know the symptoms via SMS.

3. Pakistan's Case

3.1. Cost Analysis:

As per our study, the average rate of SMS in the year 2010 was 12.8 Paisa (Rs. 0.128)¹¹. This average rate is derived from the minimum of flat and bundled rates of SMS during 2010. The rates of SMS have generally reduced from the previous year.

In the previous report, the rate per SMS was calculated to be 27 Paisa (Rs. 0.27). The reduction of 47% is observed due to the fact that, in that year, SMS analysis were done on the bases of the average SMS cost for flat rate and bundled rate separately and this year it is computed on the bases of minimum flat rate & bundled rate.

Due to an overall attractiveness of bundled rate, most text users subscribe to bundled packages. Considering above, it is assumed that 80% of the SMS were sent using bundled rates.

Flat Rate: Flat Rate SMS is the SMS sent on advertised per SMS rate (non bundled). Few operators have reduced the flat SMS rates considerably. Almost 20% of the SMS traffic is estimated to be exchanged over flat rate. All the operators have offered different flat rates. Zong is offering the highest flat rate/SMS¹² while the minimum flat rate is offered by Mobilink and Ufone.

Bundled SMS Rate: All cellular operators offered attractive SMS bundled packages. Approximately 80% of the total SMS traffic is assumed to be exchanged over bundle packages as mentioned above.

Bundle packages were usually around 700 SMS/week/subscriber @ around Rs.8.35, in 2010, of which we assumed 700 SMS/Month/Subscriber being utilized, this averages out around 25 SMS/Day/Subscriber.

It was deduced that, through bundled SMS package a subscriber is paying around Rs. 33.50/month (4.79 Paisa/SMS or Rs 0.0479/SMS).

International SMS Rate: Unlike different calling rates for different countries across the globe, a flat rate is charged by the operator for all international SMS, irrespective of the destination. The trend of International SMS seems to be on the increasing side and the rates/SMS on the decreasing trend. Mobilink and Ufone both offering the same minimum International SMS rates among all operators¹³.

*According to these national and International rates mentioned above, the revenue for SMS traffic is calculated to be approximately **Rs. 22.5 Billion**. The reported cellular non-voice revenues for 2010 were 24.751 billion¹⁴ out of which 91% of revenue is computed to be from SMS.*

¹¹ Computed based on operators' SMS data, advertised rates for international and flat rate SMS, approximations for bundled packages

¹² Advertised Rates

¹³ As per advertised rates available on website.

¹⁴ Industry data provided to PTA

Analysis					
Total SMS in 2010	INTERNATIONAL	NATIONAL		TOTAL	AVERAGE
	Revenue from International SMS (Approx) Rs.	Revenue from SMS on Flat rate* (Approx) Rs.	Revenue of SMS on bundled Rate* (Approx)	Total Revenue from SMS _(Approx) in Rs.	Avg. Rate per SMS _(Approx) in Rs.
175.4 Billion	1.5 Billion¹⁵	14.6 Billion¹⁶	6.66 Billion¹⁷	22.5 Billion	12.8 Paisa

Table 3

3.2. SMS per Month

The highest number of SMS generated in a month during 2010 were 16.2 billion SMS in the month of December, followed by August 2010.

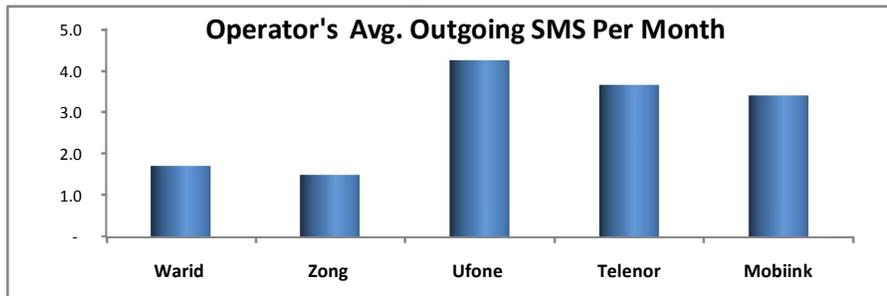


FIG 2

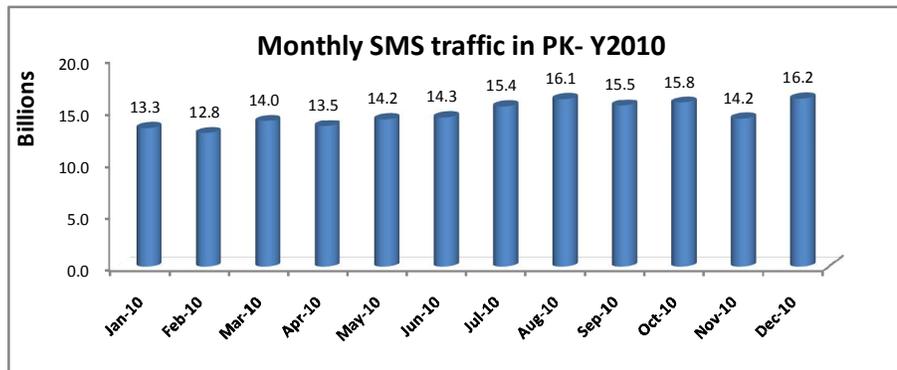


FIG 3

SMS traffic was at its minimum in February during 2010.. This zigzag but eventually increasing trend, due to varying days in a month, is evident from the graph.

¹⁵ As per advertised rates

¹⁶ As per advertised rates

¹⁷ Assumption: 700 SMS/Month/Subscriber being utilized in bundled package

3.3. Cellular Subscribers

The subscriber base reached 102.78 Million by December 2010. Mobilink contributing the 30.94% of subscribers followed by Telenor at 24%¹⁸. The subscribers during the same time previous year were less than 99 Million. The subscriber base has shown a growth of 5.1% in the 2009-10 as compared to previous year where it was 7%. The mobile penetration had been tremendous during 2005 – 2007, but now as the market is getting saturated so the growth trend line seems to flatten out.

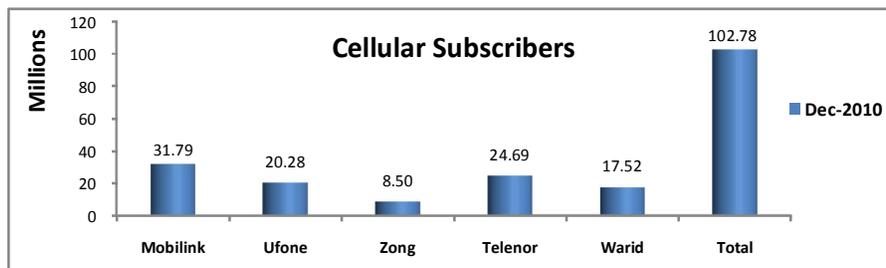


Fig 4

3.4. Inter Cellular Network Utilization for SMS

3.4.1. Ufone:

Ufone has generated the highest number of SMS per month in 2010, as shown in Fig2. As per the calculations it is generating 7SMS per Day/ Subscriber, highest among all; although the subscriber base of Ufone is less than Mobilink & Telenor. The average price per SMS of Ufone, in flat packages, were almost comparable with Mobilink.

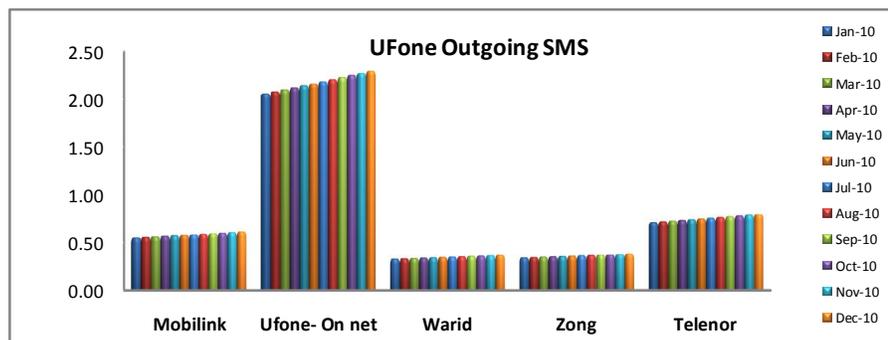


FIG 5¹⁹

A very regular rise in SMS traffic shows some devised strategy of Ufone for the increment in SMS traffic.

3.4.2. Telenor:

Telenor, the second highest generator of SMS per month in 2010 as shown in Fig-2 above. The details of SMS terminated by Telenor on various networks are as follows:

¹⁸ As of December 2010

¹⁹ SMS generated from Ufone to other networks and on-net SMS.

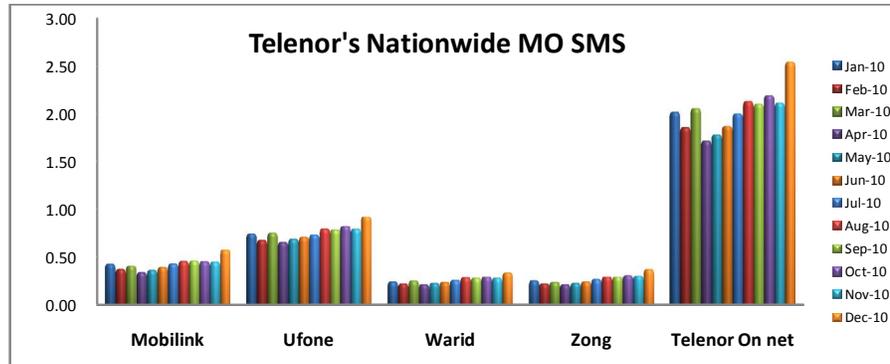


FIG 6. *MO=MOBILE ORIGINATED

3.4.3. Mobilink:

Mobilink has the largest subscriber base in the country and the SMS exchange is also high accordingly; but relative value of ‘SMS per day per Subscriber per operator’ (SMS/ Day/ Subs/Operator) show that Mobilink stands at number four.

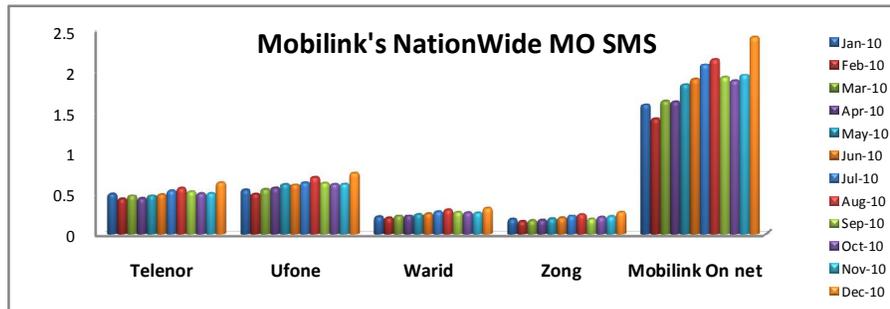


FIG 7

3.4.4. Zong:

Zong sent highest number of SMS to Ufone and minimum to Warid. Zong is offering a relatively high flat rate²⁰ than all others.

It is observed from the ‘average value of SMS per day per subscriber per operator’ (SMS/Sub/Day/Operator), that Zong subscribers are generating the 2nd highest number of SMS per day i.e. after Ufone. Zong Subscriber generates around 6 SMS every day which is greater than rest of the operators except Ufone.

²⁰ As per advertized rates

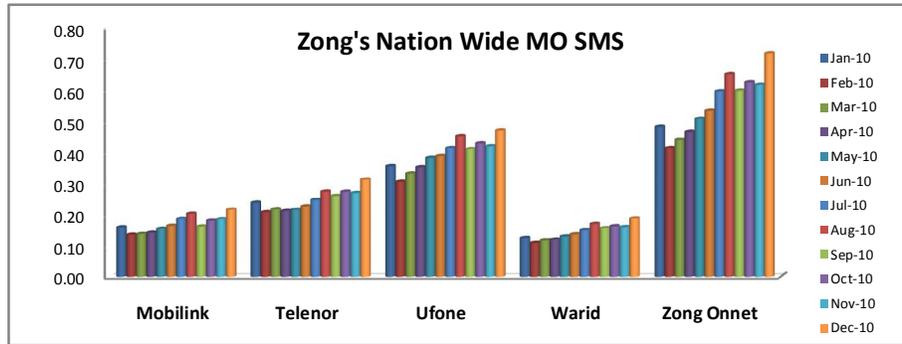


Fig 8

3.4.5. Warid:

Warid's SMS traffic decreased in the month of November and December. This is the trend not seen in any other operator. Warid sent the highest number of SMS to Ufone. The subscriber base of Warid is more as compared to Zong but the SMS/day/subscriber is approximately equal to half of Zong.

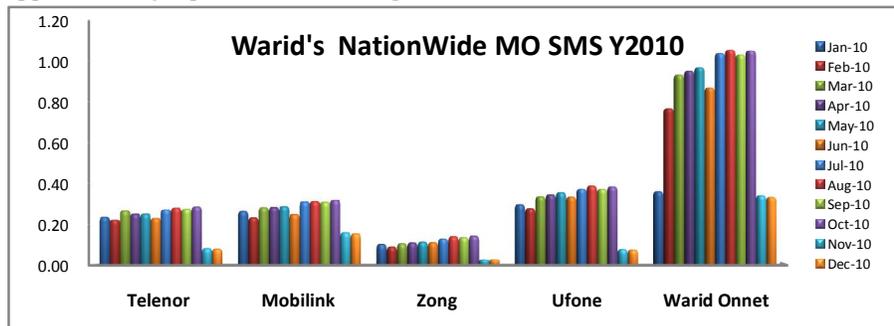


Fig 9

3.5. On-net SMS

In 2010, Ufone sent highest number of On-net SMS followed by Telenor & Mobilink.

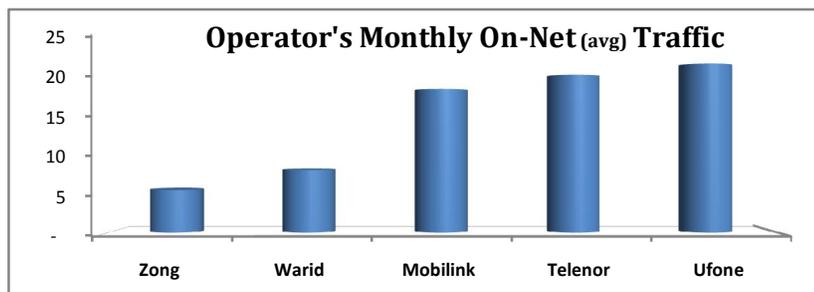


Fig 9²¹

3.6. International SMS Traffic

Average number of SMS sent out of the country per month during 2010 were 32.04 Million as given below. M/s Ufone leads as far as international outgoing SMS are concerned..

²¹ CMTOs data provided to PTA

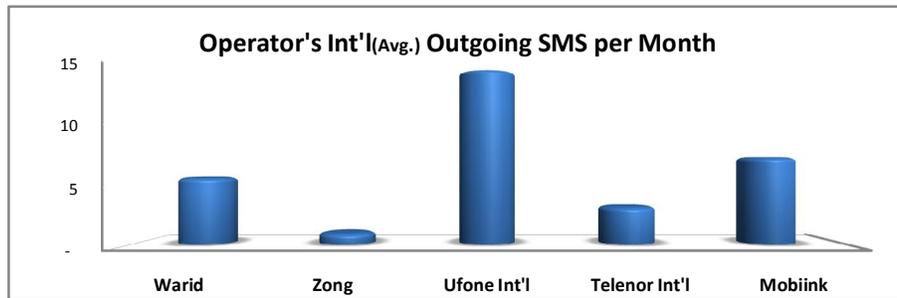


Fig 10

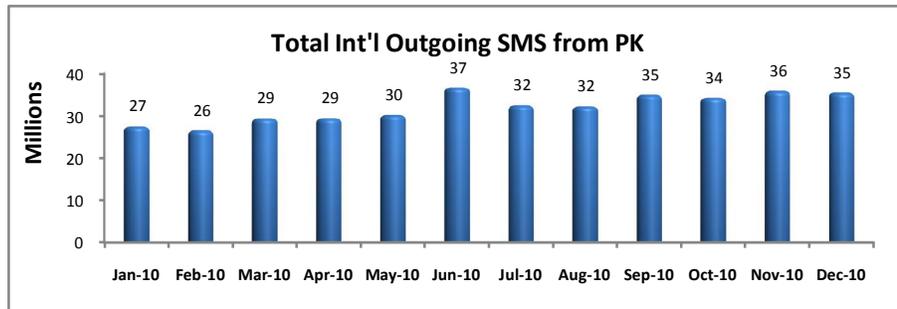


Fig 11

4. International evolution in SMS

4.1. Info 160²²

“According to the latest statistics, 77% (5.3 billion people) of the world’s population are mobile phone owners. What they own ranges from the most basic \$10 dollar phone to high-end smartphones.”

Info160 aims at making information free and accessible to all, especially people in developing countries where mobile phones have a high penetration rate but Internet speeds are still low and connectivity fees is still not favourable to everyone.

This Info160 is an SMS information service where subscribers could receive useful information free of charge like , breaking news, stock market, quotes etc according to the categories they subscribe to.

Each SMS that a user would receive shall be appended by short location based advertisements that are paid for by the advertisers. Such an advertisement can be something like location sensitive information e.g. an offer at the supermarket next door.

4.2. Application to person (A2P) and Person to Application(P2A)

Application-to-person (A2P) SMS is a part of mobile value added services (VAS). It provides mobile content to stimulate the subscribers and acts as a gateway to reach mobile subscribers in minimum time.

²² <http://world2011.itu.int/yourideas/selected-info160-free-sms-information-service-and-location-based-advertising>.

P2A (person-to-application) SMS , inverse of A2P, is the process by which a text message is produced from a mobile user and sent to an application. This means that the consumer starts the mobile interaction with a Value-Added-Service Application or Assistance, sending an inbound SMS to an application.

Typical use of A2P include general alerting and update messages such as banking updates, flight alerts, mobile check-in and boarding passes, mobile ads, mobile event ticketing, passwords are few among many others. Examples of P2A messaging include media voting & competitions, opt-in & subscriptions and text-to-win campaigns.

According to new report published by Juniper Research on May 4, 2011, the revenues from A2P will exceed USD 40Bn by 2016 and will overtake the P2P SMS revenues by then.

The business market of A2P and P2A must be promoted and expanded in Pakistan in order to keep the SMS-revenues growing and to bring innovation for the users.

5. Conclusion:

- 5.1. SMS has certainly become the most popular mode of communication in our country. Masses of all types are using text for instant information exchange. Urdu script SMS has facilitated the masses who do not understand English script. And due to being affordable, it will always have a volume to grow unless the GDP grows to an extent allowing everyone afford as many voice calls as the number of SMS they send.
- 5.2. Globally, a trend of VAS over SMS is being observed, especially in developing and underdeveloped countries. For example, Smart Money payments, m-Government, m-Health etc, all these value added services over SMS require an element of higher reliability of receipt. Delivery reports add reliability, and many services cannot be possible without reliability of receipt. So there must be a feature of delivery reports and other delivery assurance mechanisms be introduced by our operators. SMS interworking between the operators for confirmation of off-Net SMS shall also help in increasing reliability for services.
- 5.3. An overall volume of SMS has increased by 15 % from previous year. SMS cost has been reduced, the flat-rate SMS rate varied for Rs.0.24 to Rs. 0.90 against an average SMS rate of Rs.1 the previous year. Similar is the case with bundled rates.
- 5.4. Ufone has highest international SMS exchange count as compared to all others. More attractive packages may be offered on international SMS, as done on national SMS, in order to increase international traffic volumes.
- 5.5. Nationwide, Ufone has generated the maximum number of SMS per month, although the subscriber base of Ufone is less than Mobilink & Telenor.
- 5.6. As in Philippine and many other countries of the world, A2P SMS may be focused upon. The analysis show that it has much greater potential and revenues than P2P SMS. The applications of A2P are numerous and could be attractive for the masses. World is moving towards **info160** in parallel to A2P.

6. Recommendations:

- 6.1. Info160 service must be focused for our market.
- 6.2. A2P & P2A must flourish in order to increase the SMS revenues.
- 6.3. A2P & P2A SMS must be counted and maintained separately from P2P SMS.
- 6.4. Location Based services must be promoted.
- 6.5. SMS delivery reliability must be enhanced in order to provide more VAS over SMS.

- 6.6. International SMS traffic must be enhanced through some attractive packages.
- 6.7. Cellular Operators should plan to provide detailed SMS data for 2011 to PTA by February 2012 , so that SMS Report may be published by June 2012.

Note: The draft report is available at PTA website. The feedback and comments may be provided electronically at humaabid@pta.gov.pk.