



Telecom Regulatory Authority of India

Consultation Paper

on

Interconnect Usage Charges (IUC)

for

Short Message Service (SMS)

**New Delhi
June 13, 2006**

Preface

With the advent of data services in the Mobile sector, Short Message Service(SMS) has become one of the most popular, and commonly used means of data communication with significant revenue implications for Mobile Service operators. The transmission of SMS across the networks of different operators is at present, based on mutual agreement and Bill & keep approach is being adopted by most of the operators for charging such SMS. However, due to different SMS bundled tariff plans offered by the operators, and also because of SMS being increasingly used as a means of advertisements, the SMS traffic imbalance across operators is increasing. There is a possibility that such imbalance could impact the networks receiving the large proportion of SMS traffic and may justify regulatory intervention.

There is a tremendous increase in activities like tele-voting, lottery, online bidding etc. by the electronic & print media with the help of SMS. These SMSs are being charged higher than the normal rate. This consultation paper addresses the pricing issues linked with these types of activities.

The issue in this consultation paper is whether the SMS revenue share should be left to market forces or should it be regulated as in the case of voice calls in terms of terminating and carriage charges.

The consultation paper has been placed on TRAI's website (www.traai.gov.in). All stakeholders are requested to send their written comments on the issues raised in this paper on or before 30.06.2006. For any clarification on the matter, Advisor(MN) may be contacted on Phone No. +91 11 26106118 or email sgupta09@gmail.com.

(Nripendra Misra)
Chairman, TRAI

Table of Contents

Chapter 1. Introduction.....	1
Background	1
What is SMS?.....	1
Type of SMS.....	3
SMS & Voice Network Element	4
Chapter 2. Regulatory Issues.....	5
Current Scenario.....	5
Issue of Carriage Charges.....	10
International practices.....	10
Chapter 3. Premium SMS	11
Chapter 4. Issues for Consultation	14
Issues	14
Annexure A: Use of Signaling Channels	16
Annexure B: International Practices	19
Annexure C: Directive	21

List of Abbreviations Used

_S.No.	Abbreviation	Expansion
1.	A2P	Advertiser to Person
2.	ARCEP	Electronic Communication and Postal Regulatory Authority (French Telecommunication Regulator)
3.	BTS	Base Transceiver Station
4.	CAGR	Compound Annual Growth Rate
5.	CCS7	Common Channel Signaling System 7
6.	CDMA	Code Division Multiple Access
7.	DOT	Department of Telecommunications
8.	FCC	Federal Communications Commission
9.	GMSC	Gateway Mobile Switching Centre
10.	GSM	Global System for Mobile
11.	HLR	Home Location Register
12.	I2P	Internet to Person
13.	ILDO	International Long Distance Operator
14.	IUC	Interconnect Usage Charge
15.	MCMC	Malaysian Communications and Multimedia Commission
16.	MSC	Mobile Switching Centre
17.	NLDO	National Long Distance Operators
18.	P2N	Person to Network
19.	P2P	Person to Person
20.	SCCP	Signalling Connection Control Part
21.	SMS	Short Message Service
22.	SMSC	Short Message Service Centre
23.	SS7	Signaling System 7
24.	TDMA	Time Division Multiple Access
25.	TRAI	Telecom Regulatory Authority of India
26.	TV	Television
27.	VSNL	Videsh Sanchar Nigam Limited

Chapter 1. Introduction

Background

1.1 In the telecom sector, though voice is still the primary means of communication, exchange of data as communication is also playing an increasingly significant role. The sending of text messages by cellular subscribers is one category of data exchange that has become very popular in the recent past.

What is SMS?

1.2 Short Message Service, abbreviated as SMS, is the transmission of short text messages to and from a mobile phone, or any other device capable of generating the SMS. It is composed of a maximum of 160 characters, each coded on 7 bits. Once a message is sent, it is received by a Short Message Service Centre (SMSC) of the calling subscriber's network, which then delivers it to the appropriate destination device.

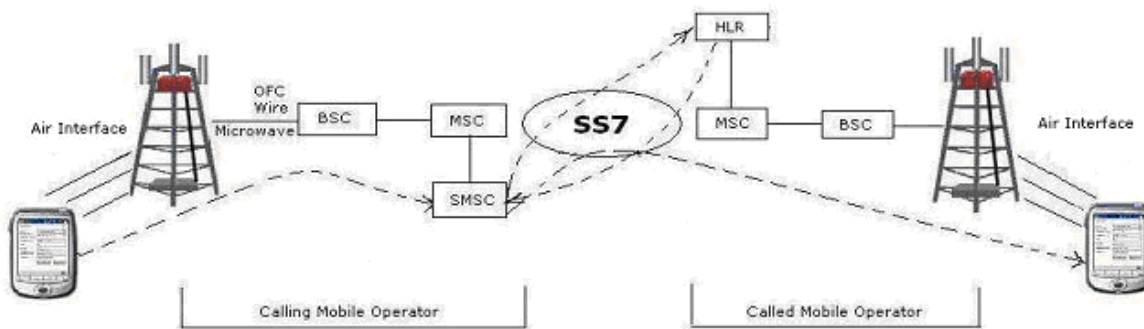
1.3 In Global System for Mobile (GSM), an SMS originated from the mobile subscriber of operator A is directly sent by the SMSC to the mobile subscriber of operator B. To determine the status of the customer, the SMSC sends a request to the home location register (HLR) of the network to which the recipient is a subscriber. Once the HLR receives the request, it will respond to the SMSC with the subscriber's status: 1) inactive or active 2) location where subscriber is roaming.

1.4 If the response is inactive, then the SMSC holds on to the message for a fixed period. When the subscriber accesses her or his device, the HLR sends a SMS Notification to the SMSC, and the SMSC attempts delivery.

1.5 There are three steps to routing an SMS from one operator to another. First, the SMS is stored in the SMSC of the calling party's operator. Then, the SMSC of the calling party's network queries the HLR of the called party's network, in order to locate the Mobile Switching Centre (MSC) to which SMS is to be delivered. Once the request has been made and authorisation received, the SMS is routed via the MSC of the called party's network.

- 1.6 The SMSC transfers the message in a Short message delivery Point to Point format to the serving system. The system pages the device, and if it responds, the message gets delivered. The SMSC receives verification that the end user received the SMS, then categorizes the message as sent and does not attempt to send it again. Thus, SMS uses a store and forward method of transmitting messages to and from mobiles.

Figure 1.1: SMS Travel Path



- 1.7 Normally in the GSM SMS delivery, SMS termination does not require the SMSC of the network of the recipient’s operator. However In some cases like Code Division Multiple Access (CDMA) network or GSM to CDMA SMS transfer, or in case of some services like Push SMS, the recipient SMSC is also used for terminating the SMS to the recipient. In all these types of SMS transfer, the air interface-signalling channel is extensively used for terminating the SMS traffic.
- 1.8 With the growing convergence of networks and services, a person can send an SMS from a mobile phone, fixed phone, or even via the Internet.
- 1.9 Since SMS uses the signaling channel as opposed to a dedicated channel, these messages can be sent/received simultaneously with the voice/data/fax service over a network. SMS supports national and international roaming. With the mobile networks based on all the technologies like GSM, CDMA etc. supporting SMS, SMS is more or less a universal mobile data service and can reach any other mobile user around the world.

Type of SMS

- 1.10 Different types of SMS communication can be broadly classified into the following categories based on the originating and terminating identities.
- a) Person to Person (P2P)
 - b) Advertiser to Person (A2P)
 - c) Person to Network (P2N)
 - d) Internet to Person (I2P)
- 1.11 In Person-to-Person (P2P) communication, the SMS is between two individual subscribers. The SMSC or originating network stores the SMS & sends it to the recipient, either directly or in case of GSM to CDMA or CDMA to CDMA network, through the SMSC of the terminating operator.
- 1.12 In Advertiser to Person (A2P) SMS mode, advertising agencies have a commercial agreement with one or more service providers. Advertisers provide the messages and mobile numbers to an operator, who then sends the messages in broadcast mode to the recipients. If the SMS transfer is on-net, then SMS moves only within the network of one operator and hence there is no issue of loading resources of other operators, but if the recipient subscriber is attached with another operator, then the resources of the terminating operator are also used for delivering of such SMSs. This type of SMS delivery is also termed as Push method.
- 1.13 The People to Network (P2N) SMSs are usually an on-net service. In this type of communication, the content provider usually has a revenue share agreement with the service provider. The operator gives the content provider a 4-5 digit short SMS code. The content provider then uses the short codes to provide different kinds of services like astrology information, ring tones, picture downloads, tele-voting, games, etc. Operators charge premium rate for these SMS to the short codes.
- 1.14 The Internet to Person (I2P) arrangement allowed by some operators with the provision of a web interface enables a person to send an SMS from the Internet to mobile subscribers. They also accept SMS originating from the Internet messaging web sites.

SMS & Voice Network Element

- 1.15 The network elements used in SMS and voice calls are similar. However, in the case of SMS, technically, SMSC and its interface is additionally required for SMS transfer.
- 1.16 SMS is carried on a signaling channel of air interface from mobile handsets to the Base Transceiver Station (BTS), and thereafter it is carried on the Signaling System 7 (SS7) signalling channel. In case of voice calls, the traffic channel is used for voice transfer and the signalling channel is used only for the setup of the call.
- 1.17 Though overall data transfer requirement for SMS, in terms of bandwidth, is less than for voice calls, the amount of data for the SMS transferred on signalling resources are much more than in that of a voice call. This is primarily because the signaling channel carries the SMS contents.

Chapter 2. Regulatory Issues

Current Scenario

- 2.1 Though SMS is possible in the fixed network too, it is not widely used in India. Almost all of the growth seen in SMS use is in mobile sector. Person to person (P2P) text messages have become a popular mode of communication and the relative contribution of revenue from SMS to the total revenue is increasing. According to the Times of India, in 2005 text-based services currently formed a Rs. 100 crore industry, approximately 30 per cent of the value-added services market. Over the next five years, observers estimate textbased services to grow at a Compound Annual Growth Rate (CAGR) of 47 percent to reach Rs 720 crores in 2010.
- 2.2 However, due to different SMS bundled tariff plans offered by the operators and as SMS is being increasingly used as a means of advertisements, the SMS traffic imbalance across operators is increasing. At present, most operators use the “Bill & Keep” regime and hence, in cases where very low SMS tariffs are offered by the service providers for either acquiring new subscribers or for attracting advertisers, there is a possibility of choking of the terminating operator’s network without any matching revenue generation for this operator.
- 2.3 In this scenario, the case for regulation of SMS termination charges could arise inter-alia on account of the following factors:-
 - a. Person to person (P2P) SMS has become a popular mode of communication by the mobile subscribers and the proportionate contribution of SMS revenue to the total revenue is increasing,
 - b. SMS traffic imbalances across operators, and
 - c. Third party usage of SMS - SMSs being increasingly used as an important mode of advertisements/ commercial usage of SMS.
- 2.4 Data available in the quarterly report of service providers has been analyzed with respect to outgoing SMS for each circle and for each service provider. Similarly, the contribution of SMS to the total revenue of service providers has also been examined from the same source.

Table 2.1**Analysis of SMS in respect of GSM Cellular service providers for the quarter ending December 2005**

Service Providers	Number of SMS per Subscriber per Month			Proportion of SMS Revenue to Total Revenue
	Post Paid	Prepaid	Blended	
SP 1	14	60	49	3.8%
SP 2	55	52	53	7.4%
SP 3	24	22	23	6.1%
SP 4	29	15	18	3.3%
SP 5	17	15	15	1.6%
SP 6	57	72	68	6.3%
SP 7	31	27	28	4.5%
SP 8	34	31	31	11.7%
SP 9	27	13	15	5.5%
SP 10	25	13	17	4.1%

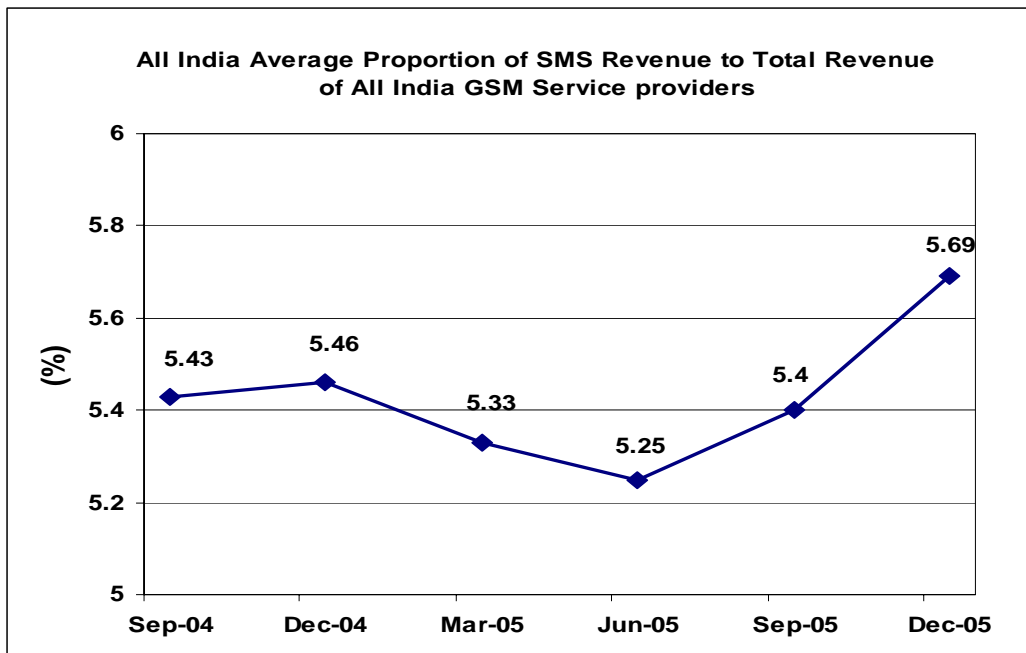
Source: Reports received from service providers.

- 2.5 For the quarter ending December 2005, the average contribution of SMS to total revenue of cellular service providers ranges from 1.6% to 11.7%. The outgoing SMS per subscriber per month ranges from 15 to as high as 68 and the trend is on the rise. The range seen in the revenue from SMS and the absolute number of SMS across service providers could indicate the imbalances in traffic in the SMS market. The limitations of available data in this respect deter us from arriving at conclusions on the break-up of SMS traffic i.e. proportion of SMS traffic that relates to P2P text messages wherein a tariff is levied and collected, toll free SMS to customer care centres and other categories. It is also a fact that service providers in the mobile space offer innovative tariff plans bundling voice and SMS in a manner wherein a large volume of SMS being made available either at charges below the average SMS rate or even at zero charges. In general, retail tariffs for local

SMS ranges from Re.0.40 to Re.1. As long as free SMSs or SMSs at lower rates are restricted to termination in the network of the same operator, it may not result as an inter-operator issue. However, we cannot expect consumers to communicate only within the same network. Thus, such traffic also terminates with the subscribers of other operators. Even in such situations, if traffic balances across the service providers it may not result in an inter-operator issue having revenue implications. This is also not likely to happen in a growing market like India where the subscriber base of service providers is asymmetrically distributed across different circles. There also does not seem to be any co-relation between the market share of service providers in access market and the average SMS per subscriber of the service providers. Thus, it is possible that the asymmetrical retail tariff for SMS and the market share of the service provider in a particular circle could together determine the average number of outgoing SMSs per subscriber per month.

- 2.6 The average revenue generated from the SMS is increasing having substantial contribution towards revenue generation (Figure 2.1)

Figure 2.1 : Proportion of SMS revenue to total revenue



As stated earlier, the mobile service providers offer innovative SMS & voice bundled tariff plans. The SMS charges in some of the plans offered by the service providers are almost zero. These tempting propositions have the full potential of initiating unbalanced SMS traffic flow. Moreover the extensive content oriented services, which involve exchange of information through SMS, could also become a reason for imbalance of SMS traffic. The non-uniform subscriber bases of mobile subscribers of different service providers also enhance the SMS traffic imbalance across different service providers.

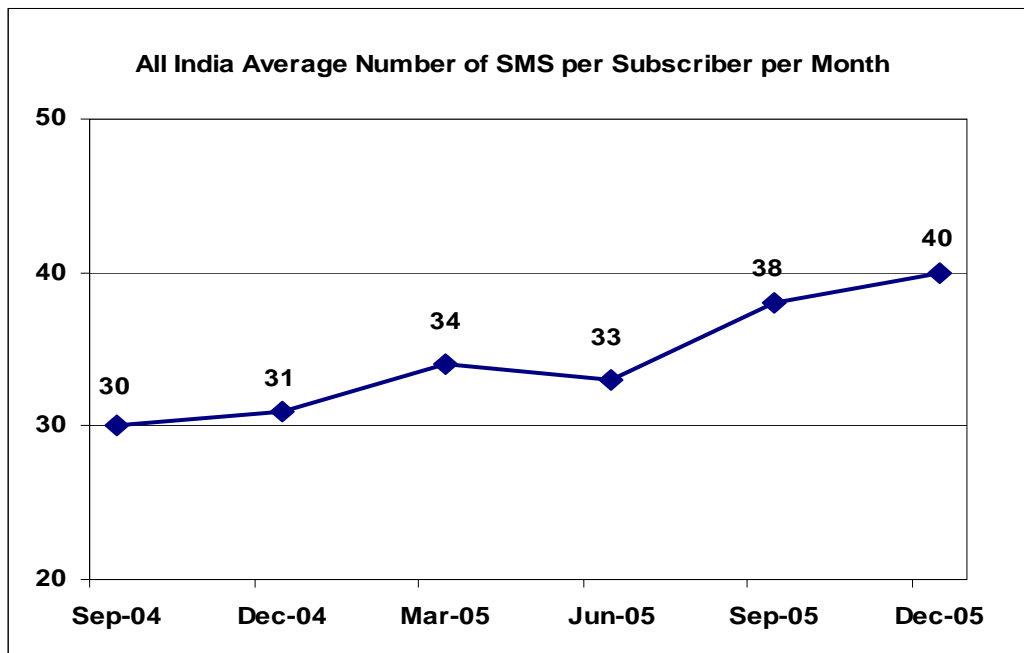
2.7 The Interconnect Usage Charge (IUC) Regulation 2003 dated 29.10.2003 had committed to revisit the matter based on collection of additional data. The relevant paragraphs of that Regulation are reproduced below:-

“No separate traffic/cost data was available with TRAI to ascertain usage charges for resources utilized in transmission of short messaging service (SMS). The Authority is of the view that at present, the service providers should work out mutual arrangements for usage charges for exchange of SMS. The Authority has forborne in respect of IUC for SMS at present, and may re-visit this matter in the near future based on the exercise of collection of additional data in this regard.”

2.8 From the argument for the support of regulation of SMS termination, it may be claimed that it is merely an extension of the existing regulation of mobile voice termination. The market for SMS termination, as in the case of the market for voice termination, is a monopoly for each mobile network operator. Thus, it there is clearly an element of ‘dominance’ that requires regulation.

2.9 On the other hand, there may be arguments against regulation of SMS termination on the following grounds:-

- Consumers have shown no reluctance to use SMS at the current prices as is evident from the rising trend in the average number of SMSs per subscriber (Figure 2.2). For many there seems to be a preference for using SMS over voice. Hence, the case for regulation does not appear to be strong.

Figure 2.2 : All India Average Number of SMS per subscriber per month

- Given the low price elasticity of SMS, a rational service provider may price SMS above cost and could use the surplus either to subsidize other more price sensitive services or to invest in network and service developments. Regulatory intervention on SMS termination could therefore have the perverse effect of slowing down innovation and investment.
- The market for SMS is composed of mobile operators that either operate a 'Bill and Keep' regime without any interconnect charges or have a reciprocal charging regime. In such circumstances, the level of SMS termination charges makes little difference, as there is little or no interconnect payment between the mobile operators. Until there is significant demand for third party usage of SMS with the help of aggregator, probably through fixed mobile convergence services, from content providers or internet to mobile messaging, there cannot be misbalance in SMS flow among different service providers. There is an apprehension that defining interconnect charges for SMS could lead to a hike in SMS tariff.

Issue of Carriage Charges

- 2.10 The Common Channel Signaling System 7 (CCS7) signalling channel is used for SMS flow in case of inter-circle and international transfer scenario. Though the signalling requirement of voice calls has priority over SMS data transfer, the fact remain that the resource of CCS7 signalling is used & the CCS7 resource provider here in our case National Long Distance operator (NLDO) /International Long Distance operator (ILDO) should have some revenue from SMS data transfer over its network. Possibly keeping in mind the utilization of CCS7 signalling channel for data transfer over it, Department of Telecommunications (DoT) has initially specified Rs. 50/- per kilo segment of Data as utilization charges for auto roaming service vide its letter no. 117-18/96-PHC (Pt.) dated 29.01.1998 (Annexure A).
- 2.11 For carrying information over CCS7, some of the CCS7 resource providers are charging a flat rate of Rs. 25/- and Rs. 50/- per month per roaming subscriber registered with the operator for national and international roaming respectively for providing Auto roaming service through use of its CCS7 link. The charges are applicable on the subscribers who roam in another service area. Using CCS7 signalling resources within the service area do not attract any utilization charges by the CCS7 resource providers.
- 2.12 However in case of Inter-service area SMS transfer or international SMS transfer, the resources of CCS7 signalling channels are used without any revenue gain by its service. There is as such no extra cost involved in carrying these SMSs. In case of increased uses of SMS over the network, additional time slots other than TS16 may be configured for carrying the additional SMS.

International practices

- 2.13 Internationally the practices vary and differ depending on the pattern of voice revenue shares. It varies from, on the one hand, the Bill & Keep by the SMS originating operator, and on the other hand, the share in revenue by the terminating operator in the form of SMS terminating charges. Practices in some of the countries are enclosed at Annexure B.

Chapter 3. Premium SMS

- 3.1 An SMS that emanates from a content service/product and adds value to the text message for the consumer, by way of the application or the content contained within, is termed as a premium rate SMS. Since the service provider usually prices these messages higher than the normal SMS, premium text messaging provides an opportunity for the operators and the content providers to increase revenues from new from of mobile applications or content.
- 3.2 Such services offered by the service providers, either themselves or in collaboration with the content providers include text services like news, sports, astrology etc, as well as binary services like ring-tones, picture messages, contests, gaming, etc.
- 3.3 These premium rate services are mostly of the P2N variety and are usually identified by the short digit codes allotted by the content providers for accessing these services. The content providers have a commercial arrangement with the access service providers wherein the revenue generated is shared in a certain ratio between them. At the most basic level, the mobile operators provide the transmission network, the billing mechanism and the established billing relationship with the customer. The value chain can be expanded further to include content and value added service providers (and sometimes a chain of these), who may be independent third parties or the mobile operators themselves.
- 3.4 Since these are premium rate services and are charged at a rate, a few times the normal SMS rates, TRAI had issued a direction on Premium Rate Services on 3rd May 2005 (Annexure C) wherein all the operators were directed to publish in all communications/advertisements relating to Premium Rate Services, the pulse rate/tariff for that service. This was done to prevent any inconvenience to consumers who unwittingly used the service, not knowing the tariff.

- 3.5 Lately, it has been noticed by TRAI that the use of these premium rate SMS for providing services like tele voting, lottery, online bidding etc. has increased tremendously. These services are being provided by the mobile operators either themselves or by Television (TV) channels/third parties. The revenue generated from these activities is shared between service providers and the third party (the organizer of these activities). Charges for these activities are much higher than the normal SMS charge.
- 3.6 It is seen that practically all the TV news channels and a number of newspapers are asking the opinion of their viewers or readers on various topics through SMS tele-voting. Such SMS are of a premium rate and are charged higher than a normal SMS, though in most of the cases the charge for the SMS is not being displayed. The issue that arises here is whether activity like tele voting should be treated as premium rate service or not.
- 3.7 One argument against these higher charges is that these tele-voting services do not give any gain to the customers. The third party, normally the TV channel or newspapers, gathers the opinion of the masses through tele-voting on certain issues, which are then used in their programmes. One classic example is that of the programme “The Indian Idol.” It is reported that, in this programme, the TV channel received a few crores of SMS from the viewers, expressing their opinion regarding different participants in the programme. The charges for the SMS were few times the normal charge. This setup is opposite to the traditional model of the opinion poll, where the surveyor would pay or give incentives to participants to participate in the survey. If one adheres to this logic, the SMS charges should not be higher but lower than the average SMS charges, or even paid by the message recipient.
- 3.8 The argument for the higher charges may be that because of the involvement of third party like a TV channel or other media in value chain of SMS delivery of tele-voting, the cost is slightly higher. However, in this case too, pricing of these services could reflect this nominally higher cost say 10-15% higher and not be at such a high premium.
- 3.9 Service providers also offer services like lotteries or auctions by SMS, leading to the issue of the ethics/legality of the services. In some of the cases, the

third party is faceless entity, and as such the service becomes questionable as far as the consumer interest/grievance redressal is concerned. It raises the issue of whether some kind of regulatory mechanism is required for monitoring them in the interest of consumers.

Chapter 4. Issues for Consultation

Issues

- 4.1 As discussed in the previous chapters, the increasing popularity of SMS as a mean of communication, and more importantly as a means for advertisement, along with the wide variation in SMS charges as each service providers are adopting different business strategies, there is a possibility of traffic imbalance across different networks. This imbalance in traffic may lead to widespread demand for regulating the termination charges for terminating the SMSs in their network.
- 4.2 The SMS is a value added service and the tariff is under forbearance. As per the international practice, in most of the countries, the SMS origination & termination charges are left to the market forces and the commercial agreements between the operators. In India also, some of the operators charge for terminating SMS in their network.
- 4.3 In view of these observations, the issue arises as to whether the SMS carriage and termination charges should be regulated to ensure an orderly growth and a level playing field.
- 4.4 Spammers also use SMS as a means of communication. With the introduction of interconnect charges, the spammers may need to expend more to send SMS. This may possibly result in a reduction of the quantum of spam.
- 4.5 Tele-voting type of SMS are being invited by the print as well as electronic media as a mean to form an opinion about the current issues or activities. The service providers are charging these SMS at premium rate. Often, the emotions of the viewers are exploited by this tele-voting service and it becomes indirectly a major source of revenue to the organizer of these activities, without corresponding 'work done'.
- 4.6 The activities like lottery, online bidding etc. invites ethical issues.

4.7 Issue for the discussions are as follows-

- a) **Is there a case for regulating the Termination Charges for SMS and why?**
- b) **What should be the method of regulating the SMS termination charges in India?**
 - i. **Mandating revenue sharing**
 - ii. **Mandate cost based termination charge**
 - iii. **Any other – specify**
- c) **Is there a case for regulating the carriage charges for SMS and why?**
- d) **What should be the method of regulating the SMS carriage charges?**
 - i. **Mandating Revenue Sharing**
 - ii. **Mandate cost based Carriage Charge**
 - iii. **Any other – Specify**
- e) **What may be the effect on the retail tariff for SMS if IUC charges are fixed/regulated?**
- f) **Should services like tele-voting be treated as premium rate service? Comments.**
- g) **Do you see any need to restrict bidding, lottery type of services offered by the service providers on their network in the interest of the consumers?**

Annexure A: Use of Signaling Channels

Govt. of India
Ministry of Communication
Telecom Commission
Sanchar Bhavan, 20, Ashoka Road, New Delhi-110 001
(VAS CELL)

No. 842-201/97-VAS

Dated: 12.01.98

To

All Cellular operators in Circles / Metro cities.

Subject: Clearance for National and International automatic Roaming with respect to license for cellular mobile telephone service in Circles / Metro cities.

Dear Sirs,

The issue relating to National and International roaming has been under active consideration of the Telecom authority. It has since been decided to permit automatic roaming between various operators' service areas. Following technical and commercial conditions shall apply.

ROAMING:

- I) Roaming will be provided by using signaling transfer capability of the new technology DOT exchange and SCCP functionality of VSNL...
 - II) Inter MSC leased line connectivity of different operators shall not be provided.
 - III) Voice path switching will be through DOT and VSNL network only.
 - IV) The licensees shall abide by the ceiling tariffs specified in the license agreement.
 - V) The licenses shall abide by all foreign and Govt. of India regulations with respect to international roaming. International roaming will be provided only after obtaining all statutory clearances as per laws of the land as applicable in the country concerned.
2. In addition to the normal charges for use of speech path payable on the basis of long distance STD/ISD calls, the charges for the use of DOT / VSNL resources for transmission of signaling data over the DOT/VSNL CCS7 signaling network reference para 1 (i) , as applicable from time to time, will also be payable to DOT / VSNL. These charges will be intimated separately.
3. You are requested to confirm the acceptance of the conditions stipulated in paras 1&2 before putting the roaming facility in use.

Sd/-

(Kuldip Singh)

Director (VAS-I)

Govt. of India
Ministry of Communications
Deptt. Of Telecom.
(CS Section)

20, Ashoka Road,
Sanchar Bhawan,
New Delhi-110001

No. 117-18/96-PHC (Pt.)

Dated 29th Jan. 1998

To

All Head of Circles/Metro Distts.
CGMs MTNL New Delhi/Mumbai

Sub: Tariff for use of DOT's CCS-7 signaling channels by cellular operators for the purpose of roaming.

Reference is invited to the VAS cell letter no. 842-201/97-VAS dated 12.9.97 and no. 842-201/97-VAS dated 12.1.1998 whereby clearance was issued for national automatic roaming in respect of the license for cellular mobile telephone service in metro cities and circles respectively using the signaling transfer capability of the new technology DOT/MTNL exchanges.

2. It has been decided to charge for the usage of CCS –7 signaling channels as follows:
- | | | |
|----|---------------------|---|
| a) | Utilisation Charge | Rs.50 per kilo segment of data |
| b) | Connectivity charge | Leased line charge for connecting MSC to nearest signaling point of DOT/MTNL, if the same is not available at the POI with the DOT network. |

In the case of circle cellular service leased line can even be provided from the signaling transfer point in a different circle if necessary. The accounting arrangement will however be made by the circle of cellular service area concerned.

3. Since the DOT switches do not presently have the capability to measure the amount of traffic flowing on CCS-7 network, it has also been decided in consultation with the cellular operators association of India that the measurement of the data will be done on the switches of cellular operators (i.e GMSC) and monthly information will be supplied by them to the designated field unit. Based on the information provided, a bill on the above mentioned rates will be raised and realized on monthly basis. A record of monthly billed amount may be kept separately for making use in various administrative and technical matters. CGMs can get themselves satisfied with regard to the data measurement point and methodology to be adopted for measurement and exchange of information.

4. Measurement information supplied by respective operators can be cross checked with the sample data randomly measured on relevant DOT switches for which capability is already available.
5. This tariff is on experimental basis and subject to review based on traffic data collected for one year.
6. This issued with the concurrence of finance vide Member (Finance) Dy.No.3161/F dated 12.12.9 and No.511-DDG (TCF) DATED 29.1.98.

Sd/

(A.K.Mittal)

Director (CS)

Annexure B: International Practices

USA

- i. The Federal Communications Commission (FCC) does not regulate any tariffs for mobile operators including for SMS. They do not appear to have any issue with SMS termination charges either and as such SMS termination charge is not regulated.

France

- ii. In October 2005, ARCEP, the French Telecom Regulatory Authority published its market analysis for SMS termination on individual mobile networks and found that the three French mobile network operators possess a Significant Market Power (SMP) for termination of SMS on their individual networks. The French regulator has proposed to impose regulatory framework similar to that imposed on voice termination which includes obligation to provide SMS access and termination, non-discrimination, transparency and a price cap on SMS termination.

Lithuania

- iii. SMS termination charges in Lithuania are not regulated. The possibility of bilateral agreements between the originating service provider and the terminating service provider for SMS is not excluded.

Pakistan

- iv. The service providers mutually agree to apply SKA (senders keep all) regime for SMS termination. However, it is likely, in future SMS termination may be brought under regulation after assessing the cost based interconnection charges.

Malaysia

- v. In the report titled A Report of Public Inquiry on Access Pricing dated 30.11.2005 the Malaysian Communications and Multimedia Commission (MCMC) has concluded that mobile termination service is a bottleneck facility. Accordingly, it decided that price for mobile network termination service (voice only) should be mandated and an indicative price for mobile network termination service (SMS only) would be published. And in doing so they fixed such rates for the years 2006, 2007 and 2008.

Finland

- v. A Finnish case study carried out in 1999 has reported that Domestic SMS messages in Finland are subject to a termination charge, which is roughly equivalent to half of the retail charge. For most international incoming messages no termination charge is levied, but the

sender keeps all principle is applied on the assumption that SMS traffic in both directions is about equal. However, some operators allow for the transmission of internet-originated messages thus causing heavy imbalance.

El Salvador

- vi. SMS termination charge is not regulated.

Israel

- vii. The termination rates of voice call and SMS have been subjected to control since May, 2004.

Singapore

- viii. SMS termination charges are not regulated but based on the mutual negotiation between operators.

Annexure C: Directive

F.No.305-8/2004-QOS
Telecom Regulatory Authority of India
A-2/14, Safdarjung Enclave, New Delhi – 110 029

Dated 3rd May, 2005

To
All Cellular Mobile Service Providers
All Unified Access Service Providers

Subject: Direction on Premium Rate Services.

1. The Authority has observed that in the last few months, a number of operators and also some independent agencies have started providing value added services like quiz, ringtones, televoting etc. through SMS. In most of these cases, the charges for these services are more than the normal published tariffs. The customers are informed about these value added premium rate services through SMS, advertisements in newspaper or T.V. But in this communication, the cost implication of the service is not intimated. Sometimes the messages are only followed by wordings "T&C apply".

2. In the present multi-operator multi service scenario, such premium rate services have increased considerably. The service provider is aware of the pulse rate for these services as either the service provider is providing such services or it has an agreement with the provider of such premium services. However, the cost for such premium services is generally known to the customer only after the service has been utilized and the bill is received. This practice of service providers is against the interest of the consumers.

3. In view the above, in the consumer's interest, the Authority in exercise of its power conferred upon it under Section 13 read with Section 11 (1) (b) (i) and (v) of the Telecom Regulatory Authority of India Act, 1997 and clause 9 and 11 of the Telecommunication Tariff order 1999 hereby directs all the Cellular Mobile Service Providers and Unified Access Service Providers to publish in all communications/ advertisements relating to premium rate services, the pulse rate/ tariff for the service.

This issues with the approval of the Authority.

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(Sudhir Gupta)
Advisor (QOS)