

From,

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To,

Shri S.K. Gupta,
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New Delhi – 110 001

Sub: **Comments / Suggestions on “TRAI”**
“Consultation Paper” on “Review of Internet Services” of Dec. 2006

Sir,

Kindly find herewith our humble suggestions on the subject. Our aim has been how these unique services are vital and serving the nation in existing form and likely to continue to serve the unserved areas of the country and people across the nation with specially configured, technologically advanced, cost effective and affordable terminal equipments for social economically back ward masses in the remote, rural, difficult hilly, desert and island areas as well as sparsely populated areas in North-East Region States, Himachal Pradesh, J&K, Uttaranchal and Madhya Pradesh, Rajasthan and remaining other states.

If there are any further inputs, kindly mail to us and we will be glad to answer and address any query / clarification on the subject.

With regards

Yours sincerely,

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OUR COMMENT / SUGGESTION ON TRAI CONSULTATION PAPER
INTERNET SERVICES

At the outset we would like to appreciate and place on record an excellent regulatory environment and policy, decisions which made this ISP Service as unique and distinguish from other services offered under various other licenses like CMTS, Basic Services / NLD / ILD / UASP etc. The purpose of internet services was totally distinct and to serve all sectors of society with emphasis on remote and rural areas of the country, which are still unserved by such services.

We have progressed with quite bit but still there are many constraints and bottlenecks in terms of last mile access limitations, lack of most efficient and cost effective technologies for wider rich and coverage of the whole country in reasonable shortest time. Keeping these constraints as well as other aspects connected with security of the nation, unlawful use of network violating the conditions of the licenses / agreements by the operators. Therefore, noting and recognizing that: -

- (1) For some time no ISP Licenses applications are being processed for grant of License,
- (2) Various issues on illegal / unauthorized operations use of internet services, security concerns, required resolutions,
- (3) Despite of the good regulation and liberal policies, the growth has not picked up as desired and unserved areas are still need the services,
- (4) The operational efficiency, quality of service, financial viability of these networks and services is still a question mark,
- (5) Even large operators who have been authorized unrestricted provisioning of internet services are not in position to take off due to their own unwillingness (perhaps) to serve remote areas as it requires heavy investments, poor returns and also heavy operation cost.
- (6) No doubt, the policy mentioned that ISP can have access by all media like Radio System, Optical Fiber System, Copper Cable System. ISPs shall have provision for setting up/establishing their own networks/last mile solutions.Satellite as one of the potential wireless solutions,shall be encouraged to cover the remote & rural areas including mountaneous regions of J&K, HP, Uttranchal, WB, NE States, A&N Islands, Desert of Thar, Rajasthan and sparsely populated areas of other states and unserved till date. It is vital media & ready to serve solution. Satellite is versatile solution to our geographical & socio-economical needs.both in LOCAL & LONG LOOP i.e last mile as well as FAR Mile..
- (7) Availability of adequate spectrum for new technologies like WiMAX, Space Communication / Satellite etc. with concessional tariff to serve rural and remote areas with new technological innovations and offering host of services – IP Base Services like IPTV, VOIP, Internet Telephony, Web Access, E-Trade / Commerce / Education / Health / Agro met Advisories / Disaster Warning Advisories and Management, Agro-Trade / Fisheries / Horticulture etc.

- (8) Flexibility and authorization to use available / upcoming new technology based devices by the customers, portable / mobile configurations with low power consumption and interfaces PC like devices of cheap value to facilitate inexpensive terminals to be used by rural masses and / or providing by Governments as the cost will be low.
- (9) Era of restrictions shall vanish and leave the flexibility and choice of technology, IP based services, tariff and needs of the customers in these areas to facilitate rapid progress unhindered and achieve our objective to serve all habitats across the country at low tariff which can be afforded by the majority of the masses of the country.
- (10) For rural remote sparsely populated areas preferential conditions of license in terms of;
- (a) One time non-refundable entry fee of reasonable amount
 - (b) Entry fee variant based on nature of services to be offered by ISP like Internet Telephony, VOIP, IPTV etc.
 - (c) Reasonable revenue sharing mechanism to boost growth of the networks and the customer demand, may be in the range of 5% to 10% depended on type of services being offered.
 - (d) Financial / Technical penalties for violation of agreement conditions like;
 - Minimum geographical coverage of rural and remote areas,
 - Reasonable numbers of customer base for these areas after 2 years of operations. The start of network time shall not exceed 2 years.
 - Minimum roll out obligations for Network as well as customer growth taking in considerations limitations of Spectrum, Right of Way and other conditions of Agreement/constraints/forced measures etc. and or Policy Changes/Regulatory Processes and political-economical considerations imposed by GOI etc.
 - Provision of monitoring and interceptions of signals of all types in the interest of the security of nation, minimize violation of agreement conditions etc.
- (11) **Roll out obligations**
Looking into technological developments, time frame creation of infrastructure and –limitations of Spectrum & its timely availability etc. and non-availability of “right of way”, the following is proposed

- (a) Date of commercial launch To+24 months
- (b) Date of desired penetration To+24 to To+36 months
- (c) Date of achieving targets of GOI To+36 to 48 months

This is suggested for upcoming new technologies offering wide range of services of all kind and types on IP based networks including IP V6 Migration. For operators failing to achieve those targets, we may Consider some penalties as a driver for growth not as punishment to Strangulate ISPs and Growth. following penalties are proposed: -

Type of License	Penalty on roll-out failure (in Crores)		Customer base proposed (in lacs)			Coverage in terms of area and customers	
	Non-compliance of DEMO	Non-compliance of commercial service	Up to 24 months	Up to 30 months	Up to 36 months	Area coverage	Customer base
Cate 'A'	x	a	m	r	u	g	j
Cate 'B'	y	b	n	s	v	h	k
Cate 'C'	z	c	o	t	w	i	l

- (12) License conditions for entry fee (one time non-refundable), BG, AGR, Processing Fee etc

The following structure is proposed: -

	Fees	Pure Internet			Internet with Telephone			Internet with VOIP		
Processing	In thousand	25	15	10	30	20	15	30	20	15
Entry Fee	In lacs	05	03	02	7.5	4.5	2.5	7.5	4.5	2.5
BG	In Crore	02	0.3	0.1	2.5	0.5	0.2	2.5	0.5	0.2
AGR	%	4.5	6	6	4	6.5	6.5	4	7	7
Spectrum Charge	Fraction of normal value	0.6	0.7	0.7	0.6	0.7	0.7	0.6	0.7	0.7

Spectrum charges shall be related with BW and RF Spectrum and independent of number of hops and reuse of frequency.

- (13) **New Trends of Technology & freedom to ISPs in terms of choice of technology, terminal equipments & adoption of IPV6**

It is suggested that based on techno-economic feasibility of the operator / licensee, choice of technology for terrestrial system of all types and kinds including WiMAX, RF with all types of excess, Optical Cable System as well as Air Radiations, Space System – Satellite System with configurations for global / zonal / spot beams and all types of multiplexes both for uplink as downlink in ground to space direction as well as space to ground direction and vice versa.

(14) **Use of Space / Satellite System**

In addition to Ratio Base Terrestrial System of variety of access, point-to-point and multipoint and MW System, OFC and Optical Radiation, copper cable and upgraded copper cable network, satellite is considered to be one of the potential candidate for covering entire geographical area of the country including remotest, hilly and difficult mountainous region in North, deserts and sparsely populated area in West, group of islands both Lakshwadeep and A&N, North-eastern states including Sikkim and part of several other states, which can be served most efficiently and in earliest time frame by satellite systems. However, it is expected to be high investment segment both from view point of investment cost as well as operation cost but this is more suited for Class 'A' type of licensees who are likely to cover entire country.

It is worthwhile to consider and recommend special satellite tariffs as well as GOI Subsidy to cover entire country and remote and rural areas in line with GOI / MOC & IT policy to take internet and its various services to each and every village, schools and other important places.

(15) **Harmonizing ISP, CMTS, NLD/ILD / UASP**

The above subject is being discussed in various forums. However, it is important to note that;

- (a) the role of internet services / networks is significantly different than other licenses mentioned above,
- (b) ISPs have different unique role in relation to basic telephony, mobile telephony, national and international long distance services. The various new technological options, applications and services are possible through internet network only and, therefore, the comparisons of various systems do not signify anything of interest. However, there is a need to harmonize spectrum, other license conditions in terms of entry fee, BG, AGR etc. but on a different pedestal as a facilitator to these services and certainly these parameters have to be on much lower level i.e. to say ISP as ground base while other services as sky base.

(16) **Level of maturity of service via ISP, Tax Relief & Concessional levies / Spectrum Charges**

The available and developing technological options offer advantage over current systems in terms of time frame, coverage, cost effectiveness as well as a wide variety of services with expected low cost terminal devices suited to the needs of people in these areas and also vary close to poverty line. It is further recommended that for these new technological options, following options may be considered: -

- (a) Tax Holidays including Service Tax for rural and remote areas,
- (b) Subsidized spectrum charges, lower entry fee, BG as well as AGRs to facilitate earnings to be invested in growth of the network.
- (c) The restrictions for use of up-to-date latest devices / terminal equipments shall be removed.
- (d) Till we reach a situation when any body anywhere anytime take get a internet connection with 24 hours, shall be deem to be “Level of Maturity of Internet Services & its Applications”. Thereafter, the concessions and tax relief, spectrum charges etc. can be reviewed for the continuity or otherwise. If that is not done, ISP Services may land up with the same fate as rural telephony in the past.

(17) **Mechanism to verify credential & financial capabilities of a company / individual / proprietorship concerns etc.**

While processing the applications, it is desirable to verify soundness of financial resources and general credential of the organization / company both private / public limited / proprietorship concern / individuals. In addition, it is also for consideration that the core officials both technical / non-technical details are obtained to verify their competence in the field of technology, finance and overall management including customer relationship.

Not necessarily the party shall be in telecom business or any other business even professionals / retiring government servants, industry officials both from private and government service as well as from other industries shall be considered on merit basis for issue of license and signing of agreements. This will enable much wider spectrum of experienced people from telecom and IT operators, manufacturing industry / Research & Development Institutions and other industries. This will be beneficial from view point of sound planning, timely implementation as well as subsequent efficient O&M of the network and services. Such organizations / individuals may be in a position to take care of customers in very careful and courteous manner.

(18) **Monitoring of time lines of the project**

The concerned Cell of the Department of Telecom / MOC & IT shall get the feedback on regular basis in relation to the dates indicating in agreement for practically possible and realizable parameters to be decided in consultation with stake holders, manufactures, R&D Institutions, DOT / TRAI ETC.

(19) **Flexibility for use of Space / Satellite System as well as Optical Radiation Based System**

The party / company / individual / proprietorship concern must have full freedom to obtain the license with the specified conditions by DOT i.e. licensor and framework of regulations. The choice of technology for all terrestrial system including WiMAX, Terrestrial Radio System and all types of Satellite System with

configuration and frequency band as internationally coordinated from view point of interference under ITU umbrella in line with recommended guidelines, frequency allocations, transmission constraints as well as in association with other satellite operators INTELSAT, Inmarsat, ARAB-Sat, EUETEL Sat, Inter-Sputnic of Russia and other regional satellite systems of Asia. This coordination is achieved by Departmental Space / ISRO, WPC / MOC & IT, DOT / MOC & IT and its operational arms using satellite system. This is very complex and long drawn process under international environment within ITU Guidelines and, therefore, it is of paramount consideration that such coordination bands in operation / in pipeline shall be reserved only for space communication. If there is an extreme need, principles of Co-existence / sharing of frequency spectrum in coordinated manner under the Chairmanship of DOS / ISRO and co-Chairmanship of WPC / MOC & IT shall be decided.

This is expected to facilitate smallest possible terminal equipment, cost effective, solar power, dual battery system for charging at central location, easy man machine interface enabling people in rural and remote areas with lack of formal education as well as computer information. This will boost the utilization of such services in all rural and remote areas of the country. This is also likely to compliment people living in peripherals of large districts / metros and developed centres. In addition to mining, power, oil exploration industry etc.

(20) **Proposed BG for various types of ISP Services**

The following structure is submitted for consideration:

License Type	Pure Internet without Gateway & Internet Telephone / VOIP / VPN	Pure Internet with Internet Telephone (PI.IT)	PI.VOIP / VPN
Category 'A'	02 Crores	2.5 Crores	2.5 Crores
Category 'B'	0.20 Crore	0.03 Crore	0.03 Crore
Category 'C'	0.03 Crore	0.05 Core	0.05 Crore

Communications offering Internet Telephony in new regulation / regime shall have full freedom to offer PC-to-PC, PC-to-Phone, Phone-to-PC based on IP Protocols without any restriction across the country as well as abroad.

Standalone ISP Network shall not be compared UASP, CMTS, NLD / ILD in any form and manner. Such a comparison has no basis and any tenable logic. This comparison is only designed to suffocate and throttle small but very important networks for the country. Any comparison and coordination must be with open mind for achieving the objective and faster progress for the rural and remote areas as well as serving common masses in urban centres.

(21) **Review of other services, licenses & agreements**

While we take note of concerns expressed by DOT / Licensor as well as process of regulation to streamline and harmonize network and services, their governing conditions of agreement etc., controlling gray market, minimizing loss of revenue by illegal operations of internet telephony by un-licensed operators.

We are afraid that this may be tip of ice burg and while large networks under UASP / CMTS / NLD / ILD might be having similar or more serious offences and contrary to conditions of license / agreement. This suggests immediate re-view of- these operators, their licenses status, recovery of losses by using networks unlawfully and also the areas of concern of national security. At least the following shall be considered for analysis, arriving at conclusion and modifying terms and conditions of the agreement at the earliest without further delay but not limited to this: -

- (a) The verification of customer addresses and their ID proof has been mandatory. Such information has to be made available to the Licensor on regular basis. The failure to do so is against the terms and conditions of the agreement, security of nation and stipulates that such network licenses shall be deemed to be terminated. If so, what is the position in respect of following: -
- Really the misuse of mobile telephones by terrorists, unlawful elements has been boosted due to non-understanding of address and ID proof importance by private operators.
 - If so, their licenses stand terminated without any Notice.
 - Therefore, they are operating illegally, fraudulently in violation of agreement conditions and home laws.
 - How the penalties to be recovered, BG stands to be encashed and how the licenses can be reissued with fresh entry fee, BG and other conditions.
- (b) The establishment of calls has to follow network guidelines as stipulated in license / agreement. However, it is understood that the routine is in-violation of agreement as well as routine manners. This might have resulted in very huge losses of revenue to the Government. Does it need technical audit as well as audit by CAG for both Government as well as private network operators.
- (c) The number of operators are providing services in the states which are bordering, neighboring, SARC Countries. For such operations, the setting up of towers is mandatory much before the borders to ensure that no radio signals cross the border and are intercepted by any body in neighboring country. If it happens, it is serious problem for our security and also monitoring of our communications by neighboring countries. Let some investigating agency of the Government along with DOT Vigilance

Monitoring Cell verify on sample basis such networks to avoid such fears and / or suggested technical solutions for implementation.

If all or any of the situation mentioned above exist, such networks licenses are deemed to be terminated. Therefore, there is urgent need to review agreements terms and conditions, penalty aspects, loss of revenue and security related matters. DOT, the licensor and TRAI as regulator is requested to initiate such a review.

(22) **Industry consolidation / revoking of licenses**

ISP Operators who have not commenced their operations, and / or non-functional and operating by violating of laws shall be given chance to explain before termination of their license and agreement. However, this is considered to be important to control mushroom growth of licenses without any utility perhaps such agencies are trading the licenses.

(23) **Scope of Services & mechanism to intercept and monitor communications**

All IP Based services as available internationally, under trial shall be permitted with variant entry, BG, AGR etc. as proposed earlier. It shall be possible to provide internet telephony, IPTV, VOIP / VPN, Web Access, e-commerce / trade / agro trade / education / health / management etc. ensuring Quality of Service "QOS", facilitate to monitor and intercept all types of signals flowing through internet.

(24) **Level Playing Field**

As mentioned earlier, no comparison between ISP and UASP is relevant as the purpose and objectives and national goals are distinct to cover entire rural and remote India. This necessitate tax holidays, lower spectrum tariffs and / or linked with AGR, all concessions and subsidy to ensure that we cover entire country within next two to three years.

(25) **Migration to UASP**

Question of migration does not arise as two license are to serve different type of customers and with emphasis on rural while UASP with urban emphasis.

(26) **RF Spectrum Charges**

As suggested earlier, we have to be on lower side to facilitate growth of ISPs and penetration across the country. The price must be based on BW and frequency spectrum and independent of hop length, frequency reissued etc. This may also be linked up AGR Whichever is beneficial and lower shall be adopted to ISPs.

(27) **Consultation Para (2.16.11)**

Let us leave flexibility for choice of technology, services and needs of customers to be taken care by market forces but in building variants of single license for

entry fee, BG, AGR etc. However, for monitoring independent wing of DOT i.e. Telecom Vigilance Monitoring Group shall verify on sample basis violation of agreement and licenses. Even such monitoring can be considered under a Committee in TRAI.

(28) **Consultation Para (2.16.12 & 13)**

Let us reduce the restrictions and impose penalties as proposed earlier. Let us also authorize use of various latest devices by customers but on payment basis to the service provider in turn this will bring extra revenue and service tax to Government.

(29) **2.17 Question for Consultation**

Question 1 : Kindly see Para No. 14 & 13

Question 2 : Kindly see Para No. 7,13 and 23

Question 3 : Kindly see Para No. 15,24&25

(30) **Lawful interception of Internet Telephony (Para 3.5 of TRAI)**

This also has been explained earlier Para No. Necessary interfaces and capability with monitoring agencies shall be mandatory at the date of start up /commercial launch.

(31) **Issue of Net Neutrality (Para 3.6 of TRAI)**

We appreciate TRAI Study and Analysis and agree for the neutrality.

(32) **Question for Consultation (Para 3.7 of TRAI)**

These aspects has been addressed in Para 7,,13,14,etc as above.

(33) **Regulatory Issues (Para 4.0 Chapter-IV)**

Various issues has been addressed in Paras above.

(34) **Question for Consultation in Chapter-V**

These questions have been addressed in our above explanations and description. and we appreciate the concerns and propose strategy of TRAI and agree to it.

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Date : 14th January 2007 at Varanasi