Telecom Regulatory Authority of India

Recommendations
On
Mobile Virtual Network Operator (MVNO)

New Delhi

6 August 2008

Mahanagar Doorsanchar Bhawan
Jawahar Lal Nehru Marg
New Delhi – 110 002

web-site: www.trai.gov.in

Table of Contents

PREFACE

The growth in telecom sector, particularly of wireless subscribers has been exponential. The Authority's policy to encourage competition, ensure level playing field and maintain technology neutral stance has had a significant contribution to the success story of telecom sector. The Indian Telecom Network today is the second largest network in the world after China. As of 30th June 2008 there are more than 325 million telephone connections in the country of which 286 million are mobile connections. Over 8 million mobile connections are being added every month.

To maintain such exponential growth, the challenge is to optimally utilize the available resources while ensuring competition and availability of services at affordable price. The Authority also believes that the regulatory framework in the country should not preclude the introduction of any service.

The introduction of Mobile Virtual Network Operator (MVNO) is seen as a natural progression towards enhancing free market principles and contributing to the efficient use of existing telecommunication infrastructure. Generally MVNO is an entity that provides mobile phone service but does not have its own radio spectrum nor does it necessarily have the entire infrastructure required to provide mobile telephone service. An entity that has the radio spectrum and the entire required infrastructure to provide the mobile service is Mobile Network Operator (MNO). MVNOs operate through commercial arrangements with licensed MNO and buy bulk minutes of traffic and resell them to their own subscribers in their own brand.

MVNO model has gained popularity in the last few years. There are currently about 360 planned or operational MVNOs worldwide. Countries including Netherland, France, Denmark, U.K., Germany, Finland, Norway, Ireland, Hongkong, Australia and U.S. have the most MVNOs.

The Department of Telecommunications has sought the recommendations of the Authority regarding Mobile Virtual Network Operator (MVNO). The recommendations has been sought on need and timing for introduction of MVNO as well as terms and conditions of the license to be granted to such operators.

The consultation paper on MVNO, issued on 5th May 2008, discussed the concept of MVNO, definition, need and timing of entry of MVNO, MVNO models, benefits and International scenario. It also examined the technical, licensing and regulatory issues to be addressed for introduction of MVNO in India. An open house discussion on MVNO was held on 16th June 2008 at New Delhi.

The stakeholders have supported the introduction of MVNO with its own regulatory and licensing framework. Based on the views of the stakeholders, discussions in the open house, International experience and internal study, these recommendations have been evolved. The Authority is committed to the view that the consumers must get the benefit of variety of services and availability at affordable prices.

The principles followed in the recommendation are that the regulatory framework should be light touch, enabling and forward looking so as to encourage genuine MVNOs. The introduction of MVNO should not result in any reduction of revenue that would accrue to the Government when compared to a situation without MVNO. It is hoped that these light touch recommendations will facilitate introduction of MVNO which would help the MNO to widen and deepen its market.

The Recommendations has dwelt upon the definition and other issues like need and timing, regulatory model, regulatory and licensing issues like license service area, eligibility conditions, scope of service, service obligations, entry fees, annual licence fees, allocation of numbers and interconnection. The recommendations have attempted to ensure that the consumer interests are protected and customers are not adversely affected by an interruption of service following a dispute between their MVNO and the parent MNO. Issues like roll out obligations, mergers, substantial equity, FDI, Bank guarantees to be paid by MVNO are also covered in these recommendations.

The full text of the Recommendations is also available on TRAI's website (www.trai.gov.in).

(Nripendra Misra)
Chairman, TRAI

Executive Summary

Department of Telecom has sought the recommendations of the Authority on need and timing of introduction of MVNO as well as terms and conditions of the licence to be granted to MVNOs under Section 11 (1) (a) (i) and (ii) of the TRAI Act 1997. The executive summary of the recommendations of the Authority on MVNO is as follows:

1. MVNO to be introduced as a distinct service provider with its own licensing and regulatory framework
2. MVNO free to choose its business model (Full or Intermediate or Thin)
3. Arrangement/ agreement between MNO and MVNO to be driven by market forces
4. MVNO to be issued a license under Indian Telegraph Act
5. The license service area of MVNO to be same as that of parent MNO
6. Any Indian Company with networth -10% of that of MNO for the service area and paid up capital - 10% of prescribed networth and fulfilling other licence conditions is eligible for MVNO licence.
7. Agreement with MNO to be submitted before issue of license to MVNO
8. No limit on number of MVNOs attached to a MNO
9. MNO to pay the spectrum charges for utilisation of spectrum by MVNO
10. Entry fees for MVNOs – 10% of MNOs subject to a maximum of Rs.5/3/1 crores for category A/B/C areas
11. Annual licence fees same as that of MNO of the service area
12. Allocation of Numbers, Number portability, Interconnection with other service providers and Roaming to be provided by parent MNO.
13. Subscribers to be protected on failure of agreement between MNO and MVNO or MVNO quitting service
14. No Roll out Obligations for MVNO
15. FDI limit 74% (same as MNO)
16. Bank Guarantee: FBG – equivalent to two quarters license fees; PBG – 5% of MNO
17. Restrictions on Mergers and acquisition on similar lines as MNOs

Chapter 1

Background

1.1 The Indian Telecom Network today is the second largest network in the world after China. As of 30th June 2008, there are more than 325 million telephone connections in the country of which around 286 million are mobile connections. Over 8 million mobile connections are being added every month. The tele-density which was less than 1 per hundred in 1984 is now over 28 per hundred. The target is to achieve 500 million connections by year 2010.

1.2 The introduction of Mobile Virtual Network Operator (MVNO) is seen as a natural progression towards enhancing free market principles and contributing to the efficient use of existing telecommunication infrastructure. The mobile value added services are still evolving. While the potential of mobile technologies is undeniable, new value added services are constantly emerging widening the range and types of service offerings and pricing plans, the likely applications and usage. Correspondingly, the possible types of services a MVNO might offer and the role they would play in the emerging market would also expand. It is observed that the entry of MVNO in the mobile market raises the level of competition by providing consumers with a wider choice of service providers, a wider range of innovative value added services and more competitive pricing plans.

1.3 Generally a MVNO is an entity that provides mobile phone service but does not have its own radio spectrum nor does it necessarily have all the infrastructure required to provide mobile telephone service. An entity that has the radio spectrum and all the required infrastructure to provide the mobile service is Mobile Network Operator (MNO).

1.4 There are currently about 360 planned or operational MVNOs worldwide. Countries including Netherland, France, Denmark, U.K., Germany, Finland, Norway, Ireland, Hongkong, Australia and U.S. have the most MVNOs.

1.5 Department of Telecommunications (DoT) has sought the recommendations of Telecom Regulatory Authority of India (TRAI, hereinafter referred the Authority) regarding Mobile Virtual Network Operator (MVNO). The recommendations have been sought on the need and timing for introduction of MVNO as well as terms and conditions of the license to be granted to such operators. Copy of DOT letter is annexed as **Annexure I.**

1.6 The Consultation Paper on MVNO was issued on 5th May 2008. The Consultation Paper discussed the definition, need and timing for introduction of MVNO, types of MVNOs, regulatory and licensing issues, International scenario and brought out the issues for consultation. The list of issues that were posed for consultation is available at **Annexure II**. The stakeholders were requested to give their comments by 3rd June 2008. Exhaustive and detailed comments have been provided by the stakeholders. All the comments of the stakeholders are available on the website of the Authority www.trai.gov.in. The list of stakeholders includes existing MNOs and their associations, prospective MVNOs, Consumer Advocacy Groups and Consultants. The Open House discussion was held on 16th June 2008 at New Delhi

1.7 Principles followed in the Recommendations:

The Recommendations deal with a variety of issues and the Authority has identified the principles that form the basis of the decisions made in these set of recommendations. For transparency and clarity the principles followed are enumerated below:

i) **Forward Looking and Technology neutral**: The Authority's stance has been to formulate recommendations, which are forward looking and technology neutral.

ii) **Principle of Light –touch**

The regulatory framework governing MVNO should be light touch and enabling so that genuine MVNOs do not face entry barriers.

iii) Revenue neutrality principle

The introduction of MVNO should not result in any reduction of revenue that would accrue to the Government when compared to a situation without MVNO. It should not become an avenue for the MNO to subvert or bypass the existing license conditions or obligations.

iv) **Catalyst for growth of the sector**:

The introduction of MVNO should help the MNO to widen and deepen its market besides promoting competition in the market.

v) **Protection of Consumer interests**:

Protecting the interests of the consumers is one of the key principles behind the framework evolved for the purpose of introducing the MVNOs in India. Under no circumstances the interest of the consumer can be compromised.

1.8 Structure of Recommendations

1.8.1 The Chapter 1 gives the Background of the recommendations on MVNO. The definition, types of MVNOs and Regulatory Model are covered in Chapter 2. Chapter 3 deals with Regulatory and Licensing issues. The points for the license agreement and the agreement between MVNO and MNO are given in Chapter 4. Chapter 5 gives the gist of Recommendations. The international scenario is available at Annexure VIII

1.8.2 After briefly discussing the issue, the gists of stakeholders' comments are given. The various options are analyzed including the International scenario before giving the recommendations of the Authority.

CHAPTER 2

MVNO types, Need and Timing for Introduction

2.1 Definition

2.1.1 There is no uniform definition on what constitutes a MVNO. Regulatory bodies around the world have adopted various definitions and different levels of regulatory intervention depending on the extent to which a MVNO relies on the facilities of the MNO.

2.1.2 Some of the definitions adopted by different organizations are at **Annexure III.** The following definition was proposed in the consultation paper by the Authority.

> "MVNO licensee is an entity that does not have assignment of spectrum for Access Services (2G/3G/BWA) but can provide wireless (mobile) Access Services to customers by sharing the spectrum of the Access Provider (UAS/ CMTS licensee)".

2.1.3 The stakeholders are of the view that in the above definition, words 'spectrum sharing' indicate an element of spectrum trading / co-ownership and is thus not appropriate. It was suggested that the definition should include "MVNOs can provide mobile services to users by means of entering into an agreement with a licensed access service provider."

2.1.4 There was a consensus among the stakeholders that MVNO's cannot have any spectrum of their own. The MVNO concept implemented worldwide envisages purchase of airtime on wholesale basis from the network operators and further using it to provide services to the customers. The definitions adopted by most of the countries also reflect this aspect. Another aspect is that in most of the countries the spectrum is auctioned, whereas in India the spectrum for the 2G services given as on date to the Access Service Providers is not through auction. The general consensus seems to be that it is better to avoid the word 'sharing' in the definition.

2.1.5 Recommendation:

Keeping in view the definitions adopted by various countries internationally and the views of the stakeholders, the prevalent market conditions and the likely growth path of the sector, the Authority recommends the following definition for MVNO.

> **"MVNO is a licensee in any service area that does not have spectrum of its own for access service, but can provide wireless (mobile) access services to its own customers through an agreement with the licensed access provider, UAS/CMTS Licensee"**

The following points are enumerated to bring clarity to the above definition:

i) Spectrum for Access Services as on date would include: 2G, 3G and BWA spectrum.

ii) As MVNOs cannot have its own spectrum, they cannot participate in any spectrum auction for Access Services in their service area.

iii) ISP can become a MVNO if it does not have any BWA spectrum.

2.2 Need and timing for introduction of MVNO

2.2.1 The issue is regarding the need to introduce MVNO in the Indian Telecom Market and whether it is right time to introduce MVNO as a distinct service provider with its own licensing and regulatory framework.

2.2.2 Generally, it is said that, markets that are sufficiently mature and tending towards saturation of demand and where excess capacity is available in the networks are the places where introduction of MVNO would add value for the customers and the operators. However, it is not limited to this alone. In markets like the Indian Mobile Market, which is highly competitive, the customer acquisition is becoming increasingly difficult and complex. The supply chain or the present network of retail outlets is unorganized barring the company outlets, which are limited in number. In India many of the 22 service areas have large geographical spread and few of them equal an average European country. A MVNO with a strong retail chain may be able to address the issues of customer acquisition and customer care more effectively in its niche area of operations. The fact that many of the existing MNOs are already outsourcing a number of its activities, reiterates this aspect.

2.2.3 Thus, there can be significant benefits to MNOs that offer MVNOs wholesale access to their mobile networks. The benefit arises principally in the form of:

a) Extending mobile services to market segments with which MNOs have not had much success previously;
b) Market expansion by reaching entirely new or previously un-served market segment or geographical area;
c) Better network utilization and realization of economies of scale;
d) Lower operational cost;
e) Effective product bundling and cross selling.

f) Utilise low operational cost of MVNO to expand into low margin/ niche areas.

g) Deepening of the market by way of offering more innovative value added services to consumers whose needs are constantly changing given the technological progress and fast moving content space.

2.2.4 The points of concern for MNO could be:

a) Cannibalization of the MNOs market share by MVNOs
b) Backlash from poor MVNO performance
c) Adverse selection of MVNOs for partnering purpose;
d) Greater customer churns.

2.2.5 Most of the stakeholders supported and welcomed the introduction of MVNOs in the Indian telecom Market for healthy competition, enhancing tele-density, increasing affordability and choice. Due to the vast territory of each licence area and various Value Added Services, the stakeholders felt that it becomes difficult for an MNO to serve niche and far away customers in a satisfying manner. Further, to arrest the falling ARPUs, it is necessary to have a larger share of Value Added Services contribution in the total revenue. This is only possible if specialized entities like MVNOs are introduced in the market to address customer specific service. However, the interest of existing operators should be protected.

2.2.6 A minority viewpoint was that, the MVNO concept has little relevance in the Indian environment due to the following reasons:

- There is no excess capacity / supply with the access providers in India and it is improbable that they will have spare capacity in the networks to sell to the MVNOs.

- there are already 12-14 licensed access providers in every service area, of which 5-6 are new networks. MVNOs would be hard pressed to compete in the highly competitive existing market.
- Market penetration at present is only about 25% and ARPU levels are fairly low, in fact, mobile tariffs in India are amongst the lowest in the world
- Indian market is not mature enough.

2.2.7 MVNO is being an already tried and tested concept globally. Keeping in line with the worldwide trends, the broad consensus was that MVNO should be introduced in the Indian telecom market now. The majority view is in favour of the introduction of MVNO. The genuine concern could be the viability of MVNO in the Indian Telecom Market.

2.2.8 MVNOs position themselves to cater to specific market segments and offer innovative and tailored content and services, and consumers around the world have responded positively. Today Indian consumers are seeking better services. Urban India is becoming increasingly brand conscious – branding is one of the driving forces behind the success of MVNOs. Given the desire of Indian mobile subscribers to move to service providers offering better service and the increasing brand consciousness among urban India, it is reasonable to expect that a well-marketed or strongly branded MVNO will attract the attention of the Indian Consumer. At this time, Category B and C circles are attracting more attention from operators because they have not tapped these markets fully yet. Consequently, the subscriber base has grown significantly and network deployment is also progressing at a similar rate. MVNOs are potentially useful in these circles as a way to boost the subscriber base, specially in rural or high cost areas. MVNOs will also help in the improvement of the 3G-business case for MNOs. Having a MVNO working to build market share will allow host MNOs to concentrate on network deployment; leaving marketing and distribution to MVNOs. MNOs can focus on building network infrastructure and reposition themselves as Facility Based Operators (FBOs) paying close attention to current congestion and interconnection problems and improving overall QoS.

2.2.9 The Authority believes that the regulatory framework in the country should not preclude the introduction of any new service/ operators. As mentioned in the principles followed in the recommendation, the framework should be light touch and enabling, to encourage genuine MVNOs. MVNOs have the potential to go closer to the consumers than the licensed operators because of their advantage arising out of the size and their focus at the retail end. Considering the large size of the operations of MNOs in India (circle being such a large geographical area), much of the customer care issues could be addressed effectively by the MVNOs. Feedback received by the Authority from consumers and consumer organizations suggest that introduction of MVNO in India will be beneficial from the consumer perspective. Hence the relationship is symbiotic and helps consumers, MVNOs and MNOs.

2.2.10 Recommendation:

The Authority recommends that MVNO should be introduced in the Indian telecom network as a distinct service provider with its own licensing and enabling light touch regulatory framework.

2.3 Types of MVNOs

2.3.1 The MVNO business model deployed in different countries varies depending on the local conditions and the regulatory regime. While some MVNOs have their own core network infrastructure including Mobile Switching Centre (MSC), Home Location Register (HLR), billing, customer care, value added services platforms and intelligent network systems, other MVNOs simply repackage network operators' services and issue their own SIM cards by relying almost completely on the host network's facilities with a little product differentiation. Accordingly the three types of MVNO models have been envisaged as:

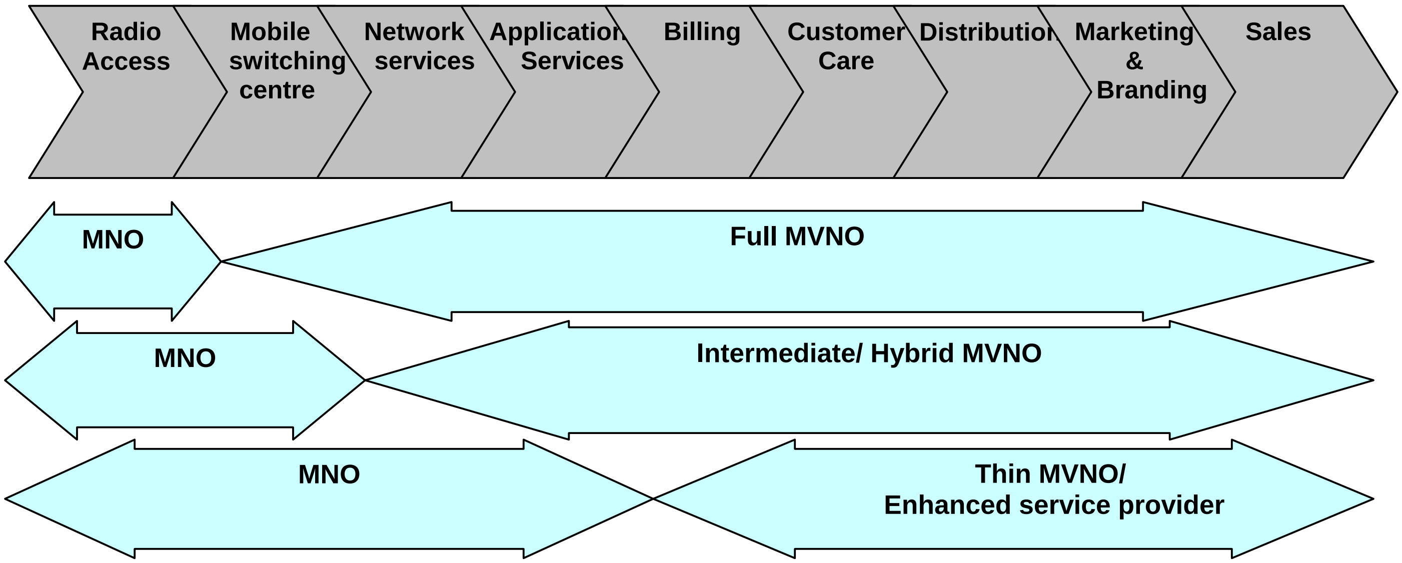
i) **Full MVNOs**, which have their own core network including Mobile Switching Center (MSC);

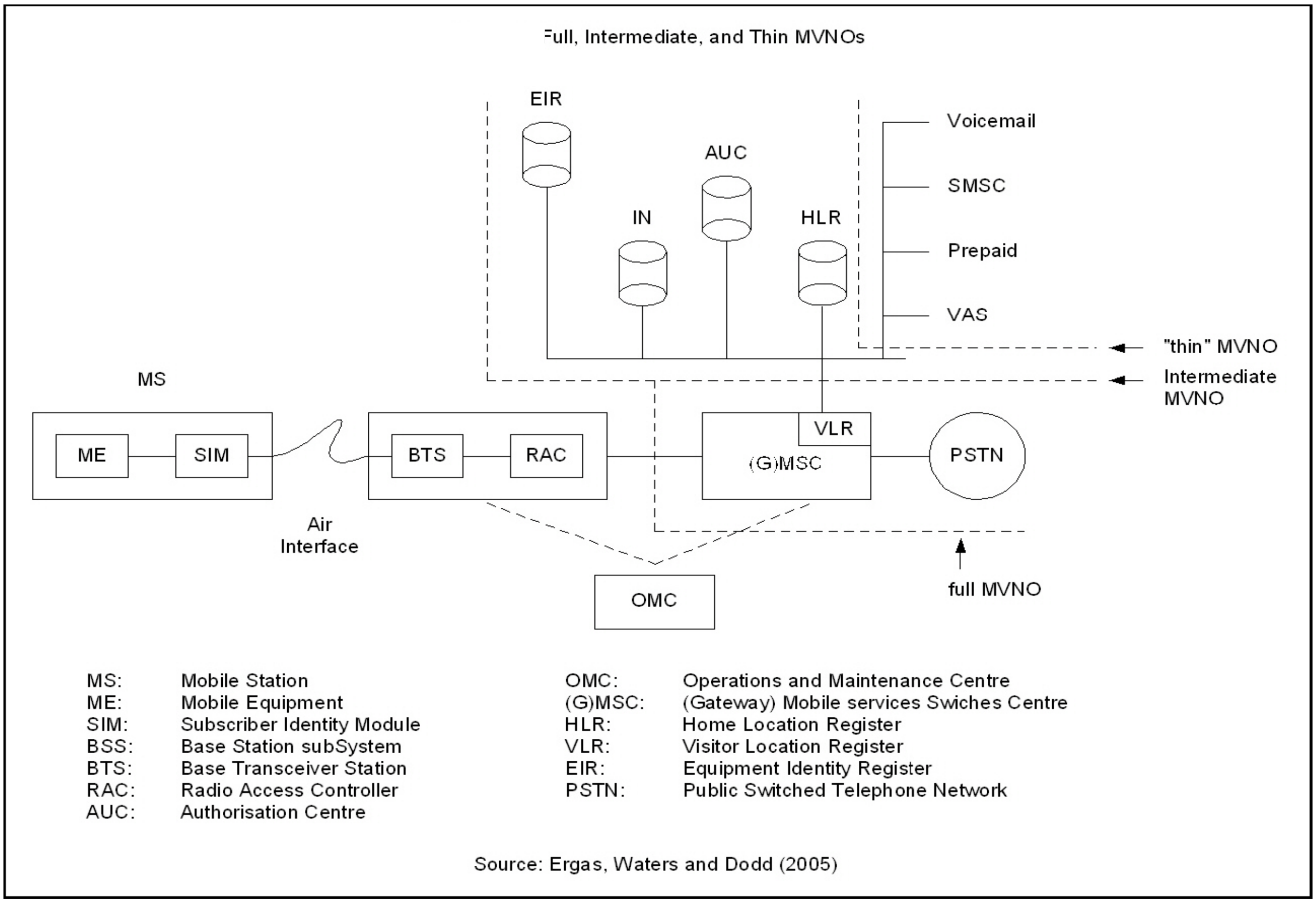
ii) **Intermediate MVNOs**, which acquire a switched service, but either provide their own home location register (HLR) or share a jointly owned HLR with an MNO; and

iii) **Thin MVNOs**, which may provide access services with additional applications and content and they are not much different from pure resellers. These thin MVNOs are also called Enhanced Service Providers.

2.3.2 The borders between these three different types of MVNO are illustrated in Figure 1.

FIGURE - 1: MVNO Models





2.3.3 Facility based MVNO's have some infrastructure of their own whereas non facility based MVNO do not own any network facilities and are thus pure resellers.

2.3.4 The issue that needs to be addressed is "to what extent MVNO should be permitted to set up their own infrastructure". Majority of MNOs opined that since MVNOs will not be having their own spectrum, they should not be permitted to install Radio Access Networks (RAN)/Base Station Sub-system (BSS). The MVNOs can only be allowed to have their own core network and value added services platforms like voicemail, IN, SMS, billing etc. They should be allowed to brand and bundle the product along with the distribution of their own product. Some stakeholders were of the view that there should be no barriers for setting up of MVNO as far as setting up network is concerned. The MVNO should have the freedom to choose its business model based on its own understanding of the market. Both facility Based as well as non Facility Based MVNOs may be permitted to provide services under their licence and specified regulatory framework.

2.3.5 The general consensus among the stakeholders is that all forms of MVNOs that is full, intermediate and thin should be permitted. However, since MVNO's cannot have spectrum they should not be allowed to install the Radio Access Network (RAN).

2.3.6 There was also a suggestion to introduce MVNO in a phased manner starting with thin MVNO. It is felt that controlling the market in this manner is not going to result in any distinct advantage, as there is no obligation on the MVNO to create infrastructure.

2.3.7 **Recommendation:**

Authority recommends that MVNO should be free to choose its business model. However MVNO shall not set up its own Radio Access Network (RAN)/ Base Station Sub-system (BSS).

2.4 Regulatory Model

2.4.1 For introduction of MVNOs, appropriate regulatory framework is a must.

2.4.2 In the European Union, until now there is no directive that obliges MNOs to grant access to MVNOs. Inspite of positive response to MVNOs, no major regulatory actions have been undertaken.

2.4.3 Regulatory approaches towards MVNOs differ quite substantially between jurisdictions. While, for example, Ireland, Denmark and Hong Kong have made specific regulatory provisions for MVNOs, several Nordic countries require MNOs to provide network access in quite general terms. Other countries such as the USA, the UK, Australia and New Zealand have no access obligations. In Germany, MNOs are required by regulation to enter into wholesale agreements with MVNOs (who basically act as resellers). Differences in regulation also exist with respect to the MVNOs' treatment. For example, some jurisdictions that mandate MVNO access require MVNOs to undertake some minimum investment into their own mobile infrastructure while others have very little infrastructure requirements. The advocates of regulated MVNO access argue that MVNOs may offer innovative service bundles and also facilitate downstream innovations by incumbent MNOs in response to a MVNO's market entry. One other view is that new entrants slowly climb up the ladder of investment if they can enter a market without burdensome investment requirements. Following this line of reasoning, regulated MVNO access may spur investment by new entrants. On the other hand, incumbent MNO's investment incentives are likely to decrease if they have to share their facilities with competitors. Since forced access reduces the rents that an incumbent can appropriate from its investment, the incentives to invest will decrease so that mandated MVNO access may reduce investment by incumbent operators.

2.4.4 When MVNO access is provisioned by regulation, it has been noted that MVNOs emerge as competitors in markets for mobile communications services. However, even in the absence of mandatory access provisions, MVNOs have successfully entered the industry in many jurisdictions. By now, MVNOs or similar business models exist in almost all jurisdictions with liberalized mobile telecommunications markets.

2.4.5 The MNOs' incentives to voluntarily provide network access and invite MVNOs onto their network critically depend on two issues: firstly, the mode of competition and, secondly, the degree of product differentiation. Generally, it is seen that MNOs will voluntarily provide network access if the services offered by the prospective MVNOs are sufficiently differentiated, as with a high degree of product differentiation the revenue effects outweigh the competition effects.

2.4.6 Most of the stakeholders feel that the MNOs should not be mandated to open access to MVNOs. There should not be any obligations imposed on MNOs for implementing MVNO model in India. Since Indian mobile market is highly competitive, regulatory step requiring mandatory access to MVNO is perhaps avoidable. India could follow the example of European Union, where there is no directive that obliges MNOs to grant access to MVNOs.

2.4.7 It was strongly suggested that a MVNOs may be allowed on commercially negotiated terms. The regulatory intervention to be considered only when markets have failed and there is not enough competition.

2.4.8 Another view mostly voiced by the prospective MVNOs was that there should be regulatory framework to protect MVNOs from Access provider's monopoly of services. There is a need to regulate the MVNO's operation to make it a success as this will help in boosting the telecom growth even further in India. There should not be high entry barriers, which will act as a deterrent for new players from becoming a MVNO. One key point is that good negotiation could be possible in short term (while MNOs want to enhance their networks base) but in the long term MNOs may raise price barrier to drive out the MVNOs from the market and realize end user revenues themselves. Thus clear guidelines and directives are also required to be in place for MNO's so as to ensure success in long term of any of the models of MVNO. The concern is that voluntary negotiation with MNO's may not be successful, because of the operator's wish to protect their brand name and not to sell to potential brand competitors. It is very critical that not just MVNOs, but also MNO's who are entering into contracts for MVNO service need to be regulated to ensure sustainability of any business model under MVNO in the long run.

2.4.9 Most of the stakeholders felt that depending on the business model, facility based or non-facility based, chosen by the MVNO, the regulatory compliance, as is applicable on MNO should be applicable in an equal manner to the MVNOs. This may cover aspects such as meeting the TRAI QOS parameters on billing, customer care, filing of tariffs and also technical parameters, which may be relevant and as may be applicable/ prescribed by TRAI from time to time.

2.4.10 There was also a suggestion that TRAI should intervene to resolve access dispute in all those cases where the parties fail to reach mutually agreed commercial arrangement. A 'light-touch' regulatory regime should be followed that avoids excessively regulating MVNO and MNO relations. MVNOs should be governed by a License by DoT to ensure entry of serious players only. Where MVNO access is mandated by law, either strict definitions for MVNOs also result, which effectively require minimum investment to prevent speculative entry (such limiting definitions may reduce efficiency and discourage tariff innovation), or the market becomes overwhelmed by new entrants, the majority of which do not survive (creating instability in the market).

2.4.11 The MNOs have argued against any form of mandating to open access to MVNOs. On the contrary the prospective MVNOs welcome that some sort of regulatory intervention in the form of mandating sharing or resolving access disputes between MVNO and MNO. The number of access service providers per service area in India is higher when compared to most of the countries in the world and thus, the Indian telecom network is today the second largest network in the world with the highest rate of growth. In such a large fast growing network it is difficult to gauge the excess capacity. Also the limitation of availability of spectrum is another factor that would go against mandating of sharing.

2.4.12 In case the MVNO is allowed on commercially negotiated terms, MVNO will have to enter to into an agreement with the parent MNO. Also this agreement besides commercial and other terms and points on other issues as mentioned in chapter 4. It should also have clear bifurcation of responsibilities between MNO and MVNO towards customer, licensor, Regulator and security agencies The Authority would have the right to intervene on the clauses of the agreement.

2.4.13 Recommendation:

Considering the international scenario and the stakeholders comments and keeping in view the Indian scenario as described above and discussed elsewhere in this recommendation, the Authority recommends that the commercial model covering the nature of relationship including the arrangement/ agreement between MNO and MVNO be left to the market forces. Besides commercial and other points, the points that has to be part of the agreement are given in chapter 4. A copy of the agreement is to be filed with the Licensor. The Authority reserves the right to intervene.

Chapter 3

Regulatory and Licensing Issues

3.1 Issue of License

3.1.1 As per the Section 4 of the Indian Telegraph Act, any entity providing a telecom service would require a license/ authorisation from the Government for the same. As MVNOs would be providing telecom service to the customers under its own brand, which would be different from that of MNO, the revenue earned by the MVNOs are required to be subjected to a levy of the applicable license fee. Further, the activities that would be carried out by the MVNOs will have direct bearing on the consumer interest and there are a number of areas where there will be service obligations on the part of MVNO. To safeguard consumer interest it is essential that the reseller is subjected to certain terms and conditions for provision of service. Also from the point of view of providing an enabling framework for the smooth operation of MVNOs also it is important that the resllers are brought within the regulatory framework. Providers of telecom service are also required to comply with a number of provisions of various other Acts/Rule/Regulations in force in the country including those relating to security and other matters of National importance. Therefore, a license would need to be issued to the MVNO under section 4 of the Indian Telegraph act.

3.1.2 **The Authority recommends that MVNO should be issued a license under section 4 of the Indian Telegraph Act, for providing the services. The terms and conditions of the license have been outlined in these recommendations.**

3.1.3 The range or types of MVNOs that exist or may come into being is wide, the simplest being an enhanced franchisee of MNO to the full MVNO which is equivalent to the MNO itself for a specified area with the only exception that the spectrum is not allotted to the MVNO and it does not set up Radio Access Network/Base station subsystem (BSS). Therefore, the regulatory and licensing issues for MVNOs need to be seen in view of the existing licensing provisions for MNOs.

3.1.4 **Licensed Service Area**

3.1.4.1 MVNO may be a simple reseller of the MNO services in a particular service area or a MVNO may like to offer service in multiple service areas of the same MNO. It is also possible that a particular MVNO may tie up with different MNO in different service area. Spectrum is allotted to the MNOs for usage within its service area.

3.1.4.2 Considering all the technical and regulatory aspects, the Authority recommends that the licensed service area (circle) of MVNO should be same as that of parent MNO. However, the MVNO could offer service anywhere within the licensed service area (circle) of the parent MNO as specified in the mutual agreement between MNO and MVNO. Separate licence for each service area shall be required.

3.1.5 **Duration and conditions governing termination/suspension/ revocation of license.**

3.1.5.1 Generally the licences for telecom services are issued for 20 years The duration of licence of MNO is 20 years and renewable. The relationship between MNO and MVNO is like that of a principal and its agent in the limited sense of tenure of license. So the validity of license of a MVNO will have to be co-terminus with the license of its parent MNO. In such a case the duration of license of MVNO may get limited to the validity of the license of the parent MNO. Similarly, if due to some reason the license of parent MNO is terminated the MVNO license cannot exist.

.

3.1.5.2 Authority recommends that the duration of license for MVNO should be 20 years and renewable. However the validity of MVNO licence shall be co-terminus with the validity of licence of the parent MNO i.e MVNO licence would automatically get terminated if the license of parent MNO is terminated or ceases to exist.

3.2 Eligibility Conditions

3.2.1 While prescribing the eligibility conditions for offering a telecom service, the factors considered are prior experience of the company in offering telecom service, the net worth and paid up capital of the company. These conditions are to ensure that the licensee company is able to roll out the services quickly and that the company has the financial strength to set up the network and run it.

3.2.2 The eligibility conditions for award of UAS License (parent MNO) prescribed by the DoT Guidelines have been taken into account while recommending eligibility conditions for MVNO.

3.2.3 Most of the stakeholders in their comments have welcomed the introduction of MVNOs. It was felt that a minimum net worth and paid-up capital requirement should be prescribed. While many stakeholders have suggested that any company with or without telecom experience should be eligible, a limited view suggested for eligibility is that it should include “prior experience in telecom”. A point that came into discussion with the stakeholders is that "a prior agreement between MVNO & MNO should be a prerequisite for issue of MVNO License".

3.2.4 The stakeholders have expressed that:-

- The entry barriers should not be such that the genuine MVNOs are not able to make it. At the same time, there should be provisions so as to encourage serious players only.
- Any company whether a telecom firm, an FMCG, a service organization such as railways, public sector banks, etc. could be eligible to become a MVNO.

3.2.5 Internationally, it is observed that while some MVNOs are from the telecom industry there are many who have no prior experience of telecom industry. The Company may use its strong brand name in another area such as sports, entertainment etc to address niche markets. Also the company with large retail networks may leverage it for extending telecom services. The MVNOs may not be offering service in entire service area of the MNO.

3.2.6 In some countries where MNO is not mandated to share their network, the MVNO, besides meeting the eligibility conditions has also to conclude a commercial agreement with MNO before they can apply for a license. This is to ensure that MVNO is able to commence operations once license is issued.

3.2.7 As per the present procedure for issue of license for MNOs, a Letter of Intent (LOI) is issued to the company. Within 15 days, the company has to pay the Entry fees and submit the Bank Guarantees after which the license is issued.

3.2.8 **The Authority recommends that an Indian company, which fulfills licence conditions such as FDI & substantial equity and the following conditions of networth and paid up capital shall be eligible for issue of MVNO license in a service area.**

a. **Networth: 10% of the networth specified for the MNO for the service area i.e. Rs.10 Crores for Metros/'A' Category, Rs. 5 Crores for 'B' Category, Rs. 3 Crores for 'C' Category**

b. **Paid up Capital: 10% of the prescribed networth for the MVNO.**

The procedure for issue of license to MVNOs, shall be as follows:

i. **LOI shall be issued to the eligible MVNO by the licensor.**

ii. **Entry fee and Bank guarantees to be submitted by the MVNO within a month from the date of grant of LOI by the licensor. The MVNO shall also enter into an agreement with MNO and submit the same to the Licensor, within this period of one month from the date of LOI.**

iii. **License shall be issued after the above conditions are fulfilled.**

iv. **The mandatory points that must be covered in the agreement between MNO and MVNO are listed in Chapter 4. TRAI would have power to intervene on any clause in the agreement. None of the clause should violate any of the license conditions or the regulations in force. The Regulations / Directions / Orders of TRAI in this regard would be binding on MNO and MVNO.**

v. If due to some reason, agreement between MVNO & MNO is terminated, the license of the MVNO would also be terminated. Fresh licence will have to be obtained by the MVNO if new agreement is being signed by the MVNO with another MNO.

3.3 Scope of Service of MVNO

3.3.1 As per UAS License, the scope of the MNO license cover collection, carriage, transmission and delivery of voice and/or non-voice MESSAGES and includes provision of all types of access services. Access service provider can also provide Internet Telephony, Internet Services and Broadband Services including triple play i.e. voice, video & data, Voice Mail, Audiotex services, Video Conferencing, Videotex, E-Mail, Closed User Group (CUG) facilities. If required, access service provider can use the network of NLD/ILD service licensee.

3.3.1 Generally MVNOs buy network capacity from a MNO to be able to provide a full portfolio of mobile services for their own subscribers. The arrangement involves selling of airtime to MVNOs by MNOs. Many business models have evolved, from simple resellers and niche providers to advanced value added MVNOs.

3.3.2 Based on the possible business strategies the MVNOs could be categorized into following groups:*

· low price
· narrow focus
· service differentiation
· international clustering

* *MVNO strategies by Amukka Kiiski, Heikki Hammaainen, Heisinki, University of Technology, Finland Case Study*

3.3.3 In case the MVNO business strategy is based on offering services at low price, the main competitive advantage must be the ability to keep costs low. All the operations of the company must be aligned to meet this target. The service portfolio is narrow including only the basic services for the selected, rather large customer groups. Thin and low cost organizational structure, a large customer potential, and a short reaction time to changes in the market are benefits for the MVNOs following the ‘price leader’ strategy. However, in order to survive with this business model, a large customer base is required because of the small profit margins. Also the amount of resources for new service development is minimal and tradeoffs are needed to be able to provide the most cost-effective services. Service platforms and roaming contracts are usually not handled by the price leader itself but by the MNO. One major challenge for a low price MVNO is the cost of its MNO contract.

3.3.4 MVNOs that select to *focus on one customer segment* typically cannot achieve business volumes big enough to justify investments on own service platforms. Tailored marketing and customer care for the chosen segment allows setting the expected ARPU high. Strategic alignment between the partnering MNO and MVNO is typically good since a large MNO cannot easily focus on small niche segments. This MVNO strategy is suggested by many.

3.3.5 A MVNO can also choose to *offer differentiated, value added services* for demanding customers. Here the service mix should be rather large to attract (especially business) customers. One possibility is to offer bundled services based on the company’s earlier core competence (e.g. fixed and mobile subscriptions, office solutions). These ‘service leaders’ might also have multiple target segments that use the same services with different, customized content. While competing with differentiated services, a MVNO has the potential to gain a rather high ARPU. Also the ability to develop new services independently (or in cooperation with partners) for the dynamic needs of the customers is an advantage. A major problem with this strategy has been the absence of profitable business models: users are not willing enough to pay extra for the value-added services (only some service concepts, like voice mail and ring tones, have been successful).

3.3.6 Global MNOs can select to enter a new country as a MVNO instead of investing in or acquiring a local MNO. This *international clustering* approach enables a fast initial service roll-out if the foreign MNO can use their existing service machinery located outside of the target market, as well as their existing service portfolios.

3.3.7 From the above discussions it emerges that the scope of service of MVNO and MNO has lot of commonality, if not the same. The difference is mainly in the business strategies that the MVNOs use for offering the same service and in some cases with some value added features.

3.3.8 **The Authority recommends that the scope of service of MVNO would be within the scope of service of MNO, i.e. the MVNO can offer any or all of the services that the MNO can offer subject to the agreement between MNO and MVNO.**

3.4 Number of MVNOs

3.4.1 The issue is regarding the number of MVNOs that can get attached to an MNO in a service area.

3.4.2 Majority of the stakeholders have mentioned that there should not be any restriction on the number of MVNO attached to a particular MNO.

However, there have been a limited view that the no. of MVNOs should be limited/ capped. Most of the stakeholders have maintained that in principle there should be no restrictions in order to create a healthy, competitive environment in which market-dynamics will play the most significant part in the number of MVNOs, which come to the market, survive, and grow. Beyond this the same dynamics generate acquisitions and consolidation.

3.4.3 Since introduction of Unified Access license in 2003, there is no cap on the number of MNOs. The licensees can offer both wire line (fixed) and wireless services. In short there is free competition in the Access services and there is no cap on the number of licensees.

3.4.4 There seems to be apparently no rationale for restrictions to be imposed on the number of MVNOs attached to a single MNO. International experience also shows that MNOs are capable of handling multiple MVNOs and there are known cases in Europe of MNOs parenting more than ten MVNOs.

3.4.5 MVNOs, as we have discussed, may focus only on a particular segment of subscribers or particular area. The spectrum available with the MNO would limit the number of MVNOs attached to an MNO. The market conditions and mutual agreement between the MNO & MVNO should therefore decide the issue, depending upon the available capacities, spectrum of MNO and capabilities of MVNO.

3.4.6 **The Authority recommends that there should not be any limit to the number of MVNOs attached to a MNO. However a MVNO cannot get attached to more than one MNO in the same service area.**

3.5 Commercial Model

3.5.1 The issue is the commercial model between MNO and MVNO and payments to DOT for spectrum usage.

3.5.2 MVNOs do not have any separate assignment of spectrum. MVNOs utilise the spectrum of the parent MNO. In India, unlike in many other countries, the spectrum allocation is linked with the grant of UAS/ CMTS license. The start up (initial) spectrum is allotted to the licensees depending upon availability. Further allotment of spectrum (2G) is based on the number of subscribers (subscriber linked criteria) and availability of spectrum. For usage of spectrum the access service providers pay an annual spectrum charge which is a percentage of Adjusted Gross Revenue (AGR). The annual spectrum usage charge is available in **Annexure V**. The spectrum allocation as on date to MNOs is available in **Annexure VI**.

3.5.3 In the European countries and USA where MVNO has been permitted, the access providers have got the spectrum through auction. The Government of India has decided to auction the spectrum for 3G and Broadband Wireless Access (BWA). This will result in a situation where some of the MNOs would have spectrum only in 2G band whereas others would have part of their spectrum allotted to them as part of the license in 2G band and remaining acquired through the process of auction (3G and BWA). The services offered by MVNO could be determined by the spectrum in 2G, 3G and BWA bands owned by MNO.

3.5.4 Some stakeholders are of the view that the need for commercial model / framework does not arise as the ownership of the spectrum is with MNO only & MVNO should not pay spectrum charges as they are not in any way owning the spectrum. Further, as the concept of sharing of spectrum is not involved, the need for commercial model or framework for sharing does not arise.

3.5.5 As far as the commercial arrangement between MNO and MVNO is concerned for spectrum sharing, the MVNO will normally be buying the wholesale minutes of usage (MOU) of airtime from the MNO. The commercial arrangements between the MNO and MVNO should be arrived at by mutual negotiation.

3.5.6 As MVNO does not have spectrum, there is no liability for the payment of spectrum charges. MVNO will be buying bulk minutes from MNO and the charges that would be paid for the bulk minutes would also account for the payment of spectrum charges by MNO. In a situation where MVNO does not exist, the subscribers would have belonged to the MNO and MNO would have paid spectrum charges on the revenue from these subscribers. In order to ensure that the revenue that is accrued to the government does not decline on account of introduction of MVNO, MNO should pay spectrum charges also on the revenue of MVNO(s) or all the payments received from MVNO(s), whichever is higher.

3.5.7 **The Authority therefore recommends that-.**

i) Commercial model between MVNO and MNO to be left to mutual agreement between the two. However this would be subject to the License Conditions and Regulations/ Directions/ Orders of TRAI.

ii) MNO should pay spectrum charges also on the revenue of MVNO(s) or all the payments made by MVNO(s) to MNO, whichever is higher. In case it is difficult to operationalise this, any other scheme where the spectrum charges are accrued to the Government on the revenues of both MNO and MVNO(s), will serve the purpose.

iii) The subscribers of MVNO(s) should be counted towards parent MNO for the purpose of spectrum allotment in bands where subscriber based criterion is applicable for spectrum allotment.

3.6 Service Obligations of MVNO

3.6.1 MVNO being a reseller of MNO, some of the service obligations of MNO's may get passed on to the MVNO. The service obligations will be different depending upon the nature of infrastructure set up by MVNO. The service obligations of MNO include billing, customer care, national security requirements, quality of service, access to emergency services, subscriber verification, directory services, number portability, controlling of unsolicited commercial communications and tariff.

3.6.2 Irrespective of the type of MVNO, three basic activities that are generally taken up by the MVNOs are:

- Customer acquisition (subscriber verification)
- Customer management (Customer care, billing, tariff, controlling unsolicited communications) and
- Service provisioning

3.6.3 Once the customer belongs to MVNO, all service obligations related to customer acquisition and management becomes the responsibility of the MVNO. As we progress from thin MVNO to full MVNO, the service obligations would also increase.

3.6.4 The stakeholders have commented that the service obligation of a MVNO may vary depending upon the model chosen and the nature of infrastructure set up by MVNO. Further that some of the service obligations of MNO may get passed onto the MVNO such as tariff, billing, customer care, national security, quality of service, implementation of regulation & compliance, timely submission of reports to DOT/TRAI or any other agency, accounting separation etc.

3.6.5 Customer acquisition, customer management and provision of service may be counted as three basic activities of a MVNO and so the onus to comply with all guidelines relating to the above activities including subscriber verification and national security shall be on the MVNO. Also, it was highlighted that the obligations on MVNO may be kept minimized and there should not any obligation on MVNO to create any infrastructure to meet its service obligations.

3.6.6 **The Authority recommends that the service obligations may be dependent on the type of model chosen by MVNO. At the minimum level MVNO should handle obligations such as customer grievances, tariff and billing and at the maximum level the obligations would be same as that of MNO, except rollout obligations.**

MVNO would however be directly responsible for –

i) Customers acquisition, management and grievance handling.

ii) Achieving QoS parameters as prescribed by TRAI from time to time.

iii) Complying with Billing and metering requirements as prescribed by TRAI including audit / surveys.

3.7 Entry fees

3.7.1 Two types of payments are associated with acquiring a telecom license – entry fee and annual license fee. The MNOs are required to pay an entry fee. This varies with the service area. The fourth cellular license was auctioned in all the service areas in 2001. The entry fee for each service area is equivalent to the entry fee paid during the fourth cellular license auction. The entry fee for the different service areas is given in the Annexure IV. The MNO is issued UAS license after payment of the entry fees. UAS licensees are eligible for allotment of initial spectrum in 2G, depending upon availability and subsequent 2G spectrum based on subscriber linked criteria and availability of spectrum.

3.7.2 MVNO does not have any spectrum assigned to it. In the present scheme of things MNOs can appoint franchisees. Even the simplest MVNOs are more than franchisee as they sell the service in their brand name and also they can do service differentiation. The mobile market in India is highly competitive. The quantum of entry fee should be such so as to discourage non serious players and not act as a deterrent to genuine players.

3.7.3 The views of stakeholders are very clearly divided on this issue. The existing MNOs are of the view that heavy entry fee of the order of 25% of the UASL may be prescribed for MVNOs. Whereas the prospective MVNOs are of the view that the MVNOs may be totally exempted from entry fee. While some suggested entry fee should be high enough and comparable to the level-playing field with MNO.

3.7.4 The international scenario indicates that in many countries, the barriers to entry including entry fees, conditions etc for MVNOs are kept fairly low, which may otherwise be a deterrent for a MVNO.

3.7.5 **The Authority recommends that the entry fee imposed on MVNO should be nominal. It may be 10% of MNO's entry fee as prevailing on date in that service area subject to a maximum of Rs. 5 crores for Metros and Category 'A', Rs. 3 crores for Category 'B' and Rs. 1 crore for Category 'C'.**

3.8 Annual License Fees

3.8.1 The services offered by MNO and MVNO are similar in nature, if not the same. It is important that the revenues accruing to the Government should not get reduced due to accounting juggleries and cross-booking of revenues between MVNOs and MNOs. Therefore, it is logical that the annual license fees for MVNO should be the same as for MNO.

3.8.2 The MNO pay an annual license fee 6% or 8% or 10% of the Adjusted Gross Revenue (AGR) depending upon the service area (refer **Annexure IV**). Out of this 5% is towards the Universal Access levy. Broadly the license conditions provide for arriving at the AGR after deducting from the gross revenue, PSTN related call charges paid to other access service providers/ roaming charges and service tax/ sales tax paid to the Government (if the gross revenue includes that component).

3.8.3 The stakeholders are of the view that the definition of AGR for the purpose of all government levies should be same for MVNOs as for MNOs. The AGR for MVNO should include all the revenues attributable directly to the access services provided by the MVNO. Based on the principle of deduction of pass through revenues followed for IUC charges for arriving at the AGR, the charges payable to MNO by the MVNO for the bulk Minutes of usage, roaming, taxes, etc. should be allowed as deduction from the total revenues of the MVNO for arriving at the AGR, so as to avoid double taxation.

3.8.4 **The Authority recommends that the rate of annual licence fee as well as definition of AGR for MVNO shall be on similar lines as defined in the Access Service Providers' licence to whom the MVNO is parented.**

3.9 Allocation of Numbers, Number Portability, Interconnection with other service providers and Roaming:

3.9.1 After spectrum, number is a finite resource used by Access Service providers. In some countries the service providers are charged for the number blocks allotted to them. In India the numbers are allotted as per the National Numbering Plan to the Access Service providers according to their subscriber base. There are no separate charges for the same.

3.9.2 Since the MVNOs operate under certain commercial agreement with MNOs, which also include clauses for exit from such agreements, therefore, the number allocation issue is very important. Similarly, with number portability regime, this issue will become more important.

3.9.3 The stakeholders are of the view that the numbers be allotted to MVNOs by the parent MNO emphasizing that the full number block allocated to the MVNOs by the MNO should be counted towards 60% criteria for allotting new block of numbers to the MNO.

3.9.4 Under the present National Numbering Plan difficulties are being experienced to manage the large number of service providers in the 23 service areas and TEC is working on a new numbering plan.

3.9.5 The introduction of number portability would also have an impact on the policy for number allocation to MVNO. Further if MVNOs become separate entities for number allocation, the number of entities interacting with the centralized data base for number portability will increase. This would increase the complexity of the number portability system.

3.9.6 In view of the factors discussed above, the MVNOs should necessarily use the numbers allocated to the MNO and responsibility of number portability be with the parent MNO.

3.9.7 MVNO would have an agreement with the MNO for carriage of all the calls, which are originated by its subscribers, and for terminating the calls to its subscribers. It is better for MVNOs to operate using the interconnection and roaming arrangements of its parent MNO.

3.9.8 The MVNO will not be allowed to make interconnect or roaming agreements with other operators instead will use the parent MNO interconnect and roaming agreement.

3.9.9 In order to ensure fair treatment to MVNO, a suitable condition may be required to be inserted in the licence for both MVNO and MNO to the effect that the Authority would intervene in case the hosting conditions of the network operators are not conducive enough for competition in the market for the MVNOs.

3.9.10 **The Authority recommends that the allocation of numbers, number portability, interconnection with other service providers and roaming be provided to MVNO by the parent MNO. For allocating new block of numbers to MNO the subscribers of MVNO(s) should also be**

counted. On request, Mobile Network Code (MNC) should be allotted to MVNO by the licensor.

A suitable condition may be inserted in the licence for both MVNO and MNO to the effect that the Authority would intervene in case the hosting conditions of the network operators are not conducive enough for competition in the market for the MVNOs.

3.10 Failure of Agreement between MVNO and MNO

3.10.1 Every MVNO would operate under certain commercial agreement with MNO, which also include clauses for exit from such agreements. The commercial part of the agreement should be framed in such a way that the MVNO may not be forced to quit by the parent MNO directly or indirectly. There may be a number of such issues which may effectively block the entry and sustainability of resellers in the market. Recently[*], the French Regulator has had an occasion to analyze the obstacles to the development of MVNOs and has made proposals to create a genuine competition momentum. It has been concluded in that analysis that the hosting conditions offered to MVNOs by network operators have been restrictive and this has limited the possibilities to enhance virtual operators business. They have concluded that it is essential to create new competition incentives in order to improve the conditions in which MVNOs can be hosted by their parent operators.

3.10.2 The issues pertaining to inter working of MVNO and MNO networks and requirement of connectivity by MNO for traffic of MVNO e.g. Initial interconnection, Augmentation, Port charges, Termination of Calls, on net,

[*] Opinion 08-A-16 of 30th July, 2008, on the situation of MVNO operators on the French Mobile telephony market.

off net etc were discussed and it was considered appropriate that these issues be addressed as and when the need arises, under the relevant Regulations/ Directions/ Orders of TRAI and licensing conditions.

3.10.3 The Authority in this context, notes that the contracts/agreements between MVNOs and MNOs need to be balanced particularly as regards the technical and price aspects which enable MVNOs to effectively stimulate competition on mobile telephony in retail market and which would enable access to network elements allowing a genuine differentiation in the offer of service to customers.

3.10.4 It is possible that a dispute can arise between the MNO and MVNO at a later date. In such a case there is a need to protect the subscribers who are being served by the MVNO. The agreement between the MVNO and the parent MNO should always include provisions for transfer of the customer base at the end of the contract. It must be ensured that consumer interests are protected and customers are not adversely affected by an interruption of service following a dispute between their MVNO provider and the parent MNO.

3.10.5 The stakeholders are of the view that, the disputes between MVNO and MNO are to be treated as disputes between any other service providers. TDSAT has powers to adjudicate disputes between service providers and disputes between MNO and MVNO fall under TDSAT’s jurisdiction. It is the duty of the licensee to ensure continuity of services to its customers unless license is terminated or suspended by the licensor.

3.10.6 Serious concern has been expressed by Consumer Groups emphasizing the need to protect the consumers’ interest under all circumstances and ensuring that the consumers are not put to any inconvenience in case of closure of services by the MVNO. Some stakeholders are of the view, that in case MVNO exits or in case of dispute between MVNO and MNO, MNO should take over the subscribers and provide continuity of service to them. However, the same should be specifically spelt out in the agreement between MVNO and MNO.

3.10.7 MNOs argued that as the tariffs offered are decided by the MVNOs themselves, the MNO cannot be held responsible or bound to offer the service at the same tariffs. They feel that there should not be an automatic obligation for the host network to continue to provide service to all end users at the end of the contract with the MVNO at the same terms and conditions offered by the MVNO. In such cases, MNO may continue the existing tariff packages depending upon their commercial viability and feasibility. Alternately, it may offer comparable tariffs to these customers or offer them to migrate to any of the existing plans of the MNO.

3.10.8 The parties must have agreed on a process to ensure that customers are notified well on time, as to what their options are before the agreement between the MVNO and the MNO is terminated. Customers who wish to be ported to another MVNO and/or MNO should also be allowed to do so.

3.10.9 Some stakeholders suggest the Licensor to prescribe Bank Guarantee to be furnished by the MVNO, which would be released upon meeting certain criteria. Certain conditions can also be imposed upon MVNO Licensee to protect the subscriber like, prescribing lock in period before which MVNO cannot exit. In case of MVNO exiting before the lock-in period, any amount charged from customers as Registration or entry fees shall be refunded, thereby ensuring that the customer is not at loss because of MVNO exiting in a very short duration

3.10.10 From the above discussions it is clear that since MVNOs are handling their customers directly and independently, MNOs cannot be forced to take over their subscribers at the terms and conditions given by

MVNO. However in order to protect the interest of the subscribers, the MNO can permit the MVNO subscribers to migrate to any of the existing plan of the MNO without charging any migration charges.

3.10.11 The Authority recommends that:

a) **In case of a dispute between MVNO & MNO, the procedure for resolution of dispute would be same as that being followed for disputes between MNOs.**

b) **In case MVNO wants to exit the business:**

   i. **MVNO to give six months' notice to customers, MNO, Licensor and the Authority before stopping the services.**

   ii. **MNO would offer its services to the subscribers of MVNO to migrate to any of the tariff plan of MNO without any extra charges such as upfront/ activation charges. In the case of lifetime subscribers, they should be offered life time plan of MNO. The subscriber should be allowed to retain the same number.**

   iii. **The MVNO that exits the business, would be disqualified to get a fresh license in that service area.**

   iv. **If the MVNO exits business, the PBG shall be forfeited. FBG shall be returned after adjusting the dues payable.**

3.11 Roll out Obligations

3.11.1 In the license issued to MNO certain roll out obligations are specified. The rolls out obligations are in the nature of coverage of the service area. Any delay in fulfilling the obligations attract liquidated damages. A gist of the roll out obligations and liquidated damages is given in **Annexure VII**.

3.11.2 There are some Access Service providers who have already fulfilled their roll out obligations while some others have been issued licenses or allotted spectrum recently and are in the process of rolling out their networks.

3.11.3 Most of the stakeholders suggested that there should not be any Roll out obligations for the MVNOs, whereas some are of the view that it should be as per the mutual agreement between MVNO and MNO.

3.11.4 There would be instances where MVNOs may like to cater to only target/ specific customer segments or maybe in niche areas. Prescribing roll out obligations is against this approach. Moreover, prescribing roll out obligations may discourage prospective MVNOs from entering the business. The parent MNO should be responsible to comply with the roll out obligations independently.

3.11.5 The Authority recommends that

- **i. No roll out obligation be prescribed for MVNOs and**
- **ii. MNO has to fulfill its roll out obligations independently i.e. the roll out done by the MVNO shall not be counted towards roll out of the parent MNO.**

3.12 Mergers:

3.12.1 The mergers of MNOs are subject to certain conditions outlined in the guidelines of DoT. Salient points of the guidelines are given in **Annexure VII**. The basic objective of these guidelines is to ensure that the competition in the market is not compromised due to the merger and prevent trading of licenses. The mobile market in India is highly competitive with about 10 to 12 MNOs in each service area. The presence of MVNOs is likely to enhance the competition. The various issues/ aspects on mergers and acquisitions were examined in detail in the Consultation Paper of the Authority on “Review of Terms and Conditions and Capping of number of access providers" dated 12th June 2007. The response of the stakeholders and their analysis are available in the Recommendations of the Authority on the same subject dated 28th August 2007.

3.12.2 The possible situations are merger of two MVNOs within the same service area and merger of MVNO and MNO within the same service area. One possible argument could be that since MVNOs do not have any assignment of spectrum, the mergers of MVNOs may not have any adverse effect in the competition.

3.12.3 As per the stakeholders' view, any acquisition or merger of MVNO should be as per the prior approval of the MNO with whom they are working and it should be ensured that competition is not hampered as per equity participation criteria in the UASL License. Merger of MVNO with other MVNO of same MNO or MVNO/s with its MNO should be allowed as per the existing merger and acquisition guidelines

3.12.4 The Authority recommends that in a service area, Merger of a MVNO with the parent MNO or another MVNO parented to the same MNO may be permitted. Merger of MVNOs parented to different MNOs in a service area is not permitted as in a service area one MVNO can only get parented to one MNO.

3.13 Substantial Equity

3.13.1 An equity holder having 10% or more equity in one MNO cannot hold more than 10% equity in any other MNO in the same service area. The relevant clause in the license agreement is given in **Annexure VII**. This is to ensure that one MNO does not directly or indirectly control other MNOs in the same service area. This will adversely affect the competition.

3.13.2 It is possible that the MNO in a service area has substantial equity participation in a MVNO in its own service area which is parented to another MNO. Here one could argue that the MNO is indirectly providing services of another MNO in the same service area and resulting in a similar situation of having control of two MNOs. In such a situation the restriction on substantial equity may be relevant.

3.13.3 Stakeholders are of the view that , MVNO should also be subject to cross holding restrictions, which are already in place for MNO. Also an MNO should not be allowed to invest in MVNO of other operator. Others feel that there should not be any restriction on cross holding between two MVNOs or between a MVNO and MNO in a service area.

3.13.4 The Authority recommends that in any service area, an equity holder, having 10% or more equity in a MVNO cannot hold 10% or more equity in another MVNO. In a service area, an equity holder having 10% or more equity in an MNO cannot hold 10% or more equity in a MVNO

3.14 Foreign Direct Investment (FDI)

3.14.1 Telecom infrastructure is a vital national infrastructure of any country. When the telecom sector was liberalized, the maximum permitted FDI was limited to 49% due to security concerns. In 2005 the FDI limit was enhanced to 74% to bring in more foreign investment. The security concerns were addressed through various conditions in the license agreement regarding appointment of foreign directors in the board, restrictions on remote control of the network etc. Today up to 49% FDI is through automatic route and beyond 49% up to 74% requires prior FIPB approval.

3.14.2 Most of the stakeholders are of the view that since both MVNOs and MNOs will be providing similar services in a given area, so as to ensure uniformity, the FDI limit should be same as for MNO prescribed in UASL conditions i.e 74%. Some are of the view that there should not be any restriction pertaining to FDI limit for them.

3.14.3 The Authority recommends that to harmonize the FDI limit for various services in telecom sector, level of FDI upto 74% may be permitted in MVNO. As in the case of MNO up to 49% FDI through automatic route and beyond 49% up to 74% with prior FIPB approval may be prescribed. All the other conditions related to FDI applicable to MNO would be applicable to MVNO also.

3.15 Bank Guarantees

3.15.1 The MNOs have to submit both financial and performance bank guarantees. The amount varies depending upon the service area. The details are given in the **Annexure VII.**

3.15.2 The financial bank guarantee acts as a financial back up for any default in the payment of the license fees. The license fees are to be paid quarterly by the MNOs and the amount of financial bank guarantee is kept equivalent to license fee of two quarters. Similarly the performance bank guarantee is to ensure that the company does not default any license condition including the roll out obligations. This acts as a financial disincentive for non performance. It is also to be mentioned that providing bank guarantees add to the cost of operation of the company. More of it would act as a disincentive for new MVNOs. There is a need to strike a right balance.

3.15.3 Major stakeholders have given the view that “since no rollout obligation is mandated for MVNOs, PBG should not be asked for. FBG should be taken to ensure payment of licence fee. Similarly the performance bank guarantee is to ensure that the company does not default any license condition apart from the roll out obligations. This acts as a financial disincentive for non performance.

3.15.4 The Authority recommends that FBG should be equivalent to two quarters’ license fee. As it may not be possible to estimate two quarters’ licence fees initially, the amount of FBG for the first year may be fixed as 5% of FBG of MNO of that service area.

The PBG for MVNO to be 5% of MNO i.e. Rs. 1 Crore for Circle A, Rs. 50 Lakhs for Circle B and Rs. 10 Lakhs for Circle C.

3.16 Branding

3.16.1 The key strength of many MVNOs is its brand name. Companies who have no prior connection with the telecom industry, for example an airline or popular beverage or entertainment company may leverage its popularity and brand appeal with certain segments of population to co-brand telecom services. As such there should not be any restriction on MVNOs on usage of brand names. MVNOs can sell SIM under their brand name.

3.17 Quality of Service

3.17.1 The Authority has issued comprehensive regulations on the Quality of Service. Generally the MVNOs are responsible for customer acquisition, billing and customer care. The services are offered by MVNO through an agreement with a parent MNO. However, as far as the subscribers are concerned MVNO is the service provider who is offering the service under its own brand and thus, becomes accountable for ensuring the Quality of Service to its subscribers. It is very important to ensure that Quality of Service to customer is not compromised. In order to achieve this, the MVNO may have certain service level agreements (SLA) with the parent MNO. **The Authority recommends that responsibility of the Quality of Service to its subscribers would remain with the MVNO. The Regulations/ Direction/ Orders of TRAI in this regard would be binding on MVNO.**

3.18 Tariff

3.18.1 The low or diverse tariff packages are the key factors for the success of MVNO in most of the countries. In other words tariff is a key Item that MVNO concentrate to build their business case. The parent MNO who sells bulk minutes of usage to the MVNO has nothing to do with the retail tariff offered by MVNO to its subscribers. **Authority recommends that MVNO being directly responsible for the tariff related matters, MVNOs should independently comply with the applicable Telecom Tariff Orders (TTOs) and tariff related requirements as prescribed by TRAI.**

3.19 Customer Acquisition and Care

3.19.1 Customer acquisition, customer management and service provisioning are the three activities which will be undertaken generally by all MVNOs. The MVNOs would be acquiring the customers/subscribers directly and billing them. So for all practical purposes they become the subscribers of MVNO. They may have to establish their own customer care centers to cater for its own subscriber complaints and related issues. **The Authority recommends that MVNO should comply with the requirements of customer acquisition including subscriber verification.**

3.20 Technical Conditions

3.20.1 Telecommunications is basically a networked service where the equipment used by different service providers have to inter-work in a seamless manner. This is possible only if the equipment used by the different service providers conform to certain prescribed technical standards. In India Telecom Engineering Center (TEC) prescribes these technical standards. **The Authority recommends that the facility based MVNOs who set up their own infrastructure has to ensure that the equipment that they use confirms to the prescribed standards.**

3.21 National Security

3.21.1 The MVNO should comply with all the requirement of National Security. This could vary depending upon the infrastructure set up by the MVNO. It could be specified by DoT in consultation with National Security Agencies. These must be clearly spelt out in the agreement between MVNO and the MNO so that all obligations to the customers, to the licensor and National Security Agencies are fulfilled without fail. **The Authority recommends that MVNO should comply with all the requirements of National Security.**

3.22 Reporting requirements

3.22.1 The Authority recommends that MVNO should comply with all the reporting requirements of the Licensor and the Authority

Chapter 4

Summary of License Conditions and Agreement Points

4.1 Summary of License Conditions

Part – I: General Conditions		
1.	Definition	MVNO is a licensee in any service area that does not have spectrum of its own for access service, but can provide wireless (mobile) access services to its own customers through an agreement with the licensed access provider, UAS/CMTS Licensee.
	Duration of licence	The duration of licence should be 20 years and renewable. However the validity of MVNO license shall be co-terminus with the validity of licence of the parent MNO i.e MVNO license would automatically get terminated if the licence of parent MNO is terminated or ceases to exist.
	Types of MVNO	MVNO should be free to choose its business model. (Full or Intermediate or Thin). However MVNO shall not set up its own Radio Access Network (RAN)/ Base Station Subsystem (BSS).
2.	Eligibility Conditions	An Indian company which fulfills license conditions such as FDI & substantial equity and the following conditions of networth and paid up capital shall be eligible for issue of MVNO license in a service area. a. Networth: 10% of the networth specified for the MNO for the service area i.e. Rs.10 Crores for

		Metros/'A' Category, Rs. 5 Crores for 'B' Category, Rs. 3 Crores for 'C' Category b. Paid up Capital: 10% of networth of the MVNO. The procedure for issue of license to MVNOs, shall be as follows: i. LOI shall be issued to the eligible MVNO by the licensor. ii. Entry fee and Bank guarantees to be submitted by the MVNO within a month from the date of grant of LOI by the licensor. The MVNO shall also enter into an agreement with MNO and submit the same to the Licensor, within this period of one month from the date of LOI. iii. License shall be issued after the above conditions are fulfilled. iv. The mandatory points that must be covered in the agreement between MNO and MVNO are listed in Chapter 4. TRAI would have power to intervene on any clause in the agreement. None of the clause should violate any of the license conditions or the regulations in force. The Regulations / Directions / Orders of TRAI in this regard would be binding on MNO and MVNO. v. If due to some reason, agreement between MVNO & MNO is terminated, the license of the MVNO would also be terminated. Fresh licence will have to be obtained by the MVNO if new agreement is being signed by the MVNO with another MNO.

3.	FDI.	The licensee shall ensure that the total foreign equity in the paid up capital of the LICENSEE Company does not, at any time during the entire Licence period, exceed 74% of the total equity.
4.	Scope of Licence	The scope of service of MVNO would be within the scope of service of MNO, i.e. the MVNO can offer any or all of the services that the MNO can offer subject to the agreement between MNO and MVNO.
5.	Licensed service area	The licensed service area (circle) of MVNO should be same as that of parent MNO. However, the MVNO could offer service anywhere within the licensed service area (circle) of the parent MNO as specified in the mutual agreement between MNO and MVNO. Separate licence for each service area shall be required
6.	Number of MVNOs	There should not be any limit to the number of MVNOs attached to a MNO. However a MVNO cannot get attached to more than one MNO in the same service area.
7.	Dispute/Termination of agreement between MVNO and MNO	a. In case of a dispute between MVNO & MNO, the procedure for resolution of dispute would be same as that being followed for disputes between MNOs. b. In case MVNO wants to exit the business: i. MVNO to give six months' notice to customers, MNO, Licensor and the Authority before stopping the services. ii. MNO would offer its services to the subscribers of MVNO to migrate to any of the

		tariff plan of MNO without any extra charges such as upfront/ activation charges In the case of lifetime subscribers, they should be offered life time plan of MNO. The subscriber should be allowed to retain the same number. iii. The MVNO that exits the business, would be disqualified to get a fresh license in that service area. iv. If the MVNO exits business, the PBG shall be forfeited. FBG shall be returned after adjusting the dues payable.
8.	Customer acquisition	The Authority recommends that MVNO should comply with the requirements of customer acquisition including subscriber verification.
9.	Reporting requirements	The Authority recommends that MVNO should comply with all the reporting requirements of the licensor and the Authority.
Part – II: Commercial Conditions		
	Tariff	The MVNO licensee will charge the tariffs for the service as per the Tariff orders / regulations / directions issued by TRAI from time to time. The licensee shall independently comply with the applicable Telecom Tariff Orders (TTOs) and tariff related requirements as prescribed by TRAI.

Part – III: Financial Conditions		
1.	Entry Fee	One Time non-refundable Entry Fee of 10% of MNO's entry fee as prevailing on date in that service area subject to a maximum of Rs. 5 crores for Metros and Category 'A'/ Rs. 3 crores for Category 'B'/ Rs. 1 crores for Category 'C' has to be paid by the LICENSEE prior to signing of the Licence agreement.
2.	Spectrum	MNO should pay spectrum charges also on the revenue of MVNO(s) or all the payments made by MVNO(s) to MNO, whichever is higher. The subscribers of MVNO(s) should be counted towards parent MNO for the purpose of spectrum allotment in bands where subscriber based criterion is applicable for spectrum allotment.
3.	Annual Licence fee and AGR	The rate of annual licence fee as well as definition of AGR for MVNO shall be on similar lines as defined in the Access Service Providers' licence to whom the MVNO is parented.
4.	Bank Guarantees	**Financial Bank Guarantee:** The LICENSEE shall submit FBG equivalent to the estimated sum payable equivalent to license fee for two quarters. As it may not be possible to estimate two quarters' licence fees initially, the amount of FBG for the first year may be fixed as 5% of FBG of MNO of that service area.

		Performance Bank Guarantee: Performance Bank Guarantee (PBG) in prescribed format shall be 5% of MNO i.e. Rs. 1 Crore for Circle A Rs. 50 Lakhs for Circle B Rs. 10 Lakhs for Circle C PBG shall be submitted before signing the Licence Agreement
5.	Mergers	In a service area, Merger of a MVNO with the parent MNO or another MVNO parented to the same MNO may be permitted. Merger of MVNOs parented to different MNOs in a service area is not permitted as in a service area one MVNO can only get parented to one MNO.
6.	Substantial Equity	In any service area, an equity holder, having 10% or more equity in a MVNO cannot hold 10% or more equity in another MVNO. In a service area, an equity holder having 10% or more equity in an MNO cannot hold 10% or more equity in a MVNO.
Part – IV:	Technical Conditions	The facility based MVNOs who set up their own infrastructure has to ensure that the equipment that they use confirms to the prescribed standards.
Part – V: Operating Conditions		
1.	Roll-Out Obligations	No roll out obligation be prescribed for MVNOs and MNO has to fulfill its roll out obligations independently i.e. the roll out done by the MVNO shall not be counted towards roll out of the parent MNO.

2.	Quality of Service	The Authority recommends that responsibility of the Quality of Service to its subscribers would remain with the MVNO. The Regulations/ Direction/ Orders of TRAI in this regard would be binding on MVNO.
3.	Allocation of numbers, number portability, interconnection with other service providers and roaming	The allocation of numbers, number portability, interconnection with other service providers and roaming be provided to MVNO by the parent MNO. For allocating new block of numbers to MNO the subscribers of MVNO(s) should also be counted. On request, Mobile Network Code (MNC) should be allotted to MVNO by the licensor.
Part – VI:	Security Conditions	Same as that of MNO as defined in UAS Licence.

4.2 Salient Points in the agreement between MNO and MVNO

4.2.1 MVNO is basically reseller of MNO. Typically a MVNO buys wholesale minutes of usage of airtime from the MNO.

4.2.2 The relationship between MVNO and MNO is to be established through a formal agreement.

4.2.3 The MVNO shall enter into an agreement with MNO within a period of one month from the date of issue of LOI and submit the same to the licensor. TRAI would have the power to intervene in the clauses of the agreement.

4.2.4 The Regulations/Directions/Orders of TRAI in this regard would be binding on MNO and MVNO.

4.2.5 If due to some reason agreement between MNO and MVNO is terminated, the license of the MVNO would also be terminated i.e. fresh license will have to be obtained, if a new agreement is signed by the MVNO with MNO.

4.2.6 The service obligations may be dependent on the type of model chosen by MVNO. Irrespective of the type of MVNO, the three basic activities that would be taken up by the MVNO's are:

- Customer Acquisition
- Customer Management
- Service provisioning.

MVNO would therefore be directly responsible for –

- Customer acquisition, management and grievance handling through customer care centres

- Maintaining QoS parameters as prescribed by TRAI from time to time. It is very important to ensure that Quality of Service to customer is not compromised. In order to achieve this, the MVNO may have certain service level agreements (SLA) with the parent MNO. The ultimate responsibility of the Quality of Service to its subscribers will have to remain with the MVNO.
- Complying with billing and metering requirements as prescribed by TRAI including audits/surveys.

4.2.7 The service obligations of the MVNO would be dependent on the type of model chosen by MVNO and some of the service obligations of MNO may get passed onto the MVNO. But the **bifurcation of responsibilities between MVNO and MNO must be clearly defined in the agreement so that all obligations to the Customer, Licensor, Security agencies and Regulator are fulfilled without fail.**

4.2.8 None of the clauses in the agreement between MNO and MVNO should violate any of the license conditions or the regulation in force. The Regulations / Directions / Orders of TRAI in this regard would be a binding on MNOs and MVNOs alike.

4.2.9 The payment that MNO receives from MVNO shall be counted towards AGR of MNO.

4.2.10 MNO should pay spectrum charges on the revenue of MVNO(s) or all the payments made by MVNO(s) to MNO, whichever is higher.

4.2.11 The subscribers of MVNO(s) should be counted towards parent MNO for the purpose of spectrum allotment in bands where subscriber based criterion is applicable for spectrum allotment.

4.2.12 The agreement between MNO and MVNO should include the following points (besides other points):-

i. Customer Acquisition

All the activities connected with customer acquisition including subscriber verification as required by the security agencies will be the responsibility of the MVNO.

ii. Customer Management

All activities connected with customer management would be the responsibility of MVNO.

iii. Service Provisioning

Service provisioning would be the responsibility of MVNO.

iv. Quality of Service

Ensuring Quality of Service to its subscribers would be the responsibility of MVNO.

v. Tariff

MVNO would be responsible for fixing tariff for its own subscribers. The tariff for the service shall be as per the Tariff orders / regulations / directions issued by TRAI from time to time.

vi Billing

MVNO would be responsible for billing of its subscribers. All the Regulations/Orders/ Directions of TRAI would be applicable and binding on MVNO.

vii Customer Care

MVNO would be responsible for handling all the complaints from its own subscribers and their redressal. All the Regulations/Orders/ Directions of TRAI would be applicable and binding on MVNO.

viii National Security

MVNO should comply with all the requirements of National Security. This could vary depending upon the infrastructure set up by the MVNO. This could be specified by DoT in consultation with security agencies.

ix Interconnection with other service providers

Through parent MNO.

x Roaming

Through parent MNO.

xi Allocation of numbers

To be allocated by parent MNO.

xii Branding

MVNO can have its own brand name.

xiii. Compliance of technical conditions

The facility based MVNO who set up their own infrastructure, have to ensure that the equipment that they use confirms to the prescribed standards.

xiv Commercial parameters

To be decided mutually between MNO and MVNO.

xv Protection of subscribers in case of failure of agreement between MNO and MVNO.

In the event of failure of agreement, the subscribers of the MVNO should have the option to become the subscribers of the parent MNO through any of the available tariff plans of MNO, without any migration/entry charges.

xvi MVNO to give six months' notice to customers, MNO, Licensor and the Authority before stopping the services.

.

Chapter 5
List of Recommendations

1. **Definition**

   "MVNO is a licensee in any service area that does not have spectrum of its own for access service, but can provide wireless (mobile) access services to its own customers through an agreement with the licensed access provider, UAS/CMTS Licensee"

   (Refer para 2.1.5)

2. **Need and timing for introduction of MVNO**

   The Authority recommends that MVNO should be introduced in the Indian telecom network as a distinct service provider with its own licensing and enabling light touch regulatory framework.

   (Refer para 2.2.10)

3. **Types of MVNO**

   Authority recommends that MVNO should be free to choose its business model. However MVNO shall not set up its own Radio Access Network (RAN)/ Base Station Subsystem (BSS).

   (Refer para 2.3.7)

4. **Regulatory Models**

   Considering the international scenario and the stakeholders comments and keeping in view the Indian scenario as described above and discussed elsewhere in this recommendation, the Authority recommends that the commercial model covering the nature of relationship including the arrangement/ agreement between

MNO and MVNO be left to the market forces. Besides commercial and other points, the points that has to be part of the agreement are given in chapter 4. A copy of the agreement is to be filed with the Licensor. The Authority reserves the right to intervene.

(Refer para 2.4.13)

5. **Issue of licence**

   The Authority recommends that MVNO should be issued a license under section 4 of the Indian Telegraph Act, for providing the services. The terms and conditions of the license have been outlined in these recommendations.

   (Refer para 3.1.2)

6. **Licensed Service area**

   Considering all the technical and regulatory aspects, the Authority recommends that the licensed service area (circle) of MVNO should be same as that of parent MNO. However, the MVNO could offer service anywhere within the licensed service area (circle) of the parent MNO as specified in the mutual agreement between MNO and MVNO. Separate licence for each service area shall be required.

   (Refer para 3.1.4.2)

7. **Duration of Licence**

   Authority recommends that the duration of license for MVNO should be 20 years and renewable. However the validity of MVNO licence shall be co-terminus with the validity of licence of the parent MNO i.e MVNO licence would automatically get terminated if the license of parent MNO is terminated or ceases to exist.

   (Refer para 3.1.5.2)

8. Eligibility conditions

The Authority recommends that an Indian company, which fulfills licence conditions such as FDI & substantial equity and the following conditions of networth and paid up capital shall be eligible for issue of MVNO license in a service area.

a) Networth: 10% of the networth specified for the MNO for the service area i.e. Rs.10 Crores for Metros/'A' Category, Rs. 5 Crores for 'B' Category, Rs. 3 Crores for 'C' Category

b) Paid up Capital: 10% of the prescribed networth for the MVNO.

The procedure for issue of license to MVNOs, shall be as follows:

i. LOI shall be issued to the eligible MVNO by the licensor.

ii. Entry fee and Bank guarantees to be submitted by the MVNO within a month from the date of grant of LOI by the licensor. The MVNO shall also enter into an agreement with MNO and submit the same to the Licensor, within this period of one month from the date of LOI.

iii. License shall be issued after the above conditions are fulfilled.

iv. The mandatory points that must be covered in the agreement between MNO and MVNO are listed in Chapter 4. TRAI would have power to intervene on any clause in the agreement. None of the clause should violate any of the license conditions or the regulations in force. The Regulations / Directions / Orders of TRAI in this regard would be binding on MNO and MVNO.

v. **If due to some reason, agreement between MVNO & MNO is terminated, the license of the MVNO would also be terminated. Fresh licence will have to be obtained by the MVNO if new agreement is being signed by the MVNO with another MNO.**

(Refer para 3.2.8)

9. Scope of Service of MVNO

The Authority recommends that the scope of service of MVNO would be within the scope of service of MNO, i.e. the MVNO can offer any or all of the services that the MNO can offer subject to the agreement between MNO and MVNO.

(Refer para 3.3.8)

10. Number of MVNOs

The Authority recommends that there should not be any limit to the number of MVNOs attached to a MNO. However a MVNO cannot get attached to more than one MNO in the same service area.

(Refer para 3.4.6)

11. Commercial Model

The Authority recommends that-.

i) **Commercial model between MVNO and MNO to be left to mutual agreement between the two. However this would be subject to the License Conditions and Regulations/ Directions/ Orders of TRAI.**

ii) **MNO should pay spectrum charges also on the revenue of MVNO(s) or all the payments made by MVNO(s) to MNO,**

whichever is higher. In case it is difficult to operationalise this, any other scheme where the spectrum charges are accrued to the Government on the revenues of both MNO and MVNO(s), will serve the purpose.

iii) The subscribers of MVNO(s) should be counted towards parent MNO for the purpose of spectrum allotment in bands where subscriber based criterion is applicable for spectrum allotment.

(Refer para 3.5.7)

12. Service Obligations of MVNO

The Authority recommends that the service obligations may be dependent on the type of model chosen by MVNO. At the minimum level MVNO should handle obligations such as customer grievances, tariff and billing and at the maximum level the obligations would be same as that of MNO, except rollout obligations.

MVNO would however be directly responsible for –

i. Customers acquisition, management and grievance handling.

ii. Achieving QoS parameters as prescribed by TRAI from time to time.

iii. Complying with Billing and metering requirements as prescribed by TRAI including audit / surveys.

(Refer para 3.6.6)

13. Entry Fees

The Authority recommends that the entry fee imposed on MVNO should be nominal. It may be 10% of MNO's entry fee as prevailing on date in that service area subject to a maximum of Rs. 5 crores for Metros and Category 'A', Rs. 3 crores for Category 'B' and Rs. 1 crore for Category 'C'.

(Refer para 3.7.5)

14. Annual licence fee and AGR

The Authority recommends that the rate of annual licence fee as well as definition of AGR for MVNO shall be on similar lines as defined in the Access Service Providers' licence to whom the MVNO is parented.

(Refer para 3.8.4)

15. Allocation of numbers, number portability, interconnection with other service providers and roaming

The Authority recommends that the allocation of numbers, number portability, interconnection with other service providers and roaming be provided to MVNO by the parent MNO. For allocating new block of numbers to MNO the subscribers of MVNO(s) should also be counted. On request, Mobile Network Code (MNC) should be allotted to MVNO by the licensor.

A suitable condition may be inserted in the licence for both MVNO and MNO to the effect that the Authority would intervene in case the hosting conditions of the network operators are not conducive enough for competition in the market for the MVNOs.

(Refer para 3.9.10)

16. Failure of agreement between MVNO and MNO

The Authority recommends that:

a) In case of a dispute between MVNO & MNO, the procedure for resolution of dispute would be same as that being followed for disputes between MNOs.

b) In case MVNO wants to exit the business:

i. MVNO to give six months' notice to customers, MNO, Licensor and the Authority before stopping the services.

ii. MNO would offer its services to the subscribers of MVNO to migrate to any of the tariff plan of MNO without any extra charges such as upfront/ activation charges. In the case of lifetime subscribers, they should be offered life time plan of MNO. The subscriber should be allowed to retain the same number.

iii. The MVNO that exits the business, would be disqualified to get a fresh license in that service area.

iv. If the MVNO exits business, the PBG shall be forfeited. FBG shall be returned after adjusting the dues payable.

(Refer para 3.10.11)

17. Roll out Obligations

The Authority recommends that

i. No roll out obligation be prescribed for MVNOs and

ii. MNO has to fulfill its roll out obligations independently i.e. the roll out done by the MVNO shall not be counted towards roll out of the parent MNO.

(Refer para 3.11.5)

18. Mergers

The Authority recommends that in a service area, Merger of a MVNO with the parent MNO or another MVNO parented to the same MNO may be permitted. Merger of MVNOs parented to different MNOs in a service area is not permitted as in a service area one MVNO can only get parented to one MNO.

(Refer para 3.12.4)

19. Substantial Equity

The Authority recommends that in any service area, an equity holder, having 10% or more equity in a MVNO cannot hold 10% or more equity in another MVNO. In a service area, an equity holder having 10% or more equity in an MNO cannot hold 10% or more equity in a MVNO.

(Refer para 3.13.4)

20. Foreign Direct Investment

The Authority recommends that to harmonize the FDI limit for various services in telecom sector, level of FDI upto 74% may be permitted in MVNO. As in the case of MNO up to 49% FDI through automatic route and beyond 49% up to 74% with prior FIPB approval may be prescribed. All the other conditions related to FDI applicable to MNO would be applicable to MVNO also.

(Refer para 3.14.3)

21. Bank Gaurantees

The Authority recommends that FBG should be equivalent to two quarters' license fee. As it may not be possible to estimate two quarters' licence fees initially, the amount of FBG for the first year may be fixed as 5% of FBG of MNO of that service area.

The PBG for MVNO to be 5% of MNO i.e. Rs. 1 Crore for Circle A, Rs. 50 Lakhs for Circle B and Rs. 10 Lakhs for Circle C.

(Refer para 3.15.4)

22. Quality of Service

The Authority recommends that responsibility of the Quality of Service to its subscribers would remain with the MVNO. The Regulations/ Direction/ Orders of TRAI in this regard would be binding on MVNO.

(Refer para 3.17.1)

23. Tariff

Authority recommends that MVNO being directly responsible for the tariff related matters, MVNOs should independently comply with the applicable Telecom Tariff Orders (TTOs) and tariff related requirements as prescribed by TRAI.

(Refer para 3.18.1)

24. Customer acquisition

The Authority recommends that MVNO should comply with the requirements of customer acquisition including subscriber verification.

(Refer para 3.19.1)

25. Technical standards

The Authority recommends that the facility based MVNOs who set up their own infrastructure has to ensure that the equipment that they use confirms to the prescribed standards.

(Refer para 3.20.1)

26. National Security

The Authority recommends that MVNO should comply with all the requirement of National Security.

(Refer para 3.21.1)

27. Reporting requirements

The Authority recommends that MVNO should comply with all the reporting requirements of the licensor and the Authority.

(Refer para 3.22.1)

Annexure I

Government of India
Ministry of Communications and Information Technology
Department of Telecommunications
(Access Services Policy Cell)
Sanchar Bhawan, 20, Ashoka Road, New Delhi- 110001

No. 800-50/2008-ASP.II/1 Dated 20th March 2008

To,

Secretary
Telecom Regulatory Authority of India
Mahanagar Doorsanchar Sadan,
Jawahar Lal Nehru Marg, Old Minto Road, New Delhi.

Subject:- Seeking recommendations of TRAI regarding Mobile Virtual Network Operator (MVNO).

Sir,

Recommendations of TRAI is hereby sought under Section 11 (1) (a) (i) & (ii) of the Telecom Regulatory Authority of India Act, 1997 on need and timing for introduction of Mobile Virtual Network Operators as well as terms and conditions of the License to be granted to such operators.

2. TRAI is requested to kindly forward its recommendations within a period of sixty days from the date of issue of this letter in accordance with second proviso of section 11 (1) of the TRAI Act.

AKSrivastava
20/3/2008
(A. K. Srivastava)
DDG (AS-I)
Tel: 23716874

Annexure II

Issues Consulted

Issue 1. Do you agree with the definition of MVNO given in section 2.1.6? If not please suggest alternate definition with justification.

Issue 2: Do you think there is a need to introduce MVNO in the Indian Telecom Market. If yes, is it the right time to introduce MVNO as a distinct service provider with its own licensing and regulatory framework? Please elaborate the comments with appropriate reasoning.

Issue 3: To what extent should the MVNO be permitted to set up their own infrastructure?

Issue 4 (i): What Regulatory Model should be followed for MVNO in the Indian context?

(ii): What kind of obligations may be imposed on MNOs so that Mobile Virtual Network Operations are implemented effectively in India benefiting the customers?

Please elaborate the comments with appropriate reasoning.

Issue 5: What should be the eligibility criteria for MVNO?

Issue 6: Do you suggest different eligibility criteria for different MVNO models and regulatory frameworks? If Yes, Please suggest with justification thereof.

Issue 7: Should there be any restriction on the number of MVNOs attached to an MNO? Please elaborate the comments with appropriate reasoning.

Issue 8: What should be the commercial model/framework for spectrum sharing by MVNO; w.r.t. (i) Department of Telecom and (ii) MNO?

Issue 9: What should be the service obligations of MVNO? Please list them with justification thereof.

Issue 10. What should be the method and consideration for determining the entry fee for MVNO?

Issue 11. What should be the definition of AGR for MVNOs?

Issue 12: What is the best way to protect the subscribers both in terms of continuity of service and applicability of tariff plan:

i) in case of a dispute between MVNO and MNO?

ii) in case MVNO wants to exit the business.

Issue 13: Should there be any roll out obligations specified for MVNO? If yes, what should be the penal provisions for failure/ delay in fulfilling the obligations.

Issue 14: What shall be the specific guidelines on the Mergers and Acquisitions of MVNO? Please elaborate the comments with appropriate reasoning.

Issue 15: Should there be any restriction on cross holdings between two MVNOs and between MVNO and an MNO in a service area? Please comment on the nature and scale of restructuring.

Issue 16: What should be the FDI limit for MVNO?

Issue 17: What should be the quantum of FBG and PBG for MVNO?

Issue 18: Any other relevant issue you would like to suggest /comment upon.

+++++++

Annexure III

MVNO Definitions

Organization	Definition of MVNO according to the organization
MVNO Directory[1]	A mobile network operator without a physical land based infrastructure, such as base stations, within the country where the MVNO operates.
Oftel[2]	A MVNO is an organization that offers mobile subscription and call services to customers but does not have an allocation of spectrum.
ITU[3]	A mobile Virtual Network Operators (VNO) is an operator that offers mobile services but does not own its own radio frequency. Usually, this operator has its own network code and in many cases issues its own SIM card. The mobile VNO can be a mobile service provider or a value-added service provider.
Pyramid Research[4]	…..MVNO provides mobile voice and data services to end users through a subscription agreement, but which does not have access to the spectrum ….
Malaysian Communications & Multimedia Commission (MCMC)[5]	….an organization that does not have assignment of 3G spectrum but is capable of providing public cellular services to end users by accessing radio networks of one or more 3G spectrum holders….
OVUM[6]	An organization that offers mobile services to customers, has its own mobile network code, issues its own SIM card, operate its own MSC, does not have its own radio frequency allocation.
Office of the Telecommunications Authority of Hong Kong (OFTA)[7]	At a highest level a MVNO may be viewed as an organization that offers mobile subscription and call services to customers but does not have an allocation of spectrum, rather it relies on hosting its service on a licensed Mobile Network Operator.
US Federal Communications Commission (FCC)[8]	A MVNO arrangement is one in which "a network operators acts as a wholesaler of airtime to another firm, which then markets itself to users just like an independent operator with its own network infrastructure."

---

[1] *MVNO Directory, MVNO Defined, available at http://www.mvnodirectory.com/ mvnodefined.html*

[2] *Oftel, Statement on Mobile Virtual Network Operators, October 1999*

[3] *ITU, Regulatory treatment of mobile VNOs, available at http://www.itu.int/osg/spu/ni/3G/resources/MVNO/index.html.*

[4] *InfoDev, Definition of a Mobile Virtual Network Operator, available at http://www.ictregulationtoolkit.org/content/practice_notes/detail/1985*

[5] *Malaysian Communications and Multimedia Commission, Guideline on regulatory framework for 3G mobile virtual network operators, February 16, 2005.*

[6] *OVUM, MVNOs – competition policy and market development, ITU Workshop on 3G mobile, 2001.*

[7] *OFTA 'Open Network' Regulatory Framework for Third Generation Public Mobile Radio Services in Hong Kong, Discussion Paper for Industry Workshop, 2001, p.14, available at http:// www.ofta.gov.hk/en/3g-licensing/discuss-mvno.pdf.*

[8] *FCC, Report & Order: 2000 Biennial Regulatory Review Spectrum Aggregation Limits For Commercial Mobile Radio Services, WT Docket No. 01-14, December 18, 2001, foot note 145.*

Annexure IV

Entry Fee, Annual License Fee, Networth and Paid up equity capital Requirements for UAS License

Sl.	Service Area	Category	Entry fee (Rs. In Crores)	Annual License Fee (% of Adjusted Gross Revenue)	Networth (Rs. In Crores)	Paid up equity capital of Applicant Company (Rs. In Crores)
1	West Bengal	B	1.0000	8	50	5
2	Andhra Pradesh	A	103.0100	10	100	10
3	Assam	C	5.0000	6	30	3
4	Bihar	C	10.0000	6	30	3
5	Gujarat	A	109.0100	10	100	10
6	Haryana	B	21.4600	8	50	5
7	Himachal Pradesh	C	1.1000	6	30	3
8	Jammu & Kashmir	C	2.0000	6	30	3
9	Karnataka	A	206.8300	10	100	10
10	Kerala	B	40.5400	8	50	5
11	Madhya Pradesh	B	17.4501	8	50	5
12	Maharastra	A	189.0000	10	100	10
13	North East	C	2.0000	6	30	3
14	Orissa	C	5.0000	6	30	3
15	Punjab	B	151.7500	8	50	5
16	Rajasthan	B	32.2500	8	50	5
17	Tamilnadu	A	233.0000	10	100	10
18	Uttar Pradesh (West)	B	30.5500	8	50	5
19	Uttar Pradesh (East)	B	45.2500	8	50	5
20	Delhi	A	170.7000	10	100	10
21	Kolkata	A	78.0100	10	100	10
22	Mumbai	A	203.6600	10	100	10

Annexure V

Annual Spectrum usage charges for Mobile Service Providers

Spectrum	Charges linked to revenue of operators
Upto 2x4.4 MHz	2%
Upto 2x6.2 MHz/2x5 MHz (CDMA)	3%
Upto 2x8 MHz	4%
Upto 2x10 MHz	4%
Upto 2x12.5 MHz	5%
Upto 2x15 MHz	6%

Annexure VI

Spectrum allocation to Mobile service providers

Sl.	Service area	Service provider		Spectrum allotted (in MHz)
		GSM	**CDMA**	
1.	Delhi	Bharti		10.00
2.		Vodafone		10.00
3.		MTNL		12.40
4.		Idea Cellular		8.00
5.		Aircel Ltd.		4.40
6.		Reliance		4.40
7.			MTNL	3.75
8.			Reliance Infocomm	5.00
9.			Tata Teleservices	5.00
10.	Mumbai	BPL		10.00
11.		Vodafone		10.00
12.		MTNL		12.40
13.		Bharti		9.20
14.		Aircel Ltd.		4.40
15.		Idea Cellular Ltd.		4.40
16.		Reliance		4.40
17.			MTNL	5.00
18.			Reliance Infocomm	5.00
19.			Tata Teleservices	5.00
20.	Chennai	Aircel Cellular Ltd.		8.60
21.		BSNL		10.00
22.		Vodafone		8.00
23.		TTSL		4.40
24.			BSNL	2.50
25.			Reliance Infocomm	5.00
26.			Tata Teleservices	3.75
27.			Shyam	2.50
28.	Kolkata	Bharti		8.00
29.		Vodafone		9.80
30.		BSNL		10.00
31.		Reliable Internet		6.20
32.		Dishnet Wireless Ltd		4.40
33.			BSNL	2.50
34.			Reliance Infocomm	5.00
35.			Tata Teleservices	3.75
36.			Shyam	2.50
37.	Maharashtra	Vodafone		6.20
38.		Idea Cellular Ltd.		9.80
39.		BSNL		10.00

Sl.	Service area	Service provider		Spectrum allotted (in MHz)
		GSM	CDMA	
40.		Bharti		6.20
41.		Aircel Ltd.		4.40
42.		Reliance		4.40
43.			BSNL	2.50
44.			Reliance Infocomm	5.00
45.			Tata Teleservices	upto 5.00
46.			Shyam	2.50
47.	Gujarat	Vodafone		9.80
48.		Idea Cellular Ltd.		6.20
49.		BSNL		7.40
50.		Bharti		6.20
51.		Aircel Ltd.		4.40
52.		Reliance		4.40
53.			BSNL	2.50
54.			Reliance Infocomm	3.75
55.			Tata Teleservices	3.75
56.			Shyam	2.50
57.	Andhra Pradesh	Idea Cellular Ltd.		8.00
58.		Bharti		9.20
59.		BSNL		10.00
60.		Vodafone		6.20
61.		Aircel Ltd.		4.40
62.		Reliance		4.40
63.		Datacom		4.40
64.		Swan		4.40
65.		Aska		4.40
66.		Spice		4.40
67.		Loop		4.40
68.		Tata Teleservices		4.40
69.			BSNL	2.50
70.			Reliance Infocomm	5.00
71.			Tata Teleservices	upto 5.00
72.			Shyam Telelink	2.50
73.	Karnataka	Bharti		9.80
74.		Spice		6.20
75.		BSNL		10.00
76.		Vodafone		8.00
77.		Aircel Ltd.		4.40
78.		Reliance		4.40
79.		Datacom		4.40
80.		Swan		4.40
81.		Aska		4.40
82.		Idea		4.40
83.		Loop		4.40
84.		Tata Teleservices		4.40
85.			BSNL	2.50

Sl.	Service area	Service provider		Spectrum allotted (in MHz)
		GSM	CDMA	
86.			Reliance Infocomm	upto 5.00
87.			Tata Teleservices	3.75
88.			Shyam	2.50
89.	Tamil Nadu	Vodafone		7.20
90.		Aircel Ltd.		9.80
91.		BSNL		10.00
92.		TTSL		4.40
93.	Tamil Nadu (incl. Chennai)	Bharti		9.20
94.		Reliance		4.40
95.		Idea		4.40
96.		Swan		4.40
97.		Loop		4.40
98.		Datacom		4.40
99.		Unitech		4.40
100.	Tamil Nadu		BSNL	2.50
101.			Reliance Infocomm	5.00
102.			Tata Teleservices	2.50
103.			Shyam Telelink	2.50
104.	Kerala	Idea Communications Ltd.		8.00
105.		Vodafone		6.20
106.		BSNL		10.00
107.		Bharti		6.20
108.		Dishnet Wireless Ltd.		4.40
109.		Reliance		4.40
110.		Datacom		4.40
111.		Swan		4.40
112.		Aska		4.40
113.		Loop		4.40
114.		Tata Teleservices		4.40
115.			BSNL	3.75
116.			Reliance Infocomm	5.00
117.			Tata Teleservices	3.75
118.			Shyam Telelink	2.50
119.	Punjab	Spice		7.80
120.		Bharti		7.80
121.		BSNL		6.20
122.		Vodafone		6.20
123.		Reliance		4.40
124.		Aircel		4.40
125.			BSNL	2.50
126.			Reliance Infocomm	3.75
127.			HFCL Infocomm	2.50
128.			Tata Teleservices	3.75
129.			Shyam Telelink	2.50

Sl.	Service area	Service provider		Spectrum allotted (in MHz)
		GSM	CDMA	
130.	Haryana	Idea Communications Ltd.		6.20
131.		Vodafone		6.20
132.		BSNL		10.00
133.		Bharti		6.20
134.		Dishnet Wireless Ltd		4.40
135.		Reliance		4.40
136.			BSNL	2.50
137.			Reliance Infocomm	3.75
138.			Tata Teleservices	3.75
139.			Shyam Telelink	2.50
140.	UP-W	Idea Communications Ltd.		8.00
141.		Bharti		6.20
142.		BSNL		10.00
143.		Vodafone		6.20
144.		Reliance		4.40
145.		Aircel		4.40
146.			BSNL	2.50
147.			Reliance Infocomm	5.00
148.			Tata Teleservices	3.75
149.			Shyam Telelink	2.50
150.	UP-E	Vodafone		8.00
151.		BSNL		10.00
152.		Bharti		6.20
153.		Idea Telecommunications Ltd.		6.20
154.		Dishnet Wireless Ltd		4.40
155.		Reliance		4.40
156.			BSNL	2.50
157.			Reliance Infocomm	5.00
158.			Tata Teleservices	3.75
159.			Shyam Telelink	2.50
160.	Rajasthan	Vodafone		6.20
161.		Bharti		6.20
162.		BSNL		8.00
163.		Idea Telecommunications Ltd.		6.20
164.		Aircel Ltd.		4.40
165.		Reliance		4.40
166.			BSNL	2.50
167.			Reliance Infocomm	3.75
168.			Shyam Telelink	upto 5.00
169.			Tata Teleservices	3.75

Sl.	Service area	Service provider		Spectrum allotted (in MHz)
		GSM	CDMA	
170.	Madhya Pradesh	Idea		8.00
171.		Reliance		6.20
172.		BSNL		10.00
173.		Bharti		6.20
174.		Dishnet Wireless Ltd		4.40
175.		Vodafone		4.40
176.			BSNL	2.50
177.			Reliance Infocomm	5.00
178.			Tata Teleservices	2.50
179.			Shyam Telelink	2.50
180.	West Bengal	Reliance		6.20
181.		BSNL		8.00
182.		Bharti		6.20
183.		Vodafone		6.20
184.		Dishnet Wireless Ltd		4.40
185.			BSNL	2.50
186.			Reliance Infocomm	3.75
187.			Tata Teleservices	2.50
188.			Shyam Telelink	2.50
189.	Himachal Pradesh	Bharti		6.20
190.		Reliance		6.20
191.		BSNL		10.00
192.		Idea Telecommunications Ltd.		4.40
193.		Dishnet Wireless Ltd		4.40
194.		Vodafone		4.40
195.			BSNL	2.50
196.			Reliance Infocomm	2.50
197.			Tata Teleservices	2.50
198.			Shyam Telelink	2.50
199.	Bihar	Reliance		8.00
200.		BSNL		10.00
201.		Bharti		8.00
202.		Dishnet Wireless Ltd		4.40
203.		Vodafone		4.40
204.		Aditya Birla Telecom Ltd. (Idea)		4.40
205.			BSNL	2.50
206.			Reliance Infocomm	5.00
207.			Tata Teleservices	3.75
208.			Shyam Telelink	2.50
209.	Orissa	Reliance		6.20
210.		BSNL		10.00

Sl.	Service area	Service provider		Spectrum allotted (in MHz)
		GSM	CDMA	
211.		Bharti		8.00
212.		Dishnet Wireless Ltd		4.40
213.		Vodafone		4.40
214.		Idea		4.40
215.		Datacom		4.40
216.		Nahan (Unitech)		4.40
217.		S Tel		4.40
218.		Loop		4.40
219.		TTSL		4.40
220.			BSNL	2.50
221.			Reliance Infocomm	3.75
222.			Tata Teleservices	2.50
223.			Shyam Telelink	2.50
224.	Assam	Reliance		6.20
225.		BSNL		10.00
226.		Bharti		6.20
227.		Dishnet Wireless Ltd		6.20
228.		Vodafone		4.40
229.			BSNL	2.50
230.			Tata Teleservices	2.50
231.			Shyam Telelink	2.50
232.			Reliance Telecom	2.50
233.	NE	Reliance		6.20
234.		Bharti		4.40
235.		BSNL		10.00
236.		Dishnet Wireless Ltd		4.40
237.		Vodafone		4.40
238.			BSNL	2.50
239.			Tata Teleservices	2.50
240.			Shyam Telelink	2.50
241.			Reliance Telecom	2.50
242.	J&K	BSNL		8.00
243.		Bharti		6.20
244.		Dishnet Wireless Ltd		4.40
245.		Vodafone		4.40
246.		Reliance		4.40
247.			BSNL	2.50
248.			Reliance Infocomm	2.50
249.			Tata Teleservices	2.50
250.			Shyam Telelink	2.50

Source: WPC, DOT as of 31.07.08

Annexure VII

UAS LICENSE CONDITIONS

1. Eligibility

The eligibility for award of UAS License has been prescribed by the DoT vide its Guidelines dated 14/12/2005. The applicant should be an Indian company, registered under Indian Companies Act, composite foreign holding should not exceed 74%, majority of Directors on Board shall be resident Indian Citizens, share holder agreement shall specifically incorporate the condition that the majority of Directors on Board including the Chairman, Managing Director and the Chief Executive Officer shall be resident Indians, comply with restriction on remote access and traffic monitoring, shall have minimum paid up equity capital and net worth requirement as prescribed.

2. Scope of service

As per UAS License, the scope of the MNO license cover collection, carriage, transmission and delivery of voice and/or non-voice MESSAGES and includes provision of all types of access services. Access service provider can also provide Internet Telephony, Internet Services and Broadband Services including triple play i.e. voice, video & data, Voice Mail, Audiotex services, Video Conferencing, Videotex, E-Mail, Closed User Group (CUG) facilities. If required, access service provider can use the network of NLD/ILD service licensee.

3. Roll out obligations

In metros, 90% of the service area shall be covered within one year and in telecom circles, at least 10% of District Headquarters/towns to be covered in the first year and 50% of District Headquarters/towns to be covered within three years. Coverage would mean that at least 90% of the area bounded by municipal limits should get the required street as well as in-building coverage. Delay in fulfilling the roll out obligations attract liquidated damages to the tune of Rs.5 lakh per week for the first 13 weeks, Rs. 10 lakh per week for the next 13 weeks and thereafter @ Rs.20 lakhs per week for next 26 weeks subject to a maximum of Rs.7.00 crores.

4. Mergers and Acquisitions

1.1 Salient points in the merger and acquisition guidelines of DoT dated 21st April 2008 are:

- Prior approval of the Department of Telecommunications shall be necessary for merger of the licence.

- Merger of licences shall be restricted to the same service area.

- The relevant service market be defined as wire line and wireless services. Wireless service market shall include fixed wireless as well.

- The market share of merged entity in the relevant market shall not be greater than 40% either in terms of subscriber base separately for wireless as well as wireline subscriber base or in terms of Adjusted Gross Revenue.

- No M&A activity shall be allowed if the number of UAS/CMTS access service providers reduces below four in the relevant market consequent upon such an M&A activity under consideration.

- Consequent upon the Merger of licences in a service area, the post merger licensee entity shall be entitled to the total amount of spectrum held by the merging entities, subject to the condition that after merger, licensee shall meet, within a period of 3 months from date of approval of merger by the Licensor, the prevailing spectrum allocation criterion separately for GSM & CDMA technologies, as in case of any other UAS/CMTS licensee(s).

- On merger, spectrum enhancement charge shall also be charged as applicable in case of any other UAS/CMTS licensee.

- In case consequent to merger of licences in a service area, the licensee becomes a “Significant Market Power” (SMP) post merger, then the extant rules & regulations applicable to SMPs would also apply to the merged entity.

- The annual license fee and the spectrum charge are paid as a certain specified percentage of the AGR of the licensee. On the merger of the two licenses, the AGR of the two entities will also be merged and the license fee will be therefore levied at the specified rate for that service area on the resultant total AGR. Similarly, for the purpose of payment of the spectrum charge, the spectrum held by the two licensees will be added/merged and the annual spectrum charge will be at the prescribed rate applicable on this total spectrum.

- For regulating acquisitions of equity stake of one access services licensee Company/ legal person/promoter company in the enterprise of another access services licensee in the same license area, present guidelines on Substantial Equity of 10% or more shall continue.

- Any permission for merger shall be accorded only after completion of 3 years from the effective date of the licences.

5. Substantial Equity

The restrictions on substantial equity are as follows:

The LICENSEE shall ensure that:

(i) Any changes in share holding will be subject to all applicable statutory permissions.

(ii) No single company/ legal person, either directly or through its associates, shall have substantial equity holding in more than one LICENSEE Company in the same service area for the Access Services namely; Basic, Cellular and Unified Access Service. ‘Substantial equity’ herein will mean ‘an equity of 10% or more’. A promoter company/ Legal person cannot have stakes in more than one LICENSEE Company for the same service area.

6. Foreign Direct Investment (FDI)

The total composite foreign holding including but not limited to investments by Foreign Institutional Investors (FIIs), Non-resident Indians (NRIs), Foreign Currency Convertible Bonds (FCCBs), American Depository Receipts (ADRs), Global Depository Receipts (GDRs), convertible preference shares, proportionate foreign investment in Indian promoters/investment companies including their holding companies, etc., shall not exceed 74 per cent. The 74 per cent foreign investment can be made directly or indirectly in the operating company or through a holding company and the remaining 26 per cent will be owned by resident Indian citizens or an Indian Company (i.e. foreign direct investment does not exceed 49 percent and the management is with the Indian owners). It is clarified that proportionate foreign component of such an Indian Company will also be counted towards the ceiling of 74%. However, foreign component in the total holding of Indian public sector banks and Indian public sector financial institutions will be treated as 'Indian' holding. The licensee will be required to disclose the status of such foreign holding and certify that the foreign investment is within the ceiling of 74% on a half yearly basis.

7. Bank Guarantees

The applicant company shall submit Financial Bank Guarantee (FBG) of amount equal to Rs. 50, 25 and 5 Crores for category 'A' 'B' & 'C' service areas respectively before the date of signing the license agreement in the prescribed Performa given in the License Agreement. Initially, FBG shall be valid for a period of one year and shall be renewed from time to time for such amount as may be directed by the Licensor. The applicant shall also submit Performance Bank Guarantees (PBG) of amount equal to Rs. 20, 10 and 2 Crores for category 'A' 'B' & 'C' service areas respectively in the prescribed Performa given in the License Agreement before signing the license. PBG shall be valid for a period of three year and shall be renewed from time to time. FBG and PBG must be from any Scheduled Bank or Public Financial Institution duly authorized to issue such Bank Guarantee.

The Fees, charges and royalties for the use of spectrum and also for possession of Wireless Telegraphy equipment shall be separately securitized by furnishing FBG of an amount equivalent to the estimated sum payable annually in the Performa annexed, to WPC, valid for a period of one year, renewable from time to time till final clearance of all such dues.

#########

Annexure VIII

International Scenario

1. Hong Kong

1.1 There are about 7 MVNOs operating in Hong Kong. The first MVNO was launched in the year 2001. Hong Kong is the highest MVNO penetrated Asian market with 7,20,000 customers, nearly 7.5% market penetration. In Hong Kong, the regulator requires 3G networks to reserve 30% of their capacity for MVNO use[9].

1.2 The Mobile Virtual Network Operator (MVNO) Services are operating under public telecommunications services licensed under the Public Non-Exclusive Telecommunications Service (PNETS) license[10], the list of all the services include:-

- International Value-Added Network Services (IVANS) or Internet Access Services
- External Telecommunications Services (ETS)
- Mobile Virtual Network Operator (MVNO) Services
- Radio distribution systems for cellular services operated within premises of the landowners or operators

1.3 The applicant for a PNETS licence should be a company registered under the Companies Ordinance in Hong Kong, but there is no foreign ownership restriction on the licensee. If the applicant is a company incorporated in Overseas, the Telecommunications Authority (TA) may consider its application provided that it has registered under the Companies Ordinance as an overseas company. Generally, there is no restriction on the number of

[9] http://www.netlab.hut.fi/tutkimus/l9ead/leaddocs/KiiskiHammainen_MVNO.pdf

[10] Guidelines for application of PNETS licenses, Hong Kong

licences granted for the PNETS licence and the TA is prepared to consider new applications at any time.

1.4 The licensee shall comply with any code of practice concerning technical configuration and operation of the service that may be issued by the TA from time to time.

1.5 MVNO Rights with respect to numbering arrangements:-

- It will be allocated its own number set under the telecommunications numbering plan; and
- it may be allocated a Mobile Network Code.

1.6 Obligations with respect to numbering requirements:-

- the MVNO shall conform to the TA's telecommunications numbering plan;
- the MVNO shall facilitate mobile number portability; and
- the MVNO shall provide emergency services to its customers.

1.7 Under the PNETS licence, the MVNO shall fulfil the following general obligations:-

- the MVNO shall provide customer statistics to the TA;
- the MVNO shall be subject to payment of licence fees; and
- the MVNO will be required to pay the same interconnection charges as a mobile network operator (MNO) for interconnection with fixed networks.

1.8 MVNO for Third-Generation (3G) Services:

1.8.1 The MNO is obliged to open 30% of its network capacity to MVNOs who are not affiliated to any MNOs. In order for a MVNO to be qualified for the TA's regulatory support on its access to the MNO's network, the

MVNO is required to meet the following minimum requirements on network operation and infrastructure:-

- provide its own mobile switching and gateway infrastructure for circuit and/or
- packet switched traffic;
- enter into its own interconnection and roaming agreements;
- provide its own business support systems, such as billing and customer care;
- maintain its own Home Location Register of customers (or equivalent functionality);
- satisfy requirements for call control as required by the TA and normally associated with a telecommunications operator; and
- issue its own SIM cards.

The TA will have regard to certain criteria when determining whether or not it will offer regulatory support to a MVNO. The criteria for, and the terms of, the TA's intervention are set out in the guidelines.

1.9 In the event that a non-affiliated MVNO and a MNO cannot agree with each other on the terms of interconnection, either of them may call upon the TA to intervene in the dispute and to determine the terms of interconnection. If a MVNO makes a request for a determination, the TA is unlikely to intervene if:-

- the MVNO is affiliated to the MNO or to any other MNO;
- the MVNO already has access to the network capacity of any other MNO's network (as defined in the mobile carrier licence) equivalent to 30% or more of the network capacity of the network to which the MVNO is seeking access. If the TA receives a request for access to a network from a MVNO that already has access to another network, the TA will take into account the extent to which the MVNO already benefits from the open network access framework

and such other factors as he may consider relevant such as the market position of the MVNO;

- the MVNO does not satisfy the minimum infrastructure requirements or
- the relevant MNO has reached its 30% open network access requirement.

2. JAPAN

2.1 In Japan, the first MVNO started its operations in Oct. 2001

2.2 Japan Communication Inc (the first MVNO in Japan) gained a profit in fiscal year 2002 for the first time since its establishment, gave the positive prospect among potential MVNOs.

2.3 One of the network, Personal Handy-phone System (PHS) network is utilized by the MVNOs in Japan.

2.4 For encouraging MVNO business, Japanese government had set up the guidelines for MVNO in June 2002.

2.5 MVNOs have made the internet connection seamless by combining wireless LAN network with PHS network. Such service was launched in the market by several MVNOs in year 2003. This type of service is the main stream of MVNO business.

3. Netherlands

3.1 The Mobile Virtual Network market in the Netherlands is among the most active in the world. New entrants have attracted many customers by offering significantly lower international calling rates.

3.2 The MVNO market in the Netherlands currently counts around 39 Virtual Operators. The majority of the new entrants are focussing on the low-cost segment.

3.3 The players in the Dutch MVNO market can be segmented into different categories. Retail chains, charity organisations, fixed-line telecom operators and calling card companies have entered the market to broaden their service portfolio, offer attractive international calling rates or increase the customer loyalty. These new entrants have changed the telecom landscape by pushing the operators to the role of network providers. MVNOs have appeal because they target a specific market segment with needs which they know best to answer.

3.4 Operators that are currently cooperating with MVNOs are those who struggled to fill its network with their own subscribers. They are eager to cooperate since they only have to lease network capacity and can profit from the success of the new entrant without costly investments.

4. Finland

4.1 In Finland, most of the MVNOs have adopted the strategy of competing with price rather than services.

4.2 In addition, also the competition has long roots in the Finnish telecommunications market because of the numerous local telephone operators and the competition between public and private telephone operator families. The Finnish MVNO market is interesting due to the presence of a large number of diverse MVNOs.

4.3 Changes in regulation have made the market easily accessible for MVNOs. The most effective trigger for MVNOs to start their operations, however, was the requirement to enable mobile number portability (MNP) between mobile network operators in July 2003.

4.4 One of the MVNO has combined three strategies of the model: it offers the low price services directly to its customers, provide differentiation with content services, and resell their network capacity to focused brand operators.

4.5 After the entrance of MVNOs, all the three incumbent MNOs have had to lower their prices and subsidize their subscriptions with free air time and goods.

5. United Kingdom

5.1 The UK operators opened their networks to MVNOs entirely voluntarily, with no regulatory intervention sought or required. The first operator which started its operation in UK in 1999, is one of the successful global MVNO. It gained 8% plus market share (>4 million) customers in five years. Around 25 MVNOs are functional in UK.

5.2 The process for establishing a MVNO depends on what services the MNO is supplying to the MVNO and is a commercial matter between those two parties. There are no specific MVNO-related Ofcom specific telecom regulatory requirements beyond those in the published General Conditions of Entitlement on their website.

5.3 Ofcom does not require notification before electronic communications networks and services can be operated in the UK.

5.4 MVNOs, which offer retail mobile services by leasing network capacity from operators, now account for over 5.5 million subscriptions in the UK.

5.5 Most MVNOs' financial strategies have largely been dictated by cost structure. The two significant advantages for MVNOs are:

- significantly lower levels of capital expenditure; and
- much shorter time taken to reach positive cash flow than a network operator.

5.6 MVNOs pay out a large proportion of their revenues in fixed agreement wholesale fees to network operators, their operating margins are far lower than those of MNOs. This results in a significant financial risk to the MVNO business model.

6. USA

6.1 As wireless services expand their stronghold in the United States, service providers are diversifying into wireless data and other differentiator services. Besides offering attractive value-added multimedia services and content, MVNOs also deliver solutions to expand the existing customer reach of MNOs.

6.2 US markets has about 60 MVNOs operating since 2002. These MVNOs created unique new services & packages and targeted unserved market niches. Rather than dividing the existing market into smaller segments at lower price points, they grew the market, increased content, and arguably raised price points by delivering services that customers wanted to buy – or buy more of.

6.3 MVNOs are also required to register with the FCC and the Universal Service Administrative Company (USAC) by filing a signed copy of certain pages of FCC Form 499-A with USAC[11]

6.4 In USA, the FCC has for several years required that networks deal on a non-discriminatory basis with re-sellers, including, by the FCC definition, MVNOs. Although this position opens the market to MVNOs, it does mean that they will be dealt with in the same way as resellers. The fact that they will be unable to reach wholesale pricing arrangements that discriminate them from resellers will make it more difficult for them to differentiate themselves from the competition.

7. Pakistan

7.1 Pakistan Telecom Authority (PTA) defines MVNO[12] as an operator that does not own spectrum but has commercial arrangements with conventional MNOs to buy minutes of use (MoU) for sale to its own customers. Pakistan has started issuing MVNO Licenses from May 2007.

7.2 A few points from the framework:

- PTA will oversee and approve the MVNO agreements and breakups.
- PTA shall allocate separate number blocks to MNOs for use by its MVNO partner.
- MVNOs cannot sign separate roaming agreements with operators other than the parent network operator.
- MVNOs will contribute to universal service fund and research & development fund, among other fees.

[11] MVNO licensing and regulation - Entering the Regulated Market of Wireless Resale (http://www.tkcrowe.com/mvno_licensing.html)

[12] Consultation paper on MVNO framework by PTA

7.3 PTA has kept the barrier to entry (fees, conditions etc) for MVNOs fairly low. Mobile operators are also permitted to support MVNO services. Only a company registered with Securities and Exchange Commission of Pakistan (SECP) is allowed to provide MVNO service. The MNO that make commercial agreement for MVNO operation in Pakistan have to submit the same to the Authority for approval prior to giving effect to this agreement. In addition to the commercial agreement, MVNO also submit application to the Authority for the award of MVNO Class License.

7.4 The MVNO Class License is issued for a period of agreement between MNO and MVNO or a valid term of his parent MNO or which ever is smaller. If the Authority for any valid reason terminates the license of Parent MNO, then the concerned MVNO class license shall automatically stand terminated.

7.5 This Framework may be reviewed by the Authority, form time deems it fit or circumstances so require.

8. Singapore

8.1 The first Asia MVNO was launched in Singapore in 2001.

8.2 In Singapore, the MVNO must use part of the networks of the MNOs licensed by Infocomm Development Authority (IDA) under the Facilities-Based Operations Licence to originate and deliver its customers' calls. The MVNO must pay the licensed MNO for the use of network and or the essential radio segment of the networks[13].

[13] Proposed regulatory approach for 3G MVNOs (http://www.ida.gov.sg/doc/Policies%20and%20Regulation/Policies_and_Regulation_Level2/MVNOs/MVNO_Consultation_Paper.pdf)

8.3 MVNOs must commercially negotiate for access to 3G networks. IDA will, however, intervene in cases of unduly restrictive or anti-competitive practices in accordance with the relevant provisions of the Telecom Competition Code.

8.4 The regulatory approach for 2G and 3G MVNO follows the following consistent regulatory principles:

- Primarily reliance on market forces in competitive markets to promote and deliver consumer welfare.
- Regulatory intervention only where there is market failure and to the extent necessary to remedy that market failure.

8.5 All Facilities Based Operators (FBO) and Service Based Operators (SBO) MVNO licensees are required to implement and support number portability.

8.6 One of the UK's mobile providers attempted to enter the market as a MVNO in 2001. However, due to a low take-up of its services, it ended its venture within a year.

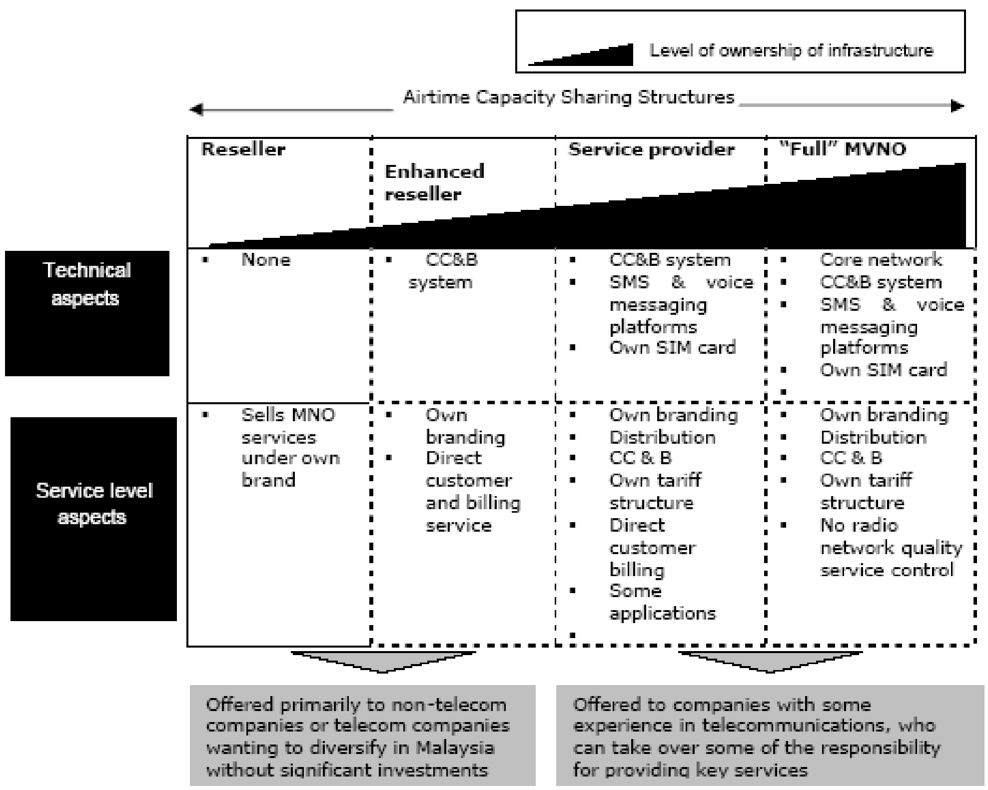
9. France

9.1 In France around 10 MVNOs are operating. The French operators have succeeded in preserving their dominance by signing up MVNOs on their own terms. The MVNOs have captured nearly 2.8 percent of the total French mobile market by 31st Dec 2006. The MVNOs' poor market share since launch has in part been driven by factors such as complex number portability arrangements, and lengthy subscriber contracts which discourage churn. There are also substantial differences in wholesale pricing by the operators – particularly when compared to the UK where rates are reportedly much lower. MVNOs face a difficult challenge in adding subscribers. The incumbents rely heavily on 24 month lock-in contracts, decreasing the incentive for subscribers to switch operator midway. Coupled with the difficulty in porting numbers, it could be construed as a strategic deterrent for MVNOs in the market. Most MVNOs offer prepaid services, promoting prepaid as a complement rather than a substitute to post-paid services.

10. Malaysia

10.1 In Malaysia, 4 MVNOs are providing their services.

10.2 Malaysian Regulator, Malaysian Communications & Multimedia Commission (MCMC), in its guidelines[14] has identified four prevalent business models and the characteristics of each of these business models and the corresponding licensing requirements are as detailed below:



Source Telekom Malaysia Berhad's detailed business plan

---

[14] Guidelines on regulatory framework for 3G MVNO – 16th Feb'05 by MCMC

10.3 The actual licensing requirement of MVNOs are ascertained by the MCMC upon assessment of the applications vis-à-vis the CMA and the relevant subsidiary legislations on a case to case basis.

10.4 As the MVNOs are largely dependent on MNOs to enter the market and compete effectively, the key factor that ensures sustainability of MVNOs is the terms and conditions of access to the radio network as well as other incidental facilities and services required to provide services to end users. The MCMC intervenes if it is satisfied that such intervention is necessary to ensure long term benefits to end users and growth in the industry.

10.5 The MCMC allocates a specific block of numbers for mobile virtual network operators who wish to establish their own brand names. These numbers will be assigned for use with network services and application services provided by Network Service Providers and / or Application Service Providers who operate their own home location registers and billing systems.

11. Germany

11.1 There are four network operators in the German mobile market. Germany has one of Europe's most advanced and leading MVNO markets. Germany has around 29 MVNOs operational. The emergence of MVNOs has boosted competition in the German mobile market, bringing down the cost of mobile calls and increasing the level of fixed-to-mobile substitution. The country's mobile operators tapped into the value-added mobile data services' revenue streams, and lined up portfolios of data-centric multimedia services, including mobile music downloads, gaming and TV streaming.

11.2 The proliferation of MVNOs following the introduction of mobile number portability on 1 November 2002 has boosted competition on the fast-paced

German mobile market[15]. The mobile operators and service providers have been lining up an array of attractive offerings to win customers.

12. Australia

12.1 In Australia, there are a relatively large number of MVNOs, around 22 in number, operating since 2000, yet it is far from having fully capitalized on the MVNO Market opportunities. These opportunities are present now due to the reduction in entry barriers, the segmentation of the market, fixed-to-mobile substitution and commoditization of voice and text services through 'capped' tariff plans.

13. Ireland

13.1 Ireland has offered incentives to encourage bidders for 3G licenses to voluntarily commit to providing access to MVNOs.

14. Italy

14.1 Italy stands out in Europe as a significant country where the regulator has determined that network operators do not have to open their networks to MVNOs on request. The Italian regulator Agcom has decreed that the network operators should be afforded a level of protection to develop their 3G businesses, in a decision that was upheld by the EU in December 2005.

[15] http://www.globalinsight.com/SDA/SDADetail7263.htm

15. Latin America

15.1 In Latin America[16] MVNOs are finding it tough to set up and get established. Here, the average mobile penetration is approx. 60% and 80% of subscribers are prepaid. Yet, the number of MVNO subscribers in relation to total mobile telephony subscribers is minimal in Latin America, than it is in other parts of the world. Latin Americans are low spenders on mobile service with ARPU of approx. US $15/month.

15.2 Latin America is far behind the Europe and US in implementation of number portability regulations, which is essential to create a competitive environment in which a MVNO can work. At present, Panama and Puerto Rico are the only countries in Latin America and the Caribbean to have number portability in place.

15.3 Regulators here, are generally in favor of MVNOs because of their positive effects on competition, but they tend not to get involved in MVNO-MNO negotiations for the sale of minutes, as they see it as a purely commercial affair.

15.4 The trend towards convergence and quadruple services is expected to be the main motivation for setting up a MVNO in Latin America.

15.5 Specific examples of some countries in this region are as follows:

- **Chile**

In Chile, the telecom regulator awarded 10 MVNO licenses last year, many have encountered difficulties in negotiations with network operators (MNOs) and to date no MVNO has yet started.

[16] MVNO growth in Latin America – Business News Americas

- **Mexico**

Mexico's telecom regulator, Cofetel introduced a regulation in 2005, allowing the entrance of national and long distance prepaid minute resellers. The regulator also approves requests for reselling telecoms services of all types. Here resellers are offering new services and targeting niches the MNOs are overlooking. MVNO licenses are expected to be granted in the first half of 2008.

- **Uruguay**

Uruguaya MVNO startup company specializes in pre-paid recharging and m-commerce technology. It has gained distribution and prepaid billing assistance through association with parent company.

List of MNO / MVNO in different countries

Sl.No.	Country	Number of MNO	Number of MVNO
1	Australia	4	22
2	Denmark	4	16
3	Finland	4	9
4	France	4	10
5	Germany	4	29
6	Hong Kong	5	7
7	Ireland	3	7
8	Italy	4	3
9	Malaysia	1	4
10	Netherlands	7	39
11	Pakistan	7	5
12	Philippines	8	1
13	Portugal	4	5
14	Russian Federation	3	2
15	Singapore	3	1
16	Switzerland	6	5
17	United Kingdom	5	25
18	United States	13	60
19	Norway	2	16

Glossary

Abbreviations used	Full-form
AGR	Adjusted Gross Revenue
BSO	Basic Service Operator
BSS	Base Station Sub-system
BWA	Broadband Wireless Access
CMSP	Cellular Mobile Service Providers
CUG	Closed User Group
DoT	Department of Telecommunications
FBG	Financial Bank Guarantee
FCC	Federation Communications Commission, USA
FDI	Foreign Direct Investment
FIPB	Foreign Investment Promotion Board
FMCG	Fast Moving Consumer Goods
HLR	Home Location Register
IDA	Infocomm Development Authority, Singapore
IN	Intelligent Network
IPLC	International Private Leased Circuits
MCMC	Malaysian Communications & Multimedia Commission
MNO	Mobile Network Operator
MSC	Mobile Switching Center
MVNO	Mobile Virtual Network Operator
OFCOM	Office of Communications, United Kingdom
OFTA	Office of the Telecommunications Authority, Hong Kong
PBG	Performance Bank Guarantee
PTA	Pakistan Telecom Authority
RAN	Radio Access Network
SACFA	Standing Advisory Committee for Frequency Allocation
SMP	Significant Market Power
TA	Telecommunications Authority, Hong Kong
TRAI	Telecom Regulatory Authority of India
UASL	Unified Access Service Licence
UCC	Unsolicited Commercial Communications
WPC	Wireless Planning Commission