

Consultation Paper No.: 5/2011



सत्यमेव जयते

TELECOM REGULATORY AUTHORITY OF INDIA

Consultation Paper

on

Mobile Value Added Services

21st July, 2011

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New Delhi-110002

Preface

The Indian telecom sector has seen an exponential growth in the last few years. High proliferation of mobile services has created a unique opportunity to deliver information and innovative services to the masses. The mobile phone has evolved from a device just to support communication requirements to a smart phone with ability to provide a plethora of information & services usually known as Mobile Value Added Services.

These applications possess features and functions that are unique to mobile devices such as mobility, flexibility to use at anytime and anywhere. MVAS is likely to provide innovative services to customers and new revenue stream for service providers. The potential for VAS revenues appears all the more significant at the present juncture, given that India has just introduced 3G and Broadband Wireless Access (BWA), that allow service providers to offer wide range of advanced services.

Considering the market potential for mobile value added service in the coming years, there is a need to develop a harmonized ecosystem for ushering growth in all the segments of the MVAS, thereby enabling benefits to consumers and also revenue generation for service providers.

Written comments on the issues raised in this consultation paper are invited from the stakeholders by 12th August, 2011 and counter-comments, if any, on the comments by 19th August, 2011. The comments and counter-comments may be sent, preferably in electronic form, to Mr Rajkumar Upadhyay, Advisor (BB & PA) on the e-mail address: advbbpa@traigov.in or bbpa@traigov.in. Comments and counter comments will be posted on the TRAI's website.


(R. Ashok)
Member, TRAI

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INTRODUCTION

1. Telecommunications had traditionally been a voice communication service. The services today have moved beyond their fundamental role of voice communications to a variety of non-core services, which in telecommunication parlance is called Value Added Services (VAS). Value Added Services are enhanced services, in the nature of non-core services, which add value to the basic telecom services.

2. Value Added Services add value to service, enabling the subscriber to use the telephone, particularly the mobile phone or any end user terminal device for a host of purposes like sending short messages, pictures, play games, listen to music, read news headlines, astrology, get flight information, surf Internet, mobile banking including mobile payments etc.. In times to come people will buy mobile phones or any end user terminal device not just to remain connected but to express themselves in a variety of ways.

3. The last decade has seen a phenomenal growth in the telecom subscriber base. We have crossed the 850 mn mark with respect to wireless telephone subscribers and adding nearly 18 mn connections every month. In the developing nations like India, where Personal Computer (PC) penetration is so low, mobile phone offers to be the best form of a communication application. Managing and buying PCs and laptops is still too expensive for our masses.

4. Till some time back use of mobile phones was limited to voice and text messaging providing an effective media to citizens for interacting with each other anytime anywhere. However, telecommunication has moved

beyond providing just basic voice calls. The mobile phone has evolved from a mere communication device to smart phone with an ability to tap a plethora of information & services and as a result being referred to as the 'fourth screen', after Cinema halls, Television and PC.

5. Consumer expectations have also evolved to where the term wireless no longer implies just voice service, but rather represents an effective medium through which one connects—in real time, from any place—to be informed, entertained, engaged in visual or audio communication, or to buy goods and services. The increasing young generation of India is driving this phenomenon with their nomadic lifestyle.
6. Various applications and services available on mobile phones are surely the new evolving wave. These services possess features and functions that are unique to mobile devices, such as mobility, flexibility, personality, and are capable in providing end-users' added value on top of voice services. A variety of applications and services can be provided through mobile phones meeting the informational, entertainment and other needs of the customer.
7. In the last few years, we have also seen a phenomenal increase in initiatives and efforts toward reinventing government with the help of Information Technology (IT). This trend has been fueled by the changing expectations of citizens and desire of the Government to capitalize on the emerging technologies to make government processes more efficient and effective. Part of the current excitement of this trend is the emergence of the wireless platform as a means for delivery of services to masses. National e-Governance Division (NeGD) under Department of Information Technology, Government of India, is already working on setting up a Mobile Services Delivery Gateway (MSDG) for providing various government services seamlessly to citizens.

8. Over the years, banking has transcended from the branch model to one where banking services are available anytime anywhere. The onset of mobile banking has transformed the banking services in the country by enabling the people to access their bank accounts almost instantaneously, conduct transactions, and receive alerts on transactions. Mobile banking and Mobile payments applications can achieve financial inclusion and the Reserve Bank of India (RBI) is already formulating necessary policy guidelines in this regard.
9. While the computer and internet empowered urban India, it is the mobile which is impacting common man including in rural areas. Mobile phones can provide the solutions for bridging the digital divide and make it possible medium for delivering a variety of services and content. The mobile platforms world over are being used to provide financial and banking services, health services, tele-education and government services. Increasing proliferation of mobile services has also created a unique opportunity to deliver all kinds of utility Mobile Value Added Services (MVAS) to the masses through innovative applications.
10. The wireless is being viewed as the extension of the Internet-based e-channel, a paradigm shift from the static terminal of the PC to the flexible “anytime, anywhere” context of the mobile environment. In recent times, the industry has witnessed innovations in low-cost feature phones using which mobile users are capable of using disparate content such as audio, video and interactive games. As a result, mobile has emerged as an effective interactive avenue blurring the social, economical as well as geographical boundaries. The initiatives to provide various services using mobile applications have already started in India. The potential for utility MVAS can be leveraged to boost social and economic activities, governance, and enhance government citizen interaction.

11. In addition to benefiting consumers MVAS is likely to become a tool for additional revenue, service differentiation, and customer retention for service providers. MVAS is expected to be the next wave for growth and a large chunk of revenue is expected to flow in from MVAS in the near future as is corroborated by the experience of telecom players in the other markets. Applications meeting the needs of the customers are going to be adopted in a big way leading to creation of a substantial revenue stream. One of the most successful service examples is China Mobile's IM service called Fetion, which has over 100 million registered users. Other examples include services such as M-PESA from Safaricom in Kenya, the Rural Information Service from China Mobile, the 'Please Call Me' service from MTN in South Africa and the 'CellBazaar' service from Grameen Phone in Bangladesh.

12. Recognising the need to address the various issues involved in the growth of value added services in a transparent and coordinated manner, TRAI sent its recommendations on “Growth of Value Added Services and Regulatory Issues” to the Government on 13th February, 2009. It was recommended that Telecom Service Providers should provide uniform access to their infrastructure to the VAS providers through mutual agreement, and stressed the need to publish charges for VAS and maintain transparency in billing. However, it observed that there was no need for a licence/registration for VAS providers. These recommendations are yet to be accepted by the government.

13. In the meantime there have been various developments specially the allotment of spectrum for 3G and Broadband Wireless Access (BWA) services, which has created additional possibilities in the area of MVAS. Recommendations on “National Broadband Plan”, which envisages creation of an open access optical fibre network throughout the country,

have also been released in December 2010. Implementation of the broadband plan will lead to expansion of mobile services even in remote areas as access networks could leverage the optical fibre network in the backhaul. Considering the enhanced market potential for mobile value added service in the coming years due to rollout of 3G & BWA services, implementation of National Broadband Plan and migration to Next Generation Networks (NGN), there is a need to develop a forward looking harmonised framework for ushering growth in all the segments of the mobile value added service viz content development, technology platform, content aggregation etc.. A well developed framework will enable benefits to consumers, promote entrepreneurship and at the same time create additional revenue streams for the service providers. Effective cooperation and collaboration amongst various participants is a key factor to form a healthy eco system for provision of value added services. Accordingly, the Authority in its recommendations on “Spectrum Management and Licensing Framework” issued in May 2010 had indicated to initiate a consultation process separately to identify measures for the proper growth of the VAS industry, including bringing them under the licensing regime.

14. In January 2011, ASSOCHAM released a study paper on “Mobile Value Added Services (MVAS) – A vehicle to usher in inclusive growth and bridge the digital divide”. The study paper identified issues for the growth of MVAS industry including policy framework, support infrastructure and high equilibrium ecosystem. TRAI uploaded this paper on its website on 22nd January 2011 for seeking comments from the stakeholders.
15. In response to the study paper some of the stakeholders mentioned that recommendations of VAS issued by TRAI in 2009 are adequate as there have been no material changes with regards the scenario existing

therein. They also mentioned that the market has become more competitive with launch of services by 4-5 additional service providers in each services area and competition to provide best of services and innovations in the form of MVAS give the VAS providers due negotiating powers. In their opinion current policy framework is working well and it is best to leave the MVAS space to the market forces and let true innovation emerge from the MVAS providers in the current framework.

16. On the other hand some of the stakeholders favoured licensing framework for MVAS providers and mentioned that the framework should include fair & transparent revenue share, dispute resolution mechanism, transparency in Management Information System (MIS) reconciliation and protection of content Intellectual Proprietary Rights (IPRs) etc. One of the stakeholders mentioned that licensing of MVAS players providing services such as banking, finance, health, news and current affairs will enable the authorities to ensure quality of content and protect consumer interests.
17. With a view to bring out all the aspects of the relevant issues and to provide a suitable platform for discussion, TRAI has initiated this consultation paper suo-motu focusing on future looking regulatory framework for provisioning of Mobile Value Added Services.
18. The paper is divided into three chapters. Chapter I deals with Growth drivers for VAS and Present Status of Mobile Value Added Services giving overview of the existing scenario. Chapter II discusses regulatory framework for MVAS. Chapter III summarises all the issues for consultation.

CHAPTER I: MOBILE VALUE ADDED SERVICES –GROWTH DRIVERS AND PRESENT STATUS

A- Growth drivers for MVAS

1.1 The Indian telecom sector has seen an exponential growth in the last few years. Favourable regulatory policies and decreasing tariffs have lead to a tremendous increase in the subscriber base. The number of telephone subscribers in India reached 874.68 million at the end of May 2011 out of which 840.28 million are wireless subscribers. Only 3% of India’s population owns a computer and with such a poor PC penetration mobile phone becomes an alternate medium for delivering a variety of services and content through mobile value added services. The low cost of the mobile device and service can ensure the masses can avail the services through MVAS platform.

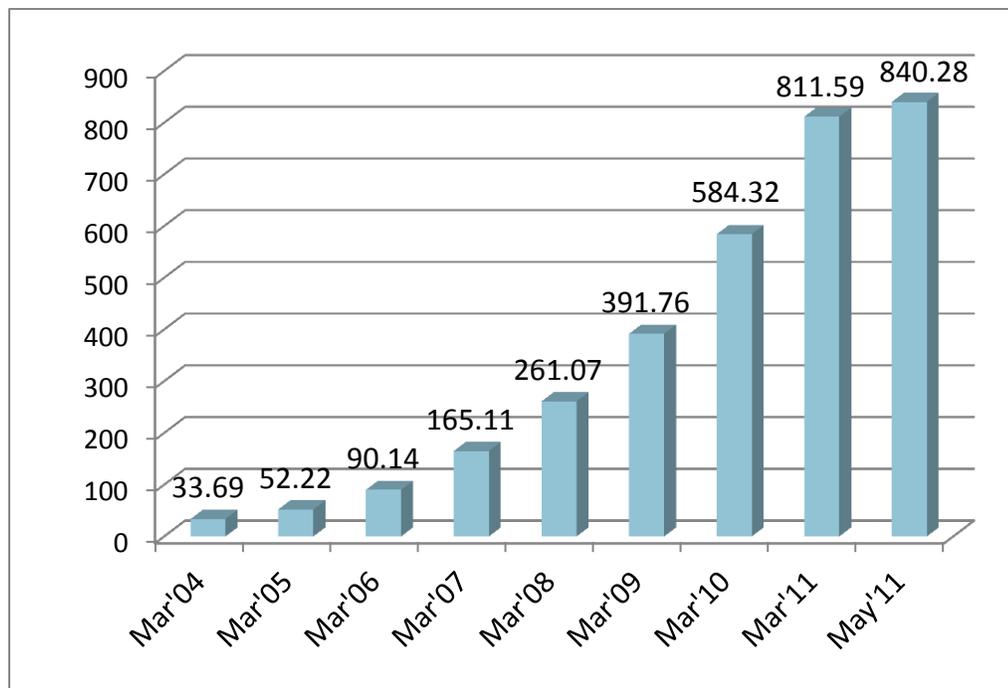


Figure 1.1: Growth of Wireless Subscribers (in million)

- 1.2 The significant change in lifestyle, changing user habits and increasing popularity of social networking sites etc. are shaping future telecom. The fast technological evolution, high processing capabilities of hand sets, huge memory availability, and high speed Internet connectivity capable to support different applications is changing the way the mobile has been used till now. A variety of applications will be possible to be delivered through MVAS which include music & videos downloads, jokes, quiz, news updates, traffic updates, railway enquiry & ticket booking, astrology, commercial transaction alerts, mobile banking etc.
- 1.3 The adoption of smart phones, development of new applications, digitisation of contents and enormous volume of user generated content are creating an environment which not only impact service requirements but may re-shape business models of service providers. With Web 2.0 (social networking, microblogging) technologies gaining popularity and the youth demographic keen on adopting smartphones, MVAS is expected to emerge as the key differentiating factor.
- 1.4 The users of social network sites such as Facebook, Twitter, LinkedIn and YouTube etc are increasing day-by-day. As on July 2011, Facebook had more than 750 million active users out of which more than 250 million are currently accessing Facebook through their mobile devices. Twitter has 175 million registered users as on September 2010, of which 37 percent use their mobile phone to tweet. YouTube has more than 2 billion views a day including 100 million views on mobile a day.
- 1.5 The smartphones are handy, have huge memory, and can support wide range of data applications. With decrease in prices, adoption of smartphones is also increasing. According to IDC¹, there was a growth of approx. 295 % in sales of smartphones in India during the period

¹ IDC India: India Quarterly Mobile Handsets Tracker, 3Q 2010, December 2010

September 2009 to September 2010. These are likely to become more affordable with rising volumes and economies of scale. According to CISCO², smartphones represent only 13 percent of total global handsets in use today, but they represent over 78 percent of total global handset traffic. In 2010, the smartphones generated 79 MB per month data traffic on an average as compared to 3.3 MB per month of mobile data traffic generated by typical basic-feature cell phones.

1.6 According to CISCO³, global mobile data traffic reached 237 petabytes⁴ per month in 2010 with a 2.6 fold growth over the last year. It is also forecasted that overall mobile data traffic will grow to 6.3 exabytes⁵ per month by 2015, a 26-fold increase over 2010.

Region	Examples
Korea	From mid-2009 to mid-2010, KT recorded a 344% increase in 3G mobile data traffic, SK Telecom's traffic grew 232%, and LG's traffic grew 114%.
Japan	Softbank's mobile traffic grew 260% from Q1 2009 to Q1 2010, according to estimates by HSBC. NTT DoCoMo's mobile data traffic grew 60% from year to year.
China	China Unicom's 3G traffic increased 62% in a single quarter from Q1 to Q2 of 2010
France	SFR's mobile data traffic has tripled each year since 2008.
Italy	Telecom Italia delivered 15 times more mobile data traffic in 2010 than in 2007.
Europe	Vodafone's European mobile data traffic increased 115% from 1Q 2009 to 2Q 2009, and 88% from 2Q 2009 to 2Q 2010.
United States	<ul style="list-style-type: none"> • AT&T reported that traffic grew 30-fold from 3Q 2009 to 3Q 2010 • The total data traffic of US consumer was approximately 350 MB per month at the end of year 2010, registering a yearly growth of 132%.
Global	Google reported that the number of YouTube videos delivered to mobile devices tripled in 2010, reaching 200 million video views per day

Source: based on data from CISCO & Chetan Sharma Consulting

Table 1.1: Mobile Data Traffic Growth in 2010

^{2,3} Cisco Visual Networking Index: Global Mobile Data Traffic Forecast Update, 2010–2015

⁴ Petabyte = 10¹⁵ bytes

⁵ Exabyte = 10¹⁸ bytes

1.7 Data services over mobile networks are gaining popularity in India also as more and more wireless subscribers are subscribing for data services. The total number of wireless subscribers who have subscribed for data services has increased more than 12 times from 31.30 million at the end of March 2007 to 381.40 million at the end of March 2011 (Figure- 1.2).

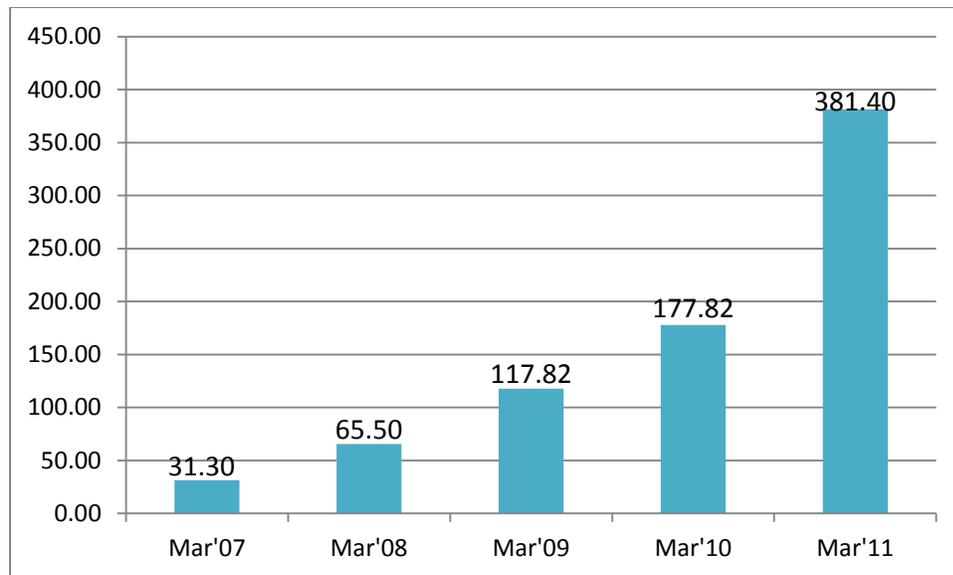


Figure 1.2: Number of Wireless subscribers subscribed to Data services (in million)

1.8 Presently approximately 50% of total population of India is below the age of 25 and more than 65% hovers below the age of 35⁶. This makes India one of the youngest countries in the world. The younger segment of the telecom subscribers are generally major consumers of such MVAS.

1.9 There is also great potential for growth of Mobile Value Added Services in rural India. Since mobile penetration in urban India is already very high, the service providers are looking for opportunities in areas so far

⁶ Population Projections for India and States 2001-2026 – Report of the Technical Group on Populations Projections constituted by the National Commission on Population, May 2006

untapped. Share of rural wireless subscribers has increased from 20% at the end of March 2007 to 33.98 % at the end of May 2011(Figure 1.3). The rural areas will be the focal point for further growth of mobile telephone services. Simultaneous provision for development of customised value added services such as crop price alerts, microfinance scheme information, instalments dues alerts, weather alerts, banking, mobile payments etc. through mobile telephones would encourage the rural population to subscribe to mobile telephone services.

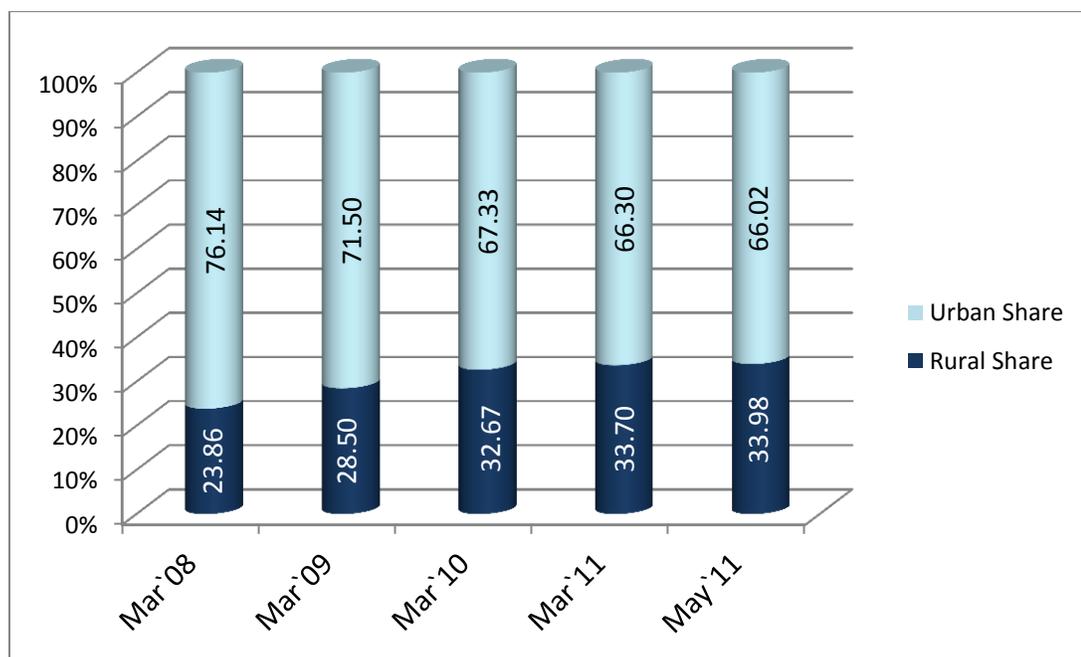


Figure 1.3: Percentage of Wireless subscribers in Rural and urban areas (in million)

1.10 Presently, the Mobile Value Added Services market in India is centered on entertainment, music and cricket. The socio-economic structure is changing with enhanced emphasis on networking. Apart from simple applications like e-mail, instant messaging, educational information, text chat etc, the focus is shifting to applications like video download, advertisements, gaming and video chat.

1.11 With the proliferation of 3G and BWA services, users would get abundance of value added services developed by independent service providers with plethora of business combinations and technical implementations. Accessing the Internet on mobile devices, downloading music, pictures, playing games and even sending multimedia messages will be extensively used by the customers. Service convergence such as voice with Mobile TV & IPTV, device convergence at the user end and network convergence at core will facilitate the rapid adoption of value added services by the consumers.

1.12 With increasing subscriber base total revenue of telecom service providers has also been increasing (Figure-1.4). However, over last few years, while subscriber base has grown rapidly the revenues have not kept the same pace (Figure-1.5) leading to a revenue gap.

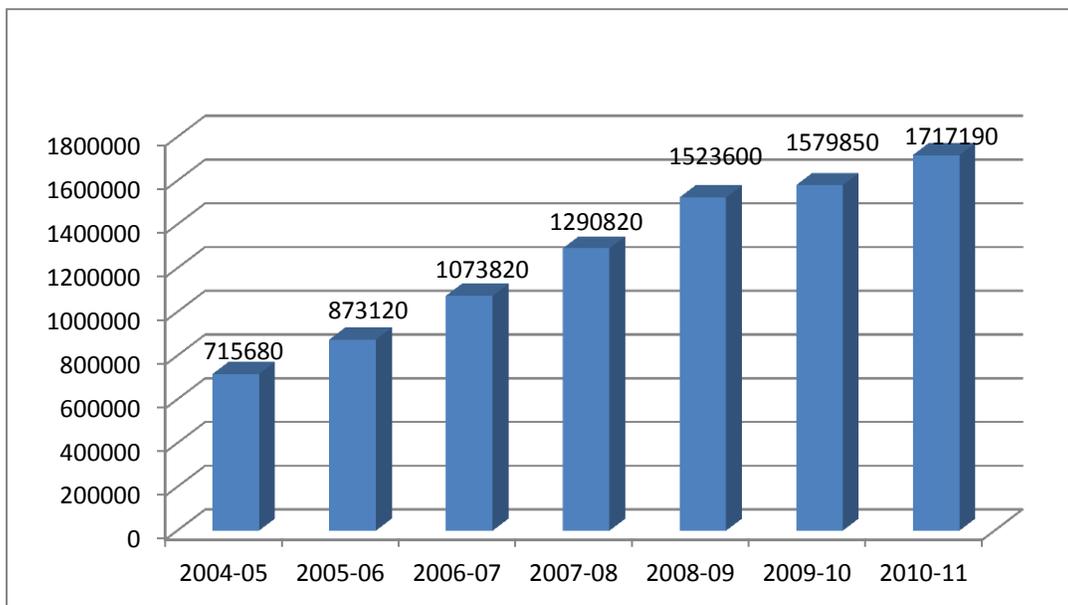


Figure 1.4: Revenue of Telecom Service Providers (Rs. in million)

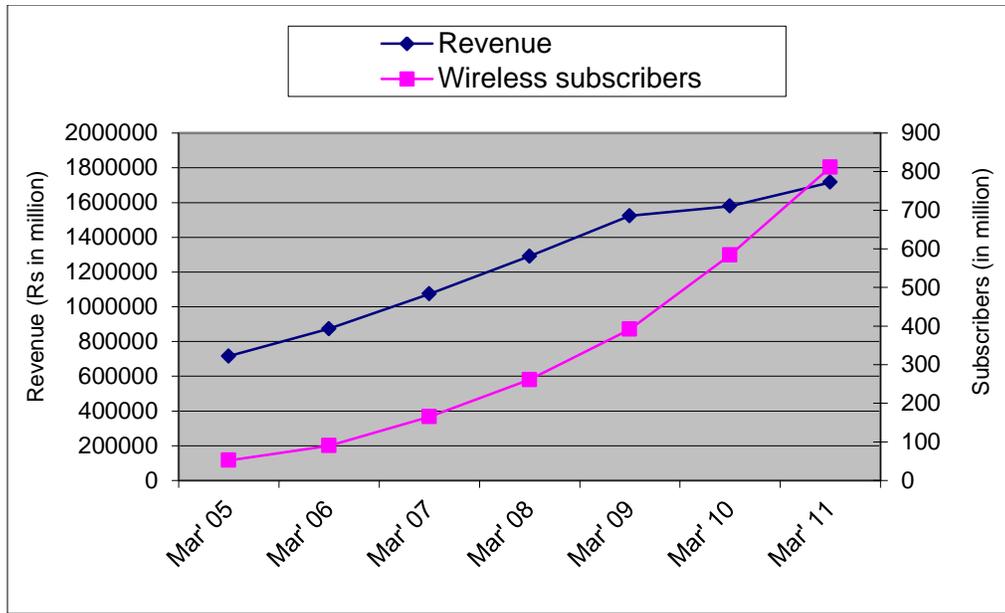


Figure 1.5: Comparison of Growth of Wireless subscribers and Revenue of Telecom Service Providers

1.13 Average Revenue Per User (ARPU) from wireless services has also come down due to increased competition and reduction in tariffs (Figure-1.6). As ARPUs decline and voice services get commoditised, the challenge for mobile service providers would be to retain customers, develop alternative revenue streams, and create a basis for brand/service differentiation. Provision of value added services, in addition to voice, on 3G/BWA networks which have wider bandwidth pipes, can also help service providers realise better returns on their investments. Creation of different value added services meeting the need of the customers could provide an opportunity to overcome these challenges and bridge the revenue gap.

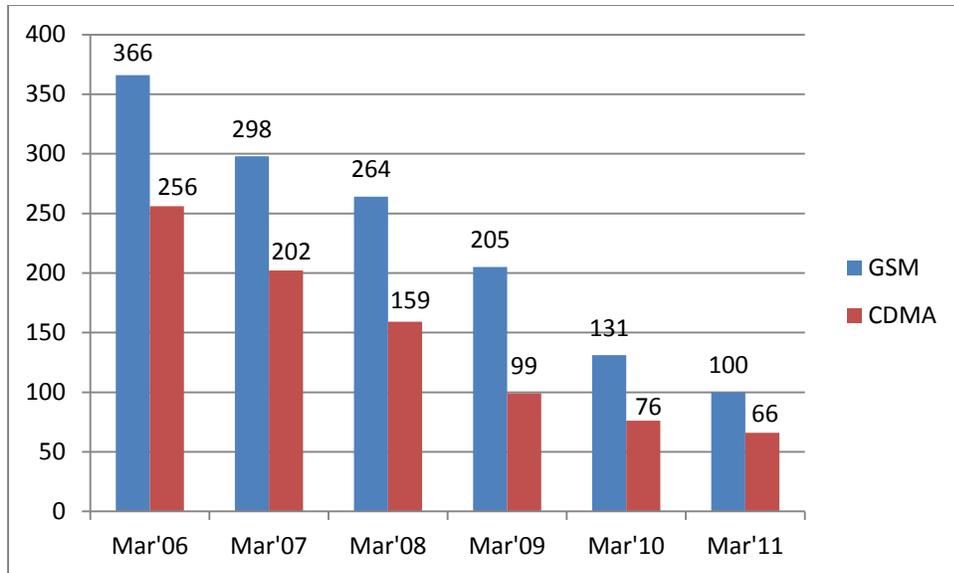


Figure 1.6: Average Revenue per User per month (in Rs.)

1.14 Currently, the contribution of non voice revenue to the total mobile revenues of Indian telecom service providers is just 11%, which is significantly lower than the revenue in developed markets (Figure-1.7). The potential for VAS revenues appears all the more significant at the present juncture, given that India has recently introduced 3G and BWA services, that allows service providers to offer users a wider range of advanced applications and services.

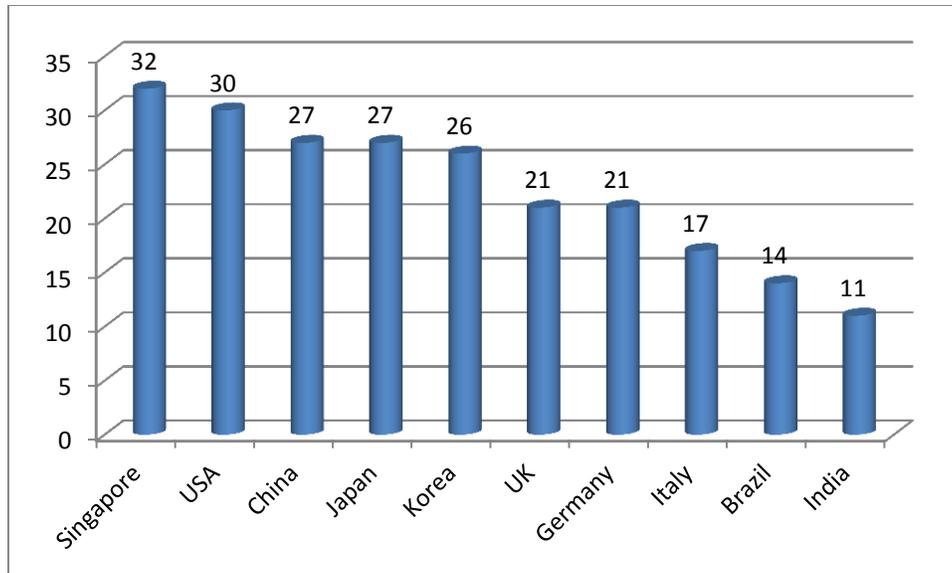


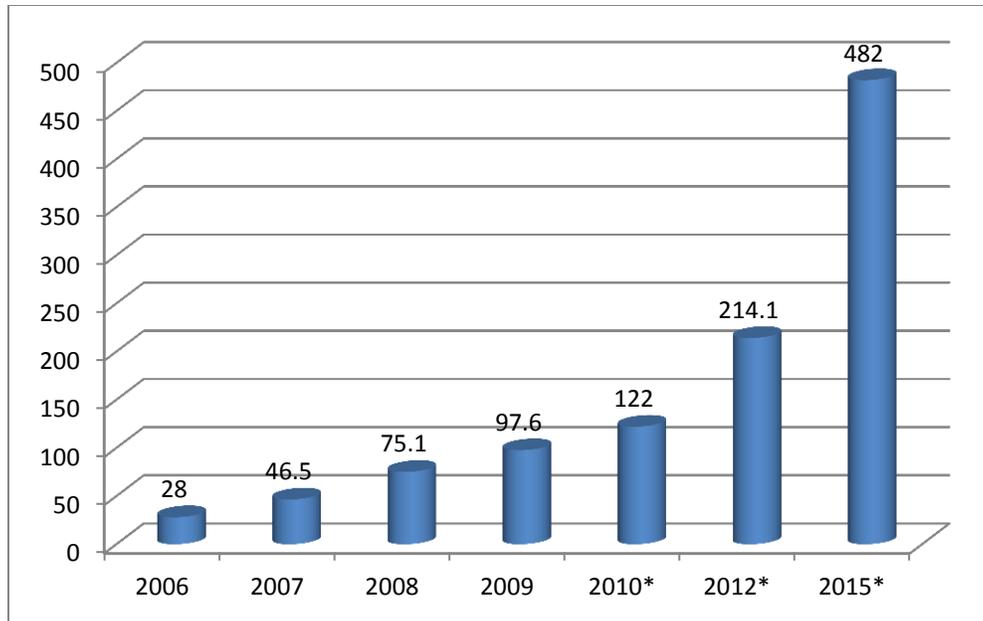
Figure 1.7: Non Voice Revenues⁷ (% of overall mobile revenues)

1.15 According to ASSOCHAM study⁸, market size of Mobile Value Added Service increased to Rs. 97.6 billion by the end of year 2009 from Rs. 28 billion at the end of year 2006. In another study⁹ by ASSOCHAM, market of MVAS at the end of year 2010 is estimated at Rs. 122.2 billion and is forecasted to reach at Rs. 482 billion by the year 2015 (Figure-1.8). Therefore, a large part of the revenue for telecom service providers will be from provision of MVAS. Telecom service providers will have to adopt strategies to diversify their service portfolio through cooperation and collaboration with various stakeholders like broadcasting companies, and value added service providers (VASPs).

⁷ Assocham white paper on MVAS, Acision Monitor for Mobile VAS & IAMAI report on Mobile VAS in India: 2010

⁸ ASSOCHAM Financial Pulse (AFP) Study "Emerging Landscape in Mobile VAS Industry" - June 2010

⁹ ASSOCHAM – Deloitte study paper: Mobile Value Added Services (MVAS) – A vehicle to usher in inclusive growth and bridge the digital divide



* Estimated

Source: ASSOCHAM- Deloitte study 2011

Figure 1.8: Market size of Mobile Value Added Services (Rs. in billion)

B- Mobile Value Added Services – Value Chain

1.16 A typical value chain in the MVAS industry encompasses content creators/providers, mobile advertisers, aggregators, technology enablers, telecom service providers and end users or subscribers. Content aggregation and provision of technology platform is usually performed by a single entity known as Value Added Service Provider (VASP). It is also to be noted here that in the value chain of MVAS, telecom service providers are very big entity in comparison to the content providers/content aggregators who are basically SMEs. Mobile handset manufacturers have also started playing an important role in the VAS value chain. Advertisers are also looking for higher delivery of marketing activities through mobile VAS platform.

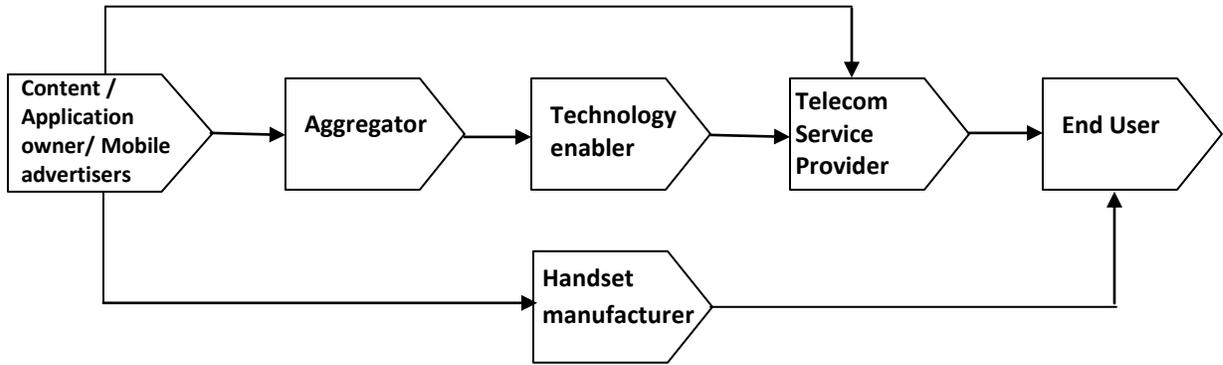


Figure 1.9: Mobile Value Added Services Value Chain

(i) Content owner/ provider

1.17 The first stakeholder in the value added services value chain is the Content Authors/Producers or copyright owners known as content owners. These entities provide the core content which drives the VAS – which may be owned or sourced by them. Examples include the music companies, movie production houses, media companies, TV channels etc. Their offerings include copyright of songs, entertainment news, movies, television listings, movie trailers, and promotional media content. Advertisers are also producing content for promotion and delivery of marketing communication to consumers through mobile VAS platform.

(ii) Content Aggregators

1.18 These are the companies that aggregate content obtained from various content owners/providers, convert it into the digital or any other suitable format and make it available to technology enablers (value added service providers) or telecom service providers.

(iii) Technology Enablers

1.19 These entities also called as Value Added Service Provider (VASP) provide the technology layer for the telecom networks, which in most of the cases also performs the task of Content aggregator. The technology layer often includes a VAS platform, Mobile Application development & hosting, MIS & reporting tools, operator billing, collection & payment settlement engine. Technology enabler may or may not be dependent on content developers, e.g. mobile phone back up facility does not require any content from the developer but the solution is directly provided to the telecom operator.

(iv) Telecom Service Provider

1.20 Telecom service providers own the access network & end users and also provide end-user billing & collection for the provision of VAS. They have commercial agreements or arrangements with the VASPs for providing the VAS.

(v) Handset manufacturers

1.21 In some cases the Mobile handset manufacturers have direct agreement with content owners or VASPs for content which are embedded in the handset or terminal device. An example of such content is games coming with the mobile handset. They also provide features such as on-device portals which are accessible through embedded links provided in the handsets.

C- MVAS Categories

1.22 In India, SMS, Ringtones and Caller Ring Back Tones (CRBT) constitute bulk of the value added services provided by mobile telecom service providers presently. There are innumerable value added services like

gaming, video and audio streaming, stock quotes, news, cricket, tele-voting, chatting, astrology, which add value to the basic telecom services. Each service differs in content, cost and demand and is customised for different segment of consumers. Primarily MVAS can be divided into following categories:

(i) Entertainment VAS

Services like music, ringtones & games are very popular and have contributed significantly to the growth of VAS in India.

(ii) Information VAS

Services like news and information on bank account, real estate, education etc.

(iii) Transactional VAS

Enable customers to conduct transactions like banking and payment through mobile phone. These services are in a very nascent phase now in India.

1.23 The break-up of revenue from different categories is provided in Table 1.2. As can be seen CRBT accounts for the maximum revenue. Video applications and m-commerce have immense potential and yet to be realised.

Category of VAS	Components	Revenue (Rs. in Crore)	Individual Share	Total share
Information	One time request	2081	18%	39%
	Monthly subscription	1156	10%	
	Voice/IVR	648	5%	
	Others	740	6%	
Entertainment	Ringtones, CRBT, Reverse CRBT	3515	30%	57%
	Music and songs, Wallpapers	1690	14%	
	Contests, Voting	1014	9%	
	Games	541	5%	
m Commerce	Mobile ticketing	472	4%	4%
	Mobile coupons			
	Others			

Source: IAMAI report on Mobile VAS in India: 2010

Table 1.2: Contribution in MVAS revenue by type of content

1.24 Range of MVAS services currently available in India is shown in table 1.3:

Delivery Platforms	Entertainment	Alerts and News	Commerce	Social VAS	Enterprise VAS
SMS	<ul style="list-style-type: none"> • SMS • Ringtones CBRT • Customised Wallpaper • Animations • Quiz • Jokes 	<ul style="list-style-type: none"> • Cricket / Match alerts • News • Astrology, Vaastu, Fengshui, Personality Test • Banking Info Alerts • Travel alerts details like Train, Flight Details etc. 	<ul style="list-style-type: none"> • Mobile Banking • Ticketing • Travel and Holiday Bookings • Payment confirmations • Due date reminder 	<ul style="list-style-type: none"> • Location Infotainment Search • Advertising • Chat 	<ul style="list-style-type: none"> • Pull on short code for contests, voting, information • Push for advertising • LBS System • Enterprise IM • Group Messaging
IVRS	<ul style="list-style-type: none"> • Religious Chants • Music on Demand 	<ul style="list-style-type: none"> • Astrology • Vaastu • Fengshui • Personality Test 	<ul style="list-style-type: none"> • Mobile Banking • Ticketing 	<ul style="list-style-type: none"> • Astrology Service • Voice SMS 	<ul style="list-style-type: none"> • IVRS based contact centres • Self Help centres • Voice Portals
WAP Portals	<ul style="list-style-type: none"> • Video Clip • Mobiles Games • Mobile Themes • Mobile Radio 	<ul style="list-style-type: none"> • Movies Related Info • Stock Portfolio Managers • News Tickers/ Alerts 	<ul style="list-style-type: none"> • Mobile Banking • Ticketing • Travel and holiday bookings 	<ul style="list-style-type: none"> • Mail • Mobile Greetings • Dating, Chatting, Blogging etc. • Infotainments • SNC/UGC • Internet search and advertising • Messenger 	<ul style="list-style-type: none"> • Location based Informations • Internet mobile email • Mobile calender • Access to internet and core business • Applications • Mobile VPN • Push email over handheld devices (e.g. Blackberry) • Wireless email

Table 1.3: Range of MVAS

D- Technical Arrangement/VAS Platforms accessed by customers

1.25 Different technical arrangements or platforms are presently being used by telecom service providers for delivering Mobile Value Added Services based on the type of content. For example SMS are used for downloading monophonic ringtones, whereas WAP/GPRS platform is used for downloading polyphonic and true-type ringtones. Some of the MVAS delivery platforms are following:

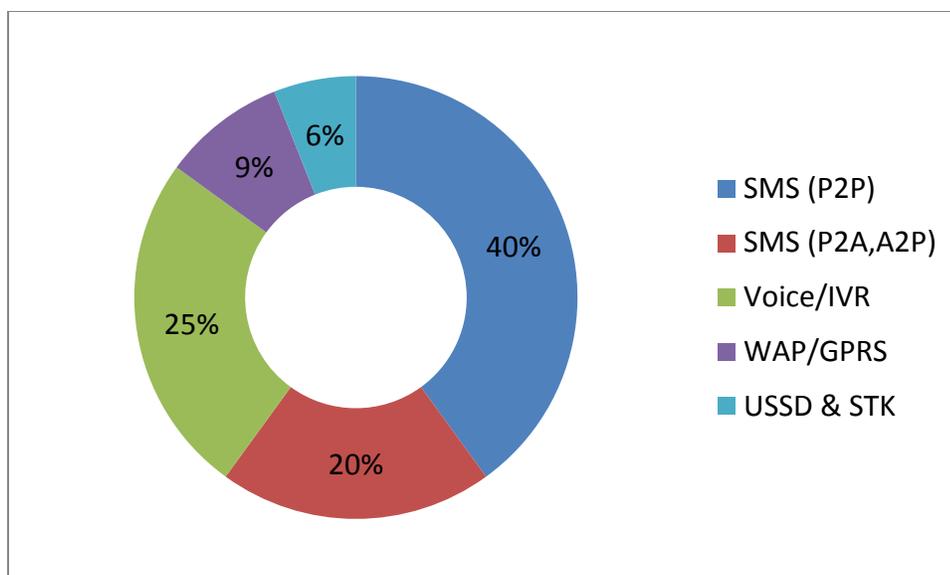
- (i) Short Message Services (SMS)** – To process and deliver SMS based value added services SMSC Platform is used by the telecom service providers. SMS can be person to person (P 2 P) and person to application (P 2 A & A 2 P). The subscriber sends an SMS to the server, which then sends back an SMS to the subscriber with the service requested e.g. downloading ringtones, seeking information like news, cricket scores, subscribing to jokes and accessing other such services.
- (ii) Interactive Voice Response (IVR)** – This platform integrates computer and telephony to detect voice and touch tones using a normal phone call. The subscribers interact with an IVR system with or without embedded voice recognition technology for accessing VAS such as news, live talk to astrologer, movie information, jokes, listening to live commentary etc.
- (iii) Wireless Application Protocol (WAP) and General Packet Radio Service (GPRS)** – It is a service which enable users the access to Internet on the mobile. These include basically data based value added services such as Internet browsing, MMS, entertainment, download music/video/wall papers, Games and Mobile TV etc.

- (iv) **Unstructured Supplementary Services Data (USSD)** - This is a method of transmitting information/instructions over GSM network. It is a session oriented service where user gets a flash message in real time. Services like content download, cricket updates, jokes, news alerts etc. can be acquired by subscribers using USSD.

- (v) **Call Management Services (CMS)** – Services like missed call alerts, call forwarding, voice mail, incoming call block etc. are provided using this platform.

- (vi) **SIM Application Tool Kit (STK)** – The SIM Application Toolkit allows for the service provider or a bank to house the consumer’s mobile banking menu within the SIM card. STK is the most secure method for mobile banking. It allows the bank to load its own encryption keys onto the SIM card with the bank’s own developed application. Thus the consumer’s data can be stored on the SIM Card and the consumer can be authenticated on the handset prior to having to carry any data across the mobile network.

1.26 The revenue break-up for MVAS using different modes is shown in figure 1.10. As can be seen SMS is the most used MVAS feature. With only a small percentage of our population understanding English, the potential of MVAS through SMS can increase many-fold if necessary platforms for Indian languages are developed.



Source: IMAI report on mobile VAS in India:2010

Figure 1.10 Revenue Breakup as per the access mechanism

E- MVAS Business Model

1.27 The MVAS market is basically a three-player market comprising of content owners, content aggregators/enablers and mobile operators. There are two business models through which the content is delivered to end consumer.

(i) On deck model

1.28 In this model, the telecom operator undertakes the branding, marketing and selling of mobile VAS content. The billing is also done by telecom operator and it collects the revenue from subscriber. As a result, it retains the largest portion of revenue (60-65%) and the rest is shared among content aggregators and content developers. Presently, in the Indian market on deck value added services, service platform including gateway/middleware is provided either directly by the telecom service providers or by the Value Added Service Providers (VASPs). In the first

case VASP only provides the content. In the second scenario VASPs provide technology platform along with content. Commercial arrangements exist between telecom service providers and Value Added Service Providers (VASPs) for providing these services. In some of the cases the VASPs do not own the contents but they have arrangements with the content providers/content developers or copyright owners known as content owners. In the commercial agreements, compliance to copyrights, digital rights management including sourcing of the content is the responsibility of VASPs.

(ii) Off deck model

1.29 In this model, the VASP sells content directly to subscribers. The content can be provided either through the operators' portal or through their short code. These short codes are uniform across all telecom service providers. The economics in this model are opposite to that of on deck model. In this model, content developers and aggregators retain 60-65% of revenue whereas 30-35% is being passed on to the telecom service providers.

1.30 Off-deck VAS provider needs to integrate with multiple operators to be able to use the same short code to provide services to subscribers across carriers. This can increase the cost and time of integration. Also, the operator has an influence on deciding the end user price as well as the potential revenue share expected by the VASP.

CHAPTER II: REGULATORY FRAMEWORK FOR MVAS

2.1 The Value Added Services industry in India is at nascent stage. In the present scenario, there are quite a large number of small and medium sized content aggregators and technology enablers called Value Added Service Providers (VASPs). Such Value Adder Service Providers generally depend on the facilities provided by the telecom operators. Effective cooperation and collaboration amongst various stakeholders is a key factor to form a healthy value chain of value added services. Looking at the potential of MVAS, there is a need to develop a suitable framework which will enable consumers to access variety of value added services, promote entrepreneurship and at the same time create additional revenue streams for the service providers.

A- Existing Provisions regarding VAS in Telecom Licences

2.2 Different licences like Basic Service, Cellular Mobile Telephone Service, Unified Access Service etc. have been issued at different point of time. Accordingly licensing conditions have undergone changes with market and technology evolution. There is no uniformity in the licensing conditions with regard to provision of value added services. This is evident from the following:

(i) Unified Access Service (UAS) Licence:-

2.3 The scope of Unified Access Service Licence has the following provisions:

(a) The SERVICES cover collection, carriage, transmission and delivery of voice and/or non-voice MESSAGES over LICENCEE's network in the designated SERVICE AREA and includes provision of all types of

access services. Access Service Provider can also provide Internet Telephony, Internet Services and Broadband Services.

- (b) The access service providers can provide Broadband services including triple play i.e voice, video and data.
- (c) The LICENCEE can also provide Voice Mail, Audiotex services, Video Conferencing, Videotex, E-Mail, Closed User Group (CUG) as Value Added Services over its network to the subscribers falling within its SERVICE AREA on non-discriminatory basis. The Licencee cannot provide any service except as mentioned above, otherwise shall require a separate licence.
- (d) Intimation before providing any other VALUE ADDED SERVICE, which is mentioned above has to be sent to the LICENSOR and TRAI.

2.4 As per the Department of Telecommunications letters No.842-336/2004-VAS/19 dated 17th September, 2004 (**Annexure-I**) and No.842-336/2004-VAS/22 dated 21st October, 2004 (**Annexure-II**), all Cellular Mobile Telephone Service Providers (including those migrated to UASL) should intimate the licensor about provision of any new service/facility along with details of provision made for lawful interception/monitoring of these facilities at least 15 days in advance before the introduction of these services/facilities”. From this it is clear that the Cellular Mobile Telephone Service Providers are generally allowed to provide mobile value added services without any further licensing. However, prior intimation is required to be given to Licensor and also to TRAI.

(ii) Cellular Mobile Telephone Service (CMTS) Licence

2.5 Scope of the CMTS Licence has the following provisions:-

- (a) The licensee shall be permitted to provide in its area of operation, all types of mobile services including voice and non-voice messages, data services and PCOs utilising any type of network equipment (however, the technology must be digital) including circuit and or packet switches that meet the relevant International Telecommunication Union (ITU)/Telecommunication Engineering Centre (TEC) standards.
- (b) The Licensee cannot provide any service requiring a separate licence except as mentioned in preceding para.
- (c) CMTS Licensees are also permitted to provide Internet Telephony, Internet Services and Broadband Services including triple play i.e. voice, video and data vide DoT's letter No. 10-21/2005-BS-I(Vol. II)/56 dated 14.12.2005

2.6 In the scope of the Licence Agreement of the Cellular Mobile Telephone there is no mention of provisioning of Value Added Services. However, in clause 24.10 of Licence Agreement it is stated that "The Licensee may provide additional facilities in case of any value addition/upgradation that the technology permits at later date, subject to approval of Licensor". It may be implied that these licensees can provide Short Message Service (SMS) and data service as Value Added Services.

2.7 In case of the old Cellular Mobile Telephone Service (CMTS) Licence Agreement, under the heading "Permitted Services" following clauses exist:-

“12.2 The Licencee shall provide all such services which are available in GSM MoU 90 days prior to the date of commissioning and decided by the Authority (*Director General of Telecommunications, Govt. of India*).

12.3 The Licencee shall provide unrestricted access for his subscribers to all services including Value Added Services available on PSTN.

12.4 The Licencee shall not engage in the business of the provision of Value Added Services based on the Cellular Mobile Service without specific permission of the Authority”.

(iii) Basic Services

2.8 In the Licence Agreement the scope of Licencee is stated as under:-

Clause 2.2(a): The service covers collection, carriage, transmission and delivery of voice or non-voice messages over Licencee’s PSTN in the Service Area and includes provision of all types of services except those which require a separate licence.

2.9 Access service providers have been permitted to provide Internet Telephony, Internet Services and Broadband Services including triple play vide letter no, 10-21/2005-BS-I(Vol. II)/56 dated 14.12.2005.

(iv) Internet Service:

2.10 As per the Licence condition the scope of Internet Service Licence is defined as under:-

“Internet Access: Internet access means use of any device/ technology /methodology to provide access to Internet including IPTV and all content available without access restriction on Internet including web hosting, web-colocation but it does not include service provider’s configured Closed User Group Services (VPN). The content for IPTV shall be regulated as per law in force from time to time. Permission to provide

IPTV services shall be granted on application by licensee provided the licensee has net worth of Rs. 100 crore or more.

2.11 Internet Telephony: Internet Telephony means a service to process and carry voice signals offered through Public Internet by the use of Personal Computers (PC) or IP based Customer Premises Equipment (CPE) connecting the following:

- a) PC to PC; within or outside India
- b) PC / a device / Adapter conforming to standard of any international agencies like- ITU or IETF etc. in India to PSTN/PLMN abroad.
- c) Any device / Adapter conforming to standards of International agencies like ITU, IETF etc. connected to ISP node with static IP address to similar device / Adapter; within or outside India”.

2.12 The scope of the ISP Licence states that “all content available without access restriction on Internet including web hosting”. The value added service providers particularly providing transaction based services may use the content services such as web portal and payment gateway etc. so, therefore, basically in the provisioning of value added services the Mobile Internet may be used as the media. Some of the value added services like music download; games, etc. are available through the Internet provided by the ISPs.

2.13 As can be seen from provisions regarding value added services in various licences, there is no uniform treatment of the subject. There is a need for clearly specifying the scope of Value Added Services which can be applied uniformly across various licences.

2.14 **Whether the current provisions under various licences (UASL, CMTS, Basic and ISP) are adequate to grow the MVAS market to the**

desired level? If not, what are the additional provisions that need to be addressed under the current licencing framework?

B- Regulatory Framework for MVAS

2.15 Presently, Indian MVAS industry is young and evolving. MVAS providers are not regulated or licenced and mainly they act as service partners of telecom service providers. The telecom service providers are the core in the value chain as they own network infrastructure and have a large customer base. VAS providers aggregate different type of content and enable the content suitable to be transported on mobile network. Both telecom service providers and VAS providers complete the value chain for providing VAS to customers. Telecom service provider and VASPs enter commercial agreements for provisioning of MVAS. There is no standard format of agreement and, telecom service providers being the core of the MVAS value chain, usually dominate in finalising the terms and conditions of the agreement.

2.16 The framework for issue of licences for some value added services already exists, particularly in respect of Voice Mail/Audiotex, Unified Messaging etc. The Department of Telecommunications had notified the revised terms and conditions for Other Service Providers (OSP) category on 31st May, 2007. As per these terms and conditions, 'Other Service Provider' means a company providing Application Services. Application Services have been defined to mean services like tele-banking, tele-medicine, tele-education, tele-trading, e-commerce, call centre, network operation centre by using Telecom Resources provided by Authorised Telecom Service Providers.

- 2.17 In view of the growing significance of value added services, possibilities of various new/enhanced value added services in 3G, BWA and Next Generation Networks (NGN) environment, it may be appropriate to consider whether the licensing system is to be resorted for licensing of mobile value added service providers. Migration to NGN could change the existing service providers' business models. The service independence from core network in case of NGN could encourage Value Added Service Providers to launch innovative services and sector specific solutions. A possible consequence of such new developments may change service provisioning profile. A sizable number VASPs providing many innovative applications & value added services could emerge and traditional network service providers may become pure access providers. This could change the business model of the existing telecom service providers to an extent, which may require regulatory measures.
- 2.18 In view of the growing and likely unprecedented expansion in these services and their contribution to the revenue stream of telecom service providers, the importance of bringing a suitable framework cannot be over-emphasised. The framework could ensure a level playing field and transparency between content providers/aggregators and telecom service providers.
- 2.19 There are divided views on the issue of bringing independent MVAS provider under licensing regime. One of the key arguments in favour of a licensing regime for value added services is to ensure that consumer's interests as well as the interest of smaller VASPs are safeguarded. The licensing will allow the independent MVAS providers to seek interconnection with QoS from telecom service providers. As a licensee they can also approach TRAI/TDSAT for resolving their issues. On the contrary it is argued that looking at the large number of entities involved, some of them being very small, it may be difficult to bring

them under licensing regime. Further bringing these small entities involved in MVAS value chain will unnecessarily burden them with the various obligation attached to a licence. At times this may be counterproductive and suppress innovative entrepreneurship.

- 2.20 Separate licencing regime is available for value added services in Singapore, China, Malaysia, Bahrain and some African countries. On the other hand in some countries there is no need to obtain a licence to provide value added services and a simple intimation is sufficient. For example in Australia, all suppliers of Mobile Premium Services are required to just submit company details to the Mobile Premium Services Industry Register managed by Communications Alliance.
- 2.21 The Authority in its recommendations on “Spectrum Management and Licensing Framework” issued in May 2010, recognised the need to develop a healthy ecosystem for value added services and indicated to initiate a consultation process separately to identify measures for the proper growth of the VAS industry, including bringing them under the licensing regime. The Authority also recommended that all future licences should be unified licences and that spectrum be delinked from the licence.
- 2.22 **Is there a need to bring the Value Added Service Providers (VASPs) providing Mobile Value Added Services under the licensing regime?**
- 2.23 **If yes, do you agree that it should be in the category of the Unified Licence as recommended by this Authority in May 2010? In case of disagreement, please indicate the type of licence alongwith the rationale thereof.**

C- Revenue sharing

- 2.24 Presently telecom service providers and VAS providers enter into mutual commercial agreements for provisioning of value added services. These agreements contain various terms and conditions including the conditions as to how the revenue generated through provision of MVAS will be shared between VAS providers and telecom service providers.
- 2.25 Content is an important ingredient for plethora of value added services being provided by telecom service providers. For these services, the telecom service providers mainly depend upon the VASPs but concerns have been raised by some of the stakeholders that VAS providers do not get commensurate returns.
- 2.26 It is reported that Mobile service providers dominate the MVAS market to a significant extent, by determining MVAS service fees, by selecting VASP according to their service portfolio they want to offer, by excluding service providers who do not generate sufficient revenues, by monitoring service contents and by controlling service access and billing.
- 2.27 According to various reports, telecom service providers typically retain the bulk of the revenue (around upto 60% to 65%) (Table 2.1) from MVAS depending on the type of content that is being delivered to the users. The rest of the revenue is shared among copyright owners, content developers, content aggregators, and technology enablers. According to market reports, in case of content with copyright, the mobile service provider is reported to get 60% revenue; a technology enabler gets 15% while content developer and aggregator together gets 15% share in MVAS revenue. The copyright owner gets balance 10% of MVAS revenue. In case of content without copyright, mobile service provider is reported to receive 65% of the revenues, a technology enabler

gets 20% and balance 15% goes to content developer and aggregator. However, these are not the standard percentage of revenue share and vary across the service providers based on the mutual commercial agreements and type of content.

	Copyright Content	Non- copyright Content
Operator's Revenue	60%	65%
Technology Enabler	15%	20%
Content Developer/ Aggregator	15%	15%
Copyright/ Content Owner	10%	-

Source: IAMAI Report on Mobile VAS in India: 2010

Table 2.1: Revenue Sharing Relationship

- 2.28 It is said that the telecom service providers justify their revenue share with 3 costs – cost of building the market (i.e. entry & licence fees, branding, customer acquisition etc.); cost of usage of the infrastructure, interconnection and finally cost of billing and collection.
- 2.29 On the contrary the content providers/content aggregators (VASPs) severely complain and express their concerns that they do not get adequate share as telecom service providers retain large share of revenue earned through mobile Value Added Services. As per them it makes return on investment (ROI) of VASP unattractive, not enough to encourage faster capital investments required to grow the VAS industry to the desired level. In the absence of a suitable revenue share for both VAS provider and service provider the development of VAS, which is essential both for development of the economy as well as the telecom sector, could suffer.

- 2.30 Adequate revenue share for VAS providers could make the market attractive for the entry of many entrepreneurs in the VAS business. On the other hand, better margins from MVAS for telecom service providers could meet the revenue gap from core services and attract investment in the network expansion.
- 2.31 The revenue share may also be dependent upon a number of factors such as the nature of technology, utility of content, demand from the customers and innovation involved. There may be some VAS which may involve higher degree of innovation and utility than some other applications which could be commoditised. In this scenario it may be necessary that the innovative VAS solutions be rewarded suitably so as promote innovation. Accordingly, revenue share could become a function of the innovation and utility involved in the concerned VAS.
- 2.32 **How do we ensure that the VAS providers get the due revenue share from the Telecom Service providers, so that the development of VAS takes place to its full potential? Is there a need to regulate revenue sharing model or should it be left to commercial negotiations between VAS providers and telecom service providers?**
- 2.33 **At the same time, how do we also ensure that the revenue share is a function of the innovation and utility involved in the concerned VAS? Should the revenue share be different for different categories of MVAS?**
- 2.34 The revenue earned through MVAS is decided based on the information recorded in Management Information System (MIS). Both VAS providers

and telecom service providers maintain their respective MIS for arriving at the revenue accrued through provisioning of MVAS.

2.35 As per the industry feedback, there are often differences in billing between the MIS of telecom service providers and the MVAS providers. It is also reported that there is a lack of transparency in statistics of content transactions, absence of credible systems to address disagreements and grievance redressal mechanisms. In the absence of a system validating the number of data downloads or transactions between MIS of telecom service providers and the MVAS providers, the account provided by the service provider may prevail due to higher bargaining power. This may lead to differences in the actual revenues earned between telecom service providers and the MVAS providers. Sharing of information between telecom service providers and the MVAS providers can lead to reconciliation between MIS of telecom service providers and the MVAS providers in a transparent and fair manner.

2.36 **Do you agree that the differences come up between the MIS figures of the operator and VAS provider? If yes, what measures are required to ensure reconciliation in MIS in a transparent manner?**

D- Standardisation of Short Code Services

2.37 One of the primary requirements for provisioning of Mobile Value Added Services is to get a short code. DoT has allowed the access providers to allot short codes themselves (**Annexure III & IV**). Accordingly short codes are allotted by telecom service providers to their content providers including for SMS based services. Short codes start with level 5 with minimum 5 digits in the short code. Content providers need to individually reach out to telecom service providers for allotment of short code. It is up to the individual telecom operator to accept the request

and allocate the chosen short code to the VAS provider. According to industry information, a varying amount of fee is required to be paid to each of the service providers for “allotment” of short code. The short codes accepted by one operator may not be accepted by others and also there is no timeline defined within which the service providers are bound to approve/reject requests for short codes.

2.38 A framework having well defined procedures and parameters (like fee, timeframe) for allotment of code may be desirable for speedy rollout of the value added services. To enhance competition in development and provisioning of innovative services, the short-code ownership and service agreements with service providers could be decoupled. The short-code numbers could be obtained centrally so that one short-code number is active across all network operators. These short codes could be enabled through standard procedures across all networks.

2.39 In US short codes are allocated online by an agency after paying the requisite fee. However, value added service providers have to make separate arrangement with telecom service providers for opening up of these codes.

2.40 **(i) Does existing framework for allocation of short codes for accessing MVAS require any modifications? Should short codes be allocated to telecom service providers and VAS providers independently? Will it be desirable to allot the short code centrally which is uniform across operators? If yes, suggest the changes required along with justification.**

(ii) Should there be a fee to be paid for allotment of short code?

E- Open access to VAS

2.41 There could be different modes of access to contents by customers. Based on the control of telecom service provider on access to content, following three models are possible:

- (i) Walled Garden
- (ii) Open Access
- (iii) Semi-walled Garden

2.42 In the walled garden scenario, users can only access content on a mobile service provider's platform. The selection and placement of content is controlled by the mobile service provider. Telecom service providers decide what goes through their network and what does not. Customers need to choose only from the services available from service provider's platform at a price fixed by the service provider.

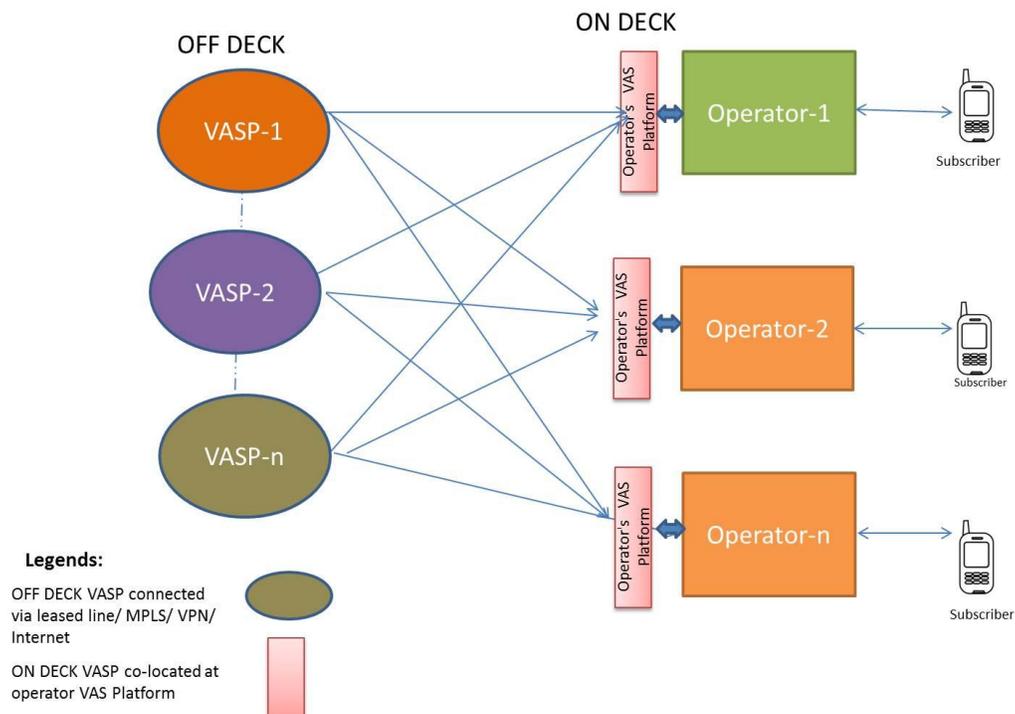


Figure 2.1: Walled Garden model

- 2.43 Presently in India generally walled garden approach is prevailing. Mobile value added services are carried under the banner, brand and name of the service providers and the role of a VAS provider is that of a content aggregator making the content suitable for accessing through mobile network. The telecom service providers invest in promoting, branding and billing the value added service along with taking care of customer service. Off deck content, accessed over network, is also routed through the operator platform. VASPs need to host their content with each service provider separately. If the content of a VASP is provided off deck through network as shown in Figure-2.1, connectivity need to be established with each operator separately. Agreements will be made with each operator for offering the VAS content.
- 2.44 Some of the services which are integrated on call-to-call basis such as caller ring back tune (CRBT), SMS person-to-person will generally be in the domain of telecom service providers. However, the value added services such as music, games, news, entertainment, M-commerce etc. can be directly marketed by value added service provider. It will be desirable that consumers can access any content and service of their choice, and not be limited to just the selections decided by the telecom service providers. Open or non-restricted access allows a user to obtain content from any provider offering mobile content. This content can be accessed independent of the mobile service provider's platform, through a link to any of the third-party content provider, through a Web browser on the mobile handset, by sending a SMS or accessing IVR. In an open access environment services and applications are decoupled from the network complexities, facilitating applications/content based services to be provided easily and also enabling third party application service providers to compete with the telecom service providers in the provision of services making the network more open. Open access can promote

innovation and can lead to development of various applications depending on the customer needs.

2.45 In such an open access environment consumers pay the access/carriage charges to the telecom service provider and for the content, charges will be paid directly to the value added service provider. Direct payment to VASP will require some delivery mechanism to make the payment for example online payment through credit card, net banking or mobile banking, which are very limited in India at present. The number of active credit cards in India is only 1.82 crore as on November 2010¹⁰. Only 5% of all mobile subscribers are registered users of mobile banking and more significantly, only 0.5% of them are active mobile banking users¹¹.

2.46 In the absence of adequate payment infrastructure, VASPs need to approach the telecom service providers for collection of VAS charges from customers. For post paid the VAS charges are added along the bill. Since majority of the customers fall in prepaid category, VAS charges are deducted from the prepaid balance. This limits the ability of the VASP to operate independent of the service provider and hence can limit the entrepreneurial activity. For provision of open access to customers, it will be desirable that services offered by VASPs under off deck model are decoupled from telecom service provider so that VASP need not to approach and integrate with each service provider. A possible approach to decouple the services of VASP is shown in Figure- 2.2. In this approach VASP can limit his installations to single location requiring integration with only one service provider of his choice. Customers can access this VASP from any other service provider's network through a

¹⁰ Times of India, Feb 10, 2011

¹¹ ASSOCHAM – Deloitte study paper: Mobile Value Added Services (MVAS) – A vehicle to usher in inclusive growth and bridge the digital divide

uniform short code. The originating operator collects the charges from the customer and passes on to terminating operator after deducting the charges like billing, customer care, interconnection etc. Terminating operator in turn passes the revenue collected from originating operator to VASP after deducting its charges like transit charges. This arrangement will require a common short code to be used across service providers. All service providers will be required to route the short code to the terminating operator where VASP has hosted its content. This arrangement is shown in Figure-2.3. Under this approach VASPs will be free to host their service under any operator. Customers also will be free to choose any VAS from any VASP, irrespective of VASPs' location. This will increase competition among VASPs for providing relevant content at right price and also between service providers for providing best hosting rates to VASPs bringing efficiency in the system, which in turn could boost MVAS market.

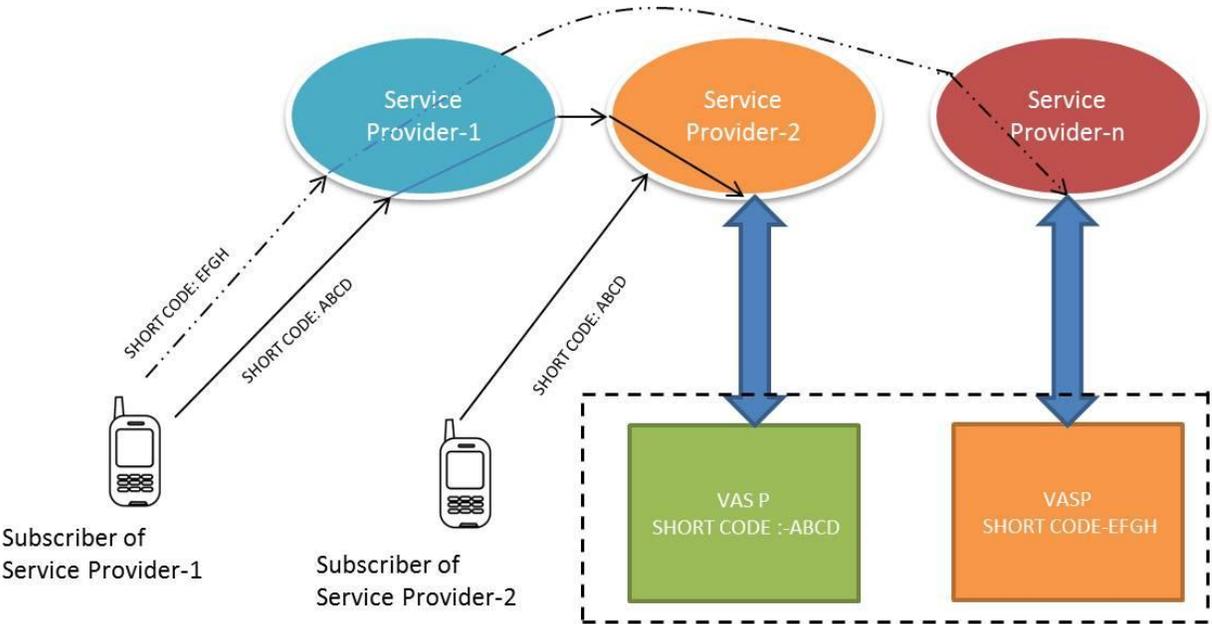


Figure 2.2 Open access model

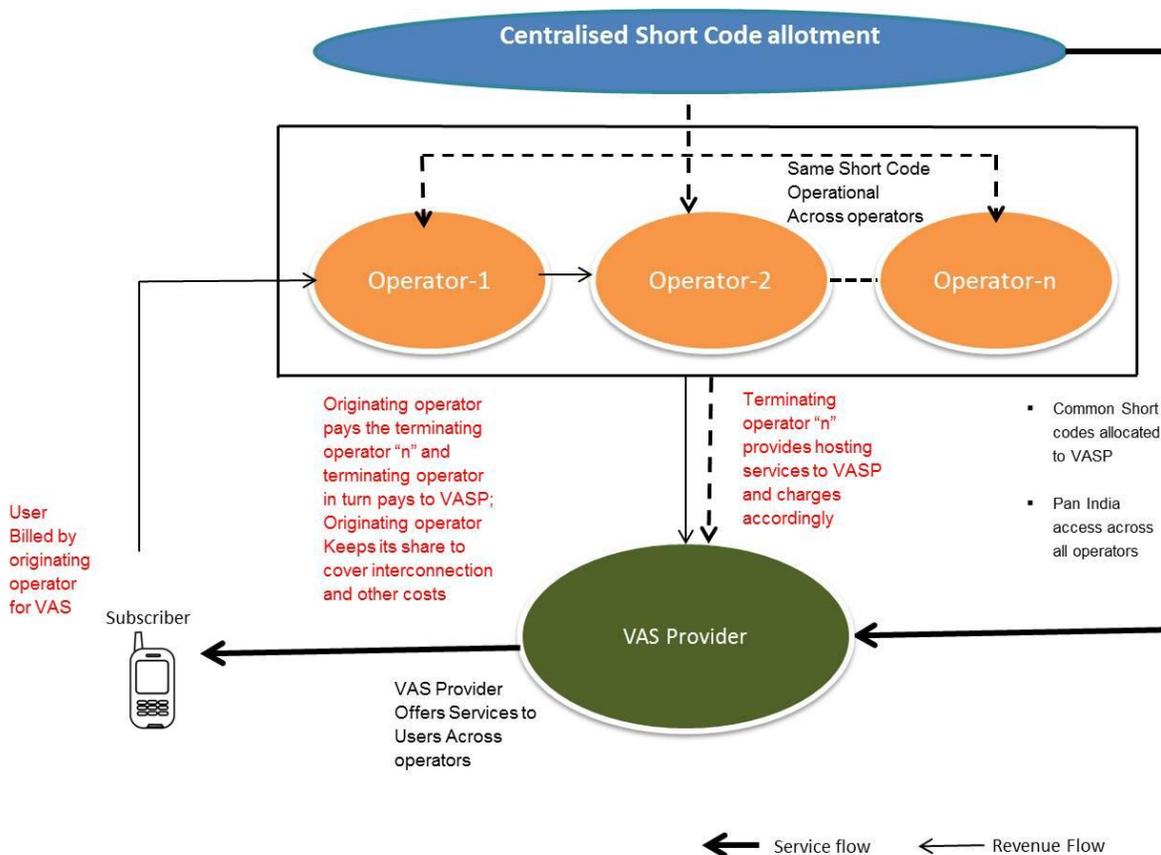


Figure 2.3 Service & Revenue flow in Open access model¹²

2.47 In the semi-walled garden scenario users can access both, the content available on the mobile operator’s platform, as well as directly from other value added service/content providers. Users often have easier access to the content on the operators' platform, but will likely demand access to content beyond that selected by the mobile operator. This model was adopted by NTT DoCoMo when it launched its iMode portal in February 1999. Three different types of content sites could be accessed from iMode: official iMode sites accessed through the iMode button on the phone, independent sites reached by typing a URL and corporate intranet sites.

¹² Inputs from Analysis Mason are acknowledged

2.48 Is there a need to provide open access to subscribers for MVAS of their choice? If yes, then do you agree with the approach provided in para 2.46 to provide open access? What other measures need to be taken to promote open access for MVAS? Suggest a suitable framework with justifications?

F- Utility MVAS (m-commerce, m-health, m-education & m-governance etc.)

2.49 Presently, the Mobile Value Added Services market in India is centered on entertainment, music and sports. It is generally the younger segment of the consumers who take maximum advantage of such MVAS. Increasing proliferation of mobile services has created an unique opportunity to deliver other utility MVAS to the masses through innovative applications. The mobile platforms world over are being used to provide financial and banking services, health services, tele-education and government services.

2.50 Telemedicine can possibly transform the health care sector in India as India faces a scarcity of both hospitals and medical specialists. A large majority of India's population still lives in villages, where healthcare facilities are poor. Primary Health Centres and Community Health Centres in the rural and remote areas can be empowered through mobile based telemedicine to provide better healthcare facilities.

2.51 M-Commerce services will enable both banking and payment services through mobile platform. With a large proportion of the Indian population still unbanked, mobile based banking services can lead to financial inclusion of the unbanked population as well as being a cost efficient channel for banks to provide financial services.

- 2.52 Government has recently introduced right to education to all. The formal institutional network to provide education is limited especially in rural and remote areas. Mobile based education can very effectively be used to supplement Government efforts.
- 2.53 Agriculture is another area where m-applications can effectively contribute. Be it advice on nature of crop according to type of soil, or protection of crop from insects and pesticides, m-applications can be handy.
- 2.54 Government has initiated the National e-Governance Plan, wherein many of the government services will be available to citizens online. Under National e-Governance Plan (NeGP), a massive countrywide infrastructure is evolving and large-scale digitisation of records is taking place to enable easy, reliable access to the citizens. The Government is in the process of implementation of NeGP, comprising of 27 Mission Mode Projects (MMPs)¹³ encompassing 10 Central MMPs, 10 State MMPs and 7 Integrated MMPs covering various services from state and central departments (Table-2.2). State data centres at various states have either been commissioned or are in various stages of commissioning. Citizens will be getting the services delivered from various departments through State data centre or the data centres of the respective departments. Therefore a lot of data will need to be transacted between citizens and the data centres. With very poor PC penetration in India, mobile can provide a perfect medium for delivery of government services to the common man.

¹³ <http://www.mit.gov.in/content/mission-mode-projects>

Central MMPs	State MMPs	Integrated MMPs
<ul style="list-style-type: none"> • Banking • Central Excise & Customs • Income Tax (IT) • Insurance • MCA21 • National Citizen Database • Passport • Immigration, Visa and Foreigners Registration & Tracking • Pension • e-Office 	<ul style="list-style-type: none"> • Agriculture • Commercial Taxes • e-District • Employment Exchange • Land Records • Municipalities • Gram Panchayats • Police • Road Transport • Treasuries 	<ul style="list-style-type: none"> • CSC • e-Biz • e-Courts • e-Procurement • EDI For e-Trade • National e-governance Service Delivery Gateway • India Portal

Table 2.2: Mission Mode Projects

2.55 The initiatives to provide various services using mobile applications have already started in India, but they are very limited. The potential for utility MVAS can be leveraged to boost social and economic activities, governance, and enhance government citizen interaction. There is plenty of scope to develop and deploy Utility MVAS services in the country. However, there are certain key challenges under each of these groups which are impediments to the growth of Utility MVAS. Utility MVAS also require deep collaboration between operators, MVAS providers, and the government.

2.56 According to ASSOCHAM the major challenges for the growth of utility MVAS are lack of government initiatives, lack of consumer authentication infrastructure, lack of micro payments infrastructure, lack of regulatory framework or guidelines related to privacy, legal liabilities & dispute resolution mechanism etc. In addition some of the operational challenges encountered while deploying Utility MVAS initiatives are:

- Inability to ensure relevance of service by understanding consumer needs
- Inability to keep products affordable
- Inability to obtain the right partners and build the ecosystem
- Inability to generate consumer awareness
- Need to make significant investments on business models which have a long gestation period
- Ensuring inter-operability of applications across operating systems/network architecture so as to not incur incremental set-up costs

2.57 While there are plenty of challenges that face the utility MVAS space today, the opportunities are enormous, given the increasing proliferation mobile phones even in rural & remote areas and the rapid development of technology including the foray of 3G.

2.58 **What measures are required to boost the growth of utility MVAS like m-commerce, m-health, m-education & m-governance etc. in India? Should the tariff for utility services provided by government agencies through MVAS platform be regulated?**

2.59 Several issues related to MVAS have been discussed above. However, there may be some other issues, which stakeholders may feel relevant for the growth of MVAS. Stakeholders may like to provide their comments on such issues.

2.60 **Any other suggestions with reasons thereof for orderly growth of mobile value added services?**

CHAPTER III: ISSUES FOR CONSULTATION

- 3.1 Whether the current provisions under various licences (UASL, CMTS, Basic and ISP) are adequate to grow the MVAS market to the desired level? If not, what are the additional provisions that need to be addressed under the current licencing framework?**
- 3.2 Is there a need to bring the Value Added Service Providers (VASPs) providing Mobile Value Added Services under the licensing regime?**
- 3.3 If yes, do you agree that it should be in the category of the Unified Licence as recommended by this Authority in May 2010? In case of disagreement, please indicate the type of licence alongwith the rationale thereof.**
- 3.4 How do we ensure that the VAS providers get the due revenue share from the Telecom Service providers, so that the development of VAS takes place to its full potential? Is there a need to regulate revenue sharing model or should it be left to commercial negotiations between VAS providers and telecom service providers?**
- 3.5 At the same time, how do we also ensure that the revenue share is a function of the innovation and utility involved in the concerned VAS? Should the revenue share be different for different categories of MVAS?**
- 3.6 Do you agree that the differences come up between the MIS figures of the operator and VAS provider? If yes, what measures are required to ensure reconciliation in MIS in a transparent manner?**

- 3.7 (i) Does existing framework for allocation of short codes for accessing MVAS require any modifications? Should short codes be allocated to telecom service providers and VAS providers independently? Will it be desirable to allot the short code centrally which is uniform across operators? If yes, suggest the changes required along with justification.**
- (ii) Should there be a fee to be paid for allotment of short code?**
- 3.8 Is there a need to provide open access to subscribers for MVAS of their choice? If yes, then do you agree with the approach provided in para 2.46 to provide open access? What other measures need to be taken to promote open access for MVAS? Suggest a suitable framework with justifications?**
- 3.9 What measures are required to boost the growth of utility MVAS like m-commerce, m-health, m-education & m-governance etc. in India? Should the tariff for utility services provided by government agencies through MVAS platform be regulated?**
- 3.10 Any other suggestions with reasons thereof for orderly growth of mobile value added services?**

**Government of India
Ministry of Communications and IT
Department of Telecommunications
(VAS CELL)
Sanchar Bhawan, 20, Ashoka Road, New Delhi- 110001.**

No. 842-336/2004-VAS/19

Dated 17.9.2004

To

All Cellular Mobile Telephone Service Providers.

Subject: Provision of appropriate monitoring facilities for all types of Value Added Services.

This has a reference to clause 40.1 of 4th CMTS licence and para 1.1 of amendment to Licence Agreement vide No. 842-47/2002-VAS dated 12th August 2002 which inter-alia provides that “the licensee will provide the necessary facilities for continuous monitoring of system as required by licensor or its various representative(s)”. Further, clause 44.9 of 4th CMTS licence and para 5.9 of amendment to Licence Agreement vide No. 842-47/2002-VAS dated 12th August, 2002 provides that “the licensee should make arrangements for monitoring by Government Security Agencies”.

2. However, it has been brought to the notice of licensor that Telecom Service Providers expand their operations by introducing different value added services without implementing systems to monitor these services. This is a gross violation of the terms and conditions of the Licence Agreement as mentioned above.

3. In view of the above, all the CMTS Licensees (including those migrated to UASL) are required to furnish the details of Value Added Services being provided as on date and indicate whether suitable monitoring facility for these services is available? In case, some Value Added Services are being provided without provision of suitable monitoring facility, the Service Providers are requested to give the details of such services and provide explanation as to why the monitoring facilities were not made available prior to commercial launch of such services. Further, they shall indicate the time frame by which the monitoring facility would be made available in such cases.

4. Reply covering the above points may be furnished to this office latest by **29.09.2004**.

Sd/-
(A.K.Dhar)
ADG (VAS-I)

Copy to information and necessary action to:

1. DDG (BS)
2. Cellular Service providers Association of India.

**Government of India
Ministry of Communications and IT
Department of Telecom
(VAS CELL)**

12th Floor, Sanchar Bhawan, 20, Ashoka Road, New Delhi- 110001.

No. 842-336/2004-VAS/22

Dated 21.10.2004

To

All Cellular Mobile Telephone Service Providers (including those Migrated to UASL)

Subject: Provision of appropriate monitoring facilities for all types of Value Added Services and additional facilities.

This has a reference to clause 40.1 of 4th CMTS licence and para 1.1. of amendment to Licence Agreement Vide No. 842-47/2002-VAS dated 12th August 2002 which inter alia provides that “the licensee will provide the necessary facilities for continuous monitoring of system as required by licensor or its various representative(s)”. Further, clause 44.9 of 4th CMTS licence and para 5.9 of amendment to Licence Agreement vide No. 842-47/2002-VAS dated 12th August, 2002 provides that “the licensee should make arrangement for monitoring by Government Security Agencies”.

2. However, it has been brought to the notice of Licensor that Telecom Service Providers expand their operations by introducing different valued added services and additional facilities without implementing systems to monitor these services/ facilities.

3. In view of the above, all the Cellular Mobile Service Providers are directed to intimate the details of various value added services and additional facilities available in their network along with the details of provision made for lawful interception and monitoring of these services/facilities within 10 days from the date of receipt of this letter and if monitoring facility is not available, plans to provide these monitoring facilities with specific time frame. In future licensee should intimate the licensor about provision of any new service/facility along with details of provision made for lawful interception/monitoring of these facilities at least 15 days in advance before the introduction of these services/ facilities.

4. The above instructions may be followed scrupulously and violation of the same would be treated as violation of the terms and conditions of the Licence Agreement for which action would be taken in terms of the Licence Agreement.

5. Please acknowledge receipt of this letter.

Sd/-
(A.K. Dhar)
ADG (VAS-I)

Copy to: Cellular Operator Associations of India

GOVERNMENT OF INDIA
MINISTRY OF COMMUNICATIONS & INFORMATION TECHNOLOGY
DEPARTMENT OF TELECOMMUNICATIONS
714, SANCHAR BHAVAN, 20, ASHOK ROAD, NEW DELHI-110001

No. 16-3/2003-BSII/Vol.VI

Dated: 30th November, 2006

OFFICE MEMORANDUM

SUBJECT: ADDENDUM TO THE NATIONAL NUMBERING PLAN, 2003 (NNP-2003) - ALLOCATION OF SHORT CODES TO THE CONTENT PROVIDERS INCLUDING SMS BASED SERVICES.

In supersession of this office O.M. of even No. dated 29th November, 2004 on the subject mentioned above, the undersigned is directed to state that for the proper conduct of telegraph, the Competent Authority has decided that all the Unified Access / Basic / Cellular Mobile Service providers must use the level '5' for allocation of short codes to the Content Providers including SMS based services within their network.

All other terms and conditions will be as per the guidelines issued in this regard.

30-11-2006
(Raj. K. Kataria)

Under secretary to the Govt. of India

Copy to:

1. Secretary, Telecom regulatory authority of India.
2. Sr.DDG(TEC), Khurshid Lal Bhavan, Janpath, New Delhi.
3. DDG(DS) / (AS) / (CS)
4. All Unified Access / Basic / Cellular Mobile service Operators.

Government of India
Ministry of Communications & Information Technology
Department of Telecommunications
LICENSING CELL (ACCESS SERVICES GROUP)
714, Sanchar Bhawan, 20, Ashok Road, New Delhi-110 001.

No.16-3/2003-BS.II/Vol.VI/441-

07th May, 2007

To

All the Access Service Providers.

**SUBJECT : ALLOCATION OF SHORT CODE TO THE CONTENT PROVIDERS
INCLUDING SMS BASED SERVICES - CLARIFICATIONS
REGARDING.**

In reference to this office O.M. of even No. dated 01st December, 2006 on the subject mentioned above, the undersigned is directed to issue the following:

1. The short codes should start with level 5 and will be minimum of 5 digits.
2. Use of suffixes to the short codes is permitted.
3. Allotment of new short codes should be minimum of 5 digits and they should be in level 5 only.
4. The parallel working of old short codes with the new codes is allowed upto 31st August, 2007.

All other terms and condition remain unchanged.

(Handwritten signature)
21/1/07
(Raj K. Kataria)
Under Secretary to the Govt. of India
Tel No. 23036536

Copy to:

1. Secretary, Telecom Regulatory Authority of India.
2. Sr. DDG (TEC), Khurshid Lal Bhawan, Janpath, New Delhi.
3. DDG(DS) / (AS) / (CS).