

Consultation Paper No. 99/2

TELECOM REGULATORY AUTHORITY OF INDIA

CONSULTATION PAPER

ON

GLOBAL MOBILE PERSONAL COMMUNICATIONS by SATELLITE

July 27, 1999

PREFACE

1. During the past few years, the market segment of mobile phones has expanded from being a business tool for senior executives to a more general utility. The phenomenal growth of terrestrial cellular market appears to have convinced companies in the space and communications business as well as a growing band of investors that there is a market for mobile satellite services. The satellite telephony is now targeting the niche market of the world's mobile users who want the convenience of being able to make a call from wherever in the world they may be at any point of time. Global Mobile Personal Communications by Satellite (GMPCS) service providers are taking up positions to exploit recent advances in satellite technology to provide global mobile satellite telephony service at economical cost.
2. The Government of India recently opened up the market for GMPCS Service. The policy in this regard provides for issue of licenses on a non-exclusive basis without any restriction on the number of service providers, coverage being voice and non-voice messages, data services and information services.
3. First license has been issued in October 1998 to M/s Iridium India Telecom Ltd. (Iridium) on a provisional basis. Final license will be based on recommendations of the TRAI in the matter of license fee structure, and terms and conditions of the License Agreement.
4. This Consultation Paper presents various issues relevant for licensing of GMPCS service. Even though the basis of this Paper is the Provisional License Agreement with Iridium, the issues have been dealt with in a generic manner so as to formulate recommendations, which would apply to all the GMPCS service providers who may wish to enter the Indian market.
5. The broad structure and format of the Provisional License Agreement for GMPCS service is the same as that for other services licensed in India. In this present exercise, the TRAI has analyzed all the clauses/ conditions of the Provisional License Agreement for GMPCS service to flag the relevant points for initiating public debate. An attempt has also been made to present the alternate draft by restructuring and rationalising the terms & conditions of the Provisional License Agreement. It is expected that debate on the structure and contents of these draft Agreements (Appendix III and IV of this Paper) will facilitate TRAI in formulating its recommendations on model terms and conditions of the License Agreement for GMPCS services.
6. On the issue of license fee structure, we have raised certain substantive issues for debate, having a bearing on the rationale for levying license fee as a percentage of the revenue share.

7. The options in the Paper in regard to structure of license fee, and comments on the terms and conditions of License Agreement do not constitute any preferences of the TRAI at this point in time. Any expression of opinion in the document is to be read in the context of analysis of the existing status/ options and is not necessarily a view of this Authority, presently.

8. Comments on any or all issues raised in this Paper are solicited on or before 13th August 1999. Public consultation through Open House Session would be held thereafter, which alongwith views/ opinions of all stakeholders would form the basis for formulating the recommendations in this regard. For any clarification in the matter, **Mr. Rakesh Kapur, Joint Secretary (Commercial)** or **Mr. Sanjay Kumar, Deputy Secretary (Commercial)** may be contacted on telephone number **331 6782 or 335 6523**, respectively (Fax No. **373 8708 / 335 6083**) (E-Mail No. traid@del2.vsnl.net.in).

(Justice S. S. Sodhi)

Chairperson

Dated: July 27, 1999

CHAPTER I

INTRODUCTION

Scope of this Paper

1. The satellite-based services are globally becoming increasingly important in the competitive telecommunications market. In its capacity as the Licensor, the Department of Telecommunications (DOT) granted a provisional license to M/s Iridium India Telecom Ltd. (Iridium) for setting up and operating GMPCS network and providing GMPCS service in the country on a non-exclusive basis. An agreement to this effect was signed on 28.10.98, the contents of which are discussed in Appendix III of this Paper.
2. The Telecom Regulatory Authority of India (TRAI) was informed by the DOT that the terms and conditions of the provisional License Agreement for GMPCS service were based on the recommendations of an inter-ministerial committee, which consisted of DOT, Department of Space, Ministry of Home Affairs, Ministry of Defence and Department of Electronics. The inter-ministerial Committee had recommended that the license fee as well as other terms and conditions of the provisional License Agreement should be subject to such modifications as may be finally decided after obtaining the recommendations of the TRAI. Suitable clauses to this effect had been incorporated in the Provisional License Agreement. Accordingly, **the DOT made a reference to the TRAI seeking its recommendations on the quantum and structure of license fee as well as other terms and conditions of license agreement for the provision of GMPCS service.**
3. **The reference made by the DOT is specific in regard to the Provisional License Agreement entered into with Iridium. The consultative exercise initiated by the TRAI through this Paper, however, deals in a generic manner with the various issues that need to be addressed in respect of the licensing of GMPCS services. This includes the issues connected with competition and licensing regime for the GMPCS service with a focus on the terms and conditions of License Agreement, and the structure and quantum of license fee.**
4. This Consultation Paper provides information on technical and operational aspects of GMPCS service by way of background along with substantive policy and regulatory issues. It contains clause-by- clause analysis of the provisional license agreement entered into with Iridium, which forms the basis for initiating public debate on the license fee structure, and terms and conditions of license agreement for the GMPCS service providers. The TRAI has also presented in this Paper a draft of a re-structured License Agreement for the GMPCS service to facilitate the public debate.

5. Open consultations with the service providers, licensor, consumers' organizations and other concerned agencies will lead to formulation of the Authority's recommendations in the matter in accordance with the provisions of Section 11 (1)(b) of the TRAI Act, 1997.

GMPCS Policy Framework as per NTP 1999

6. The policy framework in regard to GMPCS Service as contained in the New Telecom Policy (NTP) 1999 (announced in March 1999) mentions that the Government has opened up the GMPCS market in India and has issued a provisional license. The terms of the final license would need to be finalised in consultation with TRAI. All the calls originating or terminating in India shall pass through VSNL gateway or in case of bypass, it should be possible to monitor these calls in the Indian gateways. VSNL is also to be compensated in case its gateway is bypassed. The GMPCS operators shall be free to provide voice and non-voice messages, data service and information services utilising any type of network equipment, including circuit and/or packet switches that meet the relevant International Telecommunication Union (ITU) / Telecommunication Engineering Center (TEC) standards. However, the licenses will be awarded after the proposals are scrutinised from the security angle by the Government. The appropriate entry fee/revenue sharing structure would be recommended by TRAI, keeping in view the objectives of the NTP 1999.

7. NTP 1999 also envisages direct interconnectivity between licensed service providers (such as Cellular Mobile Service Providers, Fixed Service Providers, Cable Service Providers, Radio Paging Service Providers and Public Mobile Radio Trunking Service Providers) and any other type of service providers in the area of operation. In addition, sharing of infrastructure among service providers within the same service area has also been permitted. Interconnectivity between service providers in different service areas is to be reviewed in consultation with the TRAI.

8. The above policy initiatives are relevant while looking at the issues connected with the licensing regime for GMPCS service.

Structure of the Paper

9. This Consultation Paper consists of four Chapters, as under, including this Introductory Chapter:

- Chapter II provides an overview of the technical and operational features of GMPCS systems. It also covers briefly the regulatory issues with details mentioned in Appendix I and II.
- Chapter III deals with the existing terms and conditions of licensing GMPCS service in India. It analyses the terms and conditions of the provisional license agreement and provides comments on its different conditions/ clauses (in Appendix III) which need to be debated. An alternate draft has also been

suggested as per Appendix IV, rationalising the structure of the existing license agreement.

- Chapter IV deals with the Selection Criteria and License Fee structure for GMPCS service. The information on licensing regime and license fee structure for GMPCS service in other countries is contained in Appendix V and VI, respectively.

CHAPTER II

AN OVERVIEW OF GMPCS SYSTEMS

Definition of GMPCS

10. The term Global Mobile Personal Communications by Satellite (GMPCS) encompasses all communications satellite systems. At the GMPCS MOU group meeting held in Geneva on October 6-7, 1997, following definition of GMPCS system was agreed to:

"Any satellite system (i.e. fixed or mobile, broad band or narrow band, global or regional, geo stationary or non-geo stationary, existing or planned) providing telecommunication services directly to end users from a constellation of satellites".

11. GMPCS MOU essentially commits its signatories to developing arrangements on issues such as type approval and marking of terminals, licensing, customs duties and traffic data reporting.

12. GMPCS systems have been technically designed to be able to provide roaming capability of terminals over all places within the extent of their satellite beam coverage. The systems have capability wherein GMPCS terminal in any geographical location within the beam coverage can be detected and identified through radio contact between terminals and satellites, and the subscriber management function of the GMPCS network. Big LEO GMPCS systems have global beam-coverage and can, therefore, provide global service because the roaming availability spans over the entire globe. On the other hand, regional GMPCS systems like GEO-MSS will permit their subscriber terminal roaming within the service region of the system, which falls within the beam coverage. These regional GMPCS systems may offer extended connectivity through mutually compatible interface standards and agreements with other regional systems.

13. Through global service capability, GMPCS systems can extend the coverage of mobile services beyond terrestrial wireless network (PLMN) services. GMPCS systems are not designed to replace the basic telecommunications infrastructure (PSTN) services

and, hence, are not competitive with the services offered by terrestrial wireless and wired services. This may be clearly recognized by the service features of GMPCS terminals. Big LEO and GEO-MSS GMPCS terminals will offer two modes of access features in the network level, i.e. GMPCS terminal mode and terrestrial PLMN terminal mode. In addition, Big LEO GMPCS terminals will also offer multiple modes of compatibility features in the signal level, i.e. GSM, CDMA and TDMA, etc. Big LEO services are, therefore, complementary to, rather than competitive with, PSTN and PLMN services.

14. Most little LEOs rely heavily on the integration with existing terrestrial networks to provide messaging, tracking, and monitoring services.

15. The GMPCS initiatives have until now been largely on the planning board, with sophisticated marketing of ambitious plans and promises thrust into the public spotlight to gain maximum publicity and venture capital. But with real deadlines to meet, commercial realities have taken over as GMPCS operators struggle to be first to orbit and then to market. A number of GMPCS initiatives are finally heading for the Information Super Skyway. Till recently, portable satellite telephony and data was available using briefcase-size luggage costing upwards of US \$ 10,000 and around US \$7 per minute. A number of **Afro-centric** data satellites scheduled to be launched will further expand the embryonic sky network forming over the continent. Competitive systems plan to blanket the globe by 2004 with coverage from a constellation of over 1,500 satellites that could integrate with existing terrestrial cellular and PSTN networks.

16. Almost all of the GMPCS will offer a combination of all-digital voice, data, fax and paging services to and from hand-held telephone devices, some no larger than current GSM cellular handsets.

17. Background details on the technical and operational features of GMPCS Systems are given in Appendix I.

Regulatory Issues

18. Satellite systems providing GMPCS service do have some important differences compared to terrestrial telecom networks, such as their ability to provide global or regional coverage from day one and the freedom of positioning gateways at any convenient location, enabling instant connectivity from virtually anywhere in the world. This feature makes satellite services uniquely suitable in some situations (e.g. disaster relief, remote areas, etc.) For that reason, there can be regulatory treatment different to that of terrestrial networks. Broad policy and regulatory issues on GMPCS service include National Sovereignty, Security Issues, Frequency Spectrum Availability and Management, and Fair Competition.

19. Details of the Regulatory Issues connected with GMPCS System are discussed in Appendix II.

The Iridium System

20. Unlike the other Mobile Satellite Service systems, Iridium claims to use an ambitious network of inter-satellite switches for global coverage and GSM-type technology to link mobiles to the satellite network. As of July 21, 1998 all of Iridium's **66 Low Earth Orbit (LEO)** satellites were in the sky. Having gone commercial, the system provides voice, fax, data (only at 2,400 band), messaging and paging services. It expects 1 million users by 1999. Costs were projected around \$3 per minute for calls.

21. Globalstar, Odyssey, and ICO Systems will, however, do switching on the ground using local earth stations.

Iridium Service in India

22. Iridium operates in India through its US\$ 70 million company called Iridium India Telecom Ltd. (IITL). IITL is owned by a consortium of Indian Investors led by IDBI (Industrial Development Bank of India) and with major investments by EXIM bank, IL & FS, SBI, SCICI etc. IITL has set up an Iridium gateway station in India at Dighi (near Pune), which caters as the interface for the transport of calls from/to the PSTN in the franchised territory. The gateway is maintained solely and exclusively by VSNL. This will be the sole Iridium gateway in the South Asian region and would cover Bangladesh, Bhutan, Maldives, Nepal, India and Sri Lanka. Pakistan is served by the Middle East gateway at Jeddah. The gateway is one of the 12 gateways established for the Iridium System.

23. The services proposed to be offered include Mobile satellite service, Iridium Cellular Roaming Service (in alliance with other cellular operator), Iridium Paging Service and Solar powered phone booths. Iridium has a provisional license valid for one year starting October 28, 1998 for the service.

Market Structure in India

24. Iridium plans to market its service through cellular operators, supplementing their services rather than competing with them. It plans to target 5% of the cellular market over the next 5 years with a gradual increase of 1% each year. It is understood that Iridium anticipates 600,000 voice subscribers to break even with the cost, which it expects to achieve by the year 2000-2001. It would be targeting corporate segments and high-end business segments as potential customers. Remote and inaccessible areas would be another major customer segment. Railways, ONGC, Defence, Mining, Off-shore applications and Airlines are some of the potential Indian customers.

CHAPTER III

LICENSING OF GMPCS SERVICE IN INDIA

25. Iridium India Telecom Ltd. (Iridium) is the first company to have commenced GMPCS service in India in February 1999 on the basis of the provisional license granted to it in October 1998.

26. The provisional License Agreement with Iridium permits the licensee to set up and operate GMPCS network and to provide service on a non-exclusive basis in accordance with the terms and conditions mentioned therein. The license fee payable on provisional basis consists of the Fixed Component of Rs.1 Crore per annum, and Variable Component @ 16 percent of Gross Revenue per annum. License period is indicated as 10 years with the option of extension for a period of one year or more at one time in case the licensee makes a request to this effect latest by the end of 9th year from the effective date. Service area for GMPCS Service is defined as the territorial jurisdiction of the Union of India except for specified areas (that may be notified to be excluded) from time to time.

27. DOT had previously offered the provisional license agreement for Satellite Mobile Telephone Service to M/s Afro-Asian Satellite Communications Ltd. in 1995. The licensee was required to provide the service through its AGRANI satellite. A snap shot of the variations in some of the salient clauses/conditions proposed by the DOT in the provisional License Agreement with Afro-Asian (in 1995) and as included now in the provisional license agreement with Iridium (in 1998) is captured in the tabulation given below:

Provisional License Agreements			
Sl.No.	Clause/Condition	Afro-Asian	Iridium
1.	License period	License is granted for a period of 13 years extendable for another 13 years at one time at the	License is granted for a period of 10 years with extension for a period of 1 year or more at one time

		sole discretion of the Authority.	on request made by the licensee latest by the end of 9 th year.
2.	License fee	Licensee shall pay a license fee consisting of a fixed amount of Rs.1 crore plus 5% of his gross turn over resulting from the operation of services in India per annum excluding the PSTN/PSPDN/Telex utilisation charge paid to DOT by the licensee. The Government reserves the right to revise the license fee after completion of 3 years from the effective date.	License fee for the provisional license period shall consist of an amount of fixed component of Rs.1 crore per annum and variable component equal to 16% of the gross revenue generated from the services per annum. Provisional license fee shall be adjusted retrospectively as per final license fee structure to be finalised based on TRAI's recommendations.
3.	Requirement to provide the service	The licensee shall install and run applicable system within 36 months of the effective date	The licensee shall install and run the applicable system within 6 months from the effective date.

Provisional License Agreement with IRIDIUM

28. The structure and format of the Provisional License Agreement for GMPCS service are similar to that for other telecommunication services licensed in this country. The license format typically contains the following clauses/conditions, which are mentioned in the License Agreement, and Schedules A and B (Part I & II) attached to it:

- Details of licensee;
- License period;
- Quantum of license fee and schedule of payments;
- Service area;
- Application of relevant Acts;
- Tariffs;
- Restrictions on sub-licensing;
- Definitions, Interpretations and Transitional provisions relating to the Conditions;
- Requirements to provide the service;
- Quality of Service;
- Mean Time to Restore;
- Security considerations;

- Prohibition of certain activities by the licensee;
- Right to Inspect;
- Requirement to furnish information to the Licensor/ Telecom Authority;
- Engineering details;
- Acceptance Testing and Quality of Service;
- Delivery of service;
- Complaint-Booking and Treatment;
- Force-Majeure;
- Network connectivity;
- GMPCS Mobile Terminals;
- Termination of License;
- Dispute with other parties;
- Arbitration of Disputes;
- Financial Conditions;
- Preparation of Accounts;
- Financial Bank Guarantee;
- Payment of License Fee and other payments;
- Access Charges;
- Charges for Network Resources;
- Publication of the Service Directory;
- Set Off of dues;
- WPC Wing' License
- Compliance Statement.

29. There are repetitions and duplications with many conditions re-appearing at different places of the license format. In addition, some of the clauses/ conditions are one sided and tend to ignore the provisions of other legislation including the TRAI Act, 1997.

30. The provisional License Agreement gives an idea of the basic framework for the GMPCS service that the Licensor has in view. Appendix III of this Paper contains in a tabular form the clause-by-clause review of the provisional License Agreement, which has been entered into with Iridium. The analysis highlights the areas where the license agreement needs to be improved/ modified.

31. The overview comments tabulated against different conditions/ clauses of the provisional license agreement as per Appendix III may be categorized as under:

- Comments of a general nature;
- Comments relating to the operation of the license agreement;
- Provisions where regulatory functions need to be defined appropriately;
- Issues raised by specific clauses;
- Topics needing incorporation in the agreement.

32. These comments have been tabulated to initiate the debate on the terms and conditions of the license for GMPCS Service. Taking cue from the overview comments on the provisional License Agreement, the TRAI has attempted to

present (in Appendix IV) an alternate draft of the License Agreement for the GMPCS service. This re-structured draft provides a rationalized framework of the License Agreement to facilitate public consultations for evolving model terms and conditions that a generic License Agreement for GMPCS service must contain. Public consultation on these terms and conditions will facilitate TRAI in formulating its recommendations in the matter including on the revised format for the License Agreement.

CHAPTER IV

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SELECTION CRITERIA AND LICENSE FEE STRUCTURE

33. GMPCS policy of the Government of India envisages issue of license for GMPCS service on first come first served basis without artificially limiting the number of operators. Perhaps the policy assumes that the GMPCS service providers will primarily be network providers i.e., the owners of the GMPCS system and related ground segments, and that they will be supported mainly by cellular service providers, who will provide the GMPCS as an extended cellular service.

34. The allotment of orbital slots and allocation of frequency are amongst the prime pre-requisites for operating satellite systems, which are coordinated under the aegis of ITU. In other words, an ITU approved system only may qualify for a license to operate GMPCS services in India.

Selection Criteria

35. As stated above, GMPCS policy of the Government of India permits entry of service providers on a non-exclusive basis with no restriction on the number of service providers subject to availability of spectrum. Introduction of unrestricted competition needs a simple selection process with the objective of eliminating undesirable entities, without any requirement of a comparative evaluation of different proposals.

36. By the very nature of the service, there may be a limited number of GMPCS network operators who will take on the business of providing the actual service. Bandwidth

constraints also may pose limitation on accommodating unlimited number of providers. However, in case at any time in future, technological developments make it possible to permit unlimited number of players, it may become necessary to delineate the basis for selection of GMPCS service providers. Any such selection criteria will have to be transparent, non-discriminatory, simple and easy to implement with minimum cost ensuring that only serious entities enter the market. It will include delineation of eligibility criteria, selection parameters and evaluation criteria.

37. GMPCS service providers may operate at the Regional or Global level depending upon the beam coverage/ footprint of their satellite system. In view of security considerations associated with the GMPCS Service, Government agencies other than DOT/TRAI would also be involved in the scrutiny of license applications.

38. An applicant entity must normally be required to meet the basic standards to become eligible for providing the service. These may include qualifying conditions such as:

- The applicant being a corporate entity registered in India
- Restrictions on minimum equity stake of the promoter company in the entity.
- The share holding pattern conforming to the FIPB guidelines for telecommunications sector in terms of foreign equity participation.
- Total net worth of the entity with criteria for minimum net worth (such as Rs. 100 crore).
- Arrangement for the Satellite System/Space Segment.

39. The applicant will need to demonstrate that it has adequate resources to provide the intended service. This will typically involve the production of a business plan identifying sources and guarantees of finance, and detailing its business strategy.

Issue for Consideration

40. GMPCS service has just commenced. As per the policy for this service, there is no restriction on the number of service providers. Licenses will be issued on first come first served basis to every applicant on the similar terms and conditions. NTP 1999 does not contemplate seeking TRAI's recommendations on the basis for selection of new GMPCS Service providers. It is, therefore, not relevant to have an extensive debate on the selection criteria for the issue of GMPCS license.

License Fee

Objectives of the New Telecom Policy 1999

41. The New Telecom Policy (NTP), 1999 enunciated by the Government in March 1999 envisages that an environment be created for continued investment in the telecom sector for speedy augmentation of the communication infrastructure. The key objectives of NTP 1999 include:

- Access to telecommunications for achievement of the country's social and economic goals;
- Strive to provide a balance between the provision of universal service to all uncovered areas, including the rural areas, and the provision of high-level services capable of meeting the needs of the country's economy;
- Encourage development of telecommunication facilities in remote, hilly and tribal areas of the country;
- Create a modern and efficient telecommunications infrastructure taking into account the convergence of IT, media, telecom and consumer electronics and thereby propel India into becoming an IT superpower;
- Transform in a time bound manner, the telecommunications sector to a greater competitive environment in both urban and rural areas providing equal opportunities and level playing field for all players.

42. One of the important areas of attention for achieving the above objectives is an arrangement of payment of one-time entry fee and license fee as a percentage of revenue share for the new licenses, replacing the previous system of up-front license fee. The new policy has, however, not laid down any guideline for fixing the one-time entry fee or for license fee as a revenue share on annual basis.

Rationale for levy of License fee

43. License fee structure is normally linked to the competition strategy and policy objectives that the licensing system intends to sub-serve. It may relate to:

- Eliminating non serious players through entry barriers;
- Mopping up rents expected to accrue especially in a market situation with limited competition;
- Raising resources for the budget;
- Regulating scarce resources to which the service roll out is linked; and/ or
- Recovering the cost of administering the license from the service providers.

44. License fee, which permits the licensee to provide service should not be perceived in the market as deterrent to market entry. The cost of license should be reasonable and fair. Any fee associated with the required licenses will inevitably be reflected in the cost to customers. The policy decision relating to license fee has, therefore, to be evaluated carefully to avoid potentially undesirable consequences.

45. High license fee could also be for augmentation of State's budgetary resources. However, this does not appear to be among the objectives of the NTP 1999. High license fee will reflect in costs of providing services to the consumers thereby defeating the objective of making the telecom services ubiquitous and for being used for the overall development of the country.

46. As per experience in this country, the bidding process adopted for awarding licenses for other telecom services (based on highest up- front license fee) with limited

competition has not proved successful. The bidders had based their projections on high market expectations, which did not materialize. High up-front license fee imposed heavy tax on the private operators, eroding the financial viability of their projects with most of the operators in the red, encountering difficulties in effecting financial closures, and feeling threatened for their survival. This is true of the cellular mobile telephone service, basic service, paging service as well as value added services like E-Mail.

47. In addition, the existing practice of levy of license fee from telecommunication services as a source of revenue for the Central Budget has created various distortions. Although not applicable in respect of GMPCS service, license fee obligation on new entrants in the private sector has created an uneven playing field between the incumbent and the new entrant. It has also turned out to be contrary to the intention of providing telecom services to all people at affordable and reasonable prices. If at all it is felt that the telecom sector has to be used to garner resources for the ex-chequer, there are alternate ways of achieving this objective instead of levying high license fee on the service and thereby raising the cost of service to the subscriber. This would be equally applicable if the percentage of revenue share to be fixed were substantially high. Substituting high incidence of license fee/ revenue share with differential service tax would perhaps minimize such distortions and draw upon the resources directly.

48. Even when the levy of license fee is directed towards charges for scarce resources it should be imposed in a manner, which reflects the need to ensure the optimal use of these resources. Such charges should not be discriminatory, and should take into account the need to foster the development of innovative services and competition. Allocation of resources (such as spectrum) should be done without placing financial burden on operators that will inhibit the deployment of their service.

License fee as per Provisional License Agreement with Iridium

49. The Provisional License Agreement with Iridium for the GMPCS service had proposed

(in October 1998) the annual license fee under a two-tier structure with fixed component of Rs 1crore and variable component at the rate of 16 percent of the gross revenue. The rationale for quantification of fixed and variable components of license fee has not been made available by the DOT.

50. In an earlier Provisional License Agreement proposed to M/s Afro-Asian Satellite Communications Ltd. (in 1995), the license fee consisted of fixed component of Rs. 1crore per annum and variable component at the rate of 5 percent of the gross revenue (excluding PSTN/PSPDN/Telex utilization charge paid to DOT). This was to remain in force for the initial period of 3 years. **The DOT may like to indicate the basis for fixing the variable component of license fee in the Provisional License Agreement for Afro Asian @ 5% of the gross revenue, and the rationale of increasing it from 5% to 16% of gross-revenue in the Provisional License Agreement with Iridium.**

51. As per Iridium, the provisional license fee of Rs.1 crore per annum as the fixed component and 16% of the gross revenue as the annual variable component is the highest license fee charged by any country for the Iridium GMPCS service license.

Structure of License Fee

52. As stated above, NTP 1999 announced by the Government (in March 1999) intends one time entry fee and license fee based on percentage of revenue sharing for the GMPCS service. **Obviously, the Policy does not envisage any fixed component of license fee on a recurring basis.**

53. Fixed component of a license fee regime is normally operated as an entry fee to establish the bonafides of prospective service providers, and to act as the barrier for keeping out non-serious fly-by-night entities (with inadequate stakes) from entering the sector. Ideally, the entry fee should ensure elimination of non-serious players and meet the cost of inducting a service provider. Any charges in addition to that should be only by way of revenue sharing in case the degree of competition is limited and there is scope for rental gains to the operators.

54. The policy on license fee in most other countries is informed by this rationale. Article 11 in the Directive 97/13/EC of the European Community (EC) specifically deals with Fees and Charges for individual licenses under the common framework for general authorizations and individual licenses in the field of telecommunications. It requires the Member States to ensure that any fee imposed on licensees as part of authorization procedures seeks only to cover the administrative costs incurred in the issue, management, control and enforcement of the applicable individual license. Such fee is required to be proportionate to the work involved. The directive also requires the Member States to review their existing systems of calculating and collecting license fee so as to make them compliant with this directive.

55. Lump sum license fee puts a heavy burden on the operator when operation is yet to take off. Under the revenue sharing arrangement the licensor has to wait till the operations pick up for reasonable revenue to accumulate. An alternate option is to prescribe a three-stage structure for the license fee. Apart from an entry fee to enable selection of a suitable service provider, a low fixed fee in the initial gestation period of the project is levied during the 2nd stage. Thereafter, a recurring fee consisting of a variable component (linked to annual revenues) is levied. Such variable component could be based on percentage of revenue or charge per subscriber.

56. Under such an arrangement of three-stage structure for license fee, pre-determined level of one-time entry fee may recover the administrative costs associated with the processing of applications and allotment of license. If kept reasonable, it would facilitate crossing the threshold level specific to the new service without acting as an entry barrier. Steady payments at reasonable level could be recovered during the gestation period, appreciating that heavy cash outflows take place in these initial years for setting up the project without commensurate revenues. This system also tends to keep some pressure on

the Licensee to complete the project on schedule. Subsequent annual license fee could be linked to revenues as a percentage of revenue sharing. The quantum would grow as the revenues increase, reducing the risk otherwise associated with high up front license fee committed before the start of service based on some projections.

Quantum of License Fee

57. The consideration for levy of higher one time entry fee to regulate the competition and for keeping away non-serious players is not relevant for the GMPCS service. Keeping in view the scale of operations and investment levels involved in the roll out of GMPCS service, non-serious players are not likely to enter the fray. There is no point in imposing a high level of fixed entry fee, which would increase the cost of the service. Often the rationale of mopping up high entry fee may be argued on the grounds that GMPCS is a premium service used by affluent strata of the society who have the capacity to pay. Such an objective could be better realized through the mode of imposing a differential service tax on the subscribers of GMPCS service. This methodology would offer a more transparent and direct levy without introducing any distortions in the system.

58. The revenue sharing component for the annual license fee should be fair and equitable, and determined to serve the overall objective of developing a world class service and making it affordable in a competitive market as the service will be used for trade and industry applications. Such annual fee is normally linked to the cost of regulation and enforcement of the license or as a contribution to sector development through research and studies. NTP 99 does not lay down any guidelines on the modalities of calculating the percentage of revenue share.

59. As per the available information compiled in Appendix VI, the quantum of annual recurring license fee for Iridium systems either as lump sum or as a percentage of revenue sharing in other countries is nominal. Its summary is depicted below:

COUNTRY	LICENSE FEE (US \$ PER ANNUM)
USA	9,300
ITALY	13,200
THAILAND	8,400
RUSSIA	79,000
JAPAN	1,400
INDIA	250,000 + 16%

60. One methodology for determining the 'revenue share' is to undertake a viability study of the service segment based on growth projections of the service in terms of subscriber base, average revenue per user (ARPU), operating ratio, and costs of essential resources such as capital expenditure per subscriber, interconnection, spectrum fee etc., apart from the license fee. This option is, however, not feasible in the present case. The underlying costs for providing the infrastructure for the service have not been entirely incurred in India. By the very nature of the service, the costs are scattered across the globe. It is difficult to undertake a comprehensive viability study without global study of such costs and revenue streams. Further Iridium is so far the single GMPCS service provider, which has commenced commercial service (as recently as in February 1999). No past performance data is available to assess the viability of GMPCS service providers based on their operating and financial performance. The sole basis available for such an exercise is the projections and business plan of the service provider, which are fairly adhoc. As stated in Chapter II, Iridium plans to target 5% of the cellular market over the next five years with a gradual increase of 1% each year. The projections made by Iridium anticipate 600,000 voice subscribers to break even the costs by 2000-2001. As the competition is building up and new service providers are moving in to take up position, drastic changes in pricing structure of some of the Iridium products are being mentioned. This would obviously result in wide changes in their business plan. It may, therefore, not be proper to base any viability assessment on such volatile projections for arriving at the quantum of license fee that can be imposed. Even where viability analysis is carried out, it may often not lead to very reliable results.

61. It may be mentioned here that for the same reasons of difficulty in costing the service, the TRAI has already decided to forbear from tariff fixation for the GMPCS service. The service providers are free to fix the tariffs subject to reporting requirement. It is expected that suitable cost-based tariffs will emerge in a commercial and competitive environment in which new entities are free to develop or provide services.

62. The modality for arriving at the entry fee could be based on the judgement about keeping out non-serious players, and recovering the cost of inducting a service provider and granting him the license. The manner in which such costs can be quantified is open for public debate. The issue of percentage of revenue share for the annual license fee is also open for debate. This has to be debated in the context of the overall policy objective of developing a world class telecom infrastructure in the country and making affordable high-level services capable of meeting the needs of the country's economy in a competitive market.

Gross Revenue

63. The term Gross Revenue has not been defined in the provisional License Agreement. It has to be spelt out. While seeking TRAI's recommendations on the definition of Gross Revenue, the DOT has opined that it could mean Gross Revenue generated from the service operated under the ambit of the license.

64. Iridium has offered the following definition of "Gross Revenue from Services" for calculation of the license fee:

- Income accruing to Iridium India, when an Iridium subscriber makes a call from India in the satellite mode to either PSTN or to another Iridium handset or to a cellular handset should be calculated.
- This would be applicable for an Indian subscriber or a visitor who is visiting India and is a subscriber of some other Gateway.
- Monthly access charges, activation fees and revenues from any other value added service provided to the Iridium subscriber in India, would also form part of the income accruing to Iridium India.
- From this income, the following amounts be deducted to arrive at "Gross Revenue":
 - a. Amount payable to Iridium LLC;
 - b. PSTN interconnect payable to VSNL/DOT;
 - c. Service Provision Charges paid to Service Providers (Cellular Network Operators).

65. "Gross Revenue" may also be defined in terms of all such revenues accruing to the Licensee, which are related to the rendering of the services under the license including revenue on account of value-added services and supplementary services. Thus, revenues resulting from the supply of goods and services that can be provided without the license, e.g. the retail sale of subscriber equipment (like the mobile hand set), may not be included in the turnover figure. In case, however, the service provider subsidizes the sale of handsets by offering rebates on rental/ call charges, the revenue thus 'foregone' may be added to the gross revenue. Revenue foregone may be the difference between the purchase price of the handset by the GMPCS service provider and the sale price to the subscriber. It may, however, be argued that since the GMPCS mobile handset is a proprietary item with its usage specific to a particular GMPCS network, revenue earned on account of sale of handset should also be treated as a part of the Gross Revenue. Proceeds of any service tax collected by the service provider and passed on to the Government may not be included in the Gross Revenue.

66. The treatment to be given to annual charges payable by the Licensee to the Satellite Constellation/ Space Segment Provider for arriving at the Gross Revenue will need a debate. There may be double counting of related turnover on account of revenue earned from subscribers roaming into the country from other Networks, as the same will have to be shared. Similar revenue sharing would be involved when licensee's subscriber roams out to other Networks as well as for the calls transported on GMPCS network but originating from and terminating into terrestrial networks within the country. These issues have also to be resolved during the public consultation in the context of defining Gross Revenue.

67. Total Income as per the books of accounts of the Licensee may have to be adjusted to arrive at the Gross Revenue. It is essential that the term Gross Revenue is so defined that

it can easily be derived from the audited accounts. The quantum of the Gross Revenue declared by the Licensee should be verifiable from the books of account of the Licensee, in terms of the physical volume of traffic carried through the Licensee's Network during the relevant period. Its definition should not offer scope for accounting manipulation or in raising disputes about its interpretation. Whether deductions such as those claimed by Iridium for arriving at the 'gross revenue' be allowed? Perhaps compensation for not excluding such revenues, which are otherwise a direct charge on the service provider, could be in terms of lower incidence of revenue sharing percentage.

Issues for consideration

- a. **NTP 1999 envisages one-time entry fee and annual license fee as a percentage of revenue sharing for the GMPCS Service. However, the policy does not lay down any guideline for its quantification. What should be the basis of license fee structure (in terms of fixed and/or variable components) for the GMPCS service?**
- b. **What should be the definition of Gross Revenue?**
- c. **What items of receipts appearing in the total turnover have to be excluded in arriving at the Gross Revenue?**
- d. **What mechanism should be prescribed for independent verification of the declared Gross Revenue?**
- e. **Since mobile handset would be sold as a proprietary item in the initial years and its usage would be specific to a particular GMPCS network, should the sales proceeds thereof be included as an integral part of the network revenue?**
- f. **What should be the modalities for payment of License fee i.e.,**
 - **Initial payment;**
 - **Quarterly or half- yearly instalments;**
 - **Due dates for payments;**
 - **Interest for delayed payments;**
 - **Basis for quantification of revenue during the financial year pending annual audit of accounts;**
 - **Final reconciliation of the License Fee payable based on audited annual accounts.**

TECHNICAL AND OPERATIONAL FEATURES OF GMPCS SYSTEMS

1. There are several different types of the GMPCS systems, for example:

a. Geo-stationary Mobile Satellite Services (GEO-MSS):

- o Global
- o Regional

Geo-stationary satellites occupy an orbital position about 35000 km above the earth, and remain in a stationery position relative to the Earth itself. The world's major existing telecommunications and broadcasting satellites fall into this category.

a. Non-Geo-stationary Mobile Satellite Systems:

- o Little LEO

A small non-geostationary satellite, which operates in Low Earth Orbit providing mainly mobile **data** services.

- o Big LEO:

A larger non-geostationary satellite, which operates in Low Earth Orbit, providing mainly mobile telephony services. It provides narrow band GMPCS Service. Many of the new proposed 'global mobile phone' services wouldl be provided by this type of satellite. These are located between 700-1500 km from the Earth.

- o MEO:

A non-geostationary satellite, which operates in Medium Earth Orbit providing mobile telephony services. These satellites are also to be used as part of new global mobile telephone system. They are located 10,000 km from the Earth.

c) Broad band Fixed Satellite Services (Broadband GMPCS)

The major global players that will offer primarily voice include

- Globalstar
- Iridium
- ICO
- Elippsa
- Odyssey

They will be placed in GEO, Big LEO, Little LEO, or MEO orbits.

2. Of all the GMPCS networks, the US \$3.4 billion Motorola-backed Iridium network is the front runner, with Globalstar and Odyssey not far behind. ICO has had a late start because of system design problems related to their space segments and operational frequencies.

3. Most of the GMPCS systems will provide dual and possible even multi-modes on their handsets. This means that GMPCS phones will have terrestrial and satellite components, for example Iridium/GSM or even Iridium/GSM/AMPS. However because of the extremities of the frequencies, CDMA and TDMA protocols, and the engineering needed to shield multiple modes, the first multi-mode will probably only be dual.

4. Odyssey, Globalstar and Iridium have already produced some dual-mode prototypes that will allow users to use the cheaper GSM mode when they are in a GSM coverage area, and then hand-over automatically to GMPCS satellite mode the moment they lose GSM coverage-without dropping the call.

5. While the GSM component will allow the user to roam normally on other GSM cellular networks, it is highly unlikely that multi-mode phones will also encompass satellite network roaming. This means that phones manufactured for use on one GMPCS system will probably be useable only on that satellite system, although users will be able to choose at the outset which cellular system - for example, either GSM or AMPS - they want as their phone's alternative (terrestrial) mode.

Technical specifications of GMPCS Systems

GMPCS CHARACTERISTICS:

Characteristics	Data-only GMPCS	Narrowband GMPCS	GEO-MSS	Broadband GMPCS
Known as...	Little LEO	Big-LEO	Narrow/ Broadband MSS	Broadband-FSS

Services available	Data only	Voice and Data	Voice, data, video	Multimedia including voice and data
Terrestrial counterpart	Messaging services such as paging and mobile data	Cellular telephone	Cellular ISDN	Fibre
Bit rate	1.2-4.8 Kbit/s	About 9.6 kbit/s	2.4-144 Kbit/s	Upto 1.5 Gbit/s
Frequency range	Below 1 GHz	1 to 3 GHz	1.5-1.6 GHz and around 2 GHz	Above 10 GHz
Type of service	Store-and-Forward	Real-time	Store-and-Forward Real-time	Real-time

GMPCS System Specifications

Name	Orbit	Satellites	Lifetime	Services	Modes	Operational
Orbecomm		28		D		Full, mid-1997
E-Sat		6		D		1997
FAISAT (Final Analysis)		26		D.Vm.P.		1997
VIT Asat (VITA)		2		D		1997

Koskon (Polyot)	B-LEO	32		V.D.F.P.		1997
Globalstar	B-LEO	48	7.5y	V.D.F.P. GPS	CDMA	1998
I-CO	MEO	10	12y	V.D.F.P.	TDMA	1998
Iridium	B-LEO	66	5y	V.D.F.P.	FDMA+ TDMA	1998
GE Starsys		24		Dm		1998
GEMnet (CTA Commercial Systems)		38		D		1999
LEO One USA		48		D		1999
M-Star (Motorola)	Brdbnd LEO	72		Broadband services		1999
ECCO (Constellation/ TELEBRAS)	B-LEO	46		V.D.F.P.		2000
Ellipso (MCH)	LEO/ MEO	17		V.D.F.P.		2000
Odyssey	B-LEO	12	15y	D.V.F.SMS	CDMA	1998
Teledesic	Brdbnd LEO	840	10y	Broadband services	ATDMA +CDMA	2000

Celsat (Hughes/ Nortel)	GEO	3		V.D.F.P.		2000
INMARSAT 3*	GEO	5	12y	V.D.F.		in service
Spaceway (Hughes Network Systems)	GEO	12		V.D.Vi, Broadband services		2000

Key

ATDMA	Advanced Time Division Multiple Access
B-LEO	Big LEO
BrdBnd	Broadband Services
CDMA	Code Division Multiple Access
D	Data
Dm	Data Messaging
E	E-mail
F	Fax
FDMA	Frequency Division Multiple Access
GPS	Global Positioning System
LEO	Low Earth Orbit
L-LEO	Little Low Earth Orbit

MEO	Middle Earth Orbit
P	Paging
SMS	Short Message Service
TDMA	Time Division Multiple Access
V	Voice
Vi	Video

GMPCS Costs (As of 7/98)

	Launch Date	System Cost	Phone Cost	Call Cost
Iridium	9/1998	US\$4.4b	US\$2,500 -US\$3000	US\$3/min Worldwide
Globalstar	12/1999	US\$2b	US\$750	US\$1/min
Odyssey	2000	US\$2.5b	US\$700	US\$1/min
Teledesic	2002	US\$9b	Data Set	
ICO	2002	US\$2b	NA	NA
Elippso	2002	US\$2b	NA	NA

BRIEF NOTE ON REGULATORY ISSUES CONCERNING GMPCS SERVICE

1. GMPCS systems have technical capability to bypass local network as well as the theoretical possibility of unauthorized use of GMPCS services in country A by a subscriber registered to use the service in country B. Some GMPCS system architectures make bypass impossible because they depend totally on interconnection to the national PSTN. Regulatory controls have, therefore, to be introduced depending on the configuration and capabilities of different systems, which may be at the system operator level, gateway operator level or via the tracking and location of terminals.

Licensing Policy

2. Licensing has traditionally been used as one of the policy instruments for regulating technological expansion and ensuring competition in the telecommunications sector. Different licensing policies are practiced from country to country for other telecommunication services. To what extent is it feasible to standardize the licensing policies for GMPCS services? Even if the license fee structure and other terms and conditions of license continue to be different, there is the need to ensure that these are formulated in a transparent, non-discriminatory and consistent manner in all the countries to facilitate open competition, and give system operators/ service providers an optimal level of business certainty. Open competition is the best way to ensure the widest possible availability of services, lower prices and greater choice for consumers. Competition would be applicable to choice of satellite system, service providers and terminal equipment vendors.

3. Recent developments in international fora have created the conditions that enable policy makers and regulators to keep in view a set of voluntary principles for establishing a simplified, non-discriminatory, and transparent regulatory environment for service licensing, gateway/earth station authorisation, interconnection arrangements, and user terminals to introduce GMPCS.

4. In pursuance of the GMPCS MOU (October 1997), specific arrangements were agreed to for facilitating the introduction and development of GMPCS service. About 107 countries and organisations had signed the GMPCS - MOU till September 1998. India is still not a signatory to the same.

5. No unified global policy on licensing criteria exists so far; and this holds good for GMPCS as well.

Four types of licensing are relevant for introducing GMPCS service:

- Space segment/System licensing;
- Gateway licensing;
- Licensing or type approval of user terminals;
- Service Licensing.

Space segment licensing

6. It refers to the approval of the proposed technical characteristics, orbital characteristics and mode of operation of the satellite; permission to construct and launch the satellite; and frequency assignment for up-links, down-links and inter-satellite links. Satellite systems have to be licensed in their home country i.e. the country that provides them with satellite segment authorisation at the ITU. Amongst global systems, except ICO, which is registered in UK, most of the other systems are registered in the USA.

7. There is a need to recognise the importance of modifying in a harmonised fashion the national legislation with the aim of facilitating the market entry by new satellite systems, network operators and service providers offering innovative applications to customers.

8. National Authorities should provide greater transparency regarding national authorisation procedures of satellite systems. A description of these procedures should be easily accessible, and co-ordination procedures should be implemented for systems, which transcend national borders.

9. For the Satellite telephony business, allotment of orbital slots and allocation of frequency are amongst the prime pre-requisites, which are co-ordinated under the aegis of ITU. Thus ITU approved space segments/systems may only qualify to get license to operate GMPCS services in a particular country. In the Indian context, policy initiatives are imperative to facilitate filing of satellite license applications with the ITU by Commercial Operators based in India to encourage India- based systems. Alternatively, the policy for leasing of INSAT transponders for this purpose could also be considered.

Gateway licensing

10. Gateway constitutes the ground segment. License for the ground-segment is issued by the country in which the gateway is located. Gateway earth station links one or more terrestrial networks and the satellite. Gateway licensing is, therefore, country specific where the consent is needed for each gateway and its feeder's links. It includes conditions with regard to ownership, operation and control over gateways including connectivity conditions with regard to PSTN and other networks. Most GMPCS systems have such ground facilities in a number of countries depending upon the design of each system.

11. The licensing conditions for GMPCS service in India stipulate that the operation and maintenance of the GMPCS gateway, to be located in India, shall be entrusted to VSNL or an agency authorised by the Government for this purpose.

Licensing of user terminals or hand-sets

12. GMPCS user terminals can vary from hand held mobile, portable to fixed installations (e.g. village

telephone, computers etc.), for which the licensing requirements may differ. Mobile and/or portable GMPCS services require a global regime so that they can be used and carried anywhere across national boundaries. What is needed is a generic approval of the terminals and a generic right to operate them rather than a license for every terminal. The problem of different conformity assessment requirements around the world seriously hampers manufacturers by increasing their cost and time to obtain type approvals. Excessive conformity assessment requirements also affect operators and service providers by delaying the introduction of new services.

13. The absence of a single, globally accepted standard for conformity assessment of, for example, S-PCS terminals, will require the manufacturer to obtain type approvals in all countries where a separate regime exists and where he wishes to sell his products. This has the effect of increasing the ultimate cost of the user terminal and/or limiting the markets open to manufacturers. For manufacturers, operators and users, a single global conformity assessment regime would be ideal. The arrangements envisaged under the GMPCS MOU provide for simple regime for the licensing, circulation and use of GMPCS terminals. These arrangements encourage administrations to recognise the licensors for GMPCS terminals issued by another countries, exempt GMPCS terminals from requiring an individual license for those terminals covered by blanket and/or class licenses, and permit visitors to carry their terminals even if use is not permitted. It is possible that the administration may impose conditions, which must be fulfilled before GMPCS terminals will be exempted from such requirements. These conditions may include:

- Type approval of the terminals to an agreed standard marked with a certification mark, as appropriate;
- Compliance with frequency use as permitted by the administration;
- Authorisation of the service with which the terminal operates;
- Protection of other services from harmful interference

14. No separate licenses are envisaged for mobile terminals in India for the GMPCS Service. It may be added here that licensing of Inmarsat terminals are currently being carried out on a case to case basis.

Service Licensing

15. Licensing the provision of GMPCS service to end-users (or to re-sellers) is a separate issue. The license authorises the service provider to operate transmission line (wired or wireless) necessary for the provision of GMPCS service in the country. This includes transmission lines which consist of the uplink from the satellite earth stations/gateways and/or the down-link (the connection from the space segment to the earth station and/or the mobile/portable user terminals, respectively). There should normally be no restrictions to licensing the service provision whether the earth station/gateway is located in the specific country or not. GMPCS operators are technically able to switch off service to a particular country where they are constrained to operate without proper license by the national administration. Concerns have been expressed whether GMPCS service providers fall within the category of common carrier such as CMTS providers and are consequently subject to obligation concerning non-discrimination among different category of customers. Service licensing poses policy question in regard to unconditional

licensing of GMPCS service providers whose space segment is licensed in another country so as to encourage rapid growth of service or to impose condition. It also poses question with regard to permission to resell their services through independent service providers.

16. ITU Report (Document 162-E) before the World Telecommunication Development Conference (WTDC-98) held at Malta in March 1998 suggested the following minimum elements for the license application by a service provider to ensure adequate treatment of the licensing issues:

- General
 - Name of GMPCS System
 - Relationship of GMPCS System to applicant Name and contact information of applicant (in the country)
 - Services
 - Types of GMPCS Services
 - Coverage of services in the country (roaming capability, rural and remote coverage, etc.)
 - Applicant
 - Describe the type of entity through which services will be provided in the country.
 - System Description
 - Satellite constellation and orbital characteristics
 - Earth stations
 - User terminal(s)
 - Numbering Plan and its implementation, if applicable
 - Frequency requirements (feeder and service links)
 - Interconnection between GMPCS and the PSTN
 - Implementation plan
 - Implementation milestones
 - Launch contracts
 - Procurement contracts
 - Investor list
-

CLAUSE – by - CLAUSE ANALYSIS
OF
THE PROVISIONAL LICENSE AGREEMENT

1. This Appendix contains clause-by-clause review of the provisional License Agreement, which has been entered into by the DOT with Iridium. It provides a broad imprint of the basic framework for GMPCS license that the Licensor has in view.
2. Reproducing below the provisional License Agreement in the tabular form, comments (*as bullet points in bold italic print*) have been given against different clauses/ conditions for initiating public debate on all the relevant issues. The consultations would enable the TRAI to formulate its recommendations on the structure and quantum of license fee, and the generic terms and conditions of Licenses for GMPCS service.

CLAUSES/CONDITIONS IN THE PROVISIONAL LICENSE AGREEMENT WITH IRIDIUM	COMMENTS
<p>THIS AGREEMENT made on the 28th day of October 1998 between the President of India acting through Director (VAS-III). Sanchar Bhavan, 20 – Ashok Road, New Delhi – 110 001 (hereinafter called the LICENSOR) of the ONE PART and</p> <p>M/s Iridium India Telecom Ltd., a company registered under the Companies Act 1956 and having its registered office at C/O IL & FS, 4th Floor, Mahindra Towers, Dr. G.M. Bhosale Marg, Worli Mumbai-400 018 (hereinafter called the LICENSEE which expression shall unless repugnant to the context, include its successor in business, administrators, liquidators and assigns or legal representatives) of the OTHER PART.</p>	

WHEARAS in exercise of the powers under Sub-Section (2) of Section 4 of the Indian Telegraph Act, 1885, the Central Government delegated its powers to 'Telecom Authority' (hereinafter referred to as "Authority") by GSR 806 Gazette of India, Part II, Section 3 (i) dated 24th August, 1985.

AND WHEREAS pursuant to the request of the LICENSEE, the LICENSOR has agreed to grant a Provisional License, hereinafter called the License, valid for a period of one year from the date of issue unless either revoked earlier by the licensor or by issue of final licence to the LICENSEE on the terms and conditions appearing hereinafter to set up and operate GLOBAL MOBILE PERSONAL COMMUNICATION SERVICE NETWORK and to provide SERVICE in India and the LICENSEE has agreed to accept the same. The licensee shall abide by the terms and conditions of the final license agreement, when granted, and ensure compliance with such of terms and conditions thereof including payment of licence fee retrospectively from the date of issuance of this provisional licence, one licence fee is finally determined.

- *First sentence in this clause needs to be corrected partly as under:*

..... to set up and operate GLOBAL MOBILE PERSONAL COMMUNICATIONS BY SATELLITE (GMPCS) NETWORK and to provide the GMPCS SERVICE in India.....

- *A single license is contemplated for the operation of the GMPCS network and for the provision of the GMPCS service. Should these be separately licensed?*
- *There is no mention in the License Agreement of contractual obligations of the Licensee with its parent company i. e., Iridium LLC, which provides and manages the Space Segment. As the Satellite Constellation Provider, Iridium LLC will manage the Control Centre where information (consisting of geographical location and number of the calling/ called party) from all the 12 Gateways will be forwarded on a regular basis. Control Centre (located in USA) will also exercise software management control over all the Gateways. Should there be a tripartite arrangement under which the Space Segment Provider (like Iridium LLC) is also bound to honour the commitments made by the Licensee company as the Gateway and Service provider under the terms and conditions of this*

License. If so, what should be the modalities thereof?

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. In consideration of observance of mutual covenants as well as the licence fee payable in terms of schedule 'A' and due performance of all the terms and conditions on the part of the LICENSEE, the LICENSOR does, hereby, grant on non-exclusive basis, licence to establish and operate the network and provide Service, on the terms and conditions mentioned in Schedule "B" annexed hereto.

- *Information on the type of GMPCS service to be rendered i.e. Global or Regional should also be indicated; at the same time defining the GMPCS system in terms of its global or regional coverage.*
- *In addition, information on the type of Satellite System (GEO, MEO or LEO) to be deployed including its launch schedule needs to be mentioned.*

1. The final licence whenever granted shall be for a period of 10 years reckoned retrospectively from the date of this provisional licence unless terminated for default or for insolvency or for convenience or for transfer of the licence under the provisions of Condition 8 of Part II, Schedule "B". The terms and conditions of this provisional licence may be suitably modified in the final licence. If requested by LICENSEE, latest by the end of 9TH year from the effective date, extension of Licence, unless terminated earlier under Condition 8 of the Schedule "B" Part-II, may be granted by the LICENSOR for a period of ONE YEAR or more at one time. The decision of the LICENSOR shall be final in this regard.

- *It is for consideration whether the license period of 10 years is reasonable and economical for satellite systems in general, and particularly so for geo-stationary systems. Average life span of the state-of-art GEO-satellites is 12 years and for MEO and LEO satellites it is about 8 and 5-6 years, respectively. The planning for launching of replacement satellites as well as second generation satellites needs a lead- time of 3 to 5 years.*
- *The license period needs to be debated in the light of the New Telecom Policy 1999, which now contemplates award of licenses for various terrestrial systems (like CMSP, FSP, RPS, PMRTS etc.) for an initial period of 20 years, with facility of extension by additional periods of ten years thereafter. No such policy time frame*

has, however, been mentioned in NTP 1999 in regard to the licenses for GMPCS service.

- *Whether there is the need to incorporate in the license agreement the condition that the license may be revoked in case of non-allocation of satellite segment or non-restoration of service within six months of the expiry of satellite segment license?*

2.1 For the purpose of charging the licence fee for the first year, the year shall be reckoned as 12 months beginning from the date of signing of licence agreement i.e. the effective date of licence. Payments of licence fee shall become due and payable as mentioned in Schedule "A".

1. The licence shall be governed by the provisions of the Indian Telegraph Act 1885 and Indian Wireless Telegraphy Act 1933 and TRAI Act, 1997 as modified from time to time including Government of India Policy on Satellite Communications.

- In this Agreement, words and expressions will have the same meaning as is assigned to them in the Schedule "B" , Part-I

- The LICENSOR may at any time revoke the Licence by giving a written notice of 30 days for the breach of any of the terms and conditions herein contained or in default of payment of any consideration payable hereunder.

- *The clause in its present form is one sided. It does not include the provision for affording an opportunity to the licensee before revocation of the license. The notice period of 30 days is perhaps too short.*
- *Section 11 of the TRAI Act, 1997 deals with the functions mandated to the TRAI. Notwithstanding anything contained in the Indian Telegraph Act, 1885, the following clauses under sub-section 1 of Section 11 stipulate that the functions of the TRAI shall inter alia include:*
 - *to ensure compliance of terms and conditions of license,*
 - *to recommend revocation of license for non-compliance of terms and conditions of license.*
- *Should the license agreement ignore the aforementioned statutory provisions of the TRAI Act? Should it not be obligatory on the licensor to seek recommendations from the TRAI before revocation of license?*
- *The licensor must seek the recommendations of the TRAI before revocation of license for non-compliance of any terms and conditions of the license. After affording reasonable opportunity to the licensee as well as to the licensor, in case the TRAI concludes to recommend that the license be revoked, the indicative time frame (such as 30 days or any other reasonable period) may then be stipulated by the TRAI for revocation of license.*

- *The recommendations of the TRAI will not be binding on the licensor. In any instance, therefore, where the TRAI does not agree with the licensor's proposition for revocation, the licensor may still decide to pursue revocation of the license. In that situation, the notice period of 90 days (after the receipt of TRAI's recommendations) may perhaps be more reasonable for revocation of license.*

1. The LICENSEE shall clearly define the scope of SERVICE to the subscriber(s) at the time of entering into contract with such subscriber(s) and any dispute with regard to the service shall be matter between the subscriber and the licensee only. The Government i.e. the licensor, DOT as service provider, MTNL, VSNL or any other service provider licensed to provide connectable systems shall not be a party to any dispute. The licensee shall suitably notify the above to all his subscriber(s) before provisioning of the service.

- *The legality of this clause is questionable. It's a matter of debate whether a clause of this nature can override the law of the land? How can there be an exception for DOT, MTNL, VSNL or other service provider in case an affected party in a legal dispute between the subscriber and the licensee (on any matter connected with the provision of the service) wants to implead them. Often there would be laches on the part of the licensor or DOT/MTNL/VSNL in the discharge of their respective roles envisaged under the license. In its capacity as the licensor, the Government should not, therefore, ignore the applicability of different Acts to situations that may arise during the implementation of the license from which DOT, MTNL, VSNL or other service providers cannot be kept immune.*

7. The LICENSEE shall operate and maintain the licensed Network to meet the interface standard for connectivity to other operator's network. The Licensee shall be solely responsible for attending to claim and damage arising out of his operations.

8. The licensee shall be free to fix his own tariff to be levied from his subscribers unless reviewed or fixed by the Telecom Regulatory Authority of India at any time during the validity of the licence which shall be binding on the Licensee.

8.1 The charges for accessing other network i.e. PSTN, PLMN etc. for inter-network calls are not covered under the terms and conditions of this license and are to be decided by mutual agreement between the two operators.

- ***Keeping in view the provisions of Section 11 (2) of the TRAI Act 1997, this clause relating to fixing of tariffs for the service should be reworded as under:***

"The tariff to be charged by the licensee from subscriber will be in accordance with the rates and orders as notified by the TRAI from time to time."

- ***This clause refers to charges for accessing other networks, which have to be decided by mutual agreement between the two operators. The functions mandated to the TRAI under Section 11(1) of the TRAI Act inter alia include the following:***
- ***To ensure technical compatibility and effective interconnection between different service providers;***
- ***To regulate arrangement amongst service providers of sharing their revenue derived from providing telecommunication services.***
- ***In view of the aforementioned provisions of the TRAI Act, 1997, this Clause should contain at the end a specific provision mentioning that such interconnection/ access charges shall be in accordance with the orders and regulations to be framed by the TRAI from time to time.***

1. The bank guarantee(s) of requisite amount shall be furnished from time to time by the LICENSEE as provided in Schedule 'B' Part II annexed hereto and in the proforma as provided in Schedule 'C' annexed hereto.

10. The LICENSEE shall not, without the prior written consent of the Licensor, either directly or indirectly, assign or transfer its rights in any manner whatsoever to any other party or enter into any agreement for sub-licence and/ or partnership relating to any subject matter of the licence to any third party either in whole or in part. Any violation of this shall be construed as a breach of Licence Agreement and the licence shall be liable for termination.

Provided, however, that installation of systems, equipment and network can be given on contract, but, providing of the SERVICE can not be given to another party on contract.

Provided further that the aforesaid written consent permitting transfer or assignment will be granted in accordance with the terms and conditions and procedures described in Tripartite Agreement if duly executed amongst LICENSOR, LICENSEE AND LENDERS.

11. The LICENSOR reserves the right to, in case of a default of any of the terms and conditions stipulated in the Licence Agreement, impose any penalty as it may deem fit under the provisions of this agreement.

- *The clause is one-sided. Levy of penalty has to be linked to the gravity of the default, which may be determined after affording a reasonable opportunity to the licensee. Only in situations concerning national security, the Licensor may exercise un-fettered powers for the levy of penalty as it may deem fit.*

12. Notwithstanding anything contained here in before, it is further agreed and declared by the parties that :-

- i. The licence is issued on non-exclusive basis i.e. other companies may be granted licence for the same service at the discretion of the Licensor. DOT itself or through a designated Public Authority has, the right to operate the service in any part/whole of the country. Provided further that a pilot project may also be approved and licensed for any period by the LICENSOR for inducting a new technology or management techniques or both.

- *Such one-sided clauses do not offer adequate comfort level to the investors.*
- *Future issue of licenses for the GMPCS service must ensure level playing field in the interest of fairness and equity.*
- *TRAI has been mandated with the functions to recommend the need and timing for introduction of new service providers, and to render advice to the Central Government in the matters relating to the development of telecommunication technology. These provisions of the TRAI Act should be kept in view by the Licensor while granting new license including that for any pilot project.*

i. The LICENSOR reserves the right to modify at any time the terms and conditions of the licence covered under Schedule "A" ,"B", "C" and "D" annexed hereto, if in the opinion of the LICENSOR it is necessary or expedient to do so in the interests of the general public or for the proper conduct of telegraphs or on security consideration.

- *This type of one-sided clause may be justified only on security consideration. Modifications in the terms and conditions of the license on any other grounds should be carried out in a transparent manner only after affording reasonable opportunity to the licensee.*
- *The recommendations of the TRAI should be taken in the matter before effecting any modifications in the terms and conditions except in situations of exigency on security considerations.*
- *Any action in the interest of the general public must be taken after recording reasons in writing.*

i. Notwithstanding any thing contained anywhere else in the Licence Agreement, the LICENSOR's decision shall be final on all matters relating to this Agreement and application of terms and conditions herein.

- *This clause is inconsistent with the provisions of the TRAI Act.*
- *It ignores the statutory role assigned to the TRAI for ensuring compliance of terms and conditions of license.*
- *How can the Licensor's decision be final on matters such as interconnection, tariffs, quality of service etc., which fall within the domain of TRAI?*
- *In case the licensee is to be held a defaulter for breach of any terms and conditions, he must be afforded a reasonable opportunity of being heard.*

i. The LICENSOR reserves the right to take over the entire services, equipment and networks of the LICENSEE, in part or in whole of the Service Area, or revoke/terminate/suspend the licence in the interest of national security or in the event of national emergency/war or low intensity conflict or any other eventuality in public interest as declared by the Government of India. The specific orders or directions from the Government issued under such conditions shall be applicable to the LICENSEE.

12. The LICENSEE shall not employ bulk encryption equipment in its network. Any encryption equipment connected to LICENSEE's network for specific requirements has to have prior evaluation and approval of the LICENSOR or officer specifically designated for the purpose.

- The Licence is granted to the LICENCEE on the condition that any change in the Indian and foreign partner(s) or their equity participation shall not be made without the prior approval of the LICENSOR and the legal entity of the licensee shall not change.

15. Provided further that the LICENSEE shall be responsible to ensure that the total foreign equity in the LICENSEE Company does not, at any time, exceed 49% of the total equity

- ***Once the licensee acquires public share holding through Initial Public Offer, the Licensor's approval for any change in equity (as referred to in Condition 14) should not mean to include changes resulting from transfer of such shares held by the public. Only those changes as would result in the change in the effective management and control of the licensee- company should need prior approval of the licensor.***

- ***The provisions of the Companies Act in regard to limited discretion to refuse or withhold transfer of shares held by public need to be kept in view.***

- ***GMPCS being technology and capital intensive service, should there be a review of the foreign equity ceiling for this particular service to facilitate higher levels of foreign equity?***

The present Indian & Foreign partners/promoters and their equity held in the LICENSEE Company as intimated by the company are recorded as follows:

Sr. No	Name of Promoters/Technology Providers/Equity Holders	No. of Shares	Value of Shares	Indian/ Foreign	Equity % age
1.	Industrial Development Bank of India	31392.40	313.9240	Indian	24.97
2	Infrastructure Leasing & Financial Services Ltd.	22011.20	220.1120	Indian	17.51
3	Industrial Credit & Investment Corporation of India Ltd.	15715.50	157.1550	Indian	12.50
4	State Bank of India	15696.25	156.9625	Indian	12.49
5	Unit Trust of India	4744.75	47.4475	Indian	3.77
6	Housing Development Finance Corporation Ltd.	3175.75	31.7575	Indian	2.53
7	Life Insurance Corporation Of India	3165.40	31.6540	Indian	2.52
8	Export Import Bank of India	3139.25	31.3925	Indian	2.50
9	General Insurance Corporation Of India Ltd.	314.00	3.1400	Indian	0.25
10	The New India Assurance Company Ltd.	314.00	3.1400	Indian	0.25
11	National Insurance Company Ltd.	314.00	3.1400	Indian	0.25
12	United India Insurance Company Ltd.	314.00	3.1400	Indian	0.25

13	The Oriental Insurance Company Ltd.	314.00	3.1400	Indian	0.25
14	Ravi Parthasarthy	10	10	Indian	0.0
15	Ashok Totiani	10	10	Indian	0.0
16	B.S.Shashider	10	10	Indian	0.0
17	Arun K Saha	10	10	Indian	0.0
18	Vimal Bhandari	10	10	Indian	0.0
19	Shahzaad Dala	10	10	Indian	0.0
20	Gopal Rajagopalan	10	10	Indian	0.0
21	Motorola International Network Venture Inc.	25120.0	251.200	Foreign	19.98

12. All matters relating to this licence will be subject to jurisdiction of courts in Delhi/New Delhi only.

IN WITNESS WHEREOF the parties hereto have caused this Agreement to be executed through their respective authorised representatives the day and year first above written.

Signed and Delivered for and on behalf of
President of India.

By

Director (VAS-III), DoT

Signed on behalf of M/S Iridium India Telecom Ltd. by Shri Jaydev Raja, Managing Director, holder of General Power of Attorney dated 18th September, 1998 executed in accordance with the Resolution No. Nil date 5.8.1998 passed by the Board of Directors, of Iridium India Telecom Ltd.

In the presence of :

Witnesses

1. QUANTUM OF LICENCE FEE AND SCHEDULE OF PAYMENTS

- 1. The licence fee is payable by the licensee in consideration for grant of this licence, for the complete duration for which this licence is in existence. This has no relation to any mutual obligation between the licensee and any other authorized service provider/DoT/MTNL/ VSNL/ Central or State Government/local or statutory bodies.**

1.2.1 License fee for the period of this provisional licence, which shall be adjusted retrospectively after grant of final licence, shall consist of two components namely, (i) fixed and (ii) variable, and shall be payable as follows:

Fixed Component :

- i. The amount of fixed component of licence fee shall be on a provisional**

- The rationale of adopting the fixed and variable components of license fee, as above, has not been indicated. As stated in the previous Section, the variable component of license fee in the provisional license agreement (in 1995) proposed to Afro Asian's Mobile Satellite Telephone System was @ 5% of the Gross Revenues.*
- The term "Gross Revenue" has not been defined anywhere in the License Agreement. This needs to be defined.*
- Iridium has proposed that the definition of "Gross Revenue from Services" for the calculation of license fee should be as under:*

Income accruing to Iridium, when an Iridium subscriber makes a call from India in the satellite mode to either PSTN or to another Iridium handset or to a cellular handset should be calculated. This would be applicable

basis Rs. one crore per annum payable from the effective date of the licence.

i. Variable Component :

i. The Variable component of the licence fee on provisional basis shall be related to the gross revenue generated from the service and shall be equal to 16% of the gross revenue earned per annum.

for an Indian subscriber or a visitor who is visiting India and is a subscriber of some other Gateway. Further, monthly access charges, activation fees and revenues from any other value added service provided to the Iridium subscriber in India would also form part of the income accruing to Iridium India. From this income to arrive at "Gross Revenues" the following amounts be deducted:

- a. *Amount payable to Iridium LLC*
 - b. *PSTN interconnect payable to VSNL/ DOT*
 - c. *Service Provision Charges paid to Service Providers (Cellular Network Operators)*
- *DOT has not provided any definition for the Gross Revenue. In a communication to the TRAI, the DOT has stated that this should normally mean gross revenue generated from the service operated under the ambit of the license.*

- *Gross Revenue may also be defined to mean the gross operating revenues accruing to the licensee, which are associated with rendering of the licensed telecommunication services. The total turnover from the books of accounts of the Licensee would be adjusted to exclude revenues attributable to the sale of handsets; and also to quantify the financial impact in terms of lower revenues on account of*

packaging of the service rentals and tariffs for the air time with the sale of handsets. It would, however, include the revenues accruing from the value added services. The quantum of the Gross Revenue declared by the Licensee will have to be supported by relevant data in terms of the volume of traffic carried through the Licensee's network during the relevant period so as to correlate the adjusted value of the Gross Revenue with the physical traffic in terms of million minutes/ pulses.

- *During the initial years of the service, hand set would be specific to a particular type of GMPCS service, and may be sold as a proprietary item by the GMPCS service provider by packaging it with the air time. Should the revenue on account of sale of hand-set be also included in the Gross Revenue?*
- *Should the revenue earned on account of pass through traffic to other countries be included in the Gross Revenue?*
- *Should the charges payable by the Licensee to Iridium LLC as wholesale charges for Iridium services be excluded while arriving at the Gross Revenue?*
- *The matter needs debate as it would have implications for a similar assessment of 'Gross Revenue' for other telecom services where license fee will now be charged as a percentage of revenue sharing.*

1.2.2 For grant of final licence, the quantum and structure of the licence fee shall be finalised after seeking the recommendations of TRAI. The same shall be applicable for the duration of this provisional licence retrospectively.

1.2.3 On grant of final licence, the licence fee paid, both as fixed component (payable from the effective date of this provisional licence) and variable component (payable from the date the service starts operating) in terms of clause 1.2.1 above, during the period of provisional licence would be adjusted retrospectively, against the licence fee finally determined by the Licensor as per clause 1.2.2 above

3. Schedule of payment of licence fee :

- 1. The Fixed Component of licence fee of Rs. one crore shall be paid in advance before signing of the licence agreement for the first year. Thereafter, the fixed component of licence fee shall be payable in advance on or before the anniversary of the first year licence fee payment.**
- 2. The variable component of licence fees as specified in clause 1.2.1 (ii) shall be paid in four quarterly installments. The quarterly installments shall be paid by 30th of the month following the quarter. The year for the purpose of levy of variable component shall be the**

financial year ending 31st March. The first year may, therefore, be less than 12 months in most of the cases. However, for the second year onwards, the year will be reckoned w.e.f. 1st April to 31st March of next year with quarterly instalments falling due on 30th July, 30th October, 30th January and 30th April

- 3. The final adjustment of the variable component of license fee for all the four quarters of the year shall be made on or before the date on which the license fee is payable for the second quarter of the following year.**
- 4. The Schedule of payment of licence fee may be suitably modified in the final licence agreement**

2. In case of overdue payments, an interest @ prime lending rate (PLR) of State Bank of India from time to time compounded monthly shall be charged. The interest shall be charged at the rate applicable on the date such payment becomes due.

3. If due payment is not received within the stipulated time with a grace period of 30 days, the sum shall be recovered by encashing the financial bank guarantee without any notice

Schedule "B"

**Part I: DEFINITIONS, INTERPRETATIONS AND TRANSITIONAL PROVISIONS
RELATING TO THE CONDITIONS**

Unless the context otherwise requires, the following expressions shall have the meaning assigned to the in these conditions: -

1. **APPLICABLE SYSTEMS** : The "applicable system" means all the necessary equipments/sub-systems engineered to provide GLOBAL MOBILE PERSONAL COMMUNICATION BY SATELLITE in accordance with operational/technical and quality requirements and other terms and conditions of the licence agreement.

● **Auditor means the Licensee's auditor for the time being appointed in accordance with the requirements of the Companies Act, 1956.**

● **Connectable System means a telecommunication system which is authorised to be run under a Licence to provide public telecommunications service and is authorised to be connected to the Applicable System.**

● **DIRECT EXCHANGE LINE (DEL):** A telephone connection between the subscriber's terminal equipment and the terminal exchange.

<ul style="list-style-type: none"> ● DOT means Department of Telecommunications, Government of India as Telecom Service Provider (including MTNL) and/or its successors. 	<ul style="list-style-type: none"> ● <i>Since MTNL is an independent legal entity having corporate status, which has been defined separately against point No. 20 in this Schedule, there is no need for including its reference in the definition of the DOT. Reference to MTNL should, therefore, be deleted from the definition of the expression for DOT.</i>
<p>1. EFFECTIVE DATE: The effective date is the date on which this Licence Agreement is signed by the parties and if the parties have signed on different dates, the latter of the two dates. This licence comes into effect from the effective date of the licence.</p>	
<ul style="list-style-type: none"> ● Emergency means an emergency of any kind, including any circumstances whatever resulting from major accidents, natural disasters and incidents involving toxic or radio-active materials. 	
<ul style="list-style-type: none"> ● Emergency Services in respect of any locality means the relevant public, police, fire, ambulance and coast guard services for that locality. 	
<ul style="list-style-type: none"> ● ENGINEERING: The technical application of the dimensioning rules and results thereof in order to provide network resources to meet specified Grade of Service (GOS). 	
<ul style="list-style-type: none"> ● GMPCS: GMPCS means Global Mobile Personal Communication Service by Satellite. 	<ul style="list-style-type: none"> ● <i>This should be corrected to read as under:</i> <p><i>GMPCS means Global Mobile Personal Communications by Satellite.</i></p>

1. "GMPCS Gateway" means a land based satellite link station established to provide a communication link between the Satellite/Satellite Constellation and the 'National PSTN' and 'International Gateway', thereby facilitating the provisions of telecommunication services between Mobile terminal and any telephone linked to the connected PSTN or PLMN.

- GMPCS Operator means the legal entity responsible for the operation of GMPCS network.
- GMPCS Service Provider means an Indian registered company which has been licensed under this licence to provide the GMPCS Service (as defined by the GMPCS MOU of ITU) to the public within the boundaries of Indian Union.

1. GMPCS Network means any satellite based telecommunication network providing telecommunication services directly to end users through the use of mobile terminal from a satellite/ constellation of satellite.

- GMPCS mobile terminal or mobile terminal means the equipment used by the subscribers to avail the GMPCS service such as Mobile Hand-set; also called user terminal.

?? GROSS REVENUE: (This needs to be added).

- *GMPCS Operator and GMPCS Service Provider have separately been defined. Since the license has been issued for establishing and operating the network as well as for providing service, there is perhaps no need of a separate definition of GMPCS Operator.*

- *Refer comments to Condition 1.2.1of Schedule A.*

1. Licence means a licence granted or having effect as if granted under section 4 of the Indian Telegraph Act 1885 and Indian Wireless Telegraphy Act 1933.

● **LICENSEE:** A registered Indian Company that has been awarded licence for providing this SERVICE.

● *The definition of licensee needs to be reworded as under:*

A registered Indian Company that has been awarded license in accordance with the Indian Telegraph Act 18858 to set up and operate Global Mobile Personal Communications by Satellite (GMPCS) network and to provide the GMPCS service.

18. LICENSOR shall refer to the President of India acting through any authorised person, who granted Licence under Section 4 of Indian Telegraph Act 1885 and Indian Wireless Telegraphy Act 1933, unless otherwise specified.

19. Message means anything falling within sub Clause/paragraph (3) of section 3 of the Indian Telegraph Act 1885.

● **MTNL** means Mahanagar Telephone Nigam Limited.

● **Operator means any person who is authorised the LICENSOR to run a Relevant Connectable System.**

● *GMPCS Operator and GMPCS Service Provider have separately been defined. Since the license has been issued for establishing and operating the network as well as for providing service, there is perhaps no need of a separate definition of GMPCS Operator.*

19. **OR/QR Specifications means technical and quality requirements contained in the OR/QR Specifications of Telecom Engineering Centre, Department of Telecommunications unless otherwise specified.**

● **Public Switched Telephone Network (PSTN) means a fixed specified switched public telephone network a two-way switched telecommunication service to the general public.**

● **Public Land Mobile Network (PLMN) means land based mobile network e.g. Cellular Mobile Telephone Service being operated within the country under licence from Telecom Authority on non-exclusive basis.**

● **QUALITY OF SERVICE: "Quality of Service" is evaluated on the basis of observable measures on the grade of service, calls lost due to wrong processing, the bit error rate or the response time and also included acceptable grade of number of faults per unit population of the subscribers served, the mean time to restore (MTTR), faults carried over beyond the MTTR and the satisfactory disposal thereof.**

- **SERVICE AREA** : Service area for GLOBAL MOBILE PERSONAL COMMUNICATION SERVICE BY SATELLITE is the territorial jurisdiction of the Union of India except specified areas that may be notified to be excluded from time to time.

- **Services or Service means GLOBAL MOBILE PERSONAL COMMUNICATION SERVICE by Satellite and shall include the teleservice, Bearer services and supplementary service as defined by ITU.**

- **Subscriber: Subscriber means any person or legal entity who avails the GLOBAL MOBILE PERSONAL COMMUNICATION SERVICE by Satellite from licensee.**

- **TELECOM AUTHORITY** : The Director General, Telecommunications, Government of India and includes any officer empowered by him to perform all or any of the functions of the Telegraph Authority under the Indian Telegraph Act, 1885 or such other authority as may be established by law.

- *The expression ‘Telecom Authority’ has been defined and then used in the license agreement at different places to denote the Director General, Telecommunications and any officer empowered by him under the Indian Telegraph Act, 1885 to perform all or any of the functions. This expression (i. e. Telecom Authority) has been used by the DOT in other license agreements such as for basic services. In view of the fact that the Telecom Regulatory Authority of India was constituted in March 1997, the expression Telecom Authority till now used for the Director General Telecommunications (or his authorized officer) should be replaced with the expression Telegraph Authority.*

19. **TARIFF:** Charges payable by a subscriber for the service provided.

- *The definition of tariff should be as defined by the TRAI in the Telecommunications Tariff Order, 1999 or as amended from time to time by the TRAI.*

19. TRAI means Telecom Regulatory Authority of India constituted under TRAI Act, 1997.

- VSNL means "Videsh Sanchar Nigam Ltd."

- **WPC means Wireless Planning and Co-ordination Wing of the Ministry of Communications, Department of Telecommunications, Government of India.**

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SCHEDULE "B"

PART II: TERMS AND CONDITIONS

Condition 1: REQUIRMENT TO PROVIDE THE SERVICES.

1.1 The LICENSEE shall install, run Applicable Systems within six months from the effective date of this licence and offer the service on demand to its customers. Commissioning of service shall mean providing commercial service to customers.

- *Condition 1.1 refers to installation and running of Applicable Systems within six months from the effective date of license and offering the commercial services on demand to customers of the licensee. The launching of satellite system and commissioning of the associated ground equipment takes time, which may extend upto three years for a start up or new system. The six months time given for commencement of commercial service may be reasonable in respect of foreign satellite systems that have sufficiently advanced in implementation under the basic licenses from their home country. Satellite system based in India may need to be given longer time. The time frame for commercial commencement of service will have to be finalised keeping in view these constraints as well as to ensure that non-serious agencies are prevented from acquiring a license and then taking inordinately long time in implementation of the system.*
- *There could also be a stipulation to publicly notify pockets within the service area, if any, which are not covered by the foot print/ beam of the satellite for availability of service or for any other technical reasons. This is relevant as the service area extends almost over the entire territorial jurisdiction of the country and customers at different places may demand the service.*

1.2 The operation and maintenance of the GMPCS gateway, which may be located in India, shall be entrusted to VSNL or an agency authorised by the Government of this purpose.

- ***GMPCS is being treated as a virtual foreign territory and, therefore, the condition mandating the operation and maintenance of gateway by VSNL may perhaps be relevant till the liberalisation of international long distance communication by the year 2004, if only the commercial angle is involved. However, if security considerations are more, relevant in this context then the Gateway operation may always continue to be under the Government control. This needs to be debated.***

1.3 For the purpose of providing the SERVICE, the LICENSEE shall install his own equipment so as to be compatible with the other service provider's equipment to which the licensees applicable systems is intended for interconnection. The equipment so provided will fully conform to the interface requirements between the two networks i. e. connectable and applicable.

3. The LICENSEE shall be responsible for : -

- i. maintaining the performance and quality of service standards.
- ii. maintaining the MTTR (Mean Time to Restore) within the specified limits of the quality of Service

1.5 If the LICENSEE, has in addition, leased or rented other telecommunication resources from the DOT as a service provider/MTNL/VSNL or any other authorised Telecom Service provider, for the purpose of providing the service and networking its geographically dispersed equipment, such resources will be procured on mutually agreed lease/rental charges.

- *This condition needs to recognise that while the charges for the resources may be negotiated mutually, the same will have to be in accordance with the regulations/orders on Interconnection notified by the TRAI from time to time.*

6. "QUALITY OF SERVICE":- The LICENSEE shall ensure that SERVICES to be provided by him be of the good quality i.e., consistent with established and generally accepted standard. The LICENSEE shall be responsible for repair of defects and making good any degradation in the SERVICE with promptness and within reasonable period.

- *The Quality of Service will have to conform to the standards laid down by the TRAI as per its orders/ regulations issued from time to time.*

6. The LICENSEE shall operate and maintain the Licenesed Network to meet the specified quality of service as well as interface standard for connectivity of LICNESEE's network to the DOT/MTNL/VSNL's network.

- *This Condition deals refers to the quality of service and interface standards for connectivity of licensee's network to the DOT/MTNL/VSNL's network. It should also include network of other service providers.*

6. GMPCS system shall be able to generate the billing information, in adequate detail, to ensure satisfaction to the customer about the genuineness of the bill. Any billing disputes or difference, between the LICENSEE and its subscribers will be settled amongst themselves and the licensor will not have any locus standi in the matter.

- *Such matters will have to be governed in accordance with the Consumers' Act as well as the TRAI Act.*

6. MTTR (Mean Time To Restore) :

1. (i) 90% of faults resulting due to subscribers complaints should be rectified within 24 hours and 99% within 3 days.

ii. The Licensee will keep a record of number of faults and rectification reports in respect of the service and produce it to the authority as and when and in whatever form desired.

- *MTTR will have to be governed in accordance with the Quality of Service standards to be prescribed by the TRAI from time to time.*

1.10. SECURITY CONSIDERATION:

1. The LICENSEE shall not employ bulk encryption equipments in its network. Any encryption equipment connected to the LICENSEE's network for specific requirements has to have prior evaluation and approval of the LICENSOR or officer specially designated for the purpose.

● *It's a repetition of Clause 13 of the license agreement.*

1. The LICENSEE Shall provide to the LICENSOR location details of switching centers, transmission centers, including routing details etc. and locations of these centers shall not be changed without prior approval of the LICENSOR.

● The LICENSEE shall provide necessary facilities to the Government to counteract espionage, subversive act, sabotage or any other unlawful activity.

● The LICENSEE shall make available on demand to the agencies authorised by the Government of India, full access to the switching centers, transmission centers, routes etc. for detailed technical security/inspection.

- All foreign personnel likely to be deployed by the LICENSEE for installation, operation and maintenance of the LICENSEE's network shall be security cleared by the Government of India prior to their deployment. The security clearance will be obtained from the Ministry of Home Affairs, Govt. of India.

- The LICENSEE shall ensure protection of privacy of communication and ensure that unauthorised interception of message does not take place.

- LICENSOR shall have the right to take over the SERVICE, equipment and networks of the LICENSEE either in part or in whole of the Service Area as per directions if any, issued in the public interest by the Government in case of emergency or war or low intensity conflict or any other eventuality. Provided any specific orders or direction from the Government issued under such conditions shall be applicable to the LICENSEE and shall be strictly complied with.

- LICENSOR reserves the right to modify these conditions or incorporate new conditions considered necessary in the interest of national security.

- *While blanket condition of this nature may be justified in the interest of national security, sufficient notice should be given to the licensee with due regard to technical and financial feasibility of the situation. It is better to introduce certainty in the terms and conditions of the license agreement and performance of any part thereof.*

1. The designated Authority of the Central/State Government as conveyed to the Telecom Authority from time to time in addition to the Telecom Authority or its nominee shall have the right to monitor the telecommunications traffic in every gateway switch set up in India. Necessary features facilities and interfaces shall be provided by the licensee for such monitoring at their expenses. Provision should be made for simultaneous monitoring by at least six Indian agencies or more. The Licensee shall make following type of provision for extending monitored cells :

- a. Extension on PSTN lines
- b. Extension on E-1 links (30 channels Pulse Modulation-PCM), which can be stored in a voice logger at gateway and simultaneously transported to user agencies on dedicated lines with correlated Call Related Information (CRI).

Since the monitored information may not be used at the Gateway site, it may be required to be passed to a desired location on VSNL links or PSTN lines.

- *This condition relates to the monitoring facility to be provided at the licensee's premises. In case the monitoring is to be carried out by the Government agency at its own premises, charges for transporting the call and setting up of the facilities at that end should be borne by the Government agency.*

1. All calls originating or terminating or transmitting from Mobile terminals in India shall pass through the GMPCS gateway located in India. Such calls will not be routed through any other Gateway i.e. located outside India. VSNL is also to be compensated, in case the Gateway is being bypassed. All internet network calls will be routed through two switches i.e. one of the licensee and that of the VSNL or DOT/MTNL. All international calls outgoing or terminating in a PSTN shall be routed via VSNL gateway switches. All national calls outgoing to terminating in PSTN shall be routed via DoT TAX Switches.

- *This Condition need not necessarily be listed under the Security Considerations. The connectivity issues mentioned herein are also contained in Condition 6.1 and 6.2 as well as 11.10.2. These conditions could in fact be merged.*
- *This condition inter-alia mentions that all national calls outgoing or terminating in a PSTN shall be routed via DOT TAX Switches. Considering that intra-circle long distance communication is already open to new entrants and the Government has announced opening up of national long distance communication w.e.f. January 1, 2000, the GMPCS service providers may like to have the option of connectivity to tax switches of other service providers once the GMPCS traffic builds up.*
- *It is also not clear as to whether VSNL is to be compensated even in respect of the traffic received on DOT TAX bypassing VSNL gateway?*

1. The company should provide a list of his subscribers, which should be updated at quarterly intervals.

1.10.12 Any foreigner who comes in the country with a registered mobile terminal should declare the same to the Custom Authorities who will record the details on his Passport and issue an authorisation for the use of the same, provided such Overseas Subscriber take the same mobile terminal out of India.

An Indian subscriber is permitted to carry the mobile terminal to foreign countries with him/her, after due endorsement on the passport provided he brings the same back to the country on his/her return.

13. The Government through appropriate notification may debar usage of mobile terminals in certain areas in the country.
14. By suitable man machine command to be given by the operation and maintenance of the licensee in the GMPCS gateway, it should be possible to deny service to subscribers in certain specified areas.

- ***The custom authorities would be responsible for compliance with this condition. Proper exchange of information between custom authorities and service providers may facilitate the task of identifying the terminals clandestinely brought into the country for denial of service. Comments in respect of Condition 1.10.22 may also be referred to in this context.***

- ***Conditions 1.10.13 and 1.10.14 deal with the denial of service to subscribers in certain areas. These could be merged.***
- ***To facilitate this task, the co-ordinates (latitude and longitude) of the area will have to be intimated in advance to the service provider where service to subscribers is proposed to be denied by the Licensor.***

13. Adequate monitoring facility should be made available by the licensee at the GMPCS Gateway to monitor all traffic (transit as well as traffic originating/terminating in India) passing through the applicable system. For this purpose, the licensee shall set up at his cost, the requisite interfaces, as well as features and facilities for monitoring of calls by authorised agencies as directed by the licensor from time to time.

- ***Since the gateway set up in India would cater to other countries, the sensitivity in monitoring the transit calls to other countries may have implications from the point of view of sovereignty of other country. It will have to be carefully examined.***

13. The licensee shall ensure adequate verification of each and every customer before enrolling him as a subscriber. The mobile terminal to be used shall be registered against each subscriber. The licensee shall make is clear to the subscriber that the mobile terminal registered against him is non transferable and that he alone will be responsible for proper and bonafide use of the service.

- ***A format could be devised to delineate the information required before enrolling a customer as a subscriber. Such details could be uniformly maintained by the service providers and submitted for verification whenever called for by the Government agency.***

13. The precise delineation of geographical borders taken by the licensee for the purpose of defining Indian service area shall have prior approval of the Government of India. The terrestrial boundaries of India shall be as depicted in the maps issued by Survey of India.

- The LICENSEE shall create a buffer zone along the India international border where no service would be permitted. Width of this buffer zone along the borders within the Indian territory shall be as decided by the Govt. of India.

- *The area, width and co-ordinates of the buffer zone will have to be spelt out by the Government, as the system of creating buffer zone will be undertaken with the help of the location positioning features like GPS.*

13. The LICENSEE shall have provision to scan subscriber operations through certain sensitive areas within the Indian territory and shall provide their identity and positional location (latitude and longitude) to LICENSOR on as and when required basis.

- The LICENSEE shall demonstrate the system capabilities with respect to security aspects including monitoring to the LICENSOR prior to starting operations in India.

- The LICENSEE shall ensure that any mobile terminal registered in the gateway of another country shall register with Indian Gateway when operating from Indian territory.

- The LICENSEE shall have inbuilt capabilities in the system to deny service to terminals clandestinely brought into the Indian territory.

- *The GMPCS system has the capability to recognize all the registered subscribers and authorized roamers from other networks. The system can deny service to clandestine customers once they are identified. The clandestine subscriber will otherwise be a registered user of the system. It may be difficult for the service provider to detect as to which terminal has been brought clandestinely into the Indian Territory. A mechanism has to be worked out in consultation with the Custom Department for prompt exchange of information on all such terminals, which are legally brought into the country following the due procedures of law. Visiting subscriber terminals other than such terminals registered on the equipment identification register (EIR) of the service provider could be denied service. Comments on Condition 1.10.12 may also be referred to in this context.*

- *The Licensor must lay down the mechanism for prompt exchange of information between the Licensee and the Custom Authorities on the above lines. The license fee should take into account the extra work involved on this count*

13. The Licensee shall give an undertaking to the LICENSOR that satellites deployed for GMPCS service shall be used over the Indian territory only for the services authorised by the LICENSOR and that no activities such as surveillance, Electronics Warfare etc. shall be carried out over the Indian territory which might jeopardize the sovereignty and security of the country.

- The LICENSEE shall disclose the terms and conditions of his contract with his parent company and the parent company's Government to the Licensor prior to starting operations in India.

10. APPLICATION OF INDIAN TELEGRAPH ACT:

1. The LICENSEE shall furnish all necessary means and facilities as required for the application of provisions of Section 5(2) of the Indian Telegraph Act, 1885, whenever occasion so demands.

- Nothing provided and contained anywhere in this License Agreement shall be deemed to affect adversely anything provided or laid under the provisions of Indian Telegraphs Act, 1885 or any other law in force.

11. PROHIBITION OF CERTAIN ACTIVITIES BY THE LICENSEE

1. The LICENSEE shall not engage in the provision of any other SERVICE other than GMPCS as defined in this license agreement.

- To remove any doubt, it is, hereby, clarified that nothing contained in Condition in prepara above shall preclude the LICENSEE from engaging in advertising and promotional activities relating to any of the Applicable Systems.

- The LICENSEE shall ensure that objectionable, obscene, unauthorised or any other content, messages or communications infringing copyright, Intellectual property etc., in any form are not carried on his network, consistent with the established laws of the country and the licensee should take such measures to prevent it. In particular LICENSEE is obliged to provide, without any delay tracing facility to trace nuisance or malicious calls, messages or communications transported through his equipment and network. Any damages arising out of default on the part of licensee in this shall be payable by the licensee.

- *The service providers feel that the system can trace origin of such messages and malicious calls when reported by the recipient. Some industry regulation will have to be framed to address such obligations on the service providers.*
- *It may not be practical for the licensee to identify and prevent any communication from being passed through its system having bearing on the intellectual property rights of some third party. Licensee's obligation under this condition may have to be suitably modified.*

1. In case any confidential information is divulged to the LICENSEE for proper implementation of the Agreement, it shall be binding on the LICENSEE and its employees and servants to maintain its secrecy and confidentiality.

11. RIGHT TO INSPECT

The LICENSOR, of its authorised representative shall have the right to inspect the sites to which and where from the SERVICES are extended. The LICENSOR shall, in particular but not limited to, have the right to have access to leased lines, junctions, terminating interfaces, hardware/software, memories of semiconductor, magnetic and optical varieties, wired options, distribution frames, and to enter into dialogue with the system through Input/output devices or terminals. The LICENSEE will provide the necessary facilities for continuous monitoring of the system, is required by the LICENSOR or its authorised representative(s). The LICENSOR will ordinarily carry out inspection after reasonable notice except in circumstances where giving such a notice will defeat the very purpose of the inspection.

● REQUIREMENT TO FURNISH INFORMATION TO THE LICENSOR/ TELECOM AUTHORITY

1. Subject to condition 1.14.2, the LICENSEE shall furnish to the TELECOM AUTHORITY, in such manner and at such times as the AUTHORITY may require, such documents, accounts, estimates, returns or other information and procure and furnish to AUTHORITY such reports.

- The LICENSEE may not be required to procure or furnish a report which would not normally be available to it unless the TELECOM AUTHORITY considers the particular report essential to enable it to exercise its functions.

- **Engineering details:-**

a. The LICENSEE shall furnish to the TELECOM AUTHORITY, in such manner and at such times as the AUTHORITY may require, complete technical details with all calculations for engineering, planning and dimensioning of the system/network, concerned relevant literature, drawings, installation materials regarding the applicable system.

- List of performance tests shall be furnished by the LICENSEE one month prior to the date of commissioning of service.

- LICENSEE shall supply all tools, test instruments and other accessories to the testing party of LICENSOR for conducting tests, if it so desires.

- *The requirement to furnish information to the licensor should also include TRAI. The TRAI will be stipulating statements/formats and other information necessary for discharge of its regulatory functions, which the service providers will have to furnish.*

CONDITION-2 : ACCEPTANCE TESTING AND QUALITY OF SERVICE:

1. ACCEPTANCE TESTING:

The Acceptance Testing for each and every interface with the DOT/MTNL/VSNL network may be carried out by licensor or any one authorised by the licensor. The Acceptance Testing schedule shall be mutually agreed. Adequate time, not less than 30 days, will be given by the licensee for these tests.

- *There is a need to stipulate the time frames for accomplishing the acceptance test to be carried out by licensor. Since the interface with the DOT/MTNL/VSNL and any other service provider network is to be mutually agreed, and implemented by the licensee and the concerned network, the acceptance testing of the interfaces should be left to the parties involved. The licensor could be provided with the basic interconnect agreement and test results, if necessary.*

1. QUALITY OF SERVICE:

TELECOM AUTHORITY reserves the right to carry out performance tests and also define the QUALITY OF SERVICE parameters on licensee's network at any time during the currency of licence. It will be mandatory for the Licensee to comply with such parameters of Quality of Service as and when prescribed by the Telecom Authority.

- *In accordance with the provisions of the TRAI Act 1997, the Authority is required to monitor the QOS and protect the interests of the consumers. The TRAI would also stipulate the QOS standards based on open consultations. The license conditions should contain a provision to the effect that the QOS standards would be applicable as determined by the regulation and orders of the TRAI from time to time.*

1. LICENSEE will ensure that the Telecommunication installation carried out by him should not become a safety hazard and is not in contravention of Laws of the land.

CONDITION 3: DELIVERY OF THE SERVICES

1. The LICENSEE shall be responsible for installation, testing and commissioning of all the equipment to provide the GMPCS service. However, all performance tests required for successful commissioning of the services may also be carried out by the LICENSOR, if it so desires, before the services are commissioned for public use. The LICENSEE shall supply all necessary literature, drawings regarding the equipment installed for commissioning of the services. The LICENSEE shall

supply all the tools, test instruments and other accessories to the testing party of the LICENSOR for conducting the tests.

- The Licensee shall provide service within **six months** from the effective date of the license agreement unless the extension of implementation time is duly approved by Telecom Authority for reasons to be recorded in writing. Commissioning of service will mean providing commercial service to customers. However, such extension of time, if granted, shall not have any effect on the date of payability of licence fee.

- *Comments given against Condition 1.1 may be referred to in the context of making necessary amendment in this Condition.*

1. The list of performance tests will be furnished by the LICENSEE one month prior to the date of commissioning to the LICENSOR.

- The Licensee is hereby authorized to own and install and commission GMPCS Gateway (s) which shall be operated and maintained by Videsh Sanchar Nigam Limited ('VSNL') or agency authorised by the Government.

- The service shall be provided in accordance with the interface requirements of DoT/MTNL/ VSNL.

- *Condition 3.5 regarding the licensee providing service in accordance with inter-face requirement of DOT/MTNL/ VSNL should also include reference to other service providers. In fact, this Condition appears redundant in view of similar condition stipulated in Condition 1.3 of Part II.*

1. In case the LICENSEE chooses to conduct performance test, delay caused due to rectification of deficiencies, if any, in the commissioning/provision of SERVICES, will be to the account of the LICENSEE.

- The LICENSEE shall provide the service to any individual or legal person without any discrimination unless directed by the LICENSOR in writing.

CONDITION 4: COMPLAINT - BOOKING AND TREATMENT

The LICENSEE shall be responsive to the complaints lodged by his subscribers. He shall rectify the anomalies within the MTTR specified. It shall maintain the history sheets for each installation, statistics and analysis on the overall maintenance status.

CONDITION 5: FORCE- MAJEURE

If any time, during the continuance of this licence, the performance in whole or in part, by either party, of any obligation under it is prevented or delayed, by reason of war, or hostility, acts of the public enemy, civic commotion, sabotage, fire, flood, Act of State or direction from Statutory Authority, explosion, epidemic, quarantine restriction, strikes and lockouts (as are not limited to the establishments and facilities of the Licensee), or act of GOD (hereinafter referred to as event), provided notice of happenings of any such EVENT is given by either party to the other, within 21 days from the date of occurrence thereof, neither party shall, by reason of such **event**, be entitles to terminate the licence, nor

- *Last line of the above condition needs attention. While Force Majeure events may normally not be a ground for non-payment of license fee, the liability for payment of license fee for such period (s) of suspended animation may, however, be reduced/ waived on case to case basis. The matter also needs to be debated on the point of corresponding extension in the license period.*

shall either party have any such claims for damages against the other, in respect of such non-performance or delay in performance. Provided **service** under the licence shall be resumed as soon as practicable, after such EVENT comes to an end or cases to exist. The decision of the LICENSOR as to whether the SERVICE may be so resumed (and the time frame within which the SERVICE may be resumed) or not, shall be final and conclusive. However, the Force Majeure events noted above will not in any way cause extension of the period of Licence and will also not be a ground for non-payment of Licence fee.

CONDITION 6: NETWORK CONNECTIVITY

1. There will be only two direct interconnectivity between each of the licensee's gateway to the two nearest technically feasible TAXs (Level I) of DoT/MTNL for all calls coming from and to the various public telecom networks in India i.e. PSTN, PLMN or other Value Added Networks and for calls to/from neighbouring countries which are directly connected to the DoT's long distance network.

- *This condition refers to network connectivity. The reasons explained in comments to condition 1.10.10 would also be relevant as regards connectivity with DOT and other service providers is concerned. In so far as the traffic originating/terminating on the basic or cellular service providers' networks is concerned, it would be appropriate to allow the facility of direct connectivity, which would be relevant once the traffic builds up.*
- *NTP 1999 permits inter-connectivity among different service providers within the same service area including the sharing of their infrastructure. Inter-connectivity between service providers in different service areas shall be reviewed in consultation with the TRAI. It is not clear as to what policy objective is to be achieved by restrictive conditions as above?*

1. There will also be only one direct connectivity between each of the licensee's gateway to the nearest technically feasible VSNL Gateway for all calls from GMPCS to other countries and from other countries to GMPCS except for the countries for which arrangements of routing calls from DoT's network exist. Internetwork calls from other countries to GMPCS in India and vice-versa will be routed through VSNL gateway except for the countries for which arrangements of routing calls to DoT's Network exist.

- *As per condition 6.2 inter network calls from other countries to GMPCS in India and vice versa will be routed through VSNL gateway except for the countries for which arrangement for routing calls to DOT network exist.*
- *While Iridium has been allowed to set up and own the gateway, its operation and control has to be vested with VSNL.*

1. The Licensee shall place a copy of the executed agreement, specifying the terms and conditions of the interconnection between the licensee and VSNL/ DoT with the Authority, within 30 days of the execution thereof. The interconnect agreement shall be subject to regulations framed by TRAI in this regard from time to time.

- The licensee may obtain the transmission links for the purpose of interconnection of GMPCS Gateway with DoT/MTNL/VSNL on lease from DoT, licensed Basic Service Operator or any other operator specially authorised to lease such lines. The licensee may also establish its own transmission links within the service area for carrying traffic originated/terminated in his network provided that such capacities are not available from any other authorised agencies and subject to permission of Authority.

- ***Condition 6.4 permits transmission links for interconnection of GMPCS gateway with DOT/MTNL/VSNL on lease from DOT, licensed basic service operators or any other operator specially authorised to lease such lines. The licensee may also establish its own transmission link for carrying traffic originating/terminating in his network provided that such capacities are not available from any other authorised agency and subject to permission of Authority. Is it reasonable to have such restrictions on the licensee?***

1. Resources required for operation of the services for extending them over to the network of other service provider (DoT/VSNL etc) including time frame for provision of the same, will be mutually agreed between the parties and shall be listed. The resources may refer to include but not limited to physical junctions, PCM derived channels, private wires, leased lines, data circuits other communication elements. The licensee shall apply for and obtain the determined resources from the concerned network provider. The operation and charge of these resources is outside the scope of this licence agreement. Licensor will not be responsible for provision of such resources.

CONDITION 7.0 : GMPCS MOBILE TERMINAL OR MOBILE TERMINAL

1. The mobile terminals employed in the network shall be of a type/model certified by an internationally accredited agency with respect to ITU/ETSI standards. They should carry a marking specifying their compliance with ITU/ETSI standards. Only such category of Mobile Subscriber Unit as has been granted such a certificate shall be allowed to be brought into and operated within India under this Agreement.

• *This could be modified to include class approval under any other standard as may be prescribed by the licensor.*

1. The Licensee shall have the right to undertake the sale, hire purchase, lease or renting of the Mobile terminal within India.

• *In the event of the Licensee winding up its service for any reason, there should be consumer safe guards for buy back of the hand-sets sold/ leased by the Licensee.*

1. The Licensee shall be responsible to ensure that the mobile terminal is operated within India in accordance with the terms of the License and the W.P.C. license. The mobile terminal shall be non-transferable.

• *It is the licensee's responsibility to ensure that the mobile terminal is operated within India in accordance with the terms of the license agreement and the WPC license. The mobile terminals shall not be transferable.*
 • *Condition 11.4 on ownership of GMPCS mobile terminal, however, mentions that the provision of terminal at subscriber end shall be the responsibility of the subscriber. Perhaps it tends to mean the subscriber's responsibility for appropriate usage of the mobile terminal in accordance with the law of the land.*

CONDITION 8.0 : TERMINATION OF THE LICENSE

1. TERMINATION FOR DEFAULT :

The LICENSOR, may, without prejudice to any other remedy for breach of conditions of licence, by written notice of 30 days, issued to LICENSEE at its registered office in advance, terminate this license in whole or part under any of the following circumstances:

- a. if the LICENSEE fails to commission or deliver the SERVICE within the time period(s) specified in the licence or in any extension thereof, if granted by the LICENSOR. However, this does not prevent the licensee from commissioning the service even after scheduled date of commissioning, provided the licence does not already stand terminated.

or

- if the LICENSEE fails to perform any other obligation(s) under the licence including remittance of timely payments of Licence fee due to the LICENSOR.

and

- if the LICENSEE does not rectify the failure within a notice period of 30days or during such further period as the LICENSOR may authorise in writing in this regard.

- *The Condition in its present form is one sided. It does not include the provision for affording an opportunity to the licensee before revoking the license. The notice period of 30 days is perhaps too short.*
- *As mentioned in the comments against Clause 5 of the license agreement, Section 11 of the TRAI Act, 1997 deals with the functions mandated to the TRAI. Notwithstanding anything contained in the Indian Telegraph Act, 1885, the following clauses under sub-section 1 of Section 11 stipulate that the functions of the TRAI shall inter alia include:*

(c) to ensure compliance of terms and conditions of license

(f) to recommend revocation of license for non-compliance of terms and conditions of license.

- *Should the license agreement ignore the aforementioned statutory provisions of the TRAI Act? Should it not be obligatory on the licensor to seek recommendations from the TRAI before revocation of a license?*
- *The licensor must seek the recommendations of the TRAI before revocation of license for non-compliance of any terms and conditions of the license. After affording reasonable opportunity to the licensee as well as the licensor, in case the TRAI concludes to recommend that the license be revoked, the indicative time frame (such as 30 days or any other reasonable period) may then be stipulated by the TRAI for revocation of*

license.

- *The recommendations of the TRAI will not be binding on the licensor. In any instance, therefore, where the TRAI does not agree with the licensor's proposition for revocation, the licensor may still decide to pursue revocation of the license. In that situation, the notice period of 90 days (after the receipt of TRAI's recommendations) may perhaps be more reasonable for revocation of license*

**1. TERMINATION FOR
INSOLVENCY:**

The LICENSOR, may at any time terminate the licence by giving written notice of 30 days to the LICENSEE without compensation to the licensee, if the LICENSEE becomes bankrupt or otherwise insolvent, provided such termination shall not prejudice or affect any right of action which has accrued or will accrue thereafter to the LICENSOR. The right of termination will arise on the LICENSEE being adjudicated or applying for being adjudicated as bankrupt.

• **TERMINATION FOR CONVENIENCE:**

If the LICENSEE is to surrender the licence, it shall give an advance notice of 30 days to the Licensor to this effect. If the service is in operation, the licensee shall also intimate its subscribers of consequential withdrawal of service by serving a 15 days notice to them. Also the licensee shall be liable to pay the license fee till end of the notice period.

● **TERMINATION FOR TRANSFER OF THE LICENCE:**

The LICENSEE shall not, in any manner whatsoever transfer the licensing rights granted to it, to any other party. Any violation shall be construed as a breach of licence and the licence shall be terminated.

● **ACTIONS PURSUANT TO TERMINATION OF LICENCE AS PER CLAUSES 8.1, 8.2, 8.3 AND 8.4 ABOVE:**

1. In the event of termination of the licence, the LICENSOR may procure upon such terms and conditions and in such manner as deemed appropriate/fit, the required resources will make up for those not installed, not delivered or not brought into commission also as to enable provision of SERVICE and the LICENSEE shall be liable to the LICENSOR for any excess/extra costs for such corrective efforts. The criteria for determining the terms and conditions for such procurement will depend upon the market prices, prevailing at the time of procurement. The decision of the LICENSOR in this matter shall be final in all respects.

● Whenever the licence is terminated or not extended, the LICENSOR may in order to ensure the continuity of the SERVICE take such steps as are necessary including the following:

- i. permit the Department of Telecommunications/MTNL or its successor to take over; or
- ii. issue licence to another Indian Company for running the SERVICE. The LICENSEE shall facilitate taking over by DoT/MTNL or the new LICENSEE all those assets as are essential for the continuity of the SERVICE. In such circumstances, LICENSEE shall receive from DoT/MTNL or the new LICENSEE, as the case may be, reasonable compensation for the assets made over.

1. During the period when a notice for termination of licence is pending, the Quality of Service to the Subscribers as defined for the purpose shall be maintained. If the SERVICE quality is not maintained, (during the notice period), it will be treated as breach of licence conditions and will be dealt with as such.

- The Financial Bank Guarantees shall be returned to the licensee company 6 months after the termination of the licence and after ensuring clearance of any dues which the licensee company is liable to pay. In case of failure of the licensee to pay the dues the amounts will be realised through encashment of Bank Guarantee, apart from other action to recover the dues.

CONDITION 9: DISPUTES WITH OTHER PARTIES

In the event of any dispute of the LICENSEE with any other service provider or any party other than Licensor due to any reason whatsoever, the dispute will be sorted out among themselves and Licensor will have no liability in any manner. However in case of dispute arising with other parties due to nonobservance of rules and regulations by the LICENSEE as provided in this licence, the LICENSOR will have full powers to take any action against LICENSEE as is provided in the relevant clauses of this licence. The LICENSEE as is provided in the relevant clauses of this licence. The LICENSEE indemnifies LICENSOR in respect of any action against LICENSOR for acts of commission or omission on the part of the LICENSEE, its employees and servants.

- *TRAI's jurisdiction in regard to settlement of disputes among service providers or between service providers and a group of consumers has to be included in this Condition, keeping in view the provisions of Section 11(1)(n) and Section 14 of the TRAI Act, 1997. Other laws of the land will also be relevant in this context.*

CONDITION 10: ARBITRATION OF DISPUTES

1. In the event of any question, disputes or difference arising under the licence, or in connection thereof, except as to the matter, the decision of which is specifically provided under the licence, the same shall be referred to an Arbitral Tribunal, hereinafter called the "TRIBUNAL" comprising three Arbitrators, one each to be appointed by the LICENSOR (acting through Telecom Authority) and Licensee and such two Arbitrators shall then appoint the third Arbitrator within 30 days of their appointment but

before proceeding with the reference.

- The LICENSOR and the LICENSEE shall invariably make the appointment of their respective Arbitrator within 30 days of receipt of the notice of appointment of Arbitrator by another party.

- The license agreement and any dispute thereof shall be governed by the substantive provisions of Indian law.

- The venue of arbitration shall be New Delhi or as may be fixed by the TRIBUNAL any where in India.

- The arbitration proceedings shall be conducted in accordance with the provisions of Indian Arbitration and Conciliation Act, 1996 and rules framed thereunder or any modifications or re-enactment thereof made from time to time.

CONDITION 11: FINANCIAL CONDITIONS

1. **TARIFF:** The Licensee will be free to fix his own tariff to be charged from its subscribers for Mobile to Mobile and Mobile to PSTN calls. Provided, further that the licensee company shall intimate the Authority, the tariff for the service to be charged from its subscribers and any changes thereof, at least 10 days prior to its implementation. However, the TRAI (Telecom Regulatory Authority of India) may review and fix a tariff at any time during the validity of the licence which

- *Comments given on clause 8 of the license agreement regarding tariffs to be charged by the licensee from subscribers in accordance with the rates and orders notified by the TRAI from time to time would also be relevant here.*

shall be binding on the Licensee. The operation policy in regard to tariff will be determined by TRAI under section 11(2) of TRAI Act, 1997.

1. It shall be the responsibility of the Licensee to issue or cause to be issued bills to the GMPCS Subscribers for use of the service.

- The Licensee should maintain such records so as to produce itemized billing information.

- **Ownership of GMPCS Mobile Terminal: The provision of terminal at subscriber's premises shall be responsibility of the subscriber.**

- *Refer comments against condition No. 7.3*

1. The LICENSEE shall be bound by the terms and conditions of the Licence granted as well as by such regulations and instructions as are issued by the LICENSOR and/or its successors from time to time.

- Preparation of accounts:

The LICENSEE shall;

- a. maintain and prepare accounting records, sufficient to show and explain its transactions in respect of each complete financial year of the LICENCE during which this Licence is in force, or of such lesser periods as the LICENSOR may specify, fairly presenting the costs (including capital costs), revenue and financial position of the LICENSEE's business and including a reasonable assessment of the assets employed in and liabilities attributable to the LICENSEE's business.
- b. procure in respect of each of those accounting statements prepared in respect of a complete financial year, a report by the LICENSEE's Auditor stating whether in his opinion that statement is adequate for the purpose of this Condition; and

- deliver to the LICENSOR a copy of each of the accounting statements not later than three months after the end of the period to which they relate.

In this condition: the "Auditor" means the LICENSEE's auditor for the time being appointed in accordance with the requirements of the Companies Act, 1956.

- send to the Licensor statement of gross revenue from the service for each quarter by the 30th of month following the quarter.

**1. FINANCIAL BANK
GUARANTEE (FBG):**

The licensee shall submit a financial bank guarantee of an amount commensurate with the fixed component of the annual licence fee in the format as given in Schedule 'C' of the Licence Agreement prior to the signing of the licence agreement. The LICENSEE shall submit the Financial Bank Guarantee from any Scheduled Bank, to be renewed from time to time and initially valid for a period of two years.

The licensee will be liable to extend the validity of the financial Bank Guarantee one month prior to its date of expiry on its own without demand from the Licensor for a further period of one year on year to year basis during the full currency of the licence. On any failure to do so, the financial bank guarantee will be encashed without giving any notice. This is without prejudice to any other action that may be taken under the terms and conditions of the licence.

If due payment on account of licence fee or any other account is not received in time for a maximum period of 30 days, an adjustment may be made through the Bank Guarantee(s) and notice for termination of licence may be served as per the provision, DoT/MTNL/VSNL also be directed to discontinue the use of its facilities by the LICENSEE immediately thereafter. This is without prejudice to any other remedy that the LICENSOR may decide to resort to.

- LICENSOR, without prejudice to its rights to any other remedies, is free to encash Financial Bank Guarantee, in part or in full, in case of any breach of terms and conditions of the licence by the LICENSEE including non-payment of Licence fee etc.

- Breach of non-fulfilment of licence conditions may come to the notice of the LICENSOR through complaints or as part of regular monitoring. Wherever considered necessary, LICENSOR will conduct an inquiry to determine whether there has been any breach of the terms and conditions of the licence. The LICENSEE will be given an opportunity before any action adverse to his interest is taken.

The LICENSOR shall decide in each case the penalty to be levied for any breach of the terms and conditions of the License. If the penalty is not discharged or complied with, the LICENSOR has the right to encash, part or in full, the Financial Bank Guarantee.

- *There are no obligations stipulated in the License, which have to be discharged by the Licensor.*

CONDITION 11.10: PAYMENT OF LICENCE FEES AND OTHER PAYMENTS

1. The LICENSEE shall pay the due licence fee as per Schedule "A" of this licence agreement through a demand draft drawn on any Scheduled Bank in New Delhi in favour of the Pay & Accounts Officer (HQ), DOT.

- **ACCESS CHARGES:**

The LICENSEE, in addition to paying the Licence fee, will separately pay the full Access charges for carriage of calls originating in his network but carried and terminated in the DOT/MTNL/VSNL networks at applicable rates from time to time.

- *This condition should also include other service providers' networks apart from the networks of DOT/MTNL/ VSNL. The access charges will be negotiated keeping in view the orders and regulations issued by the TRAI from time to time.*

1. CHARGES FOR NETWORK RESOURCES:

The LICENSEE shall also separately pay charges for network resources provided to the licensee on licensee's request by the Department of Telecommunications/ MTNL/ VSNL / other licensed providers at rates applicable from time to time.

- *The charges for network resources will be negotiated in accordance with the orders and regulations issued by the TRAI from time to time.*

CONDITION 12: PUBLICATION OF THE SERVICE DIRECTORY:

1. The licensee may publish a Service Directory containing all commercial information, name, address and number of the subscribers. If any subscriber does not wish to name from the directory after taking concurrence of the subscriber in writing.

- *Condition 12.1 should make it obligatory for the licensee to publish a service directory containing all commercial information, name, address and number of the subscribers excluding the particulars of those subscribers who opt out from being listed in the directory.*

1. All the subscribers of the service shall be entitled to one free entry in this directory and any additional information/specific printing in a particular type at the request of the subscriber may be charged for.

- The Authority reserves the right to include information of the subscribers in the directory which may be published by the Authority for PSTN/Telex/data Services etc. and the licensee shall be bound to supply the required information as and when asked for.

- The Authority or its representative(s) will have an access to the Data base relating to the subscribers of the Licensee. The Licensee shall also update the list of his subscribers and make available to the Authority at such intervals as may be prescribed. The Licensee shall make available, at any prescribed instant, to the Authority or its representative details of the subscribers using the service.

CONDITION 13: SET OFF

Any sum of money due and payable to the LICENSEE (including Earnest money refundable to the Licensee) under this licence may be appropriated by the Government or any other person or persons including contracting through the Government of India and the same may be set off against any claim of the Government or such other persons, for payment of a sum of money arising out of this licence or under any other licence made by the LICENSEE with the Government or such other person or persons including TELECOM AUTHORITY contracting through Government of India.

CONDITION 14: WPC Wing's License

Establishment, maintenance and operation of wireless stations which includes GMPCS gateway(s) and mobile terminals shall be strictly subject to obtaining separate valid licence from WPC Wing of the Ministry of Communications under Indian Telegraph Act, 1885 under terms and conditions of that licence. Decision to grant such licence shall be governed by guidelines for such purpose which shall include, inter-alia, successful completion of national and international coordination, frequency availability, SACFA site clearance, appropriate clearances from other Ministries,

- *License fee for spectrum usage should be reasonable which reflects the need to ensure the optimal use of this scarce resource.*
- *Since the available spectrum is limited, is there the need to limit the number of licensees?*

payment of licence fee and royalty as decided by Government of India from time to time. Necessary details on the subject may be obtained from the office of the Wireless Adviser to the Government of India, WPC Wing, Ministry of Communications, Dak Bhawan, Parliament Street, New Delhi - 110 001.

SCHEDULE 'B'

PART-III: COMPLIANCE STATEMENT

The company, hereby, agrees and undertakes to fully comply with all terms and conditions stipulated in this Licence Agreement without any deviation and reservation.

Signatures of the authorised signatory of the operating company (Licensee)

For and on behalf of

M/s Iridium India Telecom Ltd.

C/o Infrastructure & Financial Services Ltd.

4th Floor Mahind Tower

Dr. G.M. Bhosale Marg.

Worli, Mumbai 400 018

SCHEDULE 'C'

PROFORMA FOR FINANCIAL BANK GUARANTEE

To

The President of India

acting through the Telecom Authority

In consideration of the President of India acting through the Telecom Authority (hereinafter called 'the Authority') having agreed to grant a licence to M/s..... of (hereinafter called 'the Licensee') to establish, maintain and operate GLOBAL MOBILE PERSONAL COMMUNICATION BY SATELLITE SERVICE (GMPCS Service) (hereinafter called 'the SERVICE') as per Letter of Intent (LoI)/Licence number dated in the country in accordance with the Application Form for obtaining GMPCS Service Licence and on the terms and conditions contained in the said licence, which inter alia provides for production of a Bank Guarantee to the extent of Rs. (..... in words) under the said licence by way of security for payment of the said licence fee as well as such other fees or charges required to be paid by the Licensee under the Licence. We (indicate the name and address and other particulars of the Bank) (hereinafter referred to as 'the Bank') at the request of the Licensee hereby irrevocably and unconditionally guarantee to the Authority that the licensee shall pay all the dues, including but not limited to, the licence fee to the Authority.

2. We, the Bank, hereby undertake to pay the Authority an amount not exceeding Rs. (Rupees..... only) against any loss or damage caused to or suffered or would be caused to or suffered by the Authority by reason of any failure of the licensee to pay all the above mentioned fees, dues and charges or any part thereof within the periods stipulated in the licence.
3. We, the Bank, hereby further undertake to pay as primary Obliger and not merely as surety to pay such sum not exceeding Rs. (Rupees.....only) to the Authority immediately on demand and without demur stating that the amount claimed is due by way of failure of the licensee to pay any fees or charges or any part thereof in terms of the said licence.
4. WE, THE BANK, DO HEREBY DECLARE AND AGREE that the decision of the Authority as to whether LICENSEE has failed to pay the said licence fees or any other fees or charge or any part thereof payable under the said Licence and as to the amount payable to the Authority by the Bank hereunder shall be final and binding on us.
5. WE, THE BANK, DO HEREBY DECLARE AND AGREE that the
 - a. Guarantee herein contained shall remain in full force and effect for a period of Two Years from the date hereof and that it shall continue to be enforceable till all the dues of the Authority and by virtue of the said Licence have been fully paid and its claims satisfied or discharged or till Authority satisfies that the terms and conditions of the said licence have been fully and properly carried out by the said Licensee and accordingly discharged this guarantee.
 - b. The Authority shall have the fullest liberty without our consent and without affecting in any matter our obligations hereunder to vary any of the terms and conditions of the said licence or to extend time of performance of any obligations by the said LICENSEE from time to time or to postpone for any time or from time to time any of the powers exercisable by the Authority

against the said LICENSEE and to forbear or to enforce any of the terms and conditions relating to the said Licence and we shall not be relieved from our liability by reason of any variation or extension being granted to the said LICENSEE or forbearance act or omission on the part of the Authority or any indulgence by the Authority to the said LICENSEE or to give such matter or thing whatsoever which under the law relating to sureties would but for this provision, have effect of so relieving us.

- c. Any claim which we have against the LICENSEE shall be subject to and subordinate to the prior payment and performance in full of all the obligations of us hereunder and we will not without prior written consent of the Authority exercise any legal right or remedy of any kind in respect of any such payment or performance so long as the obligations of us hereunder remains owing and outstanding.
- d. This Guarantee shall be irrevocable and the obligations of us herein shall not be conditional of any prior notice by us or by the LICENSEE.

2. We the Bank undertake not to revoke this Guarantee during its currency except with the previous consent of the Authority in writing.

Dated day..... for

(Name of the bank)

Witness:

1.

2.



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DRAFT OF THE RE-STRUCTURED FORMAT
OF
LICENSE AGREEMENT FOR GLOBAL MOBILE PERSONAL COMMUNICATIONS BY
SATELLITE SERVICE

This Appendix contains a draft of the re-structured License Agreement for the provision of Global Mobile Personal Communications by Satellite (GMPCS) Service.

LICENSE AGREEMENT

This AGREEMENT is made on the ____th day of (month) (year) between the **President of India** acting through Director (VAS-III), Department of Telecommunications (DOT), Sanchar Bhavan, 20– Ashok Road, New Delhi – 110 001 (**hereinafter called the LICENSOR**) of the ONE PART

and

M/s XYZ Ltd., a company registered under the Companies Act 1956, having its registered office at _____ (**hereinafter called the LICENSEE** which expression shall, unless repugnant to the context, include its successor in business, administrators, liquidators and assigns or legal representatives) of the OTHER PART.

WHEARAS in exercise of the powers under Sub-Section (2) of Section 4 of the Indian Telegraph Act, 1885, the Central Government delegated its powers to 'Telecom Authority' (hereinafter referred to as "Authority") by GSR 806 Gazette of India, Part II, Section 3 (i) dated 24th August, 1985; and

WHEREAS pursuant to the request of the LICENSEE, the LICENSOR has agreed to grant this License to set up and operate GLOBAL MOBILE PERSONAL COMMUNICATIONS BY SATELLITE SERVICE (GMPCS) NETWORK and to provide GMPCS SERVICE in India. This License is valid for a period of ____ years from the date of issue (unless revoked earlier by the licensor) on the terms and conditions appearing hereinafter. Having agreed to accept the same, the LICENSEE shall abide by the terms and conditions set out in this license agreement and ensure compliance thereof including payment of licence fee retrospectively from the date of issuance of the provisional licence.

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

In consideration of observance of mutual covenant, the payment of licence fee, and due performance of all the terms and conditions on the part of the LICENSEE, the LICENSOR does, hereby grant, on a non-exclusive

basis, the licence to establish and operate the GMPCS Network and provide Service, on the terms and conditions mentioned in this license agreement.

IN WITNESS WHEREOF the parties hereto have caused this Agreement to be executed through their respective authorised representatives on the (day) (month), (year).

The Licensee hereby agrees and undertakes to fully comply with all terms and conditions stipulated in this License Agreement without any deviation and reservation.

Signed and Delivered for and on behalf of President of India

By

Director (VAS-III), DoT

Signed on behalf of M/S XYZ Ltd. by Mr. _____, Managing Director, holder of General Power of Attorney dated xxx, 1999 executed in accordance with the Resolution No. ____ dated _____ passed by the Board of Directors of M/S XYZ Ltd.

In the presence of:

Witnesses:

TERMS AND CONDITIONS

1. Ownership of the Licensee Company

1. The LICENSEE shall ensure that the total foreign equity in the LICENSEE Company does not, at any time, exceed 49% of the total paid up equity. The details of the Indian & Foreign partners/promoters with their respective equity holdings in the LICENSEE Company (as on the date of the signing of the license agreement are given in the Appendix ____). Any change in the Indian and Foreign partner(s) or their equity participation, which has the effect of changing the management control over the LICENSEE company or a shift in its legal entity shall not be made without the prior approval of the LICENSOR.

Note: Format of the details to be furnished in the Appendix:

Sr. No	Name of Promoters/Technology Providers/ Equity Holders	No. of Shares	Value of Shares	Indian/ Foreign	Equity % age
1					
2					
3					
4					

- The Licensee shall disclose complete details on terms and conditions of the contract with his parent company/ satellite system provider including the contract with the foreign Government where the parent company is located. This information shall be furnished to the Licensor prior to starting operations in India and updated on a regular basis during the validity of the license.

2. Scope of the License

- The Licence is issued to provide Service as defined in Attachment I to this License Agreement on a non-exclusive basis i.e. other companies may also be granted licence for the same service at the discretion of the Licensor. DOT on its own or through a designated Public Authority has the right to operate the service in any part/ whole of the country. Provided further that a pilot project may also be approved and licensed for any period by the LICENSOR for inducting a new technology or management techniques or both. However, before inducting any agency to provide the Service on commercial basis, the LICENSOR shall seek the recommendations of the Telecom Authority of India (TRAI) on the need and timing for introduction of the new service provider as well as the terms and condition of the license.
- The LICENSEE shall clearly define the scope of **Service** to the subscriber(s) at the time of entering into contract with such subscriber(s). Any dispute with regard to the service shall be a matter between the subscriber and the licensee only. The licensee shall suitably notify the above to all his subscriber(s) before provisioning of the service. The DOT in its capacity as the Licensor as well as the service provider, MTNL, VSNL or any other service provider licensed to provide connectable systems shall be impleaded as a party in such disputes only when there is some prima facie instance of laches on their part subject to satisfaction of the Court/ Competent Authority.

3. Delivery of Service

3.1 The LICENSEE shall install and run Applicable Systems within X years (6 months or one/ two years) from the effective date of the license; and offer the service on demand to its customers unless any extension in time for commissioning of service has been duly approved by Telecom Authority for reasons to be recorded in writing. Commissioning of service shall mean providing commercial service to customers. The extension of time, if granted, shall not have any effect on the due date for payment of licence fee.

4. Network

1. The Licensee would furnish information regarding the type of the Satellite System (using the constellation of GEO or MEO or LEO satellites) and the type of the GMPCS service (Global or Regional) to be provided through its Network. The launch schedule of the Satellite System is _____(TO BE SPECIFIED).
2. The LICENSEE shall be responsible and is authorised to install, test and commission all the equipment to provide the GMPCS service.
3. The Licensee is also authorised to own, install and commission GMPCS Gateway(s) that shall be operated and maintained by Videsh Sanchar Nigam Limited (VSNL) or an agency authorised by the Government. The gateways will provide ground infrastructure comprising of satellite earth stations, switching equipment, and associated control electronics. The LICENSEE will be given the choice to establish the number of gateways.

4. The LICENSEE shall publicly notify pockets, if any, within the service area, which are not covered by the foot- print of the satellite for availability of service or for some other technical reasons.

5. Duration of License

5.1 The licence for operation of the GMPCS service shall be for a period of xxx years reckoned retrospectively from the date of the provisional licence, unless terminated for default or for insolvency or for convenience or for transfer of the licence in accordance with Condition_____ stipulated in this License Agreement.

(THE PERIOD OF LICENSE IS TO BE DETERMINED BASED ON CONSULTATIONS).

6. Extension of License

1. The period of licence can suitably be extended if requested by the LICENSEE latest by the end of Xth year from the effective date. The extension in the licence period will be granted by the LICENSOR for a period of ___ years at one time after seeking recommendations of the TRAI in accordance with the provisions of the TRAI Act, 1997. If, however, the extension is to be given on the same terms and conditions as per the existing license, no recommendation of the TRAI will be required. The decision of the LICENSOR shall be final in this regard.

7. License Fee

1. The license fee is payable by the LICENSEE in consideration for grant of this license for the complete duration for which this license is in existence. The license fee has no relation to other mutual obligation(s) between the licensee and any other service provider (including DOT, MTNL or VSNL), Central or State Government, Local or statutory body.

8. Quantum of License fee and Schedule of Payment

1. The Licensee will be required to pay one-time Entry Fee of Rs XXX and an annual license fee at the rate of YY percent of the Gross Revenue generated from the service.

(THE QUANTUM OF ENTRY FEE AND THE PERCENTAGE OF REVENUE SHARE ARE THE SUBSTANTIVE ISSUES, WHICH WILL BE DETERMINED BASED ON PUBLIC CONSULTATIONS)

2. Schedule of payment of licence fee :

1. The Entry Fee of Rs. ___ crore shall be paid in advance before signing of the licence agreement.
 2. The component of licence fee payable as a percentage of Gross Revenue, as specified in Condition 8.1, shall be paid in four quarterly instalments. The year for the purpose of levy of variable component shall be the financial year ending 31st March. The first year may, therefore, be less than 12 months in most of the cases. However, from the second year onwards, the year will be reckoned as the financial year with effect from 1st April to 31st March of the next calendar year.
 3. The quarterly instalments shall be paid by the end of the month following the quarter, i.e. the quarterly instalments shall fall due on 31st July, 31st October, 31st January and 30th April.
 4. The quarterly instalments of License fee shall be quantified on self certification basis by the Licensee and paid provisionally based on Gross Revenue for the relevant quarter. Final adjustment of the license fee for all the four quarters of the financial year shall be made on or before 30th June of the following year. Gross Revenue figures shall be certified by the Chartered Accountant engaged by the Licensee for auditing the annual accounts of its company.
3. Any delay in payment beyond the time stipulated in Condition 8.2.3 will attract interest linked to

the Prime Lending Rate (PLR) of State Bank of India, as notified from time to time. The interest shall be compounded at the rate(s) applicable for the period(s) of default. A part of the month shall be reckoned as a full month for the purposes of calculation of interest.

(AFOREMENTIONED CONDITIONS AT 8.2.1 to 8.3 WILL FINALLY BE DETERMINED BASED ON PUBLIC CONSULTATIONS)

4. Payments of licence fee becoming due and payable as mentioned in this license agreement shall be paid by the LICENSEE through a **demand draft drawn on any Scheduled Bank in New Delhi in favour of the Pay & Accounts Officer (HQ), DOT.**
5. If due payment is not received within the stipulated time, the outstanding license fee shall be recovered by adjustment of such unpaid amounts through the Bank Guarantee, after affording an opportunity to the Licensee. In addition, the LICENSOR may also initiate steps for termination of the licence in accordance with the provisions of this license after affording an opportunity to the LICENSEE and after obtaining the recommendations of the TRAI. This is without prejudice to any other remedy that the LICENSOR may decide to resort to.
6. The LICENSEE, in addition to paying the Licence Fee, will separately pay the full access charges for carriage of calls originating in his network but carried and terminated in the DOT/ MTNL/VSNL/ Other Service Providers' networks at applicable rates from time to time. The LICENSEE shall also separately pay charges for network resources provided to the licensee on licensee's request by the DOT/ MTNL/ VSNL / other licensed providers, at the rates applicable from time to time. The access charges and the charges for network resources will be negotiated keeping in view the orders and regulations issued by the TRAI from time to time.

9. Penalty for Default in Observance of Terms and Conditions

9.1 The LICENSOR reserves the right to impose any penalty as it may deem fit under the provisions of this agreement, in case of a default of any of the terms and conditions stipulated in the Licence Agreement.

10. Restrictions on Transfer of License

1. The LICENSEE shall not, without the prior written consent of the Licensor, either directly or indirectly, assign or transfer its rights as per this license in any manner whatsoever to any other party. The LICENSEE will also not enter into any agreement with any third party either in whole or in part for sub-licence and/or partnership for the provision of service as per this licence. Any violation of this shall be construed as a breach of Licence Agreement, which may even attract the termination of the license.
2. The written consent permitting transfer or assignment of the License may, however, be granted in accordance with the terms and conditions, and procedures described in **Tripartite Agreement** if duly executed amongst LICENSOR, LICENSEE AND LENDERS.

(PUBLIC CONSULTATIONS SHOULD ALSO LEAD TO THE CONTENTS OF THE TRIPARTITE AGREEMENT).

11. Modifications in the Terms and Conditions of License

11.1 The LICENSOR reserves the right to modify at any time the terms and conditions of the license, if in the opinion of the LICENSOR it is necessary or expedient to do so in the interest of the general public or for the proper conduct of telegraphs or on security considerations or for extension of license. The LICENSOR will seek recommendations of the TRAI before effecting any such modifications in the terms and conditions of the License. The decision of the LICENSOR shall, however, be final in this regard.

12. Termination of License

1. The LICENSOR may, without prejudice to any other remedy for the breach of conditions of licence, by written notice of reasonable time issued to the LICENSEE at its registered office, seek termination of this license in whole or part under any of the following circumstances:
 - a. In case the LICENSEE fails to commission or deliver the SERVICE within the time period(s) specified in the licence or in any extension thereof, if granted by the LICENSOR. However, this does not prevent the licensee from commissioning the service even after scheduled date of commissioning, provided the licence does not already stand terminated: or
 - b. In case the LICENSEE fails to perform any other obligation(s) under the licence including remittance of timely payments of Licence fee due to the LICENSOR; or
 - c. In case the LICENSEE does not rectify the failure, as may be pointed out to the LICENSEE, within a notice period of 30 days or during such further period as the LICENSOR may authorise in writing in this regard; or
 - d) In case the LICENSEE becomes bankrupt or otherwise insolvent. In that event, the LICENSOR may terminate the licence even without compensation to the licensee. Such termination shall not prejudice or affect any right of action, which has accrued or will accrue thereafter to the LICENSOR. The right of termination will arise on the LICENSEE being adjudicated or applying for being adjudicated as bankrupt.

Provided that the recommendations of the TRAI will be taken before revoking the License, which will not be binding on the LICENSOR. In the event the TRAI recommends the revocation of the license after affording an opportunity to the LICENSEE, the LICENSOR may give 30 days written notice to the LICENSEE for revoking the license. However, in the event the TRAI does not recommend the revocation but the LICENSOR still decides to revoke the license, a written notice of at least 90 days shall be given to the LICENSEE; or

1. If the LICENSEE intends to surrender the licence, it shall give an advance notice of XX days to the Licensor to this effect. If the service is in operation, the licensee shall also intimate its

subscribers of consequential withdrawal of service by serving a XX days notice to them. Also the licensee shall be liable to pay the license fee till the end of the notice period.

(NUMBER OF DAYS OF NOTICE PERIOD TO BE DETERMINED BASED ON PUBLIC CONSULTATIONS)

2. During the period when a notice for termination of licence is pending, the Quality of Service to the Subscribers as defined for the purpose shall be maintained. If the SERVICE quality is not maintained, (during the notice period), it will be treated as breach of licence conditions and will be dealt with as such.

13. Actions pursuant to Termination of License

1. In the event of termination of the licence, the LICENSOR may procure upon such terms and conditions and in such manner as deemed appropriate, the required resources and make up for those not installed, not delivered or not brought into commission so as to enable provision of SERVICE. The LICENSEE shall be liable to the LICENSOR for any excess/extra costs for such corrective efforts. The criteria for determining the terms and conditions for such procurement will depend upon the market prices prevailing at the time of procurement. The decision of the LICENSOR in this matter shall be final in all respects.
 2. Whenever the licence is terminated or not extended, the LICENSOR may in order to ensure the continuity of the SERVICE take such steps as are necessary including the following:
 - a. permit the Department of Telecommunications/MTNL or its successor to take over;

or
 - b. issue license to another Indian Company for running the SERVICE. The LICENSEE shall facilitate taking over by DoT/MTNL or the new LICENSEE all those assets as are essential for the continuity of the SERVICE. In such circumstances, LICENSEE shall receive from DoT/MTNL or the new LICENSEE, as the case may be, reasonable compensation for the assets made over.
1. In case for any reasons the service cannot be continued, priority will be given to refund the deposits made by the subscribers with the LICENSEE.
 2. Any sum of money due and payable to the LICENSEE (including earnest money refundable to the Licensee) under this licence may be appropriated by the Government or any other person or persons through the Government of India. The same may be set off against any claim of the Government or of such other person(s) for payment of any sums of money arising out of this licence or under any other licence made by the LICENSEE with the Government, or such other person or persons including TELECOM AUTHORITY contracting through Government of India.

3. The Financial Bank Guarantees shall be returned to the licensee company 6 months after the termination of the licence and after ensuring clearance of any dues which the licensee company is liable to pay, including the dues payable to the subscribers. In case of failure of the licensee to pay the dues the amounts will be realised through encashment of Bank Guarantee, apart from other action to recover the dues.

14. Obligations imposed on the Licensee

1. The provisions of the Indian Telegraph Act 1885, the Indian Wireless Telegraphy Act 1933, and the Telecom Regulatory Authority of India Act, 1997 as modified from time to time including the Government of India Policy on Satellite Communications shall govern the license.
2. The Licensee shall furnish all necessary means and facilities as required for the application of provisions of Section 5(2) of the Indian Telegraph Act, 1885, whenever occasion so demands. Nothing provided and contained anywhere in this License Agreement shall be deemed to affect adversely anything provided or laid under the provisions of Indian Telegraphs Act, 1885 or any other law in force.
3. The LICENSEE shall not, in any manner whatsoever, transfer the licensing rights granted to it to any other party. Any violation shall be construed as a breach of licence.
4. Establishment, maintenance and operation of wireless stations which includes GMPCS gateway (s) and mobile terminals shall be strictly subject to obtaining separate valid licence from WPC Wing of the Ministry of Communications under Indian Telegraph Act, 1885 under terms and conditions of that licence. Decision to grant such licence shall be governed by guidelines for such purpose which shall include, inter-alia, successful completion of national and international co-ordination, frequency availability, SACFA site clearance, appropriate clearances from other Ministries, payment of licence fee and royalty as decided by Government of India from time to time.

15. Interconnection

a) Network Connectivity

15.1 All calls originating or terminating or transmitting from Mobile terminal in India shall pass through the GMPCS gateway located in India. Such calls will not be routed through any other Gateway located outside India.

15.2 There will also be direct connectivity between each of the Licensee's gateway to the nearest technically feasible VSNL Gateway for all calls from GMPCS to other countries and from other countries to GMPCS except for the countries for which arrangements of routing calls from DoT's network exist.

3. The international inter-network calls will be routed through VSNL gateway except for the countries for which arrangements of routing calls to DoT's Network exist. Till the opening up of international long distance communications to competition, VSNL is to be compensated in case the Gateway is bypassed for any international long distance calls.

15.4 All other interconnection issues pertaining to inter-network calls and connectivity to Gateways shall be

subject to Orders/ Regulations issued by the TRAI from time to time.

15.5 The LICENSEE and the interconnected network will mutually define interconnection performance standards in quantitative terms. The same will be based on the Orders/ Regulations issued by the TRAI from time to time.

b) Interface

6. The LICENSEE shall operate and maintain the licensed Network conforming to the interface standards of specified quality as laid down for connectivity to other operator's network. For the purpose of providing the SERVICE, the LICENSEE shall install his own equipment so as to be compatible with other service providers' equipment to which the licensee's Applicable Systems are intended for interconnection.
7. The additional telecommunication resources for the provision of the service and networking the geographically dispersed equipment of the LICENSEE shall be leased/ rented on mutually agreed terms from service providers including DOT, MTNL, VSNL or authorised Telecom Service providers. The same will be governed by the orders/ notifications of the TRAI issued from time to time on interconnection/ access charges.
8. The charges for accessing other networks i.e. PSTN, PLMN etc. for inter-network calls shall be based on mutual agreements between the two service providers, subject to the Orders/ Regulations on interconnection charges/ revenue sharing arrangements as notified by the TRAI from time to time.

16. Tariffs

1. The tariffs to be charged by the licensee from subscribers of GMPCS Service in respect of Mobile-Mobile calls or Mobile-PSTN-Mobile calls or for any other service shall be in accordance with the rates and orders as notified by the TRAI from time to time.

17. Customer Service

1. The LICENSEE shall provide the service to any individual or legal person, without any discrimination, unless directed by the LICENSOR in writing.
2. It shall be the responsibility of the Licensee to issue or cause to be issued bills to the GMPCS subscribers for use of the service. The Licensee shall maintain such records so as to produce itemised billing information. GMPCS system shall be able to generate the billing information, in adequate details, to ensure satisfaction to the customer about the genuineness of the bill. The billing disputes between the LICENSEE and its subscribers will be settled amongst themselves and the licensor will not have any *locus standi* in the matter.

18. Publication of the Service Directory

1. The licensee shall publish a Service Directory containing the commercial information on the service with name and address, and access number of the subscribers. If any subscriber does not wish his name and address to be published in the Directory, the service provider shall do so after

- obtaining concurrence of the subscriber in writing.
2. All the subscribers of the service shall be entitled to one free entry in this Directory and any additional information/specific printing in a particular type at the request of the subscriber may be charged for.
 3. The Authority reserves the right to include information of the subscribers in any other Directory which may be published by the Authority for PSTN/Telex/data Services etc. and the licensee shall be bound to supply the required information as and when asked for.
 4. The Authority or its representative(s) will have an access to the Database relating to the subscribers of the Licensee. The Licensee shall also update the list of his subscribers and make available the same to the Authority at such intervals as may be prescribed. The Licensee shall make available, at any prescribed instant, to the Authority or its representative details of the subscribers using the service.
 5. The Licensee will ensure confidentiality of the call details extracted for clearing house purposes, which are passed on to the Satellite Constellation Provider of the GMPCS network.

19. Quality of Service

1. The LICENSEE shall ensure the good quality of SERVICES to be provided by him, consistent with the established and generally accepted standards. The LICENSEE shall be responsible for repair of defects and making good any degradation in the SERVICE with promptness and within reasonable period.
2. It will be mandatory for the Licensee to comply with such parameters of Quality of Service as may be prescribed by the TRAI from time to time.
3. The LICENSOR reserves the right to carry out performance tests and also evaluate the QUALITY OF SERVICE parameters on licensee's network at any time during the currency of licence. Such QOS standards will, however, be in accordance with the regulations and orders issued by the TRAI from time to time.
4. The LICENSEE shall be responsible for: -
 - i. Maintaining the performance and quality of service standards.
 - ii. Maintaining the MTTR (Mean Time to Restore) within the specified limits of the quality of service as given below :
 - a. 90% of faults resulting due to subscriber's complaints should be rectified within 24 hours and 99% within 3 days.
 - b. The Licensee will keep a record of number of faults and rectification reports in respect of the service, which will be produced before the LICENSOR/ TRAI as and when and in whatever from desired.

(ABOVE STANDARDS ARE APPLICABLE FOR NORMAL FAILURES EXCLUDING CATASTROPHIES LIKE SATELLITE FAILURE)

1. The Licensee shall be responsive to the complaints lodged by his subscribers. He shall rectify the anomalies within the MTTR specified and maintain the history sheets for each installation, statistics and analysis on the overall maintenance status.

20. Security Conditions

20.1 The operation and maintenance of the GMPCS gateway, which may be located in India, shall be entrusted to VSNL or an agency authorised by the Government for this purpose. The Licensee shall demonstrate the system capabilities with respect to security aspects including monitoring to the Licensor prior to starting operations in India.

20.2 The precise delineation of geographical borders taken by the licensee for the purpose of defining Indian service area shall have prior approval of the Government of India. The terrestrial boundaries of India shall be as depicted in the maps issued by Survey of India.

20.3 The Licensee shall give an undertaking to the Licensor that satellites deployed for GMPCS service shall be used over the Indian territory only for the services authorised by the Licensor. No activities such as surveillance, electronic warfare etc. shall be carried out over the Indian Territory, which may jeopardise the sovereignty and security of the country.

20.4 The LICENSEE shall create a buffer zone along the India international border where no service would be permitted. Width of this buffer zone along the borders within the Indian Territory shall be as decided by the Govt. of India. The Government will spell out the area, width and co-ordinates of the buffer zone.

20.5 The Government through appropriate notification may debar usage of mobile terminals in certain areas in the country. By suitable man/ machine command to be given by the operation and maintenance of the licensee in the GMPCS gateway, it should be possible to deny service to subscribers in certain specified areas.

20.6 The LICENSEE shall not employ bulk encryption equipment in its network. Any encryption equipment connected to the Licensee's network for specific requirements has to have prior evaluation and approval of the LICENSOR or officer specially designated for the purpose. But the LICENSEE shall have the responsibility to ensure protection of privacy of communication and to ensure that unauthorised interception of message does not take place.

20.7 LICENSOR shall have the right to take over the SERVICE, equipment and networks of the LICENSEE (either in part or in whole of the service area) in case any directions are issued in the public interest by the Government in the event of emergency or war or low intensity conflict or any other eventuality. Any specific orders or directions from the Government issued under such conditions shall be applicable to the LICENSEE and shall be strictly complied with.

20.8 The LICENSEE shall make available on demand to the agencies authorised by the Government full access to the switching centres, transmission centres, routes etc. for detailed technical security/inspection for espionage, subversive act, sabotage or any other unlawful activity.

20.9 All foreign personnel likely to be deployed by the LICENSEE for installation, operation and maintenance of the licensed network shall be security cleared by the Government of India prior to their deployment. The security clearance will be obtained from the Ministry of Home Affairs, Govt. of India.

20.10 LICENSOR reserves the right to modify these conditions or incorporate new conditions considered necessary in the interest of national security.

20.11 Adequate monitoring facility should be made available by the licensee at the GMPCS Gateway to monitor all traffic (transit as well as traffic originating/terminating in India) passing through the applicable system. For this purpose, the licensee shall set up at his cost, the requisite interfaces, as well as features and facilities for monitoring of calls by authorised agencies as directed by the licensor from time to time.

20.12 The Licensee shall ensure that any mobile terminal registered in the gateway of another country shall register with Indian Gateway when operating from Indian Territory.

20.13 The Licensee should provide a list of his subscribers, which should be updated at quarterly intervals. The licensee shall ensure adequate verification of each and every customer before enrolling him as a subscriber. The mobile terminal to be used shall be registered against each subscriber. The licensee shall make it clear to the subscriber that the mobile terminal registered against him is non-transferable and that he alone will be responsible for proper and bonafide use of the service. The LICENSEE shall have provision to scan subscriber operations through certain sensitive areas within the Indian territory and shall provide their identity and positional location (latitude and longitude) to Licensor on as and when required basis.

20.14 Any foreigner who comes in the country with a registered mobile terminal should declare the same to the custom Authorities who will record the details on his Passport and issue an authorisation for the use of the same, provided such Overseas Subscriber takes the same mobile terminal out of India. An Indian subscriber is permitted to carry the mobile terminal with him/her, after due endorsement on the passport provided he/she brings the same back to the country on his/her return.

20.15 The Licensee shall have in-built capabilities in the system to deny service to terminals clandestinely brought into the Indian Territory. The LICENSOR will delineate suitable administrative mechanism with the Customs Authority for co-ordinating the prompt exchange of information on a regular basis between the Air/ Land/ Sea Customs and the LICENSEE in respect of all such mobile terminals, which are legally brought into the country following the due procedures of law. This arrangement would facilitate the identification and segregation of mobile terminals (registered in other countries) clandestinely brought in to the Indian Territory for denial of service. Such visiting subscriber terminals other than those registered on the equipment identification register (EIR) of the service provider could be denied service, if identified.

20.16 A format would be prescribed by the LICENSOR to delineate the details of information required before enrolling a customer as a subscriber. Such details could be uniformly maintained by the service providers and submitted for verification whenever called for by the Government agency.

20.17 Licensee will ensure that the Telecommunication installation carried out by him should not become a safety hazard and is not in contravention of Laws of the land.

21. Financial Conditions

a) Bank Guarantee

1. The licensee shall submit a financial bank guarantee of an amount commensurate with the annual licence fee in the format (as per draft given in Attachment II to Appendix IV) prior to the signing of the licence agreement. The LICENSEE shall submit the Financial Bank Guarantee from any Scheduled Bank, to be renewed from time to time and initially valid for a period of two years.

(THE CONDITION FOR BANK GUARANTEE AND THE FINANCIAL BANK GUARANTEE PROFORMA WILL HAVE TO BE BASED ON THE LICENSE FEE STRUCTURE AS MAY BE DETERMINED THROUGH PUBLIC CONSULTATIONS)

21.2 The licensee will be liable to extend the validity of the financial Bank Guarantee one month prior to its date of expiry on its own without demand from the Licensor for a further period of one year on year to year basis during the full currency of the licence. Any failure to do so may result in the en-cashing the financial bank guarantee after affording a reasonable opportunity to the LICENSEE. This is without prejudice to any other action that may be taken under the terms and conditions of the licence.

21.3 Without prejudice to its right to some other remedy, the LICENSOR may encash Financial Bank Guarantee (in part or in full) in case of any other breach in the terms and conditions of the licence by the LICENSEE. Such an action will, however, be taken after affording an opportunity to the LICENSEE and after obtaining the recommendations of the TRAI.

4. Breach of non-fulfilment of licence conditions may come to the notice of the LICENSOR through complaints or as a result of the regular monitoring. Wherever considered necessary, LICENSOR will conduct an inquiry to determine whether there has been any breach in compliance of the terms and conditions of the Licence. The LICENSEE will be given an opportunity before any action adverse to his interest is taken and recommendations of the TRAI will be taken before revoking the license.

b) Preparation of Accounts:

21.5 The LICENSEE shall:

- a. Compile and maintain accounting records, sufficient to show and explain its transactions in respect of each completed financial year of the License period during which this License Agreement is in force, or of such lesser periods as the Licensor may specify, fairly presenting the costs (including capital costs), revenue and financial position of the Licensee's business including a reasonable assessment of the assets employed in and liabilities attributable to the Licensee's business.
- b. Procure in respect of each of those accounting statements prepared in respect of a complete financial year, a report by the Licensee's Auditor stating whether in his opinion that statement is adequate for the purpose of this condition; and
- c. Deliver to the Licensor a copy of each of the accounting statements not later than three months after the end of the period to which they relate.

In this condition, the "Auditor" means the Licensee's auditor for the time being appointed in accordance with the requirements of the Companies Act, 1956.

- d. Send to the Licensor a certified statement of Gross Revenue from the Service for each quarter before the end of calendar month following the quarter.

22. Prohibition of certain Activities by the Licensee

22.1 The Licensee shall not engage in the provision of any other Service other than GMPCS as defined in this license agreement.

2. To remove any doubt, it is, hereby, clarified that nothing contained in condition in Para above shall preclude the Licensee from engaging in advertising and promotional activities relating to any of the Applicable Systems.
3. The Licensee shall take measures that prevent the objectionable, obscene, unauthorised or any other content, messages or communications infringing copyright, intellectual property etc., in any form, from being carried on his network, consistent with the established laws of the country. Once specific instances of such infringement are reported to the LICENSEE by the authorised agencies, the licensee shall ensure that the carriage of such material on his network is prevented.
4. The Licensee is obliged to provide, without any delay, tracing facility to trace nuisance or malicious calls, messages or communications transported through his equipment and network. Any damages arising out of default on the part of licensee in this regard shall be payable by the licensee.
5. In case any confidential information is divulged to the Licensee for proper implementation of the Agreement, it shall be binding on the Licensee and its employees and servants to maintain its secrecy and confidentiality.

23. Inspection and Testing of Installations

1. The Licensor will also carry out all performance tests required for successful commissioning of the service, if it so desires, before the service is commissioned for public use. The LICENSEE shall supply all necessary literature, drawings etc regarding the equipment installed for commissioning of the services, and shall also supply all the tools, test instruments and other accessories to the testing party of the LICENSOR for conducting the tests. The list of performance tests will be furnished by the LICENSEE one month prior to the date of commissioning to the Licensor. In case the Licensor chooses to conduct performance test and some deficiency is found therein by the licensor, the delay caused for rectification of the deficiencies, if any, for the commissioning/ provisioning of the service will be entirely on account of the Licensee.
2. The Acceptance Testing for each and every interface with the DOT/ MTNL/ VSNL/Other Service providers' network may be carried out by licensor or any one authorised by the licensor. The Acceptance Testing schedule shall be mutually agreed. Adequate time, not less than 30 days, will be given by the licensee for these tests.

24. Right to Inspect

1. The Licensor, the TRAI or its authorised representative shall have the right to inspect the sites used for extending the Serviced. The Licensor shall, in particular but not limited to, have the right to have access to leased lines, junctions, terminating interfaces, hardware/software, memories of semiconductor, magnetic and optical varieties, wired options, distribution frames, and to enter into dialogue with the system through Input/output devices or terminals. The Licensee will provide the necessary facilities for continuous monitoring of the system, as required by the Licensor or its authorised representative(s). The Licensor will ordinarily carry out inspection after reasonable notice except in circumstances where giving such a notice will defeat the very purpose of the inspection.

25. Location of Switches

1. The LICENSEE shall provide to the LICENSOR location details of switching centres, transmission centres, including routing details etc., and location of these centres shall not be changed without prior approval of the LICNESOR.

26. Requirement to furnish Information to the Licensor

26.1 The Licensee shall furnish to the Licensor as well as to the TRAI, in the manner and as per the time frames that these Authorities may demand, such documents, accounts, estimates, returns, reports or other information as may be prescribed.

26.2 Engineering Details

- a. The Licensee shall furnish to the Telecom Authority, in such manner and at such times as the Authority may require, complete technical details with all calculations for engineering, planning and dimensioning of the system/network, concerned relevant literature, drawings, installation materials regarding the applicable system.
- b. List of performance tests shall be furnished by the Licensee one month prior to the date of commissioning of service.
- c. Licensee shall supply all tools, test instruments and other accessories to the testing party of Licensor for conducting tests, if it so desires.

27. Disputes Settlement

(CONDITIONS ON DISPUTES SETTLEMENT WILL HAVE TO BE FORMULATED BASED ON DEBATE IN PUBLIC CONSULTATIONS. THE TRAI ACT CONTAINS SPECIFIC PROVISIONS SUCH AS SECTION 11(1)(n) AND SECTION 14(2) FOR HANDLING DISPUTES BETWEEN SERVICE PROVIDERS)

28. GMPCS Mobile Terminals

1. The Licensee shall have the right to undertake the sale, hire purchase, lease or renting of the mobile terminals. Proper usage of terminal at subscriber's premises shall be responsibility of the

subscriber.

2. The Licensee shall be responsible to ensure that the mobile terminal is operated within India in accordance with the terms of the License and the WPC license. The mobile terminal is non-transferable.
3. The mobile terminals employed in the network shall be of a type/model certified by an internationally accredited agency with respect to ITU/ETSI standards or any other international standard as may be approved by the Government. They should carry a marking specifying their compliance with such standards. Only such category of mobile subscriber unit as has been granted such a certificate shall be allowed to be brought into and operated within India under this Agreement.
4. The designated Authority of the Central/ State Government as conveyed to the Telecom Authority from time to time in addition to the Telecom Authority or its nominee shall have the right to monitor the telecommunications traffic in every gateway switch set up in India. Necessary features facilities and the licensee shall provide interface for such monitoring at their expenses. Provision should be made for simultaneous monitoring by at least six Indian agencies or more. The Licensee shall make following type of provision for extending monitored calls :
 - a. Extension on PSTN line
 - b. Extension on E-1 links (30 channels Pulse Modulation-PCM), which can be stored in a voice logger at gateway and simultaneously transported to user agencies on dedicated line with correlated call Related Information (CRI).

29. Miscellaneous Conditions

a) Interpretation of Terms/ Definitions

1. Unless the context otherwise requires, the different terms and expression used in this license agreement shall have the meaning assigned to them as explained in Attachment 1 to this Appendix.

b) Force- Majeure

2. If at any time, during the continuance of this licence, the performance in whole or in part, by either party, of any obligation under it is prevented or delayed, by reason of war, or hostility, acts of the public enemy, civic commotion, sabotage, fire, flood, Act of State or direction from Statutory Authority, explosion, epidemic, quarantine restriction, strikes and lockouts (as are not limited to the establishments and facilities of the Licensee), or act of GOD (hereinafter referred to as event), provided notice of happenings of any such EVENT is given by either party to the other, within 21 days from the date of occurrence thereof, neither party shall, by reason of such event, be entitled to terminate the licence, nor shall either party have any such claims for damages against the other, in respect of such non-performance or delay in performance. Provided service under the licence shall be resumed as soon as practicable, after such EVENT comes to an end or ceases to exist. The decision of the Licensor as to whether the service may be so resumed (and the time frame within which the service may be resumed) or not, shall be final and conclusive. However, the Force Majeure events noted above will not in any way cause extension

in the period of the License. While it will normally not be a ground for non-payment of licence fee, the liability for payment of license fee for such inoperative period(s) due to force majeure clause may, however, be reduced/waived by the LICENSOR, at its discretion based on circumstances of the EVENT.

3. The Licensee shall be bound by the terms and conditions of this License Agreement as well as by such orders/ regulations and instructions as are issued by the Licensor? TRAI and/or their successors from time to time.
4. All matters relating to this License will be subject to jurisdiction of Courts in Delhi/ New Delhi.

ATTACHMENT-1
(APPENDIX IV)

DEFINITIONS AND INTERPRETATIONS RELATING TO THE EXPRESSIONS USED IN THE
TERMS & CONDITIONS OF LICENSE AGREEMENT

Unless the context otherwise requires, the different terms and expression used in the license agreement shall have the meaning assigned to them as explained in the following paragraphs:

1. **APPLICABLE SYSTEMS:** The "applicable system" means all the necessary equipment/ sub-systems engineered to provide GLOBAL MOBILE PERSONAL COMMUNICATION BY SATELLITE in accordance with operational/technical and quality requirements and other terms and conditions of the licence agreement.
2. **Auditor** means the Licensee's auditor for the time being appointed in accordance with the requirements of the Companies Act, 1965.
3. **Connectable System** means a telecommunication system which is authorised to be run under a Licence to provide public telecommunications service and is authorised to be connected to the Applicable system.
4. **DIRECT EXCHANGE LINE (DEL):** A telephone connection between the subscriber's terminal equipment and the terminal exchange.
5. **DOT** means Department of Telecommunications, Government of India as Telecom Service Provider and/ or its successors.

6. **EFFECTIVE DATE:** The effective date is the date on which this Licence Agreement is signed by the parties and if the parties have signed on different dates the latter of the two dates. This licence comes into effect from the effective date of the licence.
7. **Emergency** means an emergency of any kind, including any circumstances whatever resulting from major accidents, natural disasters and incidents involving toxic or radio-active materials.
8. **Emergency Services** in respect of any locality means the relevant public, police, fire, ambulance and coast guard services for that locality.
9. **ENGINEERING :** The technical application of the dimensioning rules and results thereof in order to

provide network resources to meet specified Grade of Service (GOS).

10. GMPCS : GMPCS means Global Mobile Personal Communications by Satellite.

11. "GMPCS Gateway means a land based satellite link station established to provide a communication link between the Satellite/Satellite Constellation and the 'National PSTN' and 'International Gateway', thereby facilitating the provisions of telecommunications services between Mobile terminal and any telephone linked to the connected PSTN or PLMN.

12. GMPCS Service Provider means an Indian registered company, which has been licensed under this licence to set up and operate GMPCS Network and to provide GMPCS Service (as defined by ITU) to the public within the boundaries of Indian Union.

COMMENTS: In the provisional License Agreement, GMPCS Operator and GMPCS Service Provider have separately been defined. It states that the GMPCS Operator would mean the legal entity responsible for the operation of GMPCS network. ***Since the license has been issued for establishing and operating the network as well as for providing service, there is perhaps no need of a separate definition of GMPCS Operator.***

13. GMPCS Network means any satellite based telecommunication network providing telecommunication services directly to end users through the use of mobile terminal from a satellite/constellation of satellite.

14. GMPCS mobile terminal or mobile terminal means the equipment used by the subscribers to avail the GMPCS service such as Mobile Handset; also called user terminal.

15. GROSS REVENUE:

(The term Gross Revenue needs to be defined in the context of levying license fee as a percentage of revenue sharing as envisaged in the New Telecom Policy 1999. Chapter IV of this Paper contains the details of substantive issues to be debated in this regard during the public consultations).

16. LICENSE: Licence means a licence granted or having effect as if granted under section 4 of the Indian Telegraph Act 1885 and Indian Wireless Act 1933.

17. LICENSEE: ***A registered Indian Company that has been awarded license to set up and operate Global Mobile Personal Communications by Satellite (GMPCS) network and to provide the GMPCS service.***

18. LICENSOR shall refer to the President of India acting through any authorised person, who granted Licence under Section 4 of Indian Telegraph Act 1885 and Indian Wireless Telegraph Act 1933, unless otherwise specified.
19. Message means anything falling within sub Clause/paragraph (3) of section 3 of the Indian Telegraph Act 1885.
20. MTNL means Mahanagar Telephone Nigam Limited.
21. OR/QR Specifications means technical and quality requirements contained in the OR/QR Specifications of Telecom Engineering Centre Department of Telecommunications unless otherwise specified.
22. Public Switched Telephone Network (PSTN) means a fixed specified switched public telephone network a two-way switched telecommunications service to the general public.
23. Public Land Mobile Network (PLMN) means land based mobile network e.g. Cellular Mobile Telephone Service being operated within the country under licence from Telecom Authority on non-exclusive basis.
24. QUALITY OF SERVICE: "Quality of Service" is evaluated on the basis of observable measure on the grade of service, calls lost due to wrong processing, the bit error rate or the response time and also included acceptable grade of number of faults per unit population of the subscriber served, the mean time to restore (MTTR), faults carried over beyond the MTTR and the satisfactory disposal thereof.
25. SERVICE AREA: Service area for Global Mobile Personal Communication Service by Satellite is the territorial jurisdiction of the Union of India except specified areas that may be notified to be excluded from time to time.
26. Services or service means Global Mobile Personal Communications by Satellite Service and shall include the tele-services, bearer services and supplementary services as defined by ITU.
27. Subscriber: Subscriber means any person or legal entity, which avails of the Global Mobile Personal Communications by Satellite Service from the Licensee.
28. TELECOM AUTHORITY: The Director General, Telecommunications, Government of India and includes any officer empowered by him to perform all or any of the functions of the Telegraph Authority under the Indian Telegraph Act, 1885 or such authority as may be established by law.

Comments: The expression 'Telecom Authority' has been defined and then used in the license agreement at different places to denote the Director General, Telecommunications and any officer empowered by him under the Indian Telegraph Act, 1885 to perform all or any of the functions. This expression (i.e. Telecom Authority) has been used by the DOT in other license agreements such as for basic services. In view of the fact that the Telecom Regulatory Authority of India was constituted in March 1997, the expression Telecom Authority till now used for the Director General Telecommunications (or his authorized officer) should be replaced with the expression Telegraph Authority.

29. **TARIFF:** Tariff means rates and related conditions at which telecommunication services within India and outside India may be provided including rates and related conditions at which messages shall be transmitted to any country outside India, deposits, installation fees, rentals, free calls, usage charges and any other related fees or service charge. The term tariff will have the same meaning as may be defined in the Telecommunication Tariff Orders to be issued by the TRAI from time to time.

30. TRAI means Telecom Regulatory Authority of India constituted under TRAI Act, 1997.

31. VSNL means "Videsh Sanchar Nigam Ltd."

32. WPC means Wireless Planning and Co-ordination Wing of the Ministry of Communications, Department of Telecommunications, Government of India.

ATTACHMENT II
(APPENDIX IV)

PROFORMA FOR FINANCIAL BANK GUARANTEE

To

The President of India

Acting through the Telecom Authority

In consideration of the President of India acting through the Telecom Authority (hereinafter called 'the Authority') having agreed to grant a licence to M/s..... of (hereinafter called 'the Licensee') to establish, maintain and operate GLOBAL MOBILE PERSONAL COMMUNICTAION BY SATELLITE SERVICE (GMPCS Service) (hereinafter called 'the SERVICE') as per Letter of Intent (LoI)/Licence number dated In the country in accordance with the Application Form for obtaining GMPCS Service licence and on the terms and conditions contained in the said licence, which interalia provides for production of a Bank Guarantee to the extent of Rs..... (..... in words) under the said licence by way of security for payment of the said licence fee as well as such other fees or charges required to be paid by the Licensee under the Licence. We (indicate the name and address and other particulars of the Bank) (hereinafter referred to as 'the Bank') at the request of the Licensee hereby irrevocably and unconditionally guarantee to the Authority that the licensee shall pay all the dues, including but not limited to, the licence fee to the Authority.

2. We, the Bank, hereby undertake to pay the Authority an amount not exceeding Rs. (Rupees..... only) against any loss or damage caused to or suffered or would be

caused to or suffered by the Authority by reason of any failure of the Licensee to pay all the above mentioned fees, dues and charges or any part thereof within the periods stipulated in the licence.

3. We, the Bank, hereby further undertake to pay as primary Obligor and not merely as surety to pay such sum not exceeding Rs. (Rupees.....only) to the Authority immediately on demand and without demur stating that the amount claimed is due by way of failure of the licensee to pay any fees or charges or any part thereof in terms of the said licence.
4. WE, THE BANK, DO HEREBY DECLARE AND AGREE that the decision of the Authority as to whether LICENSEE has failed to pay the said licence fees or any other fees or charge or any part thereof payable under the said Licence and as to the amount payable to the Authority by the Bank hereunder shall be final and binding on us.
5. WE, THE BANK, DO HEREBY DECLARE AND AGREE that the
 - a. Guarantee herein contained shall remain in full force and effect for a period of two years from the date hereof and that it shall continue to be enforceable till all the dues of the Authority and by virtue of the said Licence have been fully paid and its claims satisfied or discharged or till Authority satisfies that the terms and conditions of the said licence have been fully and properly carried out by the said Licensee and accordingly discharged this guarantee.
 - b. The Authority shall have the fullest liberty without our consent and without affecting in any matter our obligations hereunder to vary any of the terms and conditions of the said licence or to extend time of performance of any obligations by the said LICENSEE from time to time or to postpone for any time or from time to time any of the powers exercisable by the Authority against the said LICENSEE and to forbear or to enforce any of the terms and conditions relating to the said Licence and we shall not be relieved from our liability by reason of any variation or extension being granted to the said LICENSEE or to give such matter or thing whatsoever which under the law relating to sureties would but for this provision, have effect of so relieving us.
 - c. Any claim which we have against the LICENSEE shall be subject to and subordinate to the prior payment and performance in full of all the obligations of us hereunder and we will not without prior written consent of the Authority exercise any legal right or remedy of any kind in respect of any such payment or performance so long as the obligations of us hereunder remains owing and outstanding.
 - d. This Guarantee shall be irrevocable and the obligations of us herein shall not be conditional of any prior notice by us or by the LICENSEE.
2. We the Bank undertake not to revoke this Guarantee during its currency except with the previous consent of the Authority in writing.

Dated day..... for

(Name of the bank)

Witness:

1.

LICENSING REGIME FOR GMPCS SERVICE PREVALENT IN OTHER COUNTRIES

1. This Appendix presents a gist of the information gathered on licensing regime for GMPCS service prevalent in some of the countries.

Australia

2. Carrier license has been granted to Iridium South Pacific Pty Ltd. under Section 56 (1) of the Telecommunications Act 1997. Under the Act, carrier licences are subject to condition stipulated in Section 61 (Schedule 1), Section 62 (read with Section 152 AZ of the Trade Practices Act, 1974) and Section 63 of the Telecommunications Act, 1997.

Russian Federation

3. Iridium – Eurasia has been licensed to provide GMPCS services in the Russian Federation under a license effective for 3 years period. It includes the provision of local, long distance and international telephone communication; data transmission; and personal radio calls. The licensee communication network is rated to service a volume of upto 300,000 customers, with permission to set up roaming service for the licensee's communication network with the Federal Cellular Mobile Communications Network. International Call Traffic between GMPCS and other customers shall pass through the international telephone stations of the general- purpose communication network of the Russian Federation. The licensee is required to participate in the proportional development of the general- purpose communication network of the Russian Federation. The form, amount and procedure for making the investment for this purpose shall be specified and advised to the licensee once established. The Russian segment of the Iridium GMPCS shall use the numbering resources allocated by the Ministry of Communications and Electronic Technology. The licensee is required to provide the communication services every day for 24 hours a day, with the exception of interruptions, and to conduct necessary preventive maintenance and repair work. The licensee is required to provide access to its customers at their location, and to local emergency services in the licensed operating area.

Austria

4. Formal license has been issued by the Federal Ministry of Science and Transport, Republic of Austria to Iridium Communications Germany GmbH.

United States of America

5. Iridium system was authorised for the space segment in 1995 by FCC for providing mobile satellite service in the USA using specified frequency bands. The Commission adopted a blanket licensing policy for the mobile earth terminals that end users would use for the two-way communication via satellite. Each blanket licensee is responsible for construction and operation of specified number of mobile earth terminals.

Italy

6. A sum of 4 million Lira was levied as fee for the expenses incurred by the Ministry of Communications for the investigation for the permit before granting license to Iridium Services Europe GmbH & Co. in specific frequency band for providing GMPCS service. Temporary permit was granted in March 1997 on the condition that the company would pay the network service fees as set forth in Ministerial-decree of March 28, 1997.

Greece

7. Greece has recently implemented EU Directive 94/46/EEC. However, it has been difficult for service providers to determine the procedures for obtaining a licence and it is not apparent what will be the license fees. In any event, Ministerial Decision No. 61647 excludes personal mobile satellite telecommunication service from its application. Greece had not earlier adopted decisions authorising Inmarsat service providers in addition to OTE nor authorising foreign registered mobile earth stations.

8. The Greek regulations establish three categories of licences related to satellite facilities and services. Different appendices to the regulations apply to these categories.

Conditions for providing service and license categories in Greek regulations include:

- Satellite Network Services
- Satellite Services
- Space Segment

9. The preliminary view is that there should be no need to establish a License-3 category. The regulations also require an applicant to give a sworn declaration that it will take all necessary measures to avoid interfering with the monopoly rights of OTE, the national monopoly operator.

Portugal

10. The provision of satellite communications services is governed in Portugal mainly by Decree-Law 120/96 of 7 August 1996 (as amended by a Decree-Law passed in December 1997) which provides for implementation of the European Commission Directive 94/46/EEC of 13 October 1994 concerning satellite communications. Further details with regard to regulatory issues concerning the provision of satellite services were to be dealt with by a separate legislation that was to be enacted. Additional type approvals are required. Portugal has been granted an extension of the deadline for abolishing the existing state monopoly rights for the provision of voice telephony services until 1 January 2000. Thus, it will not be possible to obtain a licence for the provision of voice telephony services until then. Apparently, this monopoly right covers the provision of voice telephony services through satellites as well.

11. Perhaps the National Regulatory Authority, Instituto das Comunicacoes de Portugal (ICP) is yet to decide as to how S-PCS systems are to be considered under Portuguese law. The current legal framework applicable to telecommunications services and operators' licensing does not provide the necessary rules for global systems such as S-PCS systems.

12. Furthermore, ICP officials have expressed doubt as to the applicability of Decree-Law 120/96 of 7 August 1996, to LEO systems. Currently Decree-Law 120/96 is the only Portuguese legislation dealing with licensing requirements for the provision of satellite communications services. The filing of any licence application for S-PCS systems is not possible at present.

13. The use of frequencies is, in principle, subject to frequency assignment requirements. No specific application procedure has been established as yet. A new Decree Law is to be published, which will establish provisions with regard to frequency assignment. The new Decree Law is to provide proceedings for applications for frequency assignment and to determine the responsible authority. Furthermore, ICP intended to establish a working group whose task was to propose a specific regulatory framework for S-PCS.

14. Under Portuguese law, Portuguese Authorities claim that a business enterprise which does not have its principal office in Portugal but which carries on its business activity for more than one year shall establish a permanent representative office and complete necessary corporate registration formalities. This practice has been applied to a single VSAT terminal for a closed user group. This represents a practical hindrance for developing satellite services within Portugal.

15. Generally, most EU member states have relatively low or no licence fees for authorisation of mobile earth stations. High fees are, however, imposed by Portugal which are approximately US \$400 per year.

LICENCE FEE STRUCTURE IN OTHER COUNTRIES

NON GATEWAY TERRITORIES

Canada \$ 128,340 per year

(Rs.54.5 lakhs/year)

Germany \$ 121,000 one time fee

(Rs.51.5 lakhs one time fee)

\$ 11,300 per year

(Rs.4.8 lakhs/year)

Indonesia 1% of Operating Revenues

Malaysia 0.08% of Annual Sales

OTHER COUNTRIES - NON GATEWAY TERRITORIES

Russia

- Annual Fee = \$78,950

(Rs.33.55 lakhs/year)

Saudi Arabia

- One Time Fee = \$ 800,000

(Rs. 340 lakhs)

Thailand

- Annual Frequency Fee = \$ 8,152

- Gate License = \$ 260

\$ 8,412

(Rs.3.57 lakhs/year)

Japan

- Annual Spectrum Fee = \$ 98

- Annual Handset Spectrum Fee = \$ 5

- One time Registration Fee = \$ 1262

(Rs. 53.635)

USA

- Application fee Gateway = \$ 1,730

- Application fee Handset = \$ 7,200

\$ 8,930

(Rs.3.8 lakhs)

- Annual Regulatory Fee = \$ 330

(Rs.14, 025/year)

Brazil

- Annual Fee US \$ 103, 700 (Rs. 44.07 lakhs)

China

- Annual Fee Nil

- License Fee per Call charge \$0.74 per call

Italy

- Annual Fee US\$ 13,200 (Rs. 5.62 lakhs)

Taiwan

- Fees not firmed up as yet but expected to be nominal

Korea

- Fees not firmed up but expected to be 3% of net sales annually

Source: Iridium
