

Consultation Paper No. 6/2004



TELECOM REGULATORY AUTHORITY OF INDIA

Consultation Paper

on

Unified Licensing Regime

New Delhi

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Preface

The evolving telecommunication technologies, market trends, international trends, increasing bandwidth capabilities, the need to accelerate growth of telephone density in public interest, possibilities of innovative services and increasing use of IP technology are blurring the boundaries between different services (as they are known today) and eliminating the importance of distance. This blurring of boundaries and ability of operators to offer services using a particular technology which may not be covered in existing service specific license results in disputes and litigations. Licensing Regime should enhance the scope of applications and services, thereby removing the artificial barriers imposed on the application of technology and thus avoiding innumerable disputes and time consuming litigations. It is pertinent to migrate to a licensing regime with service and technology neutrality. There is also a need to exploit the special strengths of small niche operators especially in rural, remote and less developed areas, besides the larger or integrated operators. Thus, it is envisaged that a new licensing Regime – the Unified Licensing/Authorisation Regime – be implemented in which service providers may be able to offer any or all services, using technology of his/her choice with area of operation so defined as to promote greater participation of all types of big and small entrepreneurs.

2. To define and implement such a Unified Licensing/Authorisation Regime, the details of the Guidelines need to be spelt out. As a first step, Unified Access Licensing has already been implemented. It is now necessary to define details of Unified Licensing Regime.

3. The Authority carried out considerable analysis and in an effort to obtain more comprehensive inputs from various stakeholders, TRAI had issued a Preliminary consultation paper on Unified Licensing Regime on November 15, 2003.

4. This consultation paper is based on the extensive analysis, comments received from various stakeholders on TRAI's Preliminary consultation paper, study of market conditions and international trends. The objective of this consultation paper is to examine the various licensing, regulatory and level playing field issues in enabling a Unified Licensing Regime.

5. We are hopeful that this paper would provide the necessary platform for discussing the important issue of migrating to Unified Licensing regime. The paper has already been placed on TRAI's website (www.traigov.in).

6. Written comments on this Paper may be furnished to Secretary, TRAI by April 30, 2004. For any further clarification on the matter, Secretary TRAI or Adviser (MN), respectively, may be contacted at traio7@bol.net.in (Ph No. 26167448) and jsengg@bol.net.in (Ph No. 26106118).

(Pradip Bajjal)
Chairman, TRAI

Background

The Government has accepted the TRAI's Unified Licensing recommendations dated 27th October 2003. The recommendations envisaged a two-stage process to introduce a Unified Licensing regime in the country. The first phase that entails a Unified Access Service License at Circle level has been implemented and the guidelines to this effect are available at Department of Telecommunication's website (<http://www.dotindia.com>). The TRAI is presently consulting on implementation of the second phase of these recommendations.

2. The relevant extracts of the TRAI recommendations dated 27.10.2003, which lay down the broad framework of the envisaged regime, are reproduced below:

"7.1 Considering the vision of Government of India through various policies (e.g., NTP'94, 'NTP 99, Convergence Bill), technological development, market trends, international trends, the need to accelerate growth of telephone density, public interest and for the proper conduct of the Service/telegraphs, it is recommended that within six months "Unified Licensing" regime should be initiated for all services covering all geographical areas using any technology. The Regime would be finalized through a consultative process, once 'in-principle' approval is received from the Government. The initiation of the Unified Licensing process means that TRAI would submit its recommendations on this issue to Government of India. This Unified Licensing regime would be implemented through automatic Licensing / Authorisation subject to notification to Regulatory Authority and compliance with published guidelines (by the operator), thereby removing barriers to facilitate growth in the sector.

7.2 The Guidelines would be notified by the licensor based on TRAI recommendations to include nominal entry fee, USO, etc. The charges for spectrum shall be determined separately. The operator shall be required to approach the licensor mainly for spectrum allocation. Since, spectrum is a scarce resource, it needs to be regulated separately. Spectrum should be distributed using such a mechanism that it is allocated optimally to the most efficient user.

7.3 The choice of area/service would be left to the operator. “

3 The recommendations of the TRAI were also in line with the prevalent international practices, which is to move towards Authorisation / Converged licenses. Such a regime is already functioning in Australia, Argentina, parts of European Union (an EU directive requires such a regime to be implemented across all EU Member States), Malaysia, Singapore etc.

4. Once the broad framework was decided and put in place, the TRAI began consultation on its implementation with the issue of a preliminary consultation paper (5 of 2003) on Unified Licensing Regime on 15th November 2003. The preliminary consultation paper raised various issues, which would be required to be dealt while formulating the Unified Licensing Regime. The issues were classified under following categories:

- i) Ambit and type of Unified Licensing.
- ii) Registration Charges
- iii) Entry Fee paid by existing service providers
- iv) Service Area
- v) Rollout Obligations
- vi) License Fee
- vii) Business case of (existing) service provider, especially stand alone operators.
- viii) Interconnection and PSTN connectivity.

- ix) Numbering Issues
- x) Other Issues.

Responses to the questions raised in the preliminary consultation paper have been received from 26 stakeholders and summary of the responses is enclosed at Annexure I.

5. From the responses received, there appears to be a general consensus on moving towards a Unified Licensing Regime. However, there have been several comments on specific issues that require detailed examination before any decision is taken. This consultation paper now seeks to focus on such issues and expects to gather views of the various stakeholders on them.

Chapter 2

Key objectives and framework of Unified Licensing Regime

1. As discussed in Chapter 1, a broad framework for Unified Licensing regime has already been laid down in the TRAI's earlier recommendations dated 27th October 2003, which inter-alia includes
 - a) Unified Licensing regime would be implemented through automatic Licensing / Authorisation subject to notification to Regulatory Authority and compliance with published guidelines
 - b) The Guidelines to include nominal entry fee, USO, etc.
 - c) The charges for spectrum shall be determined separately. The operator shall be required to approach the licensor mainly for spectrum allocation.
 - d) The choice of area/service would be left to the operator.

This chapter discusses the key objectives of Unified Licensing and framework of Unified Licensing Regime followed in different countries. Based on International practices and keeping in view the key objectives of Unified Licensing regime different models of Unified Licensing are proposed in the last section of this chapter for the comments of various stakeholders.

2 **Key objectives of Unified Licensing Regime:** Unified Licensing Regime involves unification of various licenses and not unification of services. The **key objectives** of the Unified Licensing/Authorisation Regime is to encourage free growth of new applications and services leveraging on the technological developments in the Information and Communication Technology (ICT) area. Other main objectives of the Unified Licensing Regime are to:

- Simplify the procedure of licensing in the telecom sector,
- Ensure flexibility and efficient utilisation of resources keeping in mind the technological developments

- Encourage efficient small operators to cover niche areas in particular rural, remote and telecommunication facilities wise less developed areas.
- Ensure No- worse off, level playing field and easy entry.

It is pertinent to adopt a licensing regime, which ensures that these objectives are met in true spirit. To finalize the licensing regime, it is imperative to determine the desired licensing framework and details of other terms and conditions viz. Registration Charges, Service Area, License Fee, Interconnection related issues, Roll-out Obligations, Bank Guarantees, Numbering related issues, etc. This chapter discusses the framework of Unified Licensing Regime. Other licensing terms and conditions are discussed in the subsequent chapters.

3. Framework of Unified Licensing Regime:-

3.1 In the Preliminary Consultation paper, a number of existing models worldwide were discussed. Salient features of the models of Unified Licensing/Authorisation Regime prevalent in the various countries are discussed below.

i) European Union Model – Simple Authorisation Regime subject to separate regulations/notifications/Guidelines: The European Parliament and the Council gave a set of five directives to its Member States so as to provide for a single Regulatory framework for all transmission network and services. The main objective is to replace Service specific licenses by Authorizations in the EU Countries. The Member States are, however, permitted to impose a set of conditions to the general authorizations, for example financial contributions to funding Universal Service, Administrative costs etc. For the use of Radio Spectrum, grant of Numbers and Rights to Install Facilities the relevant authorities may impose separate fees. Specifically, in case of spectrum Member States can grant such rights on the

basis of selection criteria, which must be objective, transparent, non – discriminatory and proportionate. However, migration for cellular operators have not yet taken place in any of the EU countries.

ii) **Singapore Model – Facility Based and Service based Licensing:** In Singapore, a Unified-licensing framework has already been implemented. The licensees have been categorized into Facilities based Operators (FBOs) and Service Based Operators (SBOs). Service Based license is further divided into Individual and Class license. The FBOs can build telecommunications network for the carriage of telecommunications and broadcast traffic. SBOs are operator intending to lease telecommunication network elements such as transmission capacity, switching services, ducts and fibre from any FBO to provide telecommunication services to third parties or resell the telecommunication services of FBOs. The license fees depend upon the service to be provided and is generally expressed as a percentage of Annual Gross Turnover (AGTO) subject to a minimum (in all cases except one). In addition to these there are other charges such as spectrum charges, number allocation charges, etc.

iii) **Malaysian Model – Converged Licensing framework:** In Malaysia, the licensing framework is formulated to be both technology and service neutral. There are four Categories of licenses viz. Network Facilities Providers, Network Service Providers, Application Service Providers and Content Application Service Providers. The services falling under these categories are further subdivided into Individual, Class and Exempt Services. Class licenses have lower level of regulation than individual licenses. The migration to converged license framework was carried over a period of 2 years.

iv) **Argentina Model - Single License Regime:** In Argentina a single license regime was introduced in 2000. In the single License regime, a licensee provides any telecom service other than mobile service. Even with

the introduction of the single license regime in 2000, the licenses for cellular mobile/PCS continued as earlier. Any service operator other than those providing mobile service can thus take a license under the single license, inform the regulator of the service which it is going to provide, can choose any service area or customer categories to be provided by them. Information to the Authority regarding the service to be provided is required particularly for the purpose of interconnection related matters. The single license does not guarantee access to limited resources such as spectrum or numbering and the right of way.

v) Australian Model - Carrier license and carriage service providers:

In Australia, there is an open licensing regime for telecommunications with no distinction being drawn on the basis of the technology used and services offered. A carrier license allows the owner(s) of a network to supply carriage services to the public subject to obligations set out in its license, the Telecommunications Act 1997, and any additional conditions imposed by the Minister. Carriers are individually licensed and pay application and ongoing licence fees that recover the costs of regulating the industry. Carriage service providers provide telecom services to the end users. There is an obligation to take a carrier license if one owns a network unit. Single license regime was introduced in a single phase.

3.2 Inference from International Practices: All the countries mentioned in para 3.1 above follow some form of Unified Licensing. In EU and Argentina the mobile services have been excluded from the ambit of Unified licensing possibly because of the legacy aspects associated with the mobile service licenses. The unified licensing followed in different countries mainly focus on the following points:

- i) Separation of services under facility based and service based.
- ii) The spectrum and limited resource's charges are excluded from entry fee/license fee.

The Unified licensing approach also depends upon how satellite services are treated. More details of each model are provided in Annexure II.

From the various international practices, it can be observed that Unified Licensing regime enhance the scope of applications/ services that can be provided under a given Single license / Authorisation, thereby removing the policy imposed artificial barriers on application of technology. In our present service specific license, a number of rights & obligations viz. right to Numbers, Roll-out Obligations, etc. are built in the license agreement, thereby reducing flexibility, as well as resulting in misinterpretation / litigation in regard to license agreement's terms and conditions.

3.3 Concept of Class License: The Authority had earlier (in TRAI's Preliminary Consultation paper dated November 15, 2003) discussed a concept of class license which focuses on ease of entry and operation. A class license establishes a set of general conditions, which are widely publicized among the class of service providers / companies concerned and are oriented towards easy entry of operators under a regime with minimum set of requirements for providing such services. Any service provider / company may participate in the activities under the class license with, for example, zero or near zero entry fee and relatively easy license agreement's terms and conditions in this category of license. Such a concept exists in Malaysia and Singapore (please see Annexure II). In our country, there are number of services with lower entry barrier and license fees which can be grouped under a Class license. The main issue for consideration is what are the parameters that should be used to judge that a service falls under Class licence.

3.4 Comments of stakeholders on TRAI's Preliminary Consultation paper on Unified Licensing:

i) **Comments on framework of Unified Licensing Regime:** In the preliminary consultation paper, comments of the stakeholders were invited on

the model that can be best adopted in the Indian context. The general opinion of the stakeholders was that a framework best suited to the Indian situation be evolved drawing from best practices. In response to the issue of classifying the licenses as FBOs and SBOs, some of the respondents were of the view that only FBOs should be permitted as there is a need for increasing the level of infrastructure prevalent in the country.

ii) **Comments on the concept of Class license:** On the issue of classification of services with zero or very low entry fee like ISPs, PMRTS, VSAT, etc. under Class License, majority of the stakeholders had mentioned that they are in favour of the concept of class license. There were, however, some stakeholders not in favour of this concept, because they were of the opinion that there should be only one single unified telecom license. These stakeholder opined that class license category would raise more issues on the level playing field and would lead to artificial segregations that would limit the flexibility/capability of the operators to use their investments and infrastructure for providing any service to either retail subscribers or other Carriers.

iii) **Comments on whether IP-I and IP-II be included or kept outside the ambit of Unified Licensing:** In the preliminary consultation paper this was an issue for consideration whether these services should be included in the ambit of Unified Licenses. One of the view was that licensees such as infrastructure providers (IP-I and IP-II) should be kept outside the ambit of unified licensing as they do not provide service to the end customers. Some stakeholders were in favour of inclusion of these licenses under the ambit of Unified Licensing. An opinion expressed in response to the preliminary consultation paper has indicated that infrastructure providers be treated as a separate category and should be given an option to integrate into unified licensing regime.

3.5 The following aspects need to be considered while deciding the framework of Unified Licensing:-

- i) The mapping of existing service specific licenses into Unified Licensing Model;
- ii) The scope of Unified License in terms of services which are to be encompassed in Unified License and which are to be made part of Class License;
- iii) The desired level of regulation for different services;
- iv) The level of regulation could also be dependent on the basis of owning of infrastructure by the service provider;
- v) The Unified License will only authorize the licensee to offer various telecom services. The allocation of spectrum, numbering, right of way, etc. may have to be dealt separately, wherever required;
- vi) Spectrum Charges -TRAI would be releasing another consultation paper shortly on spectrum related issues, which will cover the issue of spectrum charges;
- vii) Internet Telephony: Another important issue is the treatment of Internet telephony Services in the new framework. Should PSTN based IP Telephony be permitted to ISPs at this stage? In Malaysia IP Telephony falls under the same category as other voice telephony and entails similar entry fees / license fees. In our country, only PC / Similar IP devices to phone and PC to PC telephony has been permitted to ISPs. Access and Long Distance licensees are now using the IP technology for provision of voice services. In countries where there is little distinction between the two services in terms of regulatory environment, the two forms of IP Telephony (using managed IP and Public Internet) are interchangeable. This would mean that a call from India to US may travel partly on managed IP and partly on Internet. IP Telephony services, therefore, are

increasingly becoming a part of normal voice telephony and may perhaps be regulated similarly. The main issue of concern is how Internet telephony be treated?

- viii) Implementation strategy for Unified Licensing Regime:
Phased implementation or implementation in one go.

3.6 Out of the above considerations, the impact of some are more than those of the others in changing the character of the models. For example, the aspect of national geographical spread of the National Long Distance Operators (NLDO) as compared to the access provider with well-defined limited area of operation, could substantially impact the model. Similarly, treatment of satellite based services could have a substantial impact, since the area of coverage, the type of infrastructure used and the security considerations are quite different from other services. The Satellite services are also governed by other regulations pertaining to Department of Space / Security considerations / International Co-ordination. Bringing GMPCS under the ambit of Unified License would necessitate special authorizations specific to satellite based services. VSAT services are different from others as they are presently of CUG nature and are not permitted interconnectivity with PSTN. In Malaysia, VSAT is a part of Network Facility Provider License even in CUG form. In Australia, commercial VSAT service providers require a carrier license, however, captive VSAT networks do not require carrier license. In Singapore, VSAT is treated as a CUG service.

More specifically a VSAT service provider combines access as well as long distance component and could even cover international long distance services. Similarly, IP telephony, Radio Paging, Public Mobile Radio Trunked Services (PMRTS), IP-I and IP-II possess special features which may have major impact on the character of the model. Services such as Radio Paging and PMRTS though require infrastructure and spectrum, are much lower in terms of their competitiveness with Mobile Voice service and Long Distance

Services in so far as their application and revenue potential is concerned. In effect, these services are severely challenged by growing wireless access service and for all practical purpose been converted into small-scale operations. There is perhaps a case to classify these services under Class License provided they do not have both-way PSTN connectivity.

If for a moment, we keep such services out of the picture and try to look at the remainder services, one could adopt a Unified Licensing Regime with low entry fee and suitably worked out spectrum and numbering charges. These licenses could be with facility ownership or without facility ownership. They could be in the form of an individual license or class license These are the core characteristics of the various possible models. When one tries to incorporate above-mentioned services, variants to the core models become necessary. Such variants are necessary because these services are already licensed and operational and their mapping into a new licensing regime creates certain singularities, which have to be accounted for.

Keeping the above discussion in mind, all possible models and variants and sub-variants of these models have been discussed below. More detailed discussions on these models and the impact of special issues such as registration charges/entry fee/authorization charges, service area, license fees, bank guarantee, resale of services, etc. on each model have been discussed in the following chapters.

3.7 Proposed Licensing Model/s for Unified Licensing Regime: Based on the International practices, comments received from the stakeholders and keeping in mind our objectives (mentioned in para 2) the salient features of the emerging models suitable in our conditions are described below. In addition to the models discussed below, there could be other model/s suitable in our conditions, the comments of the stakeholders are invited on the same. All proposed models discussed below provides flexibility to the service providers to offer any telecom service in the service area of their choice

subject to notification to Regulatory Authority/Licensor and compliance with published guidelines. Spectrum and Numbers are to be obtained separately as per published Guidelines.

I. **MODEL I: Unified License and Class License**: This model classifies the licensing regime as follows:

- Unified License
- Class license for some services under Unified License
- No license required for some services.

Within this model, when considerations given in para 3.6 are applied, several categories are possible and these are described below:

i) **Category - I**

- Services such as Basic, Cellular, UAS, NLD, ILD, etc. are included in the Unified License except VSAT and GMPCS which are excluded due to considerations described in para 3.6. Licenses for these services to be obtained separately.
- Radio Paging, PMRTS, ISP, IP-I, IP-II with existing licensing terms and conditions, would fall under Class license. Any change in existing licensing terms and conditions to cover services such as voice telephony (where feasible on existing infrastructure), etc. would require Unified license. Any new non facility based application services may also be licensed under Class license.
- Niche operators may be considered either under Class license. New services, which require low infrastructure, may also be considered under Class License category.

ii) **Category - II**

This model is similar to the model discussed in Category - I above except that VSAT services are under Class License, in this category.

iii) Category - III

This model is different from model described in Category - I above only to the extent that VSAT services are part of Unified Licensing Regime.

iv) Category - IV

In this model both VSAT and GMPCS services are included under Unified Licensing Regime. The services such as GMPCS are offered together with Cellular Mobile and are often marketed by Cellular Mobile Service Providers themselves. End users generally use the Cellular infrastructure to make calls and are switched to GMPCS where these services are not available. Under these circumstances, it might create difficulties of operation under two different licenses i.e., Unified License and GMPCS license. To incorporate larger flexibility to service providers, one option could be to include the services aspects of GMPCS under the unified license, but additional conditions pertaining to issues such as security etc. could be linked with the licensing of satellite services and the frequencies involved.

v) Category – V

To facilitate entry, it is possible to consider the Unified License Regime as a whole to be a Class License. This would require a minimal entry fee, similar to that applicable to Internet or even VSAT.

II. Model II: Unified License Regime on the lines of Convergence Bill

This model provide four categories on the lines of the Convergence Bill, which in some ways gives more flexibility in fitting services in different categories. These categories are described below:

- i) Network infrastructure facilities:- to provide or own telecom infrastructure including towers and ducts.

- ii) Networking services: to provide Bandwidth services, Fixed links and Mobile links.
- iii) Network application services:- to provide public switched telephony, public cellular telephony, Global Mobile Personal Communication Services by satellite, IP telephony, Radio Paging, VSAT, Public Mobile Radio Trunking, Public Switched data services
- iv) Value added network application services:- to provide Internet services, Unified messaging services etc.

A service provider who wants to offer any telecom service using his own infrastructure and developing his own bandwidth services (both fixed and mobile) needs all the four categories of licenses i.e. Network infrastructure facilities, Networking services, Network application services and Value added network application service. The service providers offering services like Internet services, Unified messaging service, etc. which do not need their own infrastructure have to take only one category of license i.e. Value added network application service. In case Internet Service Provider provides full fledged Internet telephony then he would require all the four categories of licenses i.e. Network infrastructure facilities, Networking services, Network application services and Value added network application service.

The question at this stage comes that the service providers offering services like Radio Paging, PMRTS, etc. which are much lower in terms of their competitiveness with mobile voice service and long distance services in so far as their application and revenue potential is concerned, may not be in a position to take all the four/three categories of license as mentioned above and therefore, it is necessary to protect their interest. One of the option is that these services may be considered under Value added network application service category. Other option is to consider such services under Class License category. New services, which require low infrastructure, may also be considered under either Class License category or Value added network application service category

All satellite based services may either require all the four categories of licenses i.e. Network infrastructure facilities, Networking services, Network application services and Value added network application service or they may be considered under Class license/Value added network application service category. Another option is to keep them outside the ambit of Unified Licensing. Additional terms and conditions pertaining to issues such as security etc. could be linked with the licensing of satellite services. Niche operators may be considered either under Class license or Value added network application service category.

III. **Model III: Facility and Service Based Licensing** : This model is based on dividing the services in two categories: Facility Based License (FBL) and Service Based License (SBL). The service providers offering telecom services using their own infrastructure come under FBL category. On the other hand, SBLs may offer telecom services by leasing infrastructure from others.

The issue for consideration is how should the services like Radio Paging, PMRTS, Internet Services, etc. which are much lower in terms of their competitiveness with mobile voice service and long distance services in so far as their application and revenue potential is concerned, may be treated. One of the option is that these services may be considered under Class License category. New services, which require low infrastructure, may also be considered under Class License category.

All satellite based services may either require Facility Based License (FBL) or they may be considered under Class license. Another option is to keep them outside the ambit of Unified Licensing. Additional terms and conditions pertaining to issues such as security etc. could be linked with the licensing of satellite services. Niche operators may be considered either under Class license.

3.8 In this chapter, along with key objectives of Unified Licensing Regime various models of Unified Licensing framework have been discussed. Under any licensing regime, it is pertinent to discuss the following important terms and conditions of the license.

- i) Registration Charges/Entry fee/Authorisation Charges
- ii) Service Area
- iii) Other licensing terms and conditions
 - Annual License Fee
 - Bank Guarantees
 - Roll-Out obligations
 - Interconnection
 - Spectrum charges
 - Numbering
 - Sharing of Infrastructure and Direct Interconnectivity across service areas
 - Resale of services

These issues are being discussed in the subsequent chapters.

Chapter 3

Registration Charges/Entry Fee/Authorisation Charges

1. This chapter discusses the Registration Charges/Entry Fee/Authorisation Charges in the Unified Licensing Regime. The basic idea is to keep this charge at nominal level while ensuring level playing field between new and existing service providers.

2. In the present regime i.e. service specific licensing regime, the entry fee is a function of type of service and the service area (s). The existing entry fees for various services are given below:

Type of License	Entry Fee
Cellular Mobile	Different for each Service Area* (Based on Bidding)
Basic Services	Different for each Circle*
Unified Access Service	Different for each Service Area
National Long Distance	Rs. 100 Crore
International Long Distance	Rs. 25 Crore
Global Mobile Communication by Satellite	Rs. 1 Crore
VSAT	Rs. 30 lakhs
Infrastructure Providers Cat II	Nil
Radio Paging Service Providers	Please see the note below**
Public Mobile Radio Trunked Service	Nil
Internet Service Providers	Rs. 1
Infrastructure Providers Cat I	Nil

* Details given in enclosed Annexure III.

** Entry fee of Radio Paging Service Providers will be based on date of migration to revenue sharing regime. The same is under consideration by DoT.

2.1 From the table above, it is seen that entry fee for different services varies from zero to a few hundreds of crores. The basis for deciding the entry fee for Cellular Mobile Service and the first six licenses for Basic Services was a bidding process. The entry fee for other telecom services and Basic Service's licenses post NTP'99 was fixed by licensor based upon TRAI's recommendations. The main consideration for fixing the entry fee was the ease of entry on one hand and to deter the entry of non-serious players on the other hand. For Unified Access services the entry fee was fixed at the level of fourth cellular operator's entry fee and wherever fourth cellular operator was not there, the entry fee paid by the existing basic service operator formed the basis. The entry fees for Cellular, Basic including WLL(M) and UASL included the charges for right to spectrum, right of way, right to numbers, etc. Thus the entry fee paid by the existing operators clearly comprises of two charges i.e. registration charges towards the right to provide service and other consequential rights and charges towards right to spectrum. In case of services, which are not based on spectrum the entry fee paid by the existing operators, would be on the same footing as the Registration Charges mentioned herein.

3. While deliberating on the issue of Registration Charges under the Unified License Regime, the following aspects are to be borne in mind: -

- i) The variation in entry fee for different existing services;
- ii) Easy entry of service providers into the telecom market;
- iii) To the extent possible, the Registration Charges are not dependent on the type of service(s) offered by the service providers;
- iv) Level playing field between existing service providers and those who enter in Telecom Market under Unified Licensing Regime. The existing Telecom Service Providers should not be worse off in the Unified licensing regime;
- v) Spectrum and Numbers, to be charged separately;

- vi) No separate charges for Right of Way;
- vii) As prevalent in some of the countries, the registration charges to cover administrative/regulatory costs.

4. **Comments of stakeholders on TRAI's Preliminary Consultation paper on Unified Licensing:** In our preliminary consultation paper we had sought opinion on whether the Entry Fees/Registration Charges be based on the number of services offered by the Unified Licensee. Many stakeholders had opined that the Registration Charges should not be dependent on the number of services provided by the service providers. Most of the stakeholders have commented that the Registration Charge should be additives of present entry fees depending upon the services offered. Some of the stakeholders have also opined that Registration Charges should be function of the entry fee paid by existing UASL, NLD & ILD operators. Others are of the opinion that the Registration Charge should be based on the principle of administrative cost recovery. For Class licensees a nominal fee has been proposed.

5. In the Indian context, we need to deliberate on the basis of fixing these charges. If a single Registration Charge is kept for all existing services i.e. services under existing licenses, it would be required to fix the entry fee for a unified license, at a level that it does not become a barrier for those providing low entry fee services. On the other hand, Service Providers, who have paid high entry fee to enter the infrastructure based market, may feel disadvantaged if new entrants are able to provide similar services at a very low entry fees.

5.1 Service Providers, who have paid high entry fee to enter the infrastructure based market, may raise demand for compensation under these conditions. However, it is also pertinent to note the following aspects:

- i) Existing service providers, barring UASL's licensed in the year 2003, have first mover advantage.

- ii) The entry fees for most of the existing licensees included Right to Spectrum, Numbers, Right of Way etc. This essentially means that the entry fees comprised of various components. Therefore, once these aspects are priced separately, the effective Registration Charge would be much lower. Also from the market trend, especially in access segment, it is clearly observed that the price paid by most of the existing licensees (CMSPs, UASLs and BSOs licensed after January 2001) was based on business plans that revolved around wireless services.

5.2 In Malaysia, no monetary compensation was paid to the existing licensees at the time of migration. However, the license period of the migrating licensees was increased. Although in EU, migration to the new framework has not yet taken place, the policy does not envisage any compensation. In Australia, the Carriers entering in a duopoly were foretold at the time of licensing that a common carrier regime would be in place in 1997. Similarly in Argentina, the full liberalization plan had been announced 10 years earlier and no compensation was paid. In Singapore, compensation was given to the incumbent (Singtel) when its monopoly was reduced from 15 years to 7 years. Compensation was also given to Singtel and another Service Provider (Starhub) at the time when open competition was advanced by 2 years.

6 Quantum of Registration Charges: Suggestions

Registration Charges can be determined either starting from derivatives of the existing levels, or on fresh principles of meeting administrative costs of Regulation, Licensing, Monitoring and other Administrative costs linked with the sector.

Approach I. Deriving Registration Charges from existing entry fees levels

Some stakeholders have suggested that the Registration Charge should be made a function of entry fee paid by existing UASL, NLD and ILD. There can be a number of approaches to determine the registration charges.

Approach i): Deriving from existing entry fees levels, one option for determining Registration Charge can be:

Registration charges = (Entry fee paid by existing UASLs – Spectrum Charges) + (apportioned NLD and ILD entry Fee for the Service Area selected).

In this methodology, the main issue is to quantify the following components

- a) Spectrum Charges
- b) Apportionment of entry fees for long distance services (NLD & ILD)

Spectrum Charges : As mentioned earlier, TRAI would be releasing another consultation paper shortly on spectrum related issues, which will cover the issue of spectrum charges.

If the principle mentioned in Approach 1 is adopted then it would be imperative to define and calculate circle wise additives for NLD and ILD component. Apportionment of NLD, ILD entry fee can be on the basis of entry fee of UASL in respective service areas.

Approach ii): Registration Charges based on the entry fees of NLD/ILD services

As the entry fees for NLD & ILD Services does not include spectrum charges and the service area for these services is the whole country, the Registration Charges could be the entry fees paid by the existing NLD / ILD operators. An important aspect for consideration in this approach will be that if a Unified Licensee wants to offer telecom services in a Circle or even in

smaller area say an LDCA, should he pay the Registration Charges same as for the whole country. Further, the choice is between NLDO entry fees and ILDO entry fees. One principle could be that Registration Charge be kept at the lowest of nationwide services having PSTN connectivity but do not require spectrum and numbers i.e. ILD entry fee, which is Rs 25 Crores

Approach iii): Phased implementation of Unified Licensing Regime

In Chapter 2, so as to address level playing field issues between the existing service providers and new entrants the option of phased implementation was discussed. In order to address the difference between the existing level of entry fees paid and the desirability to have a nominal Registration Charge, one approach could be to have a high entry fees in year 1, which would be reduced annually to nominal levels within a period of 3 ~ 5 years. The ease of entry would increase every year and the existing service providers would have sufficient time to recover the difference of entry fee from the market.

This approach would require derivation of

- a) Effective Registration Charge derived from existing UASLs
- b) Desired Registration Charge after three to five years
- c) Amount of decrease per year

One variant of this approach could be to freeze the Registration Charges determined for this year for another 3 ~ 5 years and thereafter reduce it to a nominal value.

Approach II. Nominal Registration Charge based on Administrative expenses

This would mean that Registration Charge should cover the expenses of regulating, licensing and monitoring the telecom sector. Since the aforementioned administrative cost are recurring in nature the issue for consideration here is whether this cost should be recovered from the levy of one time registration charge or the registration charges should be taken

annually and registration be renewed on annual basis. Therefore, period of collection of Registration Charges will need to be specified as one time charge or annual charge so as to meet the administrative expenses over the entire License period.

7. Registration charges for smaller service Areas

- i) The main point here is whether Registration Charges should be dependent on service area or should it be same irrespective of service area. To encourage niche operators in smaller service area say LDCA/SDCA, the Registration Charges for unified license could be reduced on pro rata basis for these smaller service areas.
- ii) A separate consideration may be required for Rural, Remote and Less developed service areas. In order to fulfill the growth objectives in these areas, we may consider licensing on the basis of LDCA/SDCA for Service Providers with specialized focus on Rural, Remote and Less developed service area penetration. However, for such niche players, there would have to be stringent obligations in the form of number of subscribers, percentage of subscribers in the rural category etc. The issue for consideration would be how to fix the Registration Charges for such niche players and how these Rural, Remote and Less developed service areas be defined. One of the option to define rural, remote and less developed service areas, is to link it with the teledensity. Any LDCA with less than a certain level of teledensity may be classified as Rural, Remote and Less developed service area.

In Argentina, where single license regime has been implemented, the service providers offering telecom services in areas with lesser teledensity have been given certain incentives in the form of lower license fee and investment obligations.

8. Registration Charges for Class License Category

The concept of Class License has already been explained in this consultation paper. The separate Registration Charges for Class Licensees are also required to be specified. The level of Registration Charges for Class Licensees is to be kept at a minimum level i.e. zero or near zero, so as to increase the viability of these services. One of the option could be to retain the Registration Charge of the existing order namely for IP-II, PMRTS, ISP, etc.

9. Registration charges for the Models proposed earlier:

In case Model I (Unified License and Class License for different categories) / Model III (FBO and SBO based license) is opted for Unified Licensing Regime then Registration Charges for Unified license/Facility Based license/Service based License may be fixed by choosing any of the approaches mentioned in prepages i.e. Approach I or II, or any other suggestions in this regard which meet the objectives explained earlier may kindly be suggested. The registration charges for Class licenses has already been discussed in para. 8 above.

In case Model II (Convergence Bill Model) is opted for Unified Licensing Regime then the issue for consideration is what should be the level of Registration charges for each category of service providers. The approaches discussed above i.e. Approach I or II could form the basis of Registration charges for Network application services category. The Registration Charges for Network infrastructure facilities and Networking services may be decided after taking into account the existing entry fee, the objective of development of telecom infrastructure and avoiding the creation of surplus telecom bandwidth and infrastructure in more attractive service areas.

It is noteworthy that for fixing the Registration Charges Model-II (Convergence Bill type approach) gives more flexibility. The increase in number of licenses may however, to some extent increase complexities in the licensing regime for a service provides who may wish to offer single service.

10. Registration Charges: International Practices

Registration Charges for some of countries, wherein Unified License through different models has already been implemented are given in Annexure II.

Service Area

1. Another important issue to address is the Service area in Unified License. The fundamental idea is that the service provider should be free to operate in service area of his choice.

2. Existing Arrangements : In India Service Areas have traditionally been based on telecom boundaries classified as Circles. Access Services have been licensed on the basis of Service Areas almost co-terminus with Circles. In so far as National Long Distance and International Long Distance Services are concerned, the service area has been designated as entire country. In case of services like Radio Paging service, there is city or circle based licensing. For Internet services the service area could be an LDCA, a circle or the entire country. The TRAI recommendations dated 27th October 2003 states that the choice of the area/service would be left to the operator. This clearly indicates that one way forward is to leave the choice of service area on the operator for the unified licensing regime, with the minimum size of Service area being SDCA/LDCA. However, having Unified Licensees at SDCA level may create problems of interconnection, regulation, spectrum allocation, monitoring etc. All these views are to be kept in mind while deciding the service area for Unified Licensing.

3. Following aspects needs consideration while deciding the service area for Unified Licensing Regime

- i) Different Service Area for different services
- ii) Greater flexibility for service providers
- iii) Easy entry for service providers
- iv) Efficient utilization of resources

4. Comments of Stakeholders on TRAI's preliminary consultation paper:

In respect of Service Area of the Unified license, diverse views were expressed by the stakeholders in the preliminary consultation process. One set of views were to maintain the existing sanctity of service area for each specific service. Another view is to have a two tier service area classification viz. Circle wise as applicable to access providers and an All India telecom license. There is a third view that service area at a larger level does not help Small and Medium Entrepreneurs in providing telecom service. Accordingly, there should also be an option for selecting niche service areas at smaller levels like district, as in case of Brazil. In Brazil, district based licenses were given on the guarantee of meeting tele-density rollout.

5. Small Niche Players:

Defining the service area say on the basis of LDCA/SDCA for access service would facilitate participation of SMEs / small niche players in the sector of telecom service provision. A number of LDCAs/SDCAs where there is dearth of access service providers can be identified and these LDCA/SDCA based service areas can be opened for entry of these niche operators. Niche operators can be licensed in these areas at lower entry levels/license fees/spectrum & other charges together with an obligation of achieving rural teledensity in the niche rural/remote and less developed areas. This can be useful in meeting the universal service obligation goals. However, such licensing regime has potential for misuse as service providers may 'cherry-pick' remunerative LDCAs/SDCAs as part of operations. One of the option may be to permit the niche operators to operate in only rural, remote and less developed part of the LDCA/SDCA excluding LDCC/SDCCs. However, the level of interconnection shall be as per the prevalent TRAI's orders/directives/Regulations.

6. For class licenses, one option is to have Service Area options similar to ISPs i.e. LDCA, Circle and National.

Other Licensing terms and conditions

1. The issues pertaining to framework of Unified Licensing Regime (ULR), Registration charges/Entry fee/Authorisation Charges and Service Area have already been discussed in the preceding chapters. This chapter discusses other important licensing terms and conditions related to Unified Licensing Regime. The basic idea is to ensure easy entry, flexibility, efficient utilization of resources, promote new applications/services and encourage efficient niche operators while ensuring level playing field conditions between new and existing service providers. The issues discussed in this chapter are as follows:

- i) Annual License fee
- ii) Bank Guarantees
- iii) Roll-Out obligations
- iv) Interconnection
- v) Spectrum Charges
- vi) Numbering
- vii) Sharing of Infrastructure and Direct interconnectivity across service areas
- viii) Resale of services

2. Annual License Fee

2.1 The present level of license fees payable (including USO) by existing Service Providers is tabulated below:

Type of License	Annual License Fee (% AGR)	Annual license fees excluding present level of USO
Cellular Mobile*	Type A - 10% Type B - 8% Type C - 6% / 5 %	Type A - 5% Type B - 3% Type C - 1% / 0 %
Basic Service		
Unified Access Service		
National Long Distance	15%	10%
International Long Distance	15%	10%
Global Mobile Communication by Satellite	10%	5%
VSAT	10%	5%
Infrastructure Providers Cat II	15%	10%
Radio Paging Service Providers	5%	0%
Public Mobile Radio Trunked Service	5%	0%
Internet Service Providers	0%	0%
Infrastructure Providers Cat I	0%	0%

* For first and second cellular operators, license fee has been further reduced by 2% in circles for a period of 4 years wef 2003-04.

It can be observed that the annual license fees (excluding USO levy) varies from 0% to 10%.

2.2. Some international practices in this regard are tabulated below

Name of Country	Services	USO payments	Annual license fees excluding USO payments
Australia	All	Determined annually based on approved USO costs of Universal Service Provider	A\$ 10,000 (fixed) + variable component based on Carriers Eligible Revenue
Argentina	All	1% of Eligible revenue	0.5%
Malaysia	Individual license	6%	0.5% of Gross Annual Turnover as reduced by rebates to a minimum of 0.15% of GAT or RM 50,000 - whichever is higher
Singapore	FBO designated as PTL	NA	1% AGTO subject to a minimum of S\$ 250,000 per year
	Terrestrial telecommunication networks for telecommunication purposes		1% AGTO subject to a minimum of S\$ 100,000 per year
	Public cellular mobile telephone services Public mobile broadband multimedia services Public fixed wireless broadband multimedia services		Decided by awarding of spectrum right
	Public radio paging services Public mobile data services Public trunked radio services		1% AGTO subject to a minimum of S\$ 1200 per year

It can be observed that the license fees after excluding USO is of the order of 1%.

2.3 Today, the license fee varies depending upon

- a) Type of Service Area, viz. Cat A, B, C, Metro
- b) Type of Service

In the Unified License framework the main issue for consideration is whether we should retain the license fees based upon service areas or type of service? The rationale for keeping varying license fees, was to encourage Service Providers to roll out in less lucrative service areas. One of the option is to continue with the existing framework in the new licensing regime. The issue, however, would be the availability of revenues service area wise. This can be necessitated through accounting separation norms. The other option is to work out a uniform license fee for a Unified licensee. The advantage in having a uniform license fee is the removal of all possibilities of bypass. As far as the international practices are concerned, Australia, Malaysia and Singapore do take into account service specific revenues for determining license fees / USO payments.

2.4. Annual License fees for Class Licensee and Niche rural, remote and less developed area's Service Providers: Another important issue is the determination of Annual license fees for Class Licensees and niche rural, remote and less developed area's service providers, if such concepts are considered. One option is to impose a nominal license fee of say 1% on these licensees and exclude them from USO payments. For niche operators, one option could be to have lower license fee coupled with rural roll-out guarantee and no permission to roll out in LDCC/SDCCs so as to prevent 'cherry picking'. The idea is to promote pure rural, remote and less developed area's service providers. Another option could be to keep a Rs 1 license fee, as in case of ISPs, for these niche operators.

The level of license fees payable by Class licensees internationally is mentioned below:

Country	Category	Annual Charges
Australia	Carriage Service Providers	<u>Nil</u>
Malaysia	Class Licensees	RM 2500
Singapore	Service Based Operators	S\$ 200 every 3 yrs. Or no fees payable

2.6 Impact of License fees reduction on Government

The key aspect in lowering the license fees is the impact of such reduction on the revenue to the Government. The issue whether the telecom services should be treated as source of revenue for the Government was discussed in the preliminary consultation paper. The general response advocated a lower license fee, which would encourage higher growth, further tariff reduction and increased service provider's revenues. International practices also support lower license fee. With increased growth, it could be a win-win situation for telecom industry and Government.

3 Bank Guarantees

3.1 There exists high differential in Bank Guarantee amount and its validity period, which needs to be addressed while framing the terms and conditions of unified license. One option could be to have uniform Bank Guarantees for all services in Unified Licensing Regime. Another option could be to retain the present level for different services. TRAI is of the view that the level of Performance Bank Guarantees (PBG) should be reduced to zero, once the licensee meets its roll-out obligations, if specified.

3.2 Another issue is the level of Bank Guarantees for Class licensees and niche licensees.

4 Rollout Obligations

An important issue to address the objective of easy entry, No-worse off and level playing field is roll-out obligations for different telecom services.

4.1 Existing roll out obligations

The roll out obligations prescribed in the existing licenses varies from service to service. A BSO in a service area is required to provide POPs in all SDCAs within 7 years and that too in an identified ratio of Urban, Semi-Urban and Rural SDCAs. The roll out obligation of CMSPs and UASLs is to cover 10% of DHQs in the first year and 50% of Districts Head Quarters in first three years. CMSPs and UASLs are allowed to cover any town in lieu of DHQ in that District.

The roll out obligation of NLDOs is as mentioned in the table below:

Phase	Time Period (From the effective date)	Cumulative percentage of National Coverage at the level where Point of Presence has to be established	Cumulative percentage of Coverage of uneconomic and remote areas
I	2 Years	15	2
II	3 Years	40	4
III	4 Years	80	7
IV	5-7 Years	100	All

The ILDO roll out obligations is limited to setting up POPs in each of the four regions of the country and interconnecting with all the NLDOs.

4.2 International practices on roll out obligations

Different countries have different rollout obligations for different services. The practices in some of the countries are given in Annexure II.

4.3 **Stakeholders comments on Roll Out Obligation:** In response to our question raised in the Preliminary Consultation Paper on roll out obligations, the majority of stakeholders have been in favour of imposing roll out obligations in the license. The various options that emerge from the comments are

- a) Present service specific roll out obligations to continue
- b) Roll out obligation to be linked with the authorisation of spectrum
- c) Roll out obligation to be kept similar to UASL
- d) Roll out obligation for fixed lines to remain at SDCA level
- e) Roll out obligations be removed from license and these objectives be met through USO Fund
- f) Roll out obligation of NLDO is imposed.

4.4 The objective of roll-out obligations is to ensure spread of infrastructure (as far as possible), coverage of remote, rural and less developed areas, availability of competition through options on operator's choice to less remunerative areas. The main issue of concern is whether this objective should be met through USO or through license conditions. USO approach will not guarantee competition. If licensing approach is adopted then it has to be ensured that the objectives of roll-out obligations are met.

Once, it is decided that roll out obligations are necessary, the immediate need would be to quantify them. One option is that the Unified Licensees be subject to the roll out conditions of UASLs. However, this would mean easing the roll out conditions of NLDOs keeping in view the present stage of limited roll out achieved by them. But for ILDOs, who wish to migrate to Unified Licensing regime the roll out condition could be stiffer than the existing rollout obligation.

However, as the proposed regime may be optional, the ILDOs who wish to continue in the existing regime may continue to do so. The issue that needs deliberation is the pros and cons of imposing these roll out conditions. Another interesting suggestion from the stakeholders is that roll out obligations be linked with spectrum allocation. Such practice is already prevalent in Europe. This could be considered together with the spectrum policy.

4.5. Another alternative could be that since the objective is to unify various licenses and not the unification of services, existing roll out obligations for access and long distance (both NLD & ILD) services are retained as such.

5. Interconnection:

5.1 The Interconnection regime for different kinds of service has been prescribed from time to time and a service specific interconnection regime is already in place.

5.2 For Unified Access Service License, the interconnection regime has already been implemented on the basis of service specific interconnection. The issue is whether the present service specific interconnect regime should continue once the new framework is implemented. In Malaysia, despite implementation of converged framework the interconnection regime is service dependent. In Argentina, under single license regime, the origination and termination charges are service specific. In addition SMPs are required to publish an RIO. In Singapore, Interconnection is mandated through an RIO. Flexibility is given to Service Providers to agree to an alternate mutually agreeable arrangement. In Australia, any to any connectivity is an objective and the norm but seeking mandatory access is not an explicit requirement. It is mandatory to provide interconnection when approached.

5.3 It is suggested that like the practice in the past, the service specific regime should continue to be reviewed. Since Unified Licensing Regime is a unification of licenses and not the services the existing service specific

interconnection regime may continue. However, to usher in new concepts like Interconnection Gateway Exchanges a separate detailed consultation will be required and which can be dealt with separately.

6. Spectrum Charges:-

Spectrum related issues including spectrum charges are being dealt with separately. Spectrum Charges are levied in two parts. The first part is one time spectrum charge, which is part of entry fee. The other part is annual recurring spectrum charge as a percentage of Adjusted Gross Revenue (AGR). The proposed registration charges under Unified Licensing Regime will not include any spectrum charges, therefore, while fixing the spectrum charges the level playing field aspect is to be kept in mind.

7. Numbering

7.1 Another important issue to address the objective of flexibility and efficient utilisation of resources is Numbering. The National Numbering Plan¹ (NNP) has been formulated in 2003. NNP 2003 considers numbering allocations based on Service and Geographic location. With the emergence of new class of licensees i.e., UASL, suitable harmonisation with the National Numbering Plan have recently been made for UASLs. Any change in Numbering Plan entails investments and inconvenience and, therefore, such changes have to be kept to the minimum.

7.2 One policy issue in this regard is the desirability to have an LDCA linked numbering scheme. Some stakeholders have suggested the requirement to have an LDCA linked numbering plan as it reduces the number of STD codes. However, others do not feel the necessity to do so for fixed services as Numbers have recently been changed for fixed services and another change at this stage would not be in consumer's interest.

¹ Available at <http://www.dotindia.com>

7.3 The Service Providers may offer home zone tariffs facility to its customers. The numbering scheme for all mobile subscribers including limited mobile subscribers would be identical. This will also offer flexibility to the subscribers to interchange between full and limited mobility without changing the subscriber number.

7.4 In any case the issues related to numbering may not have a direct linkage with Unified Licensing regime at this stage. However, if deemed appropriate, the numbering related issues, may be brought to the notice of TRAI as a part of this consultation process.

8. Sharing of Infrastructure and Direct interconnectivity across service areas: licensing aspects

8.1 Another important issue to address the objective of easy entry, no worse off, level playing field, flexibility and efficient utilisation of resources is issues pertaining to sharing of Infrastructure and direct interconnectivity across service areas. Under the Unified License, a service provider may have whole country or some contiguous circles as his service area. Under this situation, it may not be necessary for him to route his inter-circle traffic through an NLD operator as he may carry the traffic on his own network in his service area. This will also result in efficient utilisation of infrastructure. Under this Regime, only stand-alone-operators operating in one or more circles may offer inter-circle traffic to NLDOs and this may adversely affect his business case.

8.2 As explained earlier, a pan India access licensee would be able to bypass the NLDO completely, rendering one of the two i.e. access license / NLDO license infructuous. This situation has arisen as presently the same group of companies holds the Access as well as NLD licenses. Under these circumstances, the holding company may like to surrender NLD license and may demand compensation not only for the entry fee paid but also for the infrastructure developed as NLD operator. As far as compensation for

infrastructure is concerned there may not be a case because in any case infrastructure thus developed would be used for carrying all types of telecom traffic.

8.3. Regarding compensation for entry fee it is not to be seen in isolation. Under Unified Licensing Regime, the licensee may get relief in terms of lower annual license fee, easy roll out obligation and a total freedom to offer any type of service. This framework offers complete flexibility to licensee to change his business plan. Moreover, the operator had an advantage of early entry into the market and already a reasonable time period will lapse under service specific existing license before implementation of Unified Licensing Regime.

9 Resale of Services

9.1 Fundamentally, Reseller is an entity who sells what he buys from the service provider and gets his arbitrage on difference between bulk rates and retail rates. Basically, therefore, a Reseller only sells the products which the service provider is authorised to sell under the license. A Reseller may be franchised by the service provider who would hold the overall responsibility on tariffs, quality of service, other terms and conditions of License Agreement. In the context of NLD service, a Reseller may, therefore, provide any of the following:

- i. Switched connection at the national level.
- ii. Bandwidth on demand. It may resell the service without adding any infrastructure; or by making value additions through additional infrastructure owned or leased.

9.2 Resale of Services tantamount to permit Service Based Operations under an independent license utilizing facilities of other entity (s). In the TRAI recommendations on introduction of competition in NLD Services, it was recommended that resale of NLD service may be introduced only after 3 ~ 4 years of the opening up of the market. The general response of stakeholders

is to permit reselling only in the form of franchisees at this stage and not as separately licensed services.

9.3 Reselling in the form of franchisees is permitted in UASL and Basic Service License but is not permitted in NLDO / ILDO/ Cellular Mobile license.

9.4 As per experience elsewhere, non-facilities based competition such as Resale has played an important role in promoting and sustaining competition in telecommunication services. It provides an effective entry vehicle for new entrants that may initially lack the required capital to build up their own facilities. Resellers tend to stimulate usage of the existing network through innovative means, and thus benefit the facility-based providers as well as the growth of the information economy. This competition has the potential effect of lowering prices to consumers with increased consumer welfare resulting in stimulation of economic growth. In countries like India with low tele-density, price reductions would certainly expand the number of households that can afford service. Over a period of time, resellers may also tend to become facilities-based operators to offer services.

9.5 Experience in the long distance markets in countries like USA suggests that resale can yield significant public benefits. Most importantly, resale competition in the long distance market has reduced prices for consumers. By providing affordable prices for the customer, resellers have stimulated demand and thus compelled facilities-based carriers to bring their prices closer to actual costs. At the same time, the increased competition from resellers helped in expanding the availability of innovative services, such as new billing terms and alternative rate structures. Thus, by promoting effective competition, resale can help to achieve the public interest goal of economically efficient, reasonably priced, high quality communications services.

9.6 Comments of Stakeholders on TRAI's preliminary consultation

paper: Some of the stakeholders have opined that time is not right for permitting reselling and resale could be considered at an appropriate time. Some of the stakeholders have advocated permitting reselling under the unified licensing regime. On the issue of what should be the registration charges, license fee and other terms & conditions for these category of service providers, if reselling is permitted, some of the stakeholder have mentioned that only nominal registration charges may be prescribed and the reseller will be a franchisee of unified licensee and will not require separate license terms and conditions. Some of the stakeholders have opined that the registration charges may be same as per class licensee and license fee may be similar to that of facility-cum-service based licensees. However, the license period should be shorter. Other stakeholders have mentioned that since resellers are restricted to marketing services of a service provider no separate license/ registration fee is required.

Issues for consideration

Keeping in view our objectives of free growth of new services and applications, simplifying the licensing procedure, flexibility, efficient utilization of resources, encouragement to efficient small operators to cover niche areas, the following issues are submitted for consideration of various stakeholders:

Framework of Unified Licensing Regime

1. Based on the key objectives of Unified Licensing, International practices in this regard, the proposed models of Unified license in this paper and the current status of Indian Telecom sector, please give your views on the Unified Licensing Model which should be followed in India? You may also suggest any extra Unified licensing model, if not covered in the proposed models. Please also comment whether IP-I, IP-II, VSAT and GMPCS services should be part of Unified Licensing Model or they should be licensed separately? Should IP-I and IP-II services be licensed at all?
2. In case concept of Class License is followed, then what should be the criterion for classifying the services under this category of license?
3. What should be the simplified procedure for granting the licenses based upon the recommended licensing model?
4. Should we consider implementation of Unified Licensing framework through a multi stage process or a single stage process? What are the pros and cons of each suggestion? If the process is envisaged to be completed in phases, what should be the milestones and time frames for each step?
5. Should migration to Unified Licensing Regime be optional or compulsory?
6. How should Internet telephony be treated in Unified Licensing Regime? Should Internet telephony without any restriction, be permitted under Unified License regime? If yes, how should it be permitted?

7. How the migration from service specific license to Unified Licensing Regime including surrender of any in-fructuous license, if any, should be handled?

Registration Charges/Entry Fee/Authorisation Charges

8. Should the Registration Charge be one time charge or recurring annual charge?
9. What should be the basis of deciding the Registration Charges?
10. Whether Registration Charges should be dependent on the extent of geographical coverage?
11. Whether Registration Charge should be dependent on the number and type of services being proposed to be provided by the service provider?
12. Whether the Registration Charges should be a function of entry fees paid by the existing operators. If yes, then how should these charges be calculated?
13. Should the Registration Charges be cumulative charges of the existing services and service area and be reduced to a nominal value say after a period of 3-5 years? If yes, what should be the level/basis of calculating this nominal fee and what should be the time period after which the Registration Charges reduces to nominal fee?
14. If Class Licensing is adopted what should be the level of Registration Charges for these Licensees?
15. If niche operators especially for Rural, Remote and Less developed service areas are licensed say at LDCA/SDCA level, in that case what should be the registration charges for such operators. How should rural service area be defined? Whether niche operators should be allowed to roll out its services in LDCC's/SDCC's which are urban?
16. In Model II (Convergence bill Model) and Model III (FBO and SBO based Licenses), what should be the level of Registration Charges for different categories. Whether this Registration Charge should be dependent on the type and number of services offered by licensee?

Service Area in Unified Licensing regime

17. Whether the choice of service area should be left to the operator as envisaged in our recommendations or choice should be limited to the existing licensed service areas, viz. circle, nationwide?
18. What should be the service area for Class licenses? Should SDCA level license be granted for Class Categories?
19. How to prevent 'Cherry Picking' while leaving the choice of service areas to the service providers.
20. Whether we may define service area below circle level say LDCA/SDCA for niche operators in Unified License?

License Fee

21. What should be the level of license fee for different services in the suggested licensing model ?
22. Should minimum amount of the license fee be specified irrespective of the Adjusted Gross Revenue (AGR)?
23. Should there be uniform annual license fee say 6% (5% USO+1% administrative cost) of AGR for all telecom services in all service areas or should license fee vary from service to service and service area to service area?
24. What should be the level of license fee for Class licensees and niche service providers?

Bank Guarantees:

25. What should be the level of Bank Guarantees fee for different services in the suggested licensing model ?

26. Should the Bank Guarantees (PBG & FBG) be same for all the services in the Unified Licensing Regime or should the existing framework of Bank Guarantees be continued in the new licensing Regime?
27. What should be the level of Bank Guarantees for Class Licensees and niche service providers, if such classes are considered?

Roll Out Obligations

28. What should be the roll-out obligations for different services in the licensing model that you suggest? Should we continue with service specific roll out conditions?
29. Should we consider imposing roll out conditions of UASLs on all Unified Licensees?
30. What type of roll out obligations be imposed on Class licencees and niche (for rural, remote and under developed areas) Service Providers?

Interconnection

31. What should be the interconnection regime in the suggested Licensing model for ULR?
32. Should service specific interconnection regime be continued in ULR?
33. Should the carrier pre-selection /call-by-call selection be implemented in Unified Licensing Regime for all types of calls other than local calls?
34. What should be the approach to interconnection for niche operators?

Numbering

35. Is there a direct linkage of Numbering Plan vis-a-vis implementation of Unified Licensing regime?

36. If yes, what are the specific unavoidable changes required in the present Numbering Plan keeping in view the fact that frequent changes in the consumer numbers is highly undesirable?

Inter-Circle connectivity and Infrastructure Sharing: licensing aspects

37. Should inter circle connectivity be permitted to Access providers (Basic, Cellular and UASL)?
38. Should direct interconnectivity be also permitted across non-contiguous service areas?
39. In case migration to Unified Licensing Regime is optional, then should the inter-circle connectivity be permitted to those Access providers who do not migrate to Unified Licensing Regime.
40. Should Infrastructure sharing amongst different service areas be permitted?
41. Under Unified Licensing Regime, licensee may offer the services through out the country. In that situation the concept of NLD operator as such may be no more relevant. Under such circumstances, how would the requirement of national long distance carriage for standalone operators be met?
42. Whether there is a need to redefine national long distance traffic for the purposes of interconnection?
43. Under the Unified License, a service provider may have whole country or some contiguous circles as his service area. Under this situation, it may not be necessary for him to route his inter-circle traffic through an NLD operator as he may carry the traffic on his own network in his service area which may be different for different service providers. In such a case, how should the traffic handover principles between different service providers (present in one/more circles or nationwide) be framed in the Unified License regime?
44. Whether any change is required in the location of POI and level of interconnection?

Reselling

- 45.** Should reselling be permitted? If yes, how? What are the implications of permitting resale in the industry at this stage?
- 46.** What are the implications of having additional players in form of resellers for various telecom services such as NLD, ILD etc. purely on the basis of commercial agreements?

Other Issues

- 47.** Under the Unified Licensing Regime what changes, if any, are required to be made in the existing Merger & Acquisition Policy?
- 48.** In addition to the issues mentioned above, comments of stakeholders are invited on any other related matter that should be considered while finalizing Unified Licensing Regime.

Annexure I

Comments received on TRAI's Preliminary Consultation Paper on Unified Licensing Regime

Comments received from the following stakeholders

Sl. No	Name & Designation	Name of the Organization /Company
1	Mohamed Al Ghanim, Manager GMPCS Affairs	THURAYA SATELLITE TELECOMMUNICATIONS,
2	Shri A. AGARWAL	
3	Vipen Malhotra, President	MTROA
4	T.V. Ramachandran	COAI
5	S.C. Khanna	ABTO
6	Harish Kapoor	Tata Teleservices
7	Bipan Batra	CUAI
8	Gautam Sharma	Midas Communications
9	Bharat Mathur	Data Access
10	K.S. Gulaini	BSNL
11	Vinayak R. Pandey	Consumer Unity and Trust Society (CUTS)
12	Partho Banerjee	Hughes Escorts Comm. Ltd
13	Narender Gupta	Bharti
14	T. Narashiman	Shyam Telelink
15		Orrisa Consumers Association
16	Deepak Maheshwari	ISPAI
17	Deepak Maheshwari	Sify
18	Rajiv Kataria	VSNL
19	Pradeep Kumar	RailTel
20	Subramanya	IIM Ahmedabad
21	Dr. Niranjana Nath	Consumer Protection
22	Kapil Dev Kumar	HITL
23	R.K. Gupta	Former Director VSNL
24	Dinesh K.S.	Cyber Bazaar (India) Pvt. Ltd
25	G. Upadhyay	Reliance Infocomm

Summary of responses

Twenty-five stakeholders have provided their comments on the paper as on December 13, 2003.

Response from operators (16)

- i) BSNL, ii) Bharti, iii) VSNL, iv) Reliance, v) HFCL, vi) Shyam Telelink Ltd, vii) SIFY, viii) COAI, ix) ABTO, x) ISPAI, xi) MTROA, xii) Data Access, xiii) Hughes Comm. Ltd., xiv) Railtel Corp. of India, xv) Tata Teleservices Ltd. xvi) Thuraya Satellite Telecommunications Company.

Comments from consumer associations (5),

- i) Cyber Bazaar, ii) Orissa Consumers Association iii) Midas Communication Technologies Pvt.Ltd, iv) Cellular Users Association of India, v) Consumer Unity and Trust Society, Jaipur.

Comments from individuals and other institutions (4)

- i) Sh.A. Aggarwal, ii) Sh. R.K.Gupta, Former Director VSNL, iii) Sh.S.V.Subramanya and Gopal Srinivasan, iv) Dr.Niranjan Nath,

Comments received on the issues raised in the consultation paper

- 1. After taking into account TRAI's recommendations on Unified Access Licensing Regime, technological developments, terms and conditions of existing licenses, International Practices, etc. various issues for consideration could be classified under following categories: -***

- i) Ambit and type of Unified Licensing***
- ii) Registration charges***
- iii) Entry fee paid by existing service providers***
- iv) Service Area***
- v) Rollout obligations***
- vi) License fee***
- vii) Business case of (existing) service provider, especially stand- alone operators***
- viii) Interconnection and PSTN connectivity***
- ix) Numbering Issues***
- x) Others issues***

Response

BSNL has commented on this para and has stated that there may be many more issues which may need deliberations. A detailed discussion with the stakeholders in this regard may be helpful in identifying relevant issues. M/s

Hughes and M/s Cyber Bazaar has suggested new classifications of the structure itself (discussed subsequently)

Issue 1 Ambit and type of Unified Licensing

2. Should we consider all existing and other new services as they emerge, under the ambit of Unified Licenses, and also include existing licenses like Infrastructure Providers (IP- I & II) who don't provide services to the end customers under the existing Regime, or keep them outside the Ambit of Unified Licensing?

Response

While most of the stakeholders have agreed that all existing and other new services as they emerge should be under the ambit of Unified Licenses, some stakeholders (CUTS, Reliance, Sh. R.K. Gupta, HFCL, Railtel, SIFY, ISPAI, Shyam Telelink, Hughes, Consumer Unity and Trust Association, ABTO, BSNL, Tata Teleservices) have commented that licenses like infrastructure providers (IP-I and IP-II) who don't provide services to the end customers under the existing regime should be kept outside the ambit of Unified Licensing. Three stakeholders (Sh.S.V.Subramanya and Gopal Srinivasan, Cellular Users Association and COAI) have favored the inclusion of these licenses under the Ambit of Unified Licensing. Some stakeholders have not given any comments on this issue (Dr.Niranjan Nath, VSNL, Orissa Consumer Association, Bharti, Data Access India Ltd., Midas, MTROA, Cyber Bazaar, Sh.A.Agarwal, Thuraya Satellite Telecommunications Company).

M/s Hughes have specifically commented that Infrastructure provider be treated as a separate category but linked strongly with option to integrate and Satellite services be categorized as IP-I. It is important to bring in domestic/ international carriage as well as up linking under MIT. Also IP-II to include point to point or point to multipoint fixed or mobile bandwidth (Terrestrial, Radio or satellite)-Networking Services as per Convergence Bill.

3. Based upon the entry fee paid, the existing service providers could be classified in two categories

- i) Zero or very low entry fee like ISPs, PMRTS, VSAT, etc.**
- ii) High entry fee like CMSPs, BSOs, NLDOs, ILDOs, etc..**

Based upon this criterion, should we classify the first category under 'class license category', which will be a sub-set of Unified Licensing? The concept of class license is already briefly described in Chapter -1 of this paper. 'Class Licensees' shall pay token registration charges and meet some relatively easier entry and operational conditions.

Response:

- a) Following stakeholders were in favour of the concept of class license:**

Thuraya Satellite Telecommunications Ltd., ABTO, ISPAI., RAILTEL, Shyam Telelink, OCA, Reliance (Should have a revenue share license fees as BSO pays revenue share for leased line revenue but ISP does not), R K Gupta.

b) Following stakeholders were not in favour of the concept of class license:

BSNL, COAI, MTROA, CUIA

Some specific comments

CUIA: A simple authorization process should be there for other services like (class license category) ISP, VSAT, Satellite phone, GPS, Two way wireless radio services (radio trunking) etc. which involve a crucial value addition/ facility provisioning and can be provided by a standalone service provider or the service can be used by the end user on basis of a simple authorization process.

CUTS: Yes, but with specific QoS in place

HFCL: So long as the right to inter-connect with any operator that has the right to carry traffic across licenced areas is protected, we are comfortable including the Long Distance services under the USL (see also our response to item 22 later in this document). Secondly, we maintain that a pan-India USL can be omitted. A service provider seeking to be a pan-India operator could take all the service area specific USLs.

Hughes suggests no registration charge for new entrants and one time entry fees for migration of existing operators.

4. Should we consider prescribing Licenses under two categories viz. Facility Based and Non-facility/service Based? The concept of facility based and non-facility service license is already explained in Chapter -I.

a) Following stakeholders were in favour of the concept of facility/non-facility based licensing:

ISPAI, CUTS, CUIA,

Thuraya Satellite Telecomm. Co : If the concept of facility/non-facility based licensing is considered then GMPCS service should be considered under non-facility based service.

b) Following stakeholders were not in favour of the concept of facility/non-facility based licensing:

BSNL, COAI, CUIA, RAILTEL, Reliance, R. K. Gupta (after 3 ~ 4 years)

c) Other Comments:

- ABTO and Shyam Telelink opined that ULR should have only one category of license i.e. facility cum service based. Non-facility based operators could be included in the class license
- Hughes suggests bifurcation of Unified Licenses in three types, which in turn can be integrated in one:
 - Unified Global Telecom License (Facility Based) (Network Application Services as per Convergence Bill)
 - Unified Global Value Added Services License (Class Based) (Value Added Network Application Services as per Convergence Bill)
 - Unified Global Infrastructure Services License (Class Based) (Value Added Network Application Services as per Convergence Bill)
- Shri RK Gupta has advocated the need for three types of license (Access License, NLD/ILD license, Class License)
- CUIAI has suggested the licenses should be categorized as the Unified Access License, Infrastructure/Long distance license and the other service(s) authorization.
- Cyber Bazaar has suggested the following classification
 - **Passive Facility Infrastructure Providers:** provide passive elements to service providers like ducts, dark fibers (undersea/terrestrial), telehousing facilities. Need to meet specification of testing authorities and will have ROW rights state/interstate. Service Area based on ISP model.
 - **Active Facility Infrastructure Providers:** Provide active elements to service providers like bandwidth, exchanges. Service Area based on ISP model.
 - **Air Space Service Providers:** Who keep equipment in airspace. Ex Satellite (excludes VSAT's). Need to be auctioned and separate category required because of International Air Space issues.
 - **Wide Area Service Providers:** Like fixed line, mobile, WILL. Will have ROW in towns and cities and limited spectrum to be made available on a fixed price with a mechanism to recover utilized spectrum. Extra spectrum may be auctioned only in highly competitive areas like Metros and Big cities. Service Area based on Metros, Circles, LDCA and SDCA should be available.
 - **Narrow Area Service Providers:** Like Internet, VPN, VSAT, Bandwidth providers who need Point to Point link to deliver service or Point to Multipoint in a very small coverage area to deliver service. Limited Spectrum should be available on payment of fixed price. Service Area based on ISP model.
 - **Domestic Long Distance Service Provider:** Operators of different service areas (circles) may be allowed to interconnect directly using Infrastructure providers if ADC can be effectively measured and collected. DLD license should be available at reduced entry fee and performance guarantees for independent operators. Pan India operators to be considered deemed DLD operators and should provide eqi access to other service providers.

- **International Service Providers:** ILD, GMCS etc. Should be available at a lower entry fee and separate category necessary to fulfill international requirements on settlement, landing right etc.
- **Neutral Service Providers:** Provide services like Clearing House (Local/Long Distance), Interconnect for operators, facilitate Number Portability, Directory Services, etc and are neutral to all operators. To Be exempted from License Fee.
- **Value Added Service Providers:** Internet, Paging, Messaging, Conferencing, Call Completion (Follow Me, Call Screening) and Calling Card etc. To Be exempted from License Fee.
- **Virtual Service Providers:** Who use facilities of other providers and provide service to customers. MVNO Mobile operator, VPN Providers, Roaming Service providers.

Issue 2 Registration Charges

5. What should be the criterion for fixing the registration charges under Unified Licensing Regime? Should it be nominal charges covering say administrative charges like in other countries where this registration/Authorization process has been implemented or should it be a function of entry fee paid by existing service providers?

Responses

BSNL, Bharti Tele, ABTO, VSNL, Relianc, Sh R.K. Gupta & Shyam Telelink : New entrants must be allowed only after payment of entry fee to a level equal to the existing operators.

ABTO & Shyam Telelink : For any service like NLD/ILD service existing UASL should pay additional entry fee i.e. the charges should be additive depending upon the service provided and area covered.

Bharti: In the alternative to paying the same entry fees as fixed operator, if the registration fees is kept lower then the existing operator should be duly compensated for the high entry fees paid by them.

COAI the charges may be applied on a service area basis but incremental charge must be such that it does not deter an operator from having a wider footprint.

Sh.A.Agarwal, Hughes it should be nominal fee.

MTROA suggests that Registration Charge should be of a token nature for Class License category. OCA has the view that charges be nominal and split in administrative charges and charges for consumer education and awareness.

CUAI: Simple and nominal fee/charge be charged as registration charges. "license fee" should not be a source/mechanism to fund the national exchequer.

CUTS: , registration fee could be kept as token amount. TRAI must ensure that whatever amount to be charged from operators that should be done at one point only

RAILTEL: Nominal for FBO and Substantial for Non facility based (as lot of investment is required to build facility based services)

HFCL: For USL & UASL, the registration fee should be function of the entry fee paid by the post-NTP'99 Basic Service Operators. The actual value should be assessed considering that the BSO licence include a certain right to avail spectrum (but not the spectrum fee), but came with roll-out obligations. The exercise undertaken by TRAI for the purpose of determining the entry fee for WLL(M) pursuant to the TDSAT order is a very comprehensive exercise and did touch upon this aspect of segregating the entry fee into those for fixedline and WLL(M) services. A similar exercise could be undertaken for this segregation

6. Should registration/authorization charges be the same for class licenses, if such a concept is introduced? Under such situation should we at all have separate category of class license.

Thuraya Satellite Telecomm.Co, ABTO, Shyam Telelink : Class license should pay nominal registration charges i.e. they should have easier entry and operational conditions.

VSNL : Nominal. Additive for every service applied for.

Hughes, ISPAI : No charges.

Sh.A.Agarwal the charges should be same.

MRTOA suggests that low entry fees services like ISP, PMRTS etc. be included under the proposed class license category

BSNL does not support class license.

CUTS: Registration fee could be kept nominal and uniform and license-fee could be differentiated based upon type of service

RAILTEL: Class license can have fixed nominal registration charge depending on coverage.

HFCL: The registration fee for USL and UASL could be different to the extent that (as covered in previous section) the services portfolio difference is essentially in the right to carry traffic beyond the service area. For UASL wishing to move to USL, an additional fee could be charged.

7. Should registration/Authorisation charges be the same for facility based and service based (non-facility based), if such a concept is introduced?

VSNL : Non-facility based operator should have lowest registration charge. Facility based operators should have higher registration charge which includes percentage of entry fee, contribution to USO etc.

ABTO, Shyam Telelink: Non-facility based providers would fall under class license and be levied nominal registration charge.

ISPAI : No.

As per Sh.A.Agarwal the charges should be same.

CUAI: The various kinds of licenses/ authorizations must have a different registration charge.

CUTS: Yes

RAILTEL: As already indicated in reply to Para 5, the registration/authorization charges should be different for Facility and Non-facility based operators. This has been suggested as operator with Facility Based will have to invest lot of capital to create infrastructure whereas Non-facility Based operator will have a limited capital expenditure to start services

HFCL: Registration charges for Class Licences, which does not include Right of Way should be based on administrative costs.

Reliance: Nominal entry fees for Clas License

Hughes : Details given in Annexure 1

8. Should the registration charges be same whether service providers provide all telecom services or even one service or should it be additive depending upon the services provided by the service provider?

BSNL: In case to the service referred to as Class license the existing entry fee is considered adequate and may continue. For other services covering access and long distance the entry fee for a circle license would be same as already defined for unified access license. For a national unified license the entry fee may be the total of entry fee for all the circles plus Rs.1.25 billion for NLD and ILD. In no case the entry fee may be made proportional to the actual provision of services.

COAI : The registration charges should be identical irrespective of the number/ categories of services/ facilities being offered by a telecom operator in a geographical area. Having additive registration charges would defeat the purpose of unified license, as each additional service would be separately priced.

ABTO & Shyam Telelink : There is already a set precedent for acquiring UASL. In case new operators wish to opt for NLD/ ILD services then to ensure level playing field for existing NLD/ ILD operators, entry fee payments already made by them need to be adjusted/credited.

VSNL, Sh.A.Agarwal, RAILTEL : The registration charges should depend upon the services provided by the licensees i.e. it should be additive depending upon the service provided. This is also in consonance with UASL regime where the BSOs have migrated after paying additional entry fees.

ISPAI : Registration charges should be same.

MTROA: Nominal for Class License

HFCL: Registration Charges should be for a Licence and not based on number/ kind of services offered under the Licence. Service based registration fee would lead to administrative hassles (like defining the services) and interpretation disputes.

R K Gupta: TRAI can prescribe single charge for class licenses

9. Should the registration charges be dependent on the extent of geographical coverage?

As per BSNL, COAI, Sh.A.Agarwal: Registration charges may be based on geographic extent. COAI has further opined that incremental charges should not deter operators from covering a wider footprint.

As per VSNL, ISPAI, RAILTEL & Shyam Telelink : Registration charges should not be based on geographic extent.

CUAI: The charges should be nominal, non prohibitive and as per the circle based coverage.

CUTS: No

HFCL: Registration charges should be linked to the extent of service (geographical area)

Hughes: Yes for facility based

Reliance: Registration charges for access services (having statewide coverage area) and NLD service (having nation wide coverage area), will depend on the extent of geographical coverage area.

Issue 3 Entry fee paid by existing service providers

10. For the existing service providers who use spectrum for providing telecom services, entry fee paid includes spectrum charges. Should it be divided in two parts, i.e. Registration charges and Spectrum charges?

As per BSNL, ABTO: The entry paid for basic and cellular services does not include spectrum charges which are payable as percentage of adjusted gross revenue. The spectrum charges should be so fixed that it encourages efficient utilization.

COAI, ISPAI, Sh. A. Agarwal: The entry fee paid by existing CMSPs and other such service providers should be divided into suggested two segments. Thus apart from registration charges operator should be required to have separate permit for spectrum. TRAI may specify a procedure for allocation of spectrum. Usage charges for spectrum should cover the cost of administration and regulation of spectrum.

RAILTEL, VSNL, HFCL : It is better to have separate registration charges and spectrum charges.

Shyam Telelink : For operators who came through the bidding process the entry fee and spectrum charges are to be taken as package as they bid for the license which includes entry fee and spectrum. For others as laid down in NTP 99 separate spectrum charges should be levied. TRAI should also differentiate charges for 800, 900 and 1800 MHz of spectrum.

Thuraya Satellite Telecomm. Ltd : There should not be any frequency spectrum charges/ fees for satellite services.

MTROA: Nil entry fees for Class Licensees and Service Area should be same as that of new Unified Operators.

CUAI: Separate charges are prescribed for the registration and spectrum for the tiers of licensees/registrants.

Hughes: Spectrum charges to be flat for all operators as a percentage of revenue.

R K Gupta: Yes, Alternatively quantum of spectrum be linked to number of subscribers and spectrum charges as percentage basis. No auction.

11. While fixing up the registration charges, how the level playing field aspect be addressed in case the entry fees paid by existing service providers is higher than prescribed registration charges? This issue is more relevant for the services, which may not use spectrum like NLD, ILD Services, etc. because the difference cannot be adjusted in spectrum charges for such services.

VSNL, ABTO, Shyam Telelink: To address level playing field issue, the service specific and service area specific registration charges should be prescribed.

BSNL : Comments for issue (8) and (9) would address level playing field issue.

COAI: The TRAI must independently assess and recommend a registration charge for a new unified telecom license. This must be used as a benchmark and all operators must be equated around this benchmark. The excess monies paid by existing operators must be adjusted/ refunded. In case of operators using spectrum too, a similar approach must be adopted and no existing operator must be left worse off in the new regime vis-à-vis the new entrant.

Sh.A.Agarwal: No need for any adjustment.

MTROA: First right to migrate to either a new service or a new improved technology (viz. Analog to Digital or setting up a Public Mobile Data Service).

- New entrants may only be licensed if spectrum is available post the migration consent of existing operators (more details on this under the heading “Other Issues”).
- The Bank Guarantee per service area should not exceed Rs 0.5 lacs or 6 months of Licence fee payable, whichever is higher.

In our opinion, the best incentive for migrating existing operators to the unified licensing regime is to ensure availability of required enablers (listed in this note). *MTROA have been maintaining the same stand for the last 4 years and have been vindicated both by the lack of interest by any operator to migrate to a digital platform as on date plus the less than desirable growth track record of the industry.*

CUAI: In case of rationalization of charges for the service from retrospective effect, the benefits of refunds are passed on to the end users.

CUTS: . However in case of existing players they must be compensated too, appropriately. If required, to the extent of reimbursement of excess payment they made. Or, in those case the operator have their plan to get into other service areas, excess fee could be adjusted

RAILTEL: In order to ensure level playing field, particularly for NLD/ILD services, it is proposed that revenue share from existing NLD & ILD players can be reduced in comparison to new NLD/ILD players, say 5% for existing & NLD/ILD operators and 10% for new NLD/ILD operators. Alternatively, if revenue share payable by existing players.

HFCL: The registration fee for USL and UASL could be different to the extent that (as covered in previous section) the services portfolio difference is essentially in the right to carry traffic beyond the service area. For UASL wishing to move to USL, an additional registration fee could be charged. The principle - that the entry fee already paid in excess of the entry fee paid by the 4th CMSPs shall be adjusted from such additional fee – should be applied for such move from UASL to USL also. This approach could address the interest of existing NLD/ ILD services. The amount of this incremental registration fee could be equal to the ratio of the entry fee paid for NLD+ILD Licence to the entry fee payable for UASL in all the service areas

Hughes: Highest Entry Fee paid by the Existing operators is taken as benchmark. The principle is Existing operators are not worse off. TRAI has not considered Bank Guarantee value into consideration of Entry Fee or License Fee. This needs to be corrected as:

- a) Bank Guarantee required margin money to be put with the bank. So the money may not be available with DOT, its an outflow for the operator.
- b) Margin Money amount varies from 1% to 100% depending on the credit worthiness of the service provider. Its typically 100% for small entrepreneurs like circles ISPs or other value added service providers.
- c) Its tough to get Performance/Financial BG in Telecom sector from bank

They strongly recommend Notional charge @ 25% of the BG value to be considered as an entry Fee wherever there are BGs for performance/ financial guarantee

R K Gupta: Inter circle connectivity to be kept in mind while dealing with this issues

12. Though service area is left to the choice of service provider but still one could argue that service areas should be specified for different services or a minimum area be specified. If so, which factors and options may be considered for service areas?

BSNL : The existing licenses define the service area. The sanctity of service area in the existing area may be maintained in the envisaged unified license regime in the interest of level playing field for provision of NLD services. National level unified license maybe necessary.

COAI : Authority may adopt two tyre licensing structure (i) circle wise licensing as applicable to CMSPs, UASL and (ii) All India Unified Telecom License. Under both types of licenses, the licensees should be allowed to interconnect their networks or two networks of other operators across circle boundaries. It is suggested that only a small incremental fee may be stipulated for an All India license vis-à-vis a circle wise license.

ABTO, Sh.A.Agarwal, Shyam Telelink: Service area as specified presently for different service licenses should continue.

ISPAI: Service providers should be fee decided the service area with the obligation to report to TRAI the area for coverage or any change thereof.

Midas: Service area being at such a level does not help the SMEs from providing telecom services. Why not have service areas being defined at smaller levels like district level or municipal level. The example of Brazil is notable in this case. There is an obligation for state level/long distance operators to provide interconnect for such operators in Brazil. Licenses were given on the guarantee of teledensity and not based on the license fee.

MTROA: The service area should be the same as the circles defined for the new unified operators to attract investments in this sector. There should be no distinction made in the service area meant for a Class Licensing as compared with a broad based unified licensing.

CUAI: The primary access services should be circle based.

The other tiers of services should be all India based.

Inter circle connectivity for all types of services should be permitted and promoted as this shall lead to increased network sharing and consequent benefits to the users.

CUTS: the TRAI must ensure that though the choice of service area could be given to operators however each corner of the country must be covered through almost

every kind of service. Minimum area can be fixed but not the maximum. Operator to fulfil Universal Service Obligation in prescribed 'not-so-attractive' geographies too.

RAILTEL: The service area for Class Based services should be all India. For other, it could be as existing presently.

HFCL: As covered earlier also, we believe that the USL should be for the same service area as the UASL. The difference should be in terms of the right to provide long distance (both NLD/ILD) services and have direct inter-connection with another operator operating in a different service area.

Hughes Principally three types a) Circle based (As already done), b) National Based, c) Global based

13. Should the Unified License also have service area similar to Unified Access License (provision of these services at the circle level), plus NLD/ILD at the national level, and freedom to give services under the class license at any level of geographical coverage? Should we retain the existing service areas with inter circle connectivity to Unified Access Licensee and with more flexibility to services under class license?

BSNL: It is proposed that in the interest of level playing field the existing service areas may not be tampered with.: A serious anomaly has already been created within the service area when UASL was initiated. UASL operator of Delhi can provide basic services in Gurgaon whereas basic service operator in Gurgaon cannot provide basic services in Delhi. This has led to serious disadvantage to existing basic operators of the adjoining circles to Delhi who are now burdened with additional competition.

COAI: Authority may adopt two type unified licensing structure i.e. (i) circle wise licensing and the other All India licensing structure. COAI is in favour of the Authority's proposal to permit inter circle connectivity across service areas. Direct inter circle connectivity would ensure (I) Increase in competition in long distance and lowering of tariffs (II) optimal utilization of infrastructure (III) creation of backup network (IV) Lessening of low down infrastructure of incumbent operator.

ABTO, Tata Teleservices : The service area should remain as defined in the unified access service license.

NLD/ILD service should be at national level. There should be freedom to give service at any level of geographical coverage. The existing service area as per unified access service license should be retained for the unified licensing scheme with connectivity at mutually agreed points in the circle.

ISPAI : Service areas need not be restricted.

Shyam Telelink: Same as ABTO.

Midas: It is preferred to have UASL and UL licenses at smaller levels than at circle levels. It could be at district or municipal levels varying on case to case. The

objective is to increase penetration through competition among several SMEs. Services mentioned under class license are generally non-voice services. It is important to define services that will come under class license. Class licenses for business voice and internet data applications alone may not be viable as convergence becomes more and more pronounced.

CUAI: Under unified license it should be ensured that the network utilization is maximal and the tariffs should be such that they do not hamper/hinder the end user for the same. The smaller profits on large volumes of traffic should be the guiding principle. Inter circle connectivity for all types of services should be permitted and promoted as this shall lead to increased network sharing and consequent benefits to the users.

CUTS: Minimum service area could be fixed but not maximum.

RAILTEL: Yes, we agree.

14. Should a distinction be made for service area if the concept of class license or facility based and non-facility based licenses are introduced?

BSNL, Yes: Service areas should under no circumstances be tampered with earlier anomalies created at the time of UASL need to be corrected.

COAI: COAI is in favour of a single unified telecom license for providing all types of services/ telecom infrastructure.

ABTO, Tata Teleservices: The class license should be a sub-set of the unified license.

ISPAL: No.

Shyam Telelink : Distinction should be made for FBOs and SBOs.

Sh.A.Agarwal: Service area could be telecom circle.

CUAI: Service areas must be defined only for primary access service providers.

CUTS: every corner of the country get covered in due course of time

RAILTEL: Service Area concept not applicable to non facility based operator

HFCL: Class Licence and Facility based Licences should not have any geographical limitations

Issue 4 Rollout Obligations

15. The possibility of "niche" operators has been discussed earlier in the context of rural or not so popular areas or some new service. Should the service area be quite different for such operators.

BSNL : There is no possibility of having operators exclusively for rural and un-economic areas. Due to requirement of large investment a combination of rural and urban areas only can provide a viable solution. Under no circumstances the existing service area should be tampered with. Regulator may need to strengthen the ABC and USO regimes.

COAI: If there is any demand for niche operators this may be considered. However, they may be subjected to same terms and conditions and same service area categorization as applicable to other licensees.

ABTO, Tata Teleservices : For rural or commercially unremunerative area service area may be different. There can be SDCA services are for such operators. Such operators need to be restricted to rural SDCAs only. These operators need not pay UASL fee for the circle and can be funded by the USO fund. As regards connectivity they should be allowed to connect as other UASL without discrimination.

ISPAI: No comment.

ShyamTelelink : Introduction of niche operators will create more confusion.

Midas: Niche operator is a good concept that would help proportionate penetration. The service area for such operators should be at district or municipal levels. Barriers in licensing procedures like entry fee, obligations etc. should be minimized so that as many SMEs can enter and increase penetration. Licensing should be given to people with utmost penetration capabilities with maximal services. The technologies that are used must support good data rate Internet services that is capable of running several applications including videoconferencing, e-Health, e-Education and e-Governance.

Sh. A. Agarwal : Could be different for rural areas.

CUAI: Further elaboration required

RAILTEL: Yes, there could be niche operators in rural and unpopular areas for which no registration charges / entry fees be there and license fees / revenue share be negligible. Define area on the basis of existing teledensity.

HFCL: For niche operators, the service area should be as small as a SDCA/ LDCA with no roll-out obligations. The registration fee should be nominal as for Class Licence. They should be allowed inter-connection as allowed to UASL without discrimination.

Hughes: Roll out obligation be removed, USO fee recommended

16. Should there be any rollout obligations under Unified Licensing Regime? If so, what should be the minimum rollout obligations for the various types of services, and could this minimum differ across different services, e.g. an SDCA for fixed line and a city for internet service provider or class licenses, or for NLD/ILD at least a certain number of long distance routes for NLD or at least certain number of countries (regions) for ILD.

BSNL : In case no roll out obligation is specified it is felt that the interest of customers in rural and un-economic areas may suffer. Roll out obligation of BSOs has been wrongly exempted in the UASL regime. This would effect flow of fresh

investment in rural and semi urban SDCAs and would adversely effect growth of telecom in such areas.

COAI : The Authority may consider prescribing a roll out obligation in case of services that use radio spectrum.

ABTO, Tata Teleservices: Roll out obligations under ULR should be same as for UASL regime. NLDOs who do not desire to continue may be given option to surrender the license and opt for refund of the entry fee paid or deemed paid.

VSNL : They should be roll out obligation under ULR for all facility based operators. The level of roll out obligation should vary with the services being offered and can be different from service to service. Roll out obligations of new entrants have to be similar to the roll out obligations of current service providers in order to provide a level playing field.

ISPAI :No.

Shyam Telelink : TRAI should not specify any roll out obligation for any service.
Midas: There must be roll out obligations laid out very clearly under the ULR. The fall out of not having such obligations is that roll out plans of major telecom operators for small and middle town areas and rural areas has slowed down considerably since announcement of UASL scheme. This would affect the telecom penetration that UASL and UL are aiming to bring about or limit all the advantages of this regime only to urban areas. Rural and mid town areas would continue to languish for operators attention. On minimum roll out obligations across different services we acknowledge that obligations will differ based on type of service provider.

Sh.A. Agarwal : Yes.

MTROA: In the context of PMRTS, the rollout obligation should be specified as providing network infrastructure & coverage within 2 years from the date of spectrum allocation, failing which the spectrum shall have to be returned by the defaulting operator (more on this is covered later in this note).

RAILTEL: No roll out obligations

CUAI: Fundamentally, the issue of “obligations” is incorrect. It is the mandatory duty of the service provider. No single operator should be forced upon the task of USO operations. ZERO cost authorizations are given to co-operatives, individuals, societies etc. that come forward for the management and operations of such USO telephones. Comprehensive details must be worked out the TRAI in this regard. Favorable interconnect terms and conditions can be worked out for the smooth, economical and viable operations for such USO networks. Sparing of the incumbent operator for the USO obligations is not healthy to maintain competition and growth.

CUTS: YES, it has to be there. Minimum rollout obligation should differ as per the nature of service. This should be entirely reviewed by TRAI on yearly/bi-yearly basis and can be linked with the last year's turnover of the operator.

HFCL: For fixedline, SDCA level coverage could be specified.

Hughes: No

Cyber Bazaar: Based on the current circle wise models, Group's of LDCA's should be distributed to the 3-5 unified access operators (excluding BSNL) and should be accountable for roll out obligations of the allocated LDCA's. Meeting rollout obligations of these LDCAs (20-30% of the circle area) will be much easier to implement by private operators than insisting on all operators to meet rural obligations throughout the circle. To encourage rural investment a higher termination/origination fee may be mandated compared to urban/semi-urban termination/origination.

Access operators who opt more than 30% of LDCA's in a circle should be deemed Circle Operators. Access operators who opt more than 30% of SDCA's in a LDCA should be deemed LDCA operator. Access operators who opt 75% of A grade and 50% of B Grade circles should be deemed National Operators and should pick up remaining B and C circles.

DLD Operators: Roll out obligations to be modified to Circle Level Tax and LDCA level roll out not necessary.

ILD Operators: No roll out obligation except one POP in India and one International.

17. Suppose no rollout obligations are specified how to ensure ubiquitous coverage for all services?

BSNL : Without the well defined legally enforceable roll out obligations it is not possible to ensure spread of service into rural and un economic areas. Hence there is no alternative but to specify roll out obligations.

COAI : Once the government moves from regulator led policy and licensing regime to market based unified telecom regime then the coverage of reach of telecom services will have to be left to the market forces. BSNL can be given status of default USO operator mandatorily responsible for meeting Universal Service Obligation.

ABTO, Tata Teleservices : Coverage should be driven by business considerations and not through force. USO fund should be used for incentivising operations in un-economic areas.

VSNL : Incentives/ subsidies/ lower entry barriers to niche operators may be given for setting up operations in un-economical areas from the USO fund. Relaxation in the revenue share can also be given.

ISPAI: USO mechanism should take care of ubiquitous coverage.

Shyam Telelink : Market forces coupled with USO fund based roll out will ensure ubiquitous coverage for all services.

Midas: We feel that without roll out obligations it is impossible to achieve ubiquitous coverage for all services.

CUTS: No

RAILTEL: in order to ensure roll out, the revenue share percentage to be reduced with the roll out achieved by the operator

HFCL, Hughes, R K Gupta: Coverage should be driven by business considerations and not through force. USO fund should be used for devising innovative incentive schemes for business entities to operate in currently non-attractive area.

18. Will the concept of facility based and service based service providers and non-specification of minimum rollout obligation help in efficient utilisation of infrastructure?

BSNL: Introduction of service based service providers and exemption of roll out obligations would defeat the very purpose of introduction of competition and also lead to wastage of national resources by concentrating the efforts of all operators at the premium telecom segment.

COAI: Non specification of minimum roll out obligation will help in optimal utilization of infrastructure as roll out would be on basis of demand. Categorization of service providers into facility based and non facility based is not relevant

ABTO, Tata Teleservices: No additional roll out obligation under unified licensing regime is called for other than provided in unified access service license.

ISPAI: Yes. Competitive market forces will ensure efficient utilization.

Shyam Telelink : Yes. This would facilitate optimum utilization of resources.

Midas: Non-specification of roll out obligations would stop the penetration or severely delay the penetration of telecom in rural, small and mid town areas. Concept of facility based and service based providers would not help to mitigate this problem.

R K Gupta: No

19. Considering the fact that a part of license fee (at present 5%) is to be contributed to Universal Service Fund and there is a variation from zero to 15% in the existing license fee, what should be the level of license fee under Unified Licensing Regime?

BSNL : The license fee for the circle unified license has to be equal to the existing basic/ cellular license. In case of national unified license the average license fee may be 10% which is the average of circle categories. However, this license fee should be applicable to only those national unified licensee operators who provide all the telecom services in all the circles. Where a national unified licensee provides his services selectively the rate of 15% may be levied. The license fee structure needs

redesigning so that large integrated operators are not burdened with same percentage of license fee for all levels of revenue. To start with for aggregate AGR in excess of 25000 crores per annum license fee should not be more than 5%.

COAI : The annual license fee levied on operators must only cover the USO levy and the cost of administration and regulation of the telecom sector which would be about 2% of revenues. There is no need to have different license fee on the basis of metro category A, B and C circles.

ABTO, Tata Teleservices : License fee under ULR should be 6% of the AGR to cover USO of 5% and administrative charges of 1%. Lower burden in form of license fee will go along with in providing affordable services. License fees should not be used as revenue generating mechanism. Moreover government will earn much higher returns including service tax than what it extracts from enforced license fee.

VSNL: Same as ABTO

ISPAI: For high entry barrier services the registration should be on nominal charges to cover administrative and regulation cost besides the USO contribution. All low entry services specially non facility based service providers, under a classed license should be registered without obligation to pay administrative or regulation charges.

Shyam Telelnik : Same as ABTO.

Sh.A.Agarwal : 2% of Revenue

CUAI: All service/ infrastructure providers must pay for a USO. There should only be one set of fees i.e. the USO. In addition, The subscribers in any case are paying a service tax to the state exchequer. Further that, the sale of handsets, roll out of networks etc. generates more revenue for the govt. in forms of excise/ customs duty and sales tax. It is further stated that apart from aforesaid taxes the subscribers are also paying income tax, and for the individual subscribers it is their post- tax deduction money that is being "re taxed". It is therefore requested that the Taxation in telecom be simplified and only one kind of fee/tax be retained.

CUTS: Unified License in hand should be charged on incremental basis for as many services it wish to enter in.

OCA: Revenue depending on the volume subscriber/ business. There should be minimum conditions as regard QoS of service that are to be specified with penalty clause for non fulfillment/ compliance. Moratorium in license fee for one year depending on its performance & more particularly in rural area.

HFCL: a uniform level of licence fee could be imposed on all services including those covered under Class Licence, based on the currently realized ratio of Licence fee collections to revenue of all services

Reliance: instead of the existing license fee structure, uniform service tax based licence fee should be imposed on all services including voice, data, internet etc.

Such uniform levy will ensure level playing field and prevent discrimination between various operators. The amount of levy should only be sufficient to cover the USO and the cost of administration.

R K Gupta: 7 – 8%

20. Is it appropriate and feasible to have the services under a class license to have no or small revenue share License Fee. If so, what should be the rate of the fee;

BSNL : The class license system may not be viable.

COAI : COAI is in favour of a single license for all telecom services/ facilities and nominal license fee to cover up regulatory and licensing expenses besides contribution to USO fund.

ABTO, Tata Teleservices : Service under class license should have revenue share license fee similar to facility cum service based licensees.

ISPAI : No.

Shyam Telelink : Same as ABTO.

Sh.A.Agarwal: 2% of revenue.

MTROA: License Fee should not exceed 1% of the annual gross turnover. No contribution to Universal Service Fund, as these services are not targeted at the general public or the mass market.

RAILTEL 1% to be reduced to 0 later

HFCL: a uniform level of licence fee could be imposed on all services including those covered under Class Licence, based on the currently realized ratio of Licence fee collections to revenue of all services

Reliance: Uniform Tax should be imposed

21. The Government may feel concerned about the revenues coming from the License Fee and may view a reduction as an unattractive policy option. Would it be appropriate to consider revenues from growth to be more relevant than the revenue from License Fee? Suggest the growth model to address this issue.

Business case of (existing) service provider, especially stand alone operators: -

BSNL : The model suggested in answer to question 19 protects the aggregate receipts of the government from the license fee and also takes care of growth of telecom services automatically.

COAI: Telecom should not be viewed as a source of revenue by the government. If low license fee model is considered it will encourage high growth and the revenue will come in from the volumes. Increase revenue will mean increase collections by the government by way of corporate tax, dividend tax, sales tax, service tax etc. There are sizeable revenue increases despite reducing the license fee revenue share as per the model enclosed with the comments.

ABTO, Tata Teleservices : Reduced revenue share proposal is justified. With more growth expected, the revenue from these licenses would cover the shortfall. Government would benefit through increased collection of service tax, customs excise duty. Reduction in license fee is justified without any adverse effect on government revenue.

VSNL, Sh.A.Agarwal: It would be appropriate for government to consider revenue from growth more relevant than from license fee in light of NTP 99 objectives and carve a conducive environment for telecom growth in India.

Shyam Telelink : Growth of telecom has a direct impact on the development of the economy and growth of GDP and per capita. Therefore, it would be a dual gain for the government to encourage growth of telecom. The case study done by NCEAR also points in this direction.

CUTS: Revenue share basis

RAILTEL: As sector grows, license fee would increase

HFCL: same as COAI

Reliance: with lower license fee in terms of uniform service tax will lead to further growth of telecom sector resulting into higher subscriber base, increased network infrastructure development will ultimately lead to overall economy growth resulting into higher realization for the government.

Thus it can be appreciated that service tax model will ensure the long-term vibrancy of the sector, and that the national economy will benefit from the resultant multiplier effect.

22. The unified Licensing regime would give rise to a situation with a number of integrated service providers, and the regulatory concern with respect to a stand alone operator would become more compelling. Certain issues that arise in this regard include:

i) How would the stand-alone operator's competitive interests be protected under the new Licensing regime;

BSNL: In case the regulator adopts the suggested measures given on license fee, roll out obligations etc. the interest of stand alone operators is fully taken care of.

COAI: Unification would result in larger organizations operating across greater number of service area and segments increasing the possibility of cost subsidization

between segments and predatory pricing. Predatory pricing practice are being followed even today by integrated operators. Authority should rigorously implement and enforce effective competition safeguards like implementation enforcement of accounting separation, price controls/source, open and non-discriminatory access through network facilities etc. to protect the competitive ability of the stand alone operators. Unified license increases the burden of regulatory over site as the possibility for vertical price squeezing, predatory pricing and cross subsidization increase with the number of market segments in which an operator may participate. This needs to be controlled through accounting separation, competitive safeguards like price controls/force, equitable cost based and non-discriminatory excess and carriage charges, transparent non-discriminatory and commercial transfer pricing arrangements etc.

ABTO, Tata Teleservices, HFCL :Following measures could be considered for providing level playing field vis-à-vis integrated operators:

- a Compulsory interconnection to be offered to the stand alone operators by the unified service providers on the lines of RIO.
- b Roaming arrangements with other service providers in other circles.

Price protection (floors, ceilings) is neither desirable nor workable however; the trafficking principles such as non-discrimination, IUC compliance etc. already enunciated by TRAI should be adhered to.

Even with above enablers stand alone operators would find it difficult to compete with larger integrated service providers as integrated providers score stand alone providers in terms of economies of scale have lesser equipment cost and cost of capital and have got most staying power.

If existence of stand alone operators is considered to be desirable then physical support measures would need to be considered. Under the unified license regime consolidation activity is likely to pick up and should be encouraged. The number of players to be left to market forces to determine. However, steps should be taken to prevent monopolistic/ duopolistic situation for any kind of service.

VSNL: To protect the stand alone operators competitive interest following steps should be taken:

- a) TRAI should device proper regulation primarily to discourage and disallow cross subsidization services by SMP operators, ULR should not be such to be disadvantageous for any stand alone service provider.
- b) Incumbent operators like BSNL/MTNL should pay all prescribed fees and be regulated.
- c) Ensure that no pure access provider is allowed to by pass any transit carrier to safeguard the interest of stand alone transit operators/ carriage provider.

ISPAI: The abuse can be in terms of pricing, discrimination and denial of access to bottleneck facilities, spectrum hoarding etc. TRAI is expected to ensure that integrated players for SMPs are adequately and rigorously regulated against any instance of anti competitive behavior.

Shyam Telelink: Both OfTel and FCC ensured that while offering interconnection to stand alone operators the integrated operator shall have to treat the stand alone operator as part of his own unit and give him the same preferential treatment as he would give to his units. This would mean that the stand alone operator will be able to offer to his customers the same level of tariffs as done by integrated operators. Further following level playing measures needs to be considered.
Five points same as ABTO.

MTROA: Ensuring that the same tariff is charged for accessing other networks / services so that a Unified License Operator does not enjoy superior competitive advantage through cross subsidy /captive consumption.

- Reservation of minimum spectrum required for expansion (on the basis of reserving a minimum spectrum of 10 channels each per existing operator).

No license fee as against a maximum of 1% recommended in the earlier point for new services / operators

CUAI: Regulation must ensure that even the integrated players continue to offer standalone services, which are cost based, and the giant operators are obtaining no regulatory advantage.

It is therefore necessary, expedient and in the interests of the telecom sector, operators and the consumers that the authority prescribes the ceiling tariff for each of the individual services, such tariffs should be realistic and based on the data of the most efficient service provider, it is further stated that in the Unified regime the TRAI is aware of each and every component involved in telecom pricing, independent values for tariff be also derived by TRAI. The lower of the two tariffs be given as ceiling tariffs. The low tariffs shall accelerate the growth of telecom as well as the same shall result in the maximum utilization of the network.

CUTS: Government should not to perceive the license fee as revenue generation source rather should concentrate upon increased volumes of business so improved tax collections

CUTS: Just ensure the market to not get monopolised/oligopolised.

Hughes: Stand alone operators will have

- a) Bigger geographic coverage & hence economics of scale
- b) Common infrastructure to offer more & varied services giving better returns
- c) Zero Migration Charge
- d) Zero regulatory restrictions, interconnectivity etc

ii) Should there be any minimum conditions that should be specified to protect the interest of the stand-alone operator. If so, what should be these conditions;

BSNL: Same as in (i) above.

COAI: Yes. The condition would improve those relating to detailed accounting separation as well as anti competitive safeguards that should be applied to SMP/ integrated operators.

ABTO, Tata Teleservices : Same as in (i) above.

VSNL: Adequate measures should be taken to encourage competition. Number of players should be left to market forces. Competitive measures may include provisions like carrier access code which needs to be enforced on all operators and primarily on SMPs. Steps should be taken to ensure that no monopolistic/ duopolistic situation arises with regard to any kind of service. Regulator should also ensure that the stand alone operators are not discriminated with respect to any commercial terms being offered by an incumbent dominant player/ SMP within its group company.

Telecom service provider would be subject to provisions of competition act; at the macro level the objective of the regulator shall be light touch with least inclusive regulatory mechanism for unified license specially private licensees.

ISPAI : Integrated players and SMPs should be mandated to publicly make available information on pricing, numbering, availability, quality etc. under the aegis of TRAI and which should be accompany with implementation of accounting separation. TRAI should announce and impose exemplary penalties against errant service providers.

Reliance: additional regulatory obligations can be imposed.. These obligations can be as follows

- obligation to interconnect and provide co-location facility on fair and non-discriminatory terms
- obligation to publish reference interconnect offer to other operators
- obligation to maintain accounting separation with complete transparency
- obligation of non-discrimination in respect of offering of all products and services
- obligation to follow price control in case instances of price escalations

Further, TRAI may impose additional restrictions, which can be monitored from time to time to protect stand-alone operator's competitive interests.

R K Gupta

- i) Proper accounting separation to prevent cross subsidy
- ii) Same termination charge for a service as levied on itself
- iii) Carrier selection for NLD / ILD

iii) What incentives, if any, may be devised for operators (e.g. ISP, PMRTS, VSAT etc.) becoming willing to move from their present License to a new License with a wider coverage?

BSNL: BSNL does not favour a class license. The provision of services would depend on the business model of each operator. It would be unwise to migrate small operators to wider coverage for which they are not willing based on their business

volume. TRAI may like to remove all barriers and make entry into new services more open and liberal.

COAI: There is no requirement for any special incentive to encourage low entry fee operators to migrate to a unified licensing regime.

ABTO, Tata Teleservices: No incentive should be provided which may distort level playing field. These service providers propose to be classified under class license may be considered to become facility cum service based licensee by paying prescribed registration charges which would be additive with regard to service scope and area and offer any services of their choice in these service areas. It is up to the operators to decide whether they wish to migrate to the new regime or remain in current one.

ISPAI : We are suggesting moving away from current licensing system to a automatic authorization/ class licensing norm without any added financial obligations. Unrestricted internet telephony, rationalization of spectrum fee and delicensing of specific frequency bands (2.4 – 2.4835 GHz) 23.

Shyam Telelink: Same as ABTO.

Sh.A.Agarwal : For point (i) to (iii) : Either No or low entry fee.

MTROA: Followings incentives are suggested

- Right to migrate to either a new service or a new improved technology (viz. Analog to Digital or setting up a Public Mobile Data Service).
- New entrants may only be licensed if spectrum is available post the migration consent of existing operators (more details on this under the heading “Other Issues”).
- The Bank Guarantee per service area should not exceed Rs 0.5 lacs or 6 months of Licence fee payable, whichever is higher.

RAILTEL: For operators like ISPs, PMRTS, VSAT etc. full PSTN connectivity as well Voice Over IP call within India from PC to telephone should be permitted, so that they are willing to move to new license regime with wider coverage. Further. ISP operators can be permitted to provide IP phones with PSTN connectivity.

Reliance: These service providers proposed to be classified as ‘class license’ may be considered to become facility cum service based licensee by paying prescribed registration charges (which would be additive with regard to service scope and area) and offer any service(s) of their choice in the service area(s). No incentives should be provided which may distort level playing field.

23. The interconnection regimes for different types of services are not the same. This was the case also with respect to the interconnection among fixed line and cellular mobile. With more services being covered, we would need to consider further differences in this regard. Likewise, there is another matter, which becomes relevant, namely the extent of PSTN connectivity provided to different services. For example, services like VSAT have no PSTN connectivity whereas services like PMRTS have limited PSTN connectivity. With a Unified Licensing regime such distinctions and differences would be difficult to maintain. Issues that arise in these cases include:

i) How do the differences in interconnection regime affect the details of the Unified Licensing regime? What should be the interconnection regime applicable to the new services/service providers giving more than one service under the same License?

BSNL :The interconnection is service specific and not license specific. The interconnection packages adopted and followed for various services under individual licenses may continue to be followed under unified license regime. As stand alone operators are going to co-exist sanctity of existing fundamental plans relating to numbering, routing and charging will have to be maintained. This will also ensure level playing field and smooth flow of traffic. With this the doubts raised in question No.22 (iii) about the VSAT and PSTN connectivity are taken care of.

COAI : In the event that the government opt for an LDCA based numbering scheme for PSTN/ fixed services, then the Authority must mandate interconnection at the LDCA level. If however, the present SDCA based numbering arrangement continues then interconnection entitlement must be prescribed at the SDCA level or any desirable point subject to network integrity and technical feasibility. The choice of POI should be left to the service provider. Since under unified licensing, one operator may provide both fixed line and mobile services as well as NLD/ILD etc. using common infrastructure, uniform interconnection regime will have to be mandated for all types of services. Direct interconnection at all technically feasible points subject to network integrity being maintained, should be allowed. It should be up to the seeker to decide as to where to get his network interconnected to the providers network.

ABTO, Tata Teleservices : Interconnection must be made mandatory for all types of operators. It is also desirable some form of special provisions for interconnection obligations on the incumbent. For class licenses the existing interconnection regime should continue.

The interconnection policy for the facility cum service based operator should be so viewed so that existing POIs which have been set up at huge investments are not disturbed. Any change can cause conjunction and capacity constraints affecting the end customer. This will also lead to wastage of resources spent in establishing the infrastructure and sudden changes would have financial implications on service providers since the increased cost cannot be passed on to customers in a downward competitive scenario therefore, decision should be taken so that operators recover their investments without further drainage of financial resources.

Interconnect numbering and interconnect usage charges are inter-related and cannot be viewed in isolation. Commercial issues related to migratory path would need to be adequately addressed.

VSNL: Interconnection must be made mandatory; the present differences in interconnection regime for different types of services may be continued in certain cases depending on types of networks to be interconnected.

However interconnection policy among facility cum service based operators providing access , national long distance and ILD services should be rationalized. LDCA based interconnectivity should be mandated among service providers in the unified regime. This would eliminate the inconsistency that presently exists.

Shyam Telelink: Interconnection policy among facility cum service based operators providing access NLD and ILD services should be rationalized. LDCA based interconnectivity should be mandated among service providers in the unified regime. This would eliminate the inconsistency that presently exists. Also suitable correction needs to be done in the IUC regime as per LDCA connectivity.

MTROA:

- There should be no restrictions if possible on the PSTN interconnectivity, as PMRTS would never have any significant marketing power to win individual wireless customers (we have maintained that we are also ok with 40%, the minimum required interconnectivity for a viable business case).
- Interconnection regime applicable to new services/service providers giving more than 1 service under the same license should not result in any unfair competitive advantage to existing or new service provider.
- However, inter circle traffic shall have to be carried through an NLD or a Unified License holder

CUAI: The level of interconnection should be same for all types of services across the board. Considering the variety of access services, it is desirable that all the access service providers may interconnect with each other at either the SDCA or at the LDCA level

HFCL: The present service specific interconnection regime may be continued. For class licensees (as proposed), the existing interconnection regime should continue.

Sharing of passive equipments should be permitted. Sharing of active components (switch, transmission equipment, access electronics) should not be allowed. Sharing of IT/ IS equipment should be allowed.

Hughes: All services are freely interconnect able. It shall be based on following:

- a) IUC based: Between Basic Telecom service providers
- b) Telecom Tariff based: Between VAS service providers and Basic Telecom service Providers.

Two Restrictions that will apply are:

- a) Infrastructure Service providers can give Service ONLY to Basic Telecom Service Providers and VAS Service Providers

VAS service providers shall NOT be allowed to Carry /switch traffic on Inter SDCA level. They have to use a Basic Telecom Service Provider or Infrastructure Service Provider.

Reliance: it is essential that existing point of interconnection of access providers should not be disturbed at all for various reasons as given below;

- a) Operators have invested heavily, both in terms of Capex and Opex, for establishing present Pols. Any change in the interconnect regime for existing Pols will result into huge loss of investment as well as will amount to wastage of national resource
- b) In addition to huge capital investment loss, operators will have to incur additional charges in terms of higher IUC charges. Thus such change would mean increase in cost for the consumers

The interconnection regime ideally should be such so as to facilitate far end handover by all operators, which would necessarily result into lesser IUC charge being built in into the consumer tariff. This means that networks interconnection at various levels should be encouraged so that each network owner can have his distinct tariff without the loading of carriage charges of other service providers network.

Hughes, R K Gupta: Interconnection freely

ii) What should be the criteria for infrastructure sharing among the operators, and infrastructure "sharing" for the same operator who operates in two distinct and/or distant regions?

BSNL, Sh.A.Agarwal : The sharing of infrastructure is mutual arrangement between the operators. This is in no way connected to the unified license.

COAI, CUIAI, R K gupta: Infrastructure sharing must be both permitted as well as encouraged both: between different operators in the same service area and same operator in different service areas.

ABTO, Tata Teleservices: Infrastructure sharing among the operators may be allowed within the common/ over lapping service area. Shared use of mast, antennas, cables and combiners etc. may be permitted. Shared use of MSC must not be permitted. For the same operator, operating in two distinct and on distance region, sharing of switch/ MSC for different services areas along with billing, customer care etc. may be considered.

VSNL: Infrastructure sharing may be fully allowed without any regulatory restrictions and left to mutual commercial agreement among service providers.

ISPAI : Commercial considerations and negotiations, without discriminatory practice should be the criteria.

Shyam Telelink: All type of infrastructure both active and passive should be allowed to be shared. As spectrum is a contractual commodity they should not be any confusion in this respect. A new model would emerge based on optimal sharing of all infrastructures.

Bharti : to be taken up with the consultation paper

MTROA: The choice of infrastructure sharing should be left to the operators and the market forces.

Reliance: Subject to mutual agreement, infrastructure sharing among the operators within same service area can be permitted. Passive infrastructure sharing such as towers etc. is already permitted. In case of the same operator who operates in two distinct and or distant regions, sharing of infrastructure can be permitted only if such sharing does not amount as revenue loss for the any other service providers.

iii) Should the restrictions on PSTN connectivity which are prevalent at present for some services, be done away with. If not, why and under what conditions should these numbers apply?

BSNL : Issue raised is not clear. The PSTN connectivity of various networks have to be handled carefully after taking care of the legitimate interest of the operators and there is an urgent need to maintain network discipline. The telecom connectivity may not be made "free for all type".

COAI : No. It would not be desirable to do away with the restrictions on PSTN connectivity. The restrictions would depend upon the type of service and should be in line with prevalent international practices.

ABTO, Tata Teleservices: Response given at (i) above.

ISPAL, Sh.A.Agarwal, R K gupta : Yes.

Shyam Telelink: For class licenses viz. ISPs, VSATS etc. the existing interconnection regime should continue.

Issue 6 Numbering Issues

24. At present Numbering Scheme for WLL(M) service is SDCA specific because mobility was permitted within SDCA only. Now, with the unlimited mobility, should the numbering scheme for WLL(M) services be revised? If yes, the suggestions in this regard. Also, from the trends abroad and in India too, in some states, it is clear that the number of cellular mobile subscribers are likely to exceed the fixed access (PSTN) subscribers. Should, therefore, access to mobile service be through '9' level codes without explicit SDCA/LDCA identity? Or, the numbering plan be reviewed considering the future requirements and trends including e-NUM?

BSNL : The current numbering plan has been finalized and implemented very recently in 2003 due to this BSNL changed telephone numbers of 35 million customers causing consumer inconvenience and dissatisfaction. The current numbering plan takes care of 450 million mobile customers. As such there is no

need to change the existing numbering plan at present. The WLL (M) subscribers can be easily accommodated within the framework of the existing numbering plan.

COAI: As WLL (M) services will continue to be offered, the same numbering scheme has to continue however, if the above issue of WLL(M) is addressed then it would be more logical and desirable to go in for LDCA based link numbering scheme with POIs at the LDCA level for all fixed services. As far as cellular mobile service is concerned the existing circle/ MSC based numbering scheme should be continued. LDCA based link numbering scheme will have advantage of reducing the area codes, more consumer friendly and will remove disparity between cellular and basic services in terms of interconnection.

ABTO, Tata Teleservices : Frequent revision of numbering scheme is completely undesirable besides being customer unfriendly. In TRAI meeting on 3rd December three options emerged:

- a) All mobile and fixed line have SDCA based numbers.
- b) SDCA based numbers for fixed and 9xxxxxxx for mobile this option does not follow ITU recommendation E164.
- c) All mobile and fixed line have SDCA based numbers.

Since the matter of great consequence all three options should be put in the final paper for discussions.

ISPAI: Numbering plan should be revised only if it is a must. However, e-NUM must be an integral part of any further planning/ review of the numbering plan.

Shyam Telelink, Sh.A.Agarwal: The numbering plan should be LDCA based. There is however a ground for revising the numbering scheme of CMSPs to LDCA based considering the future requirements and trends.

MTROA: PMRTS being classified in the same category as a paging service (class license), the "96" numbering plan given to the paging industry, if feasible, may be shared with PMRTS and other services in the same basket of a *class licence*.

CUAI: The existing numbering plan may continue. A radical change in numbering plan is undesirable. All the newly upgraded WLL-M to cellular mobile phones must also be changed to the 9XXXXXXXXX type numbers permitting the easy distinction of mobile from fixed numbers. The digits in a telephone number must not exceed "10".

CUTS: Needs revision, LDCA based

RAILTEL The numbering for WLL(M) telephone should be with '9' level codes as is existing for cellular phones, till such time, the numbering plans are reviewed considering future requirement.

HFCL: Numbering for a kind of service should be identical. For better management of growing subscriber base, we believe all the mobility services should move to LDCA based numbering and inter-connection. The view on fixedline services could

be taken independent of this, though we believe this too should move to a LDCA based numbering.

Hughes No adverse impact seen

Reliance: Numbering Plan UASL operators, who have migrated from basic service, should not be changed at all for various reasons as explained below;

- a) The change in Numbering scheme at this stage would involve change in numbers for existing more than 6 million mobile subscriber base of unified access operators which is not desirable and not at all in consumer interest.
- b) As per guidelines of the UASL, operators are mandated to offer WLL (M) service in addition to the full mobile service, for which SDCA linked numbering is required.
- c) Due to SDCA code being present in the CLIs, existing number scheme of BSOs is more suitable for UASL operator and will help controlling traffic bypass as parent SDCA of mobile consumer can be known from the CLI. This also helps in the determination of distance based IUC charges including ADC payments.
- d) In addition to these policy issues, to implement any number change in network will be a technically difficult to implement in short span of time and also has commercial implications.

In this context, it is important to take cognizance of the important point, regarding target of achieving 100 million subscribers, that SDCA based numbering plan offers much higher capacity utilization as compared to service area based Level '9' numbering plan or LDCA linked numbering scheme. In this regard, restricting mobile service to level 9 would be a retrograde step considering the fact that major expansion is happening only in mobile service sector.

25. Under Unified Licensing Regime, should we have SDCA based STD Codes or the codes be reduced say to LDCA level?

BSNL: The existing numbering plan with SDCA based codes is well known and the local area is also co-terminus with SDCA. There is no merit in fixing the area codes based on LDCA at this stage.

COAI, RAILTEL : It would be more desirable to have LDCA based linked numbering scheme for fixed services which could be as follows:

- a) Service Access Code (1 or 2 digits) + LDCA code (2 or 3 digits) + Carrier Access Code (2 digits) + Subscriber number (7 to 8 digits).

In case of cellular mobile services present numbering scheme should be continued. Telephone numbers of WLL (M) subscribers who have now been migrated to full mobility should be changed to cellular mobile numbering scheme. The entire level 9 should be reserved for cellular mobile services.

ABTO, Tata Teleservices : Same as in 24.

VSNL, Sh.A.Agarwal : Yes. It is highly desirable to restrict STD code to LDCA level from current SDCA level.

ISPAI: Yes.

Shyam Telelink.: Yes. We should have LDCA based STD codes which will be of great benefit to consumers.

Issue 7 Others issues

26. A number of other policy issues on which inputs would be useful for a more comprehensive assessment include:

a Should the existing service providers have an option to continue under the present licensing regime (with present terms and conditions) or migrate to new Unified Regime.

BSNL, Sh.A.Agarwal, HFCL, Reliance : Legally it may not be possible to compulsorily shift the operators to new regime. They may be allowed to continue in the present regime if they so desire.

COAI : Existing licenses must have the option to continue under the existing licensing scheme or migrate to new unified regime. However, it is imperative to ensure that existing licenses are no worse of under new regime vis-à-vis the new licenses. Measures possibly recommended to protect financial health and viability of the existing licensees vis-à-vis new licensees by duly compensating existing licensees. It is proposed that all existing licensees should be entitled to migrate to a full non spectrum based unified license regime. The value of spectrum has already been established/ settled by the Authority in the case of UASL. The value of unified license with spectrum should be equal to registration charges + spectrum charges as determined above. All existing licensees must be equated around the same benchmark. Operators who have paid in excess of the benchmark may be compensated by various means.

ABTO, Tata Teleservices : The existing service providers should have option to continue under present licensing regime or migrate to new regime with present scope of service and no additional payment.

Subsequent to their migration after payment of necessary entry fees to unified licensing regime they will be free to offer services other than those they were licensed earlier in the service areas of their choice.

ISPAI : Yes. The option can remain open.

Shyam Telelink: Same as ABTO.

CUAI: Yes

CUTS They should be migrated to ULR however their genuine concerns are to be accounted entirely.

RAILTEL: There should be no option for existing operators to continue under the present licensing regime and he should migrate to new unified regime.

b Under Unified licensing regime should there be special provisions for Service Providers with Significant Market Power.

BSNL: All operators having SMP be compulsorily required to provide all services in each and every SDCA of their area in a time bound manner, say within one year of reaching this stage. Failure to meet this requirement may entail additional license fee @ 10% of AGR.

COAI : Yes. Accounting separation and price regulation are the principle regulatory tools that have been used to control the abuse of SMP, prevent cost subsidy and encourage competitive behavior.

ABTO, Tata Teleservices : Yes.

ISPAI: Yes. TRAI will need to rigorously regulate the practices of the players with SMP.

Shyam Telelink: Same as ABTO.

CUTS: This can be provided as one of the tool among various available to the Regulator to achieve the regulatory objective of maintaining 'adequate' competition in the market place.

HFCL: special provisions

c. At present the FDI limit is different for different telecom services. To what extent this difference of FDI limits for different telecom services be maintained in the unified regime. How can we have same FDI limit for all services under unified licensing regime?

BSNL, HFCL : No comments.

COAI: Under unified licensing regime, the FDI limit should be same for all telecom services/ infrastructure. We recommend that it should be fixed at 74%. To achieve 100 million wireless subscribers a total investment of Rs.50,000 crores needs to be made out of which financial institutions in India have sanctioned Rs.8480crores. The deficit would need to be primarily funded by foreign investors and would does warrant raising the FDI limits. It is proposed that a uniform 74% FDI may be considered for the telecom sector.

ABTO, Tata Teleservices : Difference of FDI limits for different telecom services be maintained in the unified regime by granting a class license for services having different FDI limits.

ISPAI : We recommend FDI up to 74% for facility based operators and 100% for non facility based services.

Shyam Telelink : Same as ABTO.

Sh.A.Agarwal : 49 or 74%.

CUTS: ULR needs not necessarily to spell out into Unification for FDI limit too. One must avoid obsession with unification. This issue should be dealt with on case to case basis.

Reliance: Under unified licensing regime there should not be any difference of FDI limits; however for class licensee different FDI limit may be applicable

27. Should we consider models of Australia/ Singapore/ Malaysia /European Union or any other model for implementing Unified Licensing?

BSNL : India is a unique country hence it may need to evolve a model of its own. There should not be any pick and choose of regulatory regime prevailing in other countries. In case, we need benefit of experience of another country, full regulatory regime needs to be studied to remove all anomalies existing in our system regarding interconnection IUC, tariff etc. Ultimately, India has to evolve its own model learning from other countries, if required in totality.

COAI: The success of unified licensing has more to do with the development and maturity of the market, availability of a strong and effective regulatory and competition law framework, which will provide adequate effective and timely remedies against any abuses that may arise. Unification of licensing in various countries has been used in conjunction with range of other remedies so as to promote orderly growth and development of the market. It is therefore, important for the Authority to consider unified licensing in a holistic manner taking full account of market and operator maturity, existence of SMP, the range of controls that are in use to control it and the existence of specific competition law remedies to enforce compliance.

ABTO, Tata Teleservices : TRAI may consider EU, Singapore or any other suitable model as may be applicable to our country.

ISPAI : We suggest our own specific model to be developed.

Shyam Telelink: Same as ABTO.

MTROA: we borrow from the models mentioned but we need to modify the policy to suit Indian conditions.

28. Should reselling be permitted under the Unified Licensing Regime?

BSNL, CUTS, Reliance : Time is not right for permitting re-selling.

ISPAI, COAI, RAILTEL : Yes.

ABTO, Shyam Telelink, Tata Teleservices : Resale could be considered at an appropriate time as service based industry.

MTROA: Reselling/assigning/transfer of license and spectrum should be freely permitted under the unified licensing regime for PMR industry to ensure utilization of spectrum depending upon technology evolution and market forces.

HFCL: USL and UASL holders should be allowed to bulk their capacities to virtual operators, who in turn should hold the relevant licence for the service they intend to offer

29. If reselling is permitted then what should be the registration charges, license fee and other terms & conditions for these category of service providers?

BSNL : Not applicable.

COAI : Only a nominal registration charge may be prescribed. There is no requirement for a separate license, terms and conditions etc. The reseller will be a franchisee of the unified licensee who will be accountable for the operations of his franchisee.

ABTO, Tata Teleservices : For these category of service providers the registration charges may be the same as per class licensees and license fee may be similar to that of facility cum service based licensees. However, the license period should be shorter.

ISPAI: Resellers are restricted to marketing/ selling/ supporting services of the principal service provider in which case separate registration, license fee need not be considered.

Shyam Telelink: Same as ABTO

Sh.A.Agarwal : Should be permitted.

Reliance: Registration charges may be same as Class License. USO contribution be higher

30. Some new Service Providers may also like to provide services like billing, customer care, Directory enquiry, interconnect exchange services, etc. or any other service with or without setting up their own network or infrastructure. What should be the registration charges, license fee and other terms & conditions for these category of service providers?

BSNL: The services (except interconnection exchange) are mainly down the line BPO (Business Process Out Sourcing) type operations, which any operator is obliged to conduct. The regulator may like to leave them to the business model of each operator. Interconnect exchange services will very much depend upon their financial viability. It is important that cost of interconnection will need to be maintained at the present level so such a concept may not put additional financial burden on existing operators. BSNL has been providing interconnect services to all the operators. Later with the introduction of direct interconnection between various

operators, wastage of precious national resources has occurred. BSNL is capable and willing to meet the interconnect service needs of all the operators in the country.

COAI : Services such as billing, customer care and directory enquiry need not require a telecom license. In the case of interconnect exchange services; these may be treated at par with infrastructure providers.

ABTO, Tata Teleservices: These services should be outside the ambit of unified licensing.

ISPAI: There is no need for considering separate license fee, registration fee etc as these are auxiliary services for the licensed service providers.

Shyam Telelink: Such service providers may be treated similar to class license or should be kept outside the ambit of unified licensing regime.

Sh.A.Agarwal : No registration charge.

Issue 8 New issues raised

Policy related to licenses rendered surplus

Bharti: Policy pertaining to Licenses rendered surplus due to introduction of Unified License. Such a Policy specifically needs to take into account for following:

- The amount of entry fees/ bank guarantees paid by the operator and a suitable process for refund of the same;
- Migration of the operator's existing subscribers, who are availing the service being surrendered, to the Unified Licensing Regime.
- Procedure for dealing with the spectrum allocated to the operator, especially in view of the migration of the operator's subscribers as detailed above.

HFCL: Business process outsourcing services should not be licenced. However, an inter-connect exchange carrying communication traffic need to be covered under the ambit of Licencing/ Authorisation.

International practices

1. Argentina

Argentina began a process of liberalization in the fixed telecom market in 1990 by dividing the country into 2 areas (North and South) and privatising the incumbent as 2 separate entities, i.e. one in each of these two areas. In addition to these 2 private entities, there were 300 small operators (each in a local call area), thus covering 300 local call areas out of a total of 2900 such areas in Argentina as a whole. While the 300 small operators could carry the calls within their respective local call areas, they needed other operators to take the calls outside their local call areas. Each of the 2 large private entities could carry calls within their license areas and calls to the other license area was to be handed over at a specified point of interconnection at Buenos Aires. Subsequently in 1998, two more companies were allowed to enter the fixed market but only as long distance carriers, i.e., they could carry calls across local call areas and across license areas but not within the local call area.

In 1999, three other kinds of licenses were specified :

License for provision of telephony, which had 3 different types of licenses under it;

- a) General license under which both local calls and long distance call carriage was allowed.
- b) Long distance license under which local call carriage was not allowed.
- c) Local call licenses.

The second category of licenses was for telecommunication services except telephony, with the service provider having their own infrastructure.

The third category of licenses was for telecommunication services except telephony, with service providers not having their own infrastructure.

The terms & conditions in the licenses at various point of time were not the same. Thus, even though there was a national long distance license given to two companies (one in 1998 and another under the long distance license category specified in 1999), the terms & conditions of these two licenses were not the same. Therefore, by 1999, there were in effect five different kinds of licenses for fixed telephony, namely, carriage in license area, 2 types of long distance licenses, general license; and local call area license.

Entry into cellular mobile was allowed in 1989. There are three license areas in Argentina (Argentina is divided in effect into three circles), and each license area has two cellular mobile operators. Each of them have 12.5 MHz + 12.5 MHz spectrum. The spectrum was allotted through bidding and in one case although the total bid was for 12.5 MHz + 12.5 MHz, the initial allotment was for 10 MHz + 10 MHz.

Later in 1999, four PCS operators were allowed in each of the three areas to provide mobile services. Two of these four were the existing two cellular mobile companies in the license area, and all these got spectrum of 10 MHz + 10 MHz each. The other, new, PCS operators each received 20 MHz + 20 MHz.

In the single License regime, a license to provide any telecom service can be obtained on the payment of Pesos 5000/-, and a charge of 0.5% revenue share. There is no restriction on foreign capital investment, resale is allowed, there is a fee for using radio spectrum (the fee differs for different types of services), there are no conditions regarding coverage or roll out, long distance service providers can use the general internet for carriage of a long distance call but a call carried by internet service providers cannot be terminated on a telephone. The long distance operator can terminate a call on a computer but such a call has to be billed as a telephone call.

Any service operator other than those providing mobile service can thus take a license under the single license, inform the regulator of the service which it is going to provide, can choose any service area or customer categories to be provided by them. Information for the Authority regarding the service to be provided is required particularly for the purpose of interconnection related matters. The single license does not guarantee access to limited resources such as spectrum or numbering and the right of way issues have to be addressed separately with the Municipal Authorities as applicable. Fixed, mobile and internet service providers are charged a revenue share of one percent, for revenues in areas with more than 10% tele-density, so as to finance the USO scheme.

2. Australia

In Australia, Telstra was the monopoly service provider offering all services nationwide till 1991. In 1991-92, oligopoly was introduced with one more common operator (OPTUS) and one mobile operator (Vodafone). In 1991, the operators were informed about the open competition in 1997 and the oligopoly comprising of three operators was replaced by an open license regime in 1997. The new regime has a technology neutral licensing framework with operators classified under Carrier / Nominated Carrier declaration and Carriage / Content Service Provider. The key distinction between the two categories is that while Carrier licenses / Nominated Carrier Declaration are owners of network units and can offer services as well, Carriage Service Provider / Content Service Providers do not. Network units for the purpose are line links exceeding 500 meters or designated radio communications links (Mobile Base Stations, Satellite units etc.) used to provide public telecommunications services.¹ Specifically, network units comprise

- a) Single line links connecting distinct places in Australia
- b) Multiple line links connecting distinct places in Australia
- c) Designated radio communications facility
- d) Facilities specified in Ministerial declaration

An owner of a network unit can declare a carrier as his nominated Carrier provided the nominated carrier is ready to comply with the requisite conditions. Only one carrier can be declared as nominated carrier for one network unit. In such situation, the carrier would have to apply to the ACA for nominated carrier declaration. Carriage service providers do not require license. Spectrum and Numbers are allotted separately. Carriage Service providers may own infrastructure which is not

¹ Defence, Transport, electricity and Broadcast are exempted if the network is solely for these purposes

transmission infrastructure. These service providers do not pay any entry or license fee.

The following obligations are applicable to all Carriers

- a) Consumer and Community Obligation Industry codes and Standards
- b) Universal Service Regime
- c) Customer Service Guarantee
- d) Telecommunications Industry Ombudsman Scheme
- e) Emergency Services Arrangements
- f) Protection of Communication (confidentiality)
- g) National Interest
- h) Law Enforcement
- i) Defence Requirements and Disaster Plans
- j) Obligations to Promote Competition
- k) Pre-selection in favour of Carriage Service Providers
- l) Caller Line Identification
- m) International Issues
- n) Technical Standards
- o) Compliance to Numbering Plan
- p) Access Obligations
- q) Obligations imposed through Radio Communications Act.
- r) Compliance with Service Providers Obligations

In addition to the obligations a) to p), which are specific on Carriers, b) covers the obligations that Carriage Service Providers are required to meet. Also the Minister has the freedom to impose any other conditions through a determination.

The obligations on Carriage Service Providers include

- a) Compliance to the Act
- b) To provide operator service
- c) To provide directory assistance services
- d) Integrated Public Number Database
- e) To provide itemized billing
- f) Industry Codes and Practices
- g) Continued access to local un timed call
- h) Customer Service Guarantee
- i) Telecom Industry Ombudsman scheme
- j) Emergency Service arrangements
- k) Protection of Communication
- l) National Interest
- m) Law enforcement
- n) Defence requirement and disaster plan
- o) Technical standards
- p) Numbering Plan
- q) Obligation to promote competition
- r) Caller Line Identification
- s) International Issues

Licenses are granted to Carriers provided the ACA is satisfied that the applicant meets the following criteria

- a) Person applying is a constitutional corporation, an eligible partnership or a public body.
- b) The applicant has a current industry development plan, which has been approved by the Minister (e.g. R&D, Export development, encouraging employment in industries involved in manufacture, development or supply of services)
- c) Applicant has paid the requisite fees i.e. A\$ 10000 (Ten thousand only)
For Nominated Carrier Declaration, the annual fee is A\$ 3411.10.

The annual license fee comprises a fixed amount of \$A 10,000, a variable component (Eligible revenue based license fees derived from cost of administration) and USO. For the purpose of access, ACCC declares a list of services on which standard access obligations apply. Services are added/removed through a Public Enquiry Process.

3. European Union

The European Parliament and the Council gave a set of five directives² to its Member States so as to provide for a single Regulatory framework for all transmission network and services. The service specific licenses in the new framework would be replaced by authorizations. The Member States are however, permitted to impose a set of conditions to the general authorizations.

The EU directive creates a legal framework to ensure the freedom to provide electronic communication networks and services subject to the conditions laid down in the directive and other restrictions related to public policy, public security and public health. The directive covers authorisation of electronic communication networks and services whether they are provided to the public or not. It also envisages administrative charges to be imposed on providers of electronic communication services in order to finance the activities of the National Regulatory Authority in managing the authorization system and for the granting of rights of use. As per directive such charges should be limited to cover actual administrative cost for those activities. Systems for administrative charges should not distort competition or create barriers for entry into the market. With a general authorisation system it will no longer be possible to attribute administrative cost and hence charges to individual undertakings except for the granting of rights to use numbers, radio frequencies and for rights to install facilities. Any applicable administrative charges should be in line with the principle of a general authorisation system.

In addition to administrative charges, usage fees may be levied for the use of radio frequencies and numbers as a cost instrument to ensure the optimal use of such resources. Such fees should not hinder the development of innovative services and competition in the market. In case of competitive or comparative selection prevailing fees for rights of use of radio frequencies consist entirely or partly of one-off amount, the payment arrangements should ensure that such fees do not in practice lead to

² http://europa.eu.int/information_society/topics/telecoms/implementation/index_en.htm

selection on the basis of criteria unrelated to the objective of ensuring optimal use of radio frequencies. The process of implementation of authorisation scheme and alignment of the existing licenses with the new rules to take place in parallel as per the directive.

Minimum list of rights services from the general authorisation

Authorised undertakings shall have the rights to:-

- a) Provide electronic communication network and services.
- b) Have their application for the necessary rights to install facilities.
- c) Negotiate interconnection and obtain access to other providers' communication networks and services as per Access directive of EU.
- d) Be given an opportunity to be designated to provide different elements of a Universal Service and/or to cover different parts of the national territory in accordance with Universal Service directive of EU.
- e) Use of radio frequencies and numbers. Subject to rules and conditions ensuring efficient use of these resources as per framework directive of EU.

Conditions attached to General Authorisation, Spectrum and Numbering in the EU framework

“ The conditions listed in this Annex provide the maximum list of conditions which may be attached to general authorisations (Part A), rights to use radio frequencies (Part B) and rights to use numbers (Part C) as referred to in Article 6(1) and Article 11(1)(a).

A. Conditions which may be attached to a general authorisation

1. Financial contributions to the funding of universal service in conformity with Directive 2002/22/EC (Universal Service Directive).
2. Administrative charges in accordance with Article 12 of this Directive.
3. Interoperability of services and interconnection of networks in conformity with Directive 2002/19/EC (Access Directive).
4. Accessibility of numbers from the national numbering plan to end-users including conditions in conformity with Directive 2002/22/EC (Universal Service Directive).
5. Environmental and town and country planning requirements, as well as requirements and conditions linked to the granting of access to or use of public or private land and conditions linked to co-location and facility sharing in conformity with Directive 2002/22/EC (Framework Directive) and including, where applicable, any financial or technical guarantees necessary to ensure the proper execution of infrastructure works.
6. Must carry obligations in conformity with Directive 2002/22/EC (Universal Service Directive).
7. Personal data and privacy protection specific to the electronic communications sector in conformity with Directive 97/66/EC of the European Parliament and of the Council of 15 December 1997 concerning the processing of personal data and the protection of privacy in the telecommunications sector (1).
8. Consumer protection rules specific to the electronic communications sector including conditions in conformity with Directive 2002/22/EC (Universal Service Directive).

9. Restrictions in relation to the transmission of illegal content, in accordance with Directive 2000/31/EC of the European Parliament and of the Council of 8 June 2000 on certain legal aspects of information society services, in particular electronic commerce, in the internal market (2) and restrictions in relation to the transmission of harmful content in accordance with Article 2a(2) of Council Directive 89/552/EEC of 3 October 1989 on the coordination of certain provisions laid down by law, regulation or administrative action in Member States concerning the pursuit of television broadcasting activities (3).
10. Information to be provided under a notification procedure in accordance with Article 3(3) of this Directive and for other purposes as included in Article 11 of this Directive.
11. Enabling of legal interception by competent national authorities in conformity with Directive 97/66/EC and Directive 95/46/EC of the European Parliament and of the Council of 24 October 1995 on the protection of individuals with regard to the processing of personal data and on the free movement of such data (4).
12. Terms of use during major disasters to ensure communications between emergency services and authorities and broadcasts to the general public.
13. Measures regarding the limitation of exposure of the general public to electromagnetic fields caused by electronic communications networks in accordance with Community law.
14. Access obligations other than those provided for in Article 6(2) of this Directive applying to undertakings providing electronic communications networks or services, in conformity with Directive 2002/19/EC (Access Directive).
15. Maintenance of the integrity of public communications networks in accordance with Directive 2002/19/EC (Access Directive) and Directive 2002/22/EC (Universal Service Directive) including by conditions to prevent electromagnetic interference between electronic communications networks and/or services in accordance with Council Directive 89/336/EEC of 3 May 1989 on the approximation of the laws of the Member States relating to electromagnetic compatibility (1).
16. Security of public networks against unauthorised access according to Directive 97/66/EC.
17. Conditions for the use of radio frequencies, in conformity with Article 7(2) of Directive 1999/5/EC, where such use is not made subject to the granting of individual rights of use in accordance with Article 5(1) of this Directive.
18. Measures designed to ensure compliance with the standards and/or specifications referred to in Article 17 of Directive 2002/21/EC (Framework Directive).

B. Conditions which may be attached to rights of use for radio frequencies

1. Designation of service or type of network or technology for which the rights of use for the frequency has been granted, including, where applicable, the exclusive use of a frequency for the transmission of specific content or specific audiovisual services.
2. Effective and efficient use of frequencies in conformity with Directive 2002/21/EC (Framework Directive), including, where appropriate, coverage requirements.
3. Technical and operational conditions necessary for the avoidance of harmful interference and for the limitation of exposure of the general public to electromagnetic fields, where such conditions are different from those included in the general authorisation.

4. Maximum duration in conformity with Article 5 of this Directive, subject to any changes in the national frequency plan.
5. Transfer of rights at the initiative of the right holder and conditions for such transfer in conformity with Directive 2002/21/EC (Framework Directive).
6. Usage fees in accordance with Article 13 of this Directive.
7. Any commitments which the undertaking obtaining the usage right has made in the course of a competitive or comparative selection procedure.
8. Obligations under relevant international agreements relating to the use of frequencies.

C. Conditions which may be attached to rights of use for numbers

1. Designation of service for which the number shall be used, including any requirements linked to the provision of that service.
2. Effective and efficient use of numbers in conformity with Directive 2002/21/EC (Framework Directive).
3. Number portability requirements in conformity with Directive 2002/22/EC (Universal Service Directive).
4. Obligation to provide public directory subscriber information for the purposes of Articles 5 and 25 of Directive 2002/22/EC (Universal Service Directive).
5. Maximum duration in conformity with Article 5 of this Directive, subject to any changes in the national numbering plan.
6. Transfer of rights at the initiative of the right holder and conditions for such transfer in conformity with Directive 2002/21/EC (Framework Directive).
7. Usage fees in accordance with Article 13 of this Directive.
8. Any commitments which the undertaking obtaining the usage right has made in the course of a competitive or comparative selection procedure.
9. Obligations under relevant international agreements relating to the use of numbers."

Source:- Directive 2002/20 EC - dated 7th March 2002

Roll Out

In the European countries, while awarding 3G licenses, roll out was a criteria. The details are shown in the table below:

Coverage and Rollout obligations on 3G mobile operators in EU Member States

	Coverage and rollout obligations	Actions taken by NRA if obligations not met
Belgium	30% population after 3 yrs, 40% population after 4 yrs, 50% population after 5 yrs, 85% population after 6 yrs, may be reviewed by Government	The Minister may, on BIPTs advice, impose financial penalties (fines) if coverage obligations are not met within a reasonable time.
Denmark	30% population coverage by end of 2004, 80% population coverage by end of 2008	Penalties may be set by NTA in the event of failure to meet the minimum requirements of the license or refusal to submit information

Germany	25% population by end 2003, 50% population by end 2005	License may be revoked
Greece	25% population by December 2003, 50% by December 2006, at minimum 144 kbit/s for downlink and 64 kbit/s for uplink	Infringement of license obligations may result in recall, suspension or revocation of the license.
Spain	Coverage for all Spanish cities with over 250,000 inhabitants by June 2002; 90% population by 2005	There are financial guarantees associated with coverage and number of base stations etc.
France	2 years after launch: 25% population coverage for voice, 20% for 144 kbit/s packet data ; 8 years after launch : 80% population coverage for voice, 60% for 144 kbit/s packet data	No financial guarantees but license may be revoked.
Ireland	To be decided	
Italy	Regional capitals within 30 months and provincial capitals within extra 30 months	
Luxemburg	To be decided	
Netherlands	By 1 Jan 2007, coverage at 144 kbit/s must be provided in built-up areas of all municipalities with over 25,000 inhabitants, on all main connecting arteries and through motorways to Belgium and Germany, and in and around the three main airports. This equates to roughly 60% of population.	No financial guarantees or penalties but license may be revoked or altered if the licensee no longer meets the requirements set on it to be eligible for the license.
Austria	25% population by end 2003, 50% population by end 2005	Financial penalties apply if coverage requirements are not fulfilled.
Poland	Minimum 20% population after 1 yr, 40% after 3 yrs, 60% after 5 yrs, but each operator has committed to higher figures as part of the tender process – these are included in individual licenses	A lump sum is paid to ICP in the form of a bank guarantee (2, 493,989) which is paid back yearly during the first five years as the licensee meets its objectives
Finland	No coverage obligation	No financial guarantees or penalties
Sweden	99.98% population coverage by 31 st December 2003 (based on commitments made in license applications)	
UK	80% UK population by 31 st December 2007	No financial penalties but license may be revoked.

Source:- Study on administrative and frequency fees related to the licenses of networks involving the use of frequencies AEGIS, 14th Nov 2001

Migration of Cellular operators have not yet taken place in any of the EU countries.

4. Malaysia

In the converged framework, there are four categories of licenses viz. Network Facilities Providers, Network Service Providers, Application Service Providers and

Content Application Service Providers. The services falling under these categories are further subdivided into Individual, Class and Exempt Services. Class licenses have lower level of regulation than individual.

Network Facilities Providers (NFP) - are the owners of facilities such as satellite earth stations, broadband fibre optic cables, telecommunications lines and exchanges, radio-communications transmission equipment, mobile communications base stations, and broadcasting transmission towers and equipment. They are the fundamental building block of the convergence model upon which network, applications and content services are provided. NFP are the largest and the most heavily regulated licensees. Often NFP licenses entail special conditions such as roll out obligations etc.

NFP Class Licensees are limited purpose niche networks such as Radio transmitters for Paging, PMRTS, P-P & P-MP Internet wireless Broadband links.

Network Services Providers (NSP) - provide the basic connectivity and bandwidth to support a variety of applications. Network services enable connectivity or transport between different networks. A network service provider is typically also the owner of the network facilities. However, a connectivity service may be provided by a person using network facilities owned by another.

e.g. Bandwidth Services, Broadcasting distribution services. NSP Class Licensee include Niche customer access, connection service, Broadband connection between end user and Internet Access Service Provider.

Applications Service Providers (ASP) - provide particular functions such as voice services, data services, content-based services, electronic commerce and other transmission services. Applications services are essentially the functions or capabilities, which are delivered to end-users. This category enables service provision to end users such as Public Cellular, MVNO or reselling, Payphone, IP Telephony. **ASP class licenses include** Audio text, Messaging Services, Directory services, Internet Access Services.

For providing IP Telephony, an ASP individual license is required. There is no difference in terms of numbering between PSTN IP Telephony and Internet Telephony. IP Telephony services are accessed by multiple dialing procedures as only NSP, NFP have PSTN numbers.

Content Applications Service Providers (CASP) - are special subset of applications service providers including traditional broadcast services and newer services such as online publishing and information services. At this point of time there are no Class CASP license

Class licenses are renewed annually. The potential licensee applies for license to MCMC. MCMC makes a recommendation to the Minister. The Minister decides the license application. After which either the license is granted or refused. In event of refusal, the reasons are let known to the licensee. Financial/ Business plan, applicant's background etc are evaluated on a case-to-case basis. Often extra conditions are imposed in the licenses.

Applicable fees: The applicable license fees for each type of Individual licence are as follows:

- a) Application Fee - RM10,000 (non refundable)
- b) Approval Fee - RM 50,000
- c) Annual Fee - 0.5% of Gross Annual Turnover as reduced by rebates to a minimum of 0.15% of GAT or RM50,000 - whichever is higher

All these fees are on per license basis. The license fees for class license are RM 2500 per annum. Fees was set to cover administrative costs and also to harmonize the existing license fees in the earlier regime. There are rebate clauses in License Fee for R&D, HRD Skills, Value Added procurement from Local SME, Local Content.

For issues such as Rights of Way, Spectrum, separate authorizations are required.

For classifying areas under USO, penetration rate of fixed service was used as benchmark to classify an area as under served areas. Competitive mechanism is followed to award the work for USO. Relevant licenses are required. Choice of technology is with the operators but tariffs are regulated. USO funding is a percentage of revenue accruing from defined services.

The regulator promotes Infrastructure sharing. Some steps taken by MCMC include

- Encouraging lease over build
- While licensing 3G Services, there was a special weightage (20%) to Infrastructure Sharing.

No compensation was granted to any operator as a result of migration. However, it was ensured that no operator was worse off from the pre migration regime. At the point of migration, the existing operators were permitted to provide only those services that existed prior to migration. But these operators were free to apply for new licenses post migration so as to increase their ambit of service provision. The migration process extended over a period of about 2 years. Some of the incentives that the migrating service providers had were

- Potential increase in scope of license (as scope could be increased by paying a very low amount);
- Increase in validity of license
- Spectrum was retained with the migrating operators, which would mean that they were in a position to expand on the applications using the earlier spectrum.

5. Singapore

The Singapore telecommunication services market was fully liberalised from 1st April 2000. As required under the Telecommunications Act, any person operating and providing telecommunication systems and services in Singapore has to be licensed. The Info-communications Development Authority of Singapore (IDA) has adopted a two-pronged licensing approach that differentiates between licensees based on the nature of their operations i.e. whether facilities-based or services-based type of operations. The licensing framework is formulated on a hierarchical basis with

Facilities-Based Operators (FBO) being at the higher hierarchical level. Thus, licensees who are licensed as FBO would be able to offer services that Services-Based Operator (SBO) can offer, but not vice versa. Also, the intention is that an entity should be issued a single licence for all the networks/services it intends to operate/offer. Hence, if a SBO decides to build its own network after building up its market share, it can apply to be licensed as a FBO at that stage. The FBO licence will then replace its SBO licence. Service Based license is further divided into Individual and Class license.

Facilities-based operations refer to the deployment of any form of telecommunication networks, systems and facilities by any persons, outside of their own property boundaries, to offer telecommunication services to third parties, which may include other licensed telecommunication operators, business customers or the general public. Parties intending to deploy such operations will require a FBO Licence from the IDA. Telecommunication networks, systems and facilities include any telecommunication infrastructure for the carriage of telecommunication or broadcast traffic. The traffic can be cross-border or local in nature, and the network coverage can be nationwide or only confined to selected geographical areas in Singapore. These may include mobile communications systems (e.g. base stations, mobile switching centres) required to offer public mobile phone, paging, trunked radio or mobile data services; and fixed telecommunication systems (e.g. switches, optical fibre, cable ducts, submarine cables, frontier stations, international cable and satellite gateways) required to offer local and international voice, data and leased circuit services.

Separate licences or authorisation may be required from other relevant government agencies for the deployment and/or provision of certain types of networks and/or services. The range of telecommunication services to be provided over the licensees' facilities can include backbone/wholesale bandwidth capacity and interconnection/access services to other licensed telecommunication operators, or other domestic and international services. such as Public Switched Telephone Services, Public Switched Message Services, Public Switched Integrated Services Digital Network (ISDN) Services, Leased Circuit Services, Public Switched Data Services, Public Radio Communication Services 2, Public Cellular Mobile Telephone Service (PCMTS), Public Radio Paging Services (PRPS), Public Trunked Radio Services (PTRS), Public Mobile Data Services (PMDS), Public Mobile Broadband Multimedia Services, Public Fixed-Wireless Broadband Multimedia Services, Terrestrial Telecommunication Network for Broadcasting Purposes, Satellite Uplink/Downlink for Broadcasting Purposes

The framework, however, attributes different entry fees & annual license fees for different class of services. These services are categorized as under:

License	License Fee	
⇒ <u>FBO designated as PTL</u>	Initial Fee: Annual Fee License duration:	None 1%AGTO, subject to a minimum of \$ 250,00 per year 20 years, renewable for a further period as IDA thinks fit
⇒ <u>Terrestrial telecommunication networks for telecommunication purposes</u>	Initial Fee: Annual Fee License duration:	None 1%AGTO, subject to a minimum of \$ 100,00 per year 15 years, renewable for a further period as IDA thinks fit
⇒ <u>Public cellular mobile telephone services</u> ⇒ Public mobile broadband multimedia services ⇒ Public fixed wireless broadband multimedia services	Due to limited frequency spectrum, the license fees and license duration will be specified together with the approach to award the respective spectrum rights and licenses, via a comparative selection exercise and / or an auction exercise.	
⇒ <u>Public radio paging services</u> ⇒ Public mobile data services ⇒ Public trunked radio services	Initial Fee: Annual fee License Duration	None 1% AGTO, subject to a minimum of \$1,200 per year 10 years, renewable for a further period as IDA thinks fit
⇒ <u>Terrestrial telecommunication networks for broadcasting purposes only</u> ⇒ Satellite Uplink/Downlink for broadcasting purposes	Initial Fee: Annual fee License Duration	None \$5,000 10 years, renewable on a 5 – yearly basis

In Singapore, the numbers are priced and are allocated through bidding or balloting.

IDA has published a 'Code of practice for competition in the Provision of telecommunication services', which provides the detailed rules. Under the code of practice, the Licensees are subjected to varying conditions of dominance / non-dominance, duty to end user, Interconnection and Sharing, Competition rules and Enforcement conditions based on the following classifications

- Dominant Facilities based Licensees,
- Non Dominant Facilities based licensees,
- Service based licensees that use switching or routing equipment,
- Service Based Licensees that do not use switching or routing equipment
- Self provisioning Licensees
- Telecommunications equipment Dealer Licenses

Annexure-III

Entry fees for Cellular Mobile Service Providers and Basic Service Operators									
Cellular						BSOs			
S. No.	Circle (A)	Licensee (Old) (B)	From Licensees of Pre-Migration (Amt. in Crores) (C)	New Licensee (D)	From 4th Cellular Operators (Amt. in Crores) (E)	Name of the operator (F)	Entry fee from Licensees migrated (Amt. in Crores) (G)	Name of new operator (H)	Entry fee from new operators (Amt. in Crores) (I)
1	Rajasthan	ADIL	108.99	Escorts	32.25	Shyam Telelink	29.29		
	Rajasthan	Hexacom	108.34						
	Rajasthan							Reliance Telecom	20
2	UP(East)	ADIL	138.25	Escorts	45.25			Reliance Telecom	15
3	Gujarat	Birla AT & T	511.95	Bharti	109.01	Reliance Telecom	179.09	TTSL	40
		Fascel	508.78						
4	Maharashtra	Birla AT & T	473.03	Bharti	189	Hughes	532.55	Reliance Telecom(Inc. Mumbai	115
		BPL	470.1						
5	North East	Reliance	1.21						
		Hexacom	1.21						
6	Karnataka	Spice	395.04	Barakamba	206.83			TTSL	35
		Bharti Mobile	375.7					Reliance Telecom	35
								Bharti Telenet	35
7	Punjab	Spice	359.02	Escorts	151.75	HFCL	177.59	Reliance Telecom	20
		Bharati Mobile	488.49						
8	AP	Bharti Mobile	285.64	Barakamba	103.01	TTSL	161.47	Reliance Telecom	35
		Tata	283.87						
9	Haryana	ADIL	68.49	Bharti	21.46			Reliance Telecom	10
		Escotel	68.49					Bharti Telenet	10
10	Kerala	Escotel	147.53	Bharti	40.54			Reliance Telecom	20
		BPL	147.53						

Annexure-III (Contd/-)

Entry fees for Cellular Mobile Service Providers and Basic Service Operators									
Cellular						BSOs			
S.No.	Circle (A)	Licensee (Old) (B)	From Licensees of Pre-Migration (Amt. in Crores) (C)	New Licensee (D)	From 4th Cellular Operators (Amt. in Crores) (E)	Name of the operator (F)	Entry fee from Licensees migrated (Amt. in Crores) (G)	Name of new operator (H)	Entry fee from new operators (Amt. in Crores) (I)
11	UP(West)	Escotel	115.92	Bharti	30.55			Reliance Telecom	15
12	West Bengal	Reliance	12.24					Reliance Telecom(Inc. Kolkata)	25
13	MP	Reliance	14.56	Bharti	17.45	Bharti Telenet	35.33	Reliance Telecom	20
		RPG	14.56						
14	Assam	Reliance	0.38						
15	Bihar	Reliance	89.5					Reliance Telecom	10
16	Himachal	Reliance	4.27	Escorts	1.1			Reliance Telecom	2
		Bharti Telenet	4.27						
17	Orissa	Reliance	58.49					Reliance Telecom	5
18	Tamil Nadu	BPL	238.56	Bharti	79			TTSL(Inc. Chennai)	50
		Srinivas	44.35					Reliance Telecom(Inc. Chennai)	50
								Bharti Telenet(Inc. Chennai)	50
19	Delhi	Bharti	98.15	Birla At & T	170.7			TTSL	50
		Sterling	70.94					Reliance Telecom	50
								Bharti Telenet	50
20	Mumbai	BPL	88.86	Bharti	203.66				
		Hutchison Max	83.33						
21	Chennai	RPG	21.59	Barakamba	154				
		Skycell	20.95						
22	Kolkata	Modi Tels	31.5	Reliance	78.01				
		Usha	25.8						
23	A&N							Reliance Telecom	1
	Total		5979.88		1633.57		1115.32		768