VERIZON COMMUNICATIONS INDIA PRIVATE LIMITED
(FORMERLY WORLDCOM COMMUNICATIONS INDIA PRIVATE LIMITED)

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Nripendra Misra,
Chairman,
Telecom Regulatory Authority of India,
Mahanagar Doorsanchar Bhawan,
Jawaharlal Nehru Marg,
New Delhi- 110002

Fax: +91-11-23211998

**Sub: <u>Response to TRAI's "Review of Internet Services" Consultation Paper</u>**

Dear Sir,

We are pleased to provide our comments to the Consultation Paper No. 19/2006 issued on 27 December 2006.

Please do not hesitate to contact me at tel: +65-6248-6681/email: andrew.ngiam@verizonbusiness.com or my colleague John Young at tel:+65-6248-6556/ email: John.young@verizonbusiness.com should the TRAI wish to discuss any of the issues in greater detail.

Sincerely,

Andrew Ngiam
Legal and External Affairs
Verizon Business

C/o C-56, Neeti Bagh New Delhi - 110 049 India

# Response to TRAI's 27 December 2007 Consultation Paper on

# "Review of Internet Services"

1. ***At present, there are 389 licensed ISPs out of which only 135 are offering Internet Services. Top 20 ISPs cater to 98% Internet Subscriber base. In your view, is there a rational for such a large number of ISPs who are neither contributing to the growth of the Internet nor bringing in competition in the sector? Suggest appropriate measures to revamp the Internet Service Sector.***

Verizon Business is of the view that the present makeup of the pool of Internet Service Providers (ISPs) in India is a consequence of the following factors:

1. **Natural segmentation of the market into specialty categories**. Verizon Business' ISP serves primarily larger commercial concerns, not individuals. Other ISPs have developed their own target markets
2. **A narrowing of permissible ISP activities** which prevents ISPs from engaging in, high-value market segments such as IP-VPN without costly license fees.
3. **A departure of ISPs from the marketplace** that find that they cannot compete commercially in light of the two factors above.

Verizon Business respectfully submits that the shrinkage of the pool of active ISPs in India can be halted *and even reversed* if the Telecom Regulatory Authority of India (TRAI) permits ISPs to engage in higher, value-added services such as IP-VPN, and issues clearer regulations on Voice over the Internet (VOIP) and encryption.

Today, an ISP operator can provide only basic Internet access services under the auspices of the ISP license. To engage in provision of IP-VPN, for example, requires payment of license fees set at INR 10 Crores (US$2.3 million) and a 6% revenue share. An investment of such magnitude is impractical for any but the largest incumbent operators.[1] An outlay of INR 10 Crores is substantial, even for large newcomers. A small market entrant would be making a huge investment with merely the permission to *offer* IP-VPN as the only reward, a permission most thought they had when they originally obtained their ISP licenses. The other drawback is that this large investment does not go towards equipment or facilities—which could be disposed of to free at least some capital. The IP-VPN add-on cannot be turned back for a refund if the business does not go well. Finally, on top of the INR 10 Crores up-front fee, there is a 6% revenue share. Margins in today's telecom world are often in the single digits, and this 6% levy can, in many cases, be the difference between a viable and non-viable commercial business model.

In short, the extremely high add-on fees required to offer IP-VPN is unaffordable for most ISP's and locks them out of this important part of the market.

[1] TRAI's data reveals that only a handful of operators have grown to the size where they conceivably could afford an INR 10 Crores license fee. See TRAI, Study Paper No. 2/2006 on "Analysis of Internet & Broadband Tariffs in India", 287/11/2006 (hereinafter "TRAI Study Paper").

Service-based operators in other countries are permitted to offer a wider scope of services with far lower license fees than prevail in India. Service-based operators in Hong Kong and Singapore, for example, are not limited to the provision of Internet Access Services under their license conditions. The permissible services include, but are not limited to[2], the following: International Simple Resale, Resale of Leased Circuit Services, Virtual Private Network Services, Managed Data Network Services, Prepaid Services, and IP Telephony Services. The license fees imposed are low facilitating market entry. In Singapore, the Service-Based Operator (SBO) annual license fees are set at S$5,000 (US$3,600) per annum while Hong Kong's Public Non-Exclusive Telecommunications Service ("PNETS") annual license fees are set at HK$750 (US$100). And these licenses ***do not*** impose revenue share obligations.

**<u>Services available to Service-Based Operators</u>**

| | |
|---|---|
| Singapore | International Simple Resale (ISR)<br>Resale of Leased Circuit Services<br>Public Internet Access Services<br>Internet Exchange Services<br>Virtual Private Network Services<br>Managed Data Network Services<br>Store-and-Forward Value-Added Network Services<br>Mobile Virtual Network Operation<br>Backhaul Bandwidth Capacity Services<br>Live Audiotex Services<br>Prepaid Services- Call-back/Call Re-origination Services, Internet Based Voice and Data Services<br>Store-and-Retrieve Value-Added Network Services<br>International Calling Card Services, Resale of Public Switched Telecommunications Services<br>Global Mobile Personal Communications by Satellite Services<br>IP Telephony Services |
| Hong Kong | Mobile Virtual Network Operator Services Licensees<br>External Telecommunications Services (ETS) Operators<br>International Value-Added Network Services Operators/Internet Services Providers Virtual Private Network Services Operators<br>Public Radio Communications Relay Services Operators<br>Teleconferencing Service Operators<br>Private Payphone Service Operators<br>Short Message Service Licensees<br>Security and Fire Alarm Signals Transmission Service Licensees<br>Miscellaneous Value-Added Services |

2. ***Due to limited availability of spectrum for wireless broadband access, and high cost of creating last mile infrastructure, many ISPs are left with only option to provide Internet dialup access services. With increasing penetration of broadband,***

[2] Verizon Business wishes to highlight that other regulators have chosen to regulate ISPs lightly and in terms of prohibitions, rather than permissions. Verizon Business respectfully suggests that this helps unleash the creativity of ISPs to experiment with new products and services to the benefit of the Customer.

***what efforts are required to ensure viability of such ISPs in changing scenario? Please give suggestions.***

Verizon Business supports measures allowing ISPs greater wholesale access to suitably priced leased lines, DSLs and Ethernet. We agree that it is impractical for a new entrant to replicate a last mile infrastructure. These new entrants have little choice but to procure access services to serve the customer. Under such circumstances, these telecommunication service components must be made available to ISPs on a wholesale basis. Here the TRAI can play a role to ensure that anti-competitive behaviors do not surface in the form of exclusionary prices, including refusal to supply, predatory pricing, vertical price squeezes and other forms of discriminatory practices.[3]

Further measures could be introduced to allow for and encourage the resale of telecommunications services, including internet services. We respectfully suggest that regulations encouraging ISPs to resell and combine the regulated telecom products of other licensees will both help struggling ISPs to find a market niche, and provide a broader range of competitive products to Indian customers.

3. ***At present limited services are permitted under ISP licenses. There is no clarity in terms of some services whether they can be provided under ISP licenses. Do you feel that scope of services which can be provided under ISPs licenses need to be broadened to cover new services and content? Suggest changes you feel necessary in this regard.***

In addition to our suggestions above regarding lowering the high barrier to entry for service-based providers seeking to offer IP-VPN services and allowing creative recombination and resale of telecommunications products and services, Verizon Business suggests that the TRAI consider the introduction of IP Telephony services on E.164 numbers in the India telecommunications market.[4] IP Telephony services using E.164 numbers were introduced in Singapore and Hong Kong in June 2005 and January 2006 respectively. The service allows a user to make and receive voice, data and video calls in any domestic or overseas location where broadband Internet access is available.

We note that Singapore adopted a “light-handed” regulatory approach on IP Telephony services. IP Telephony services there can be provided via Facilities-Based Operator (“FBO”) or Service-Based Operators (“SBO”) licenses, depending on whether the service provider intends to deploy network infrastructure.

Similarly, Hong Kong introduced the SBO License framework to allow service-based operators to enter the market to provide and operate local voice telephony services employing various technologies including IP-based technologies. Under the SBO license, the licensee may provide all types of internal and external telecommunication services, including local voice telephony services, Enhanced Telecommunications Services (ETS) and International Value Added Network Services (IIVANs.)

[3] The need for such regulatory measures is evident with the market data showing that the PSU’s have 62 percent of the Internet subscribers. TRAI Study Paper, p.8.
[4] In this response, the terms IP Telephony and Voice Over the Internet (VOIP) are the same offering consumers the possibility of using their Internet access to originate and/or terminate telephone calls.

The revenue share obligations that India requires for provision of value-added enhancements for IP Telephony and IP-VPN services are high compared to requirements in other countries. These obligations present a significant barrier to new entrants and deter existing service providers from introducing new services.

4. ***UASL/CMTS licensees have been permitted unrestricted Internet telephony however none of them are offering the service. ISPs (with Internet Telephony) can provide Internet telephony within scope defined in license condition. The user friendly and cheaper devices with good voice quality are increasing Internet grey market. Please suggest how grey market operations can be curbed without depriving users to avail such services?***

Verizon Business respectfully submits that *ISP (with Internet Telephony)* license conditions could and should be streamlined to encourage greater competition and investments.

VOIP offers increased customer choices and introduces competition to an otherwise traditional voice carrier dominated market place. The introduction of such services has improved the product offerings and introduced greater price competition, benefiting customers. We believe that regulatory barriers to VOIP services should be removed to encourage new market entrants and the development of effective competition. We have observed that restrictive regulations inevitably create a grey market, posing problems to regulators and customers alike. The grey market results in lost licensing revenues for the authorities and for end-users, service quality assurance issues.

A grey market typically arises from a permanent difference in price between those provided by the licensed operators and the true underlying cost of providing that service. Unless, the price differential can narrow to better reflect the true costs of service provision, sufficient incentives will continue to perpetuate a grey market. We note that regulators in other liberalized markets have encouraged the introduction of IP Telephony in their marketplace by adopting only minimal and proportionate regulation.

5. ***How to address the issue of level playing field amongst the licensees of UASL, CMSP, and ISPs?***

We note that both Hong Kong and Singapore have introduced a two-class licensing approach for IP Telephony services. In Hong Kong, services under “Class-1” possess all the attributes of conventional telephone services. Service operators are required to fulfill all licensing conditions attributable to the conventional telephone service operators. By contrast, services under “Class-2” are however subject to minimal regulations. Singapore has taken a similar approach in which IP Telephony operators on “level 6” 8-Digit number blocks are given the same set of obligations as the conventional voice operators. But operators can also choose to deploy IP Telephony service using “Level 3” 8-Digit number blocks which carry limited obligations on number portability, emergency services, and so forth.

We respectfully propose that services-based operators be allowed to serve a wider segment of the India telecommunications market. This includes services such as IP Telephony which could provide direct competition for the International Long Distance Operators (“ILDOs”) and NLDOs. VOIP and other value-added services in other liberalized markets are not solely the prerogative of the facilities-based operators. Services-based operators can enter the market with relative ease, and rely on the facilities based operators for their infrastructure needs to provide of voice services including IP Telephony. We note that regulators in other markets have confidence that facilities and non-facilities operators can compete if commercial arrangements and, to the extent necessary, regulations ensure that the non-facilities-based operators can obtain facilities–based services on a wholesale price basis.

6. ***The emerging technological trends have been discussed in Chapter 3. Please suggest changes you feel necessary in ISP licenses to keep pace with emerging technical trends?***

The introduction of Next Generation Networks (NGN) has implications for access and interconnection arrangements. We strongly encourage the TRAI to consider a NGN regulatory framework which continues to promote competition and a favorable climate for infrastructure investments.

Furthermore, Verizon Business respectfully suggests that allowing ISPs broad abilities to purchase telecommunications components from other licensed service providers, and then to combine, resell and manage the resulting value-added services will encourage ISPs to create and offer to the marketplace innovative products and services. Trying to closely regulate based on technological trends both presupposes that the regulator will be able to accurately predict the marketplace, and that no new and disruptive technologies will arise. Verizon Business respectfully suggests that TRAI focus on creating regulations that broadly protect the Indian Customer from fraud and abuse, and let the marketplace decide what the marketplace wants to buy. Verizon Business is not unmindful of the legitimate need to protect the interests of ILDO and NLDO license holders, and in this regard suggests that TRAI regulations be drafted as prohibitions rather than as permissions. For example, the ISP regulations could prohibit ISPs from selling specific types of products such as international analog voice. As long as the ISP steers clear of the forbidden product(s), it would have reasonable confidence that if the ISP comes up with a new product or service, it can invest in it and offer it to the marketplace without fear of having its investment and creativity rendered valueless. Similarly, Verizon Business can accept the idea that certain types of infrastructure, such as IPLCs, should be owned by the NLDOs/ILDOs. However, an ISP should be free to ***re-sell*** such products properly sourced from an NLDO/ILDO. ***The day has passed when Customers bought individual telecommunications products and services.*** Customers now demand an integrated suite of services comprising international data, VOIP, IT, hosting and management. New ISP regulations ought to recognize this and release the creativity of the Indian ISP community.

7. ***The service roll out obligations under ISP license is very general and can be misused by non-serious players. Do you feel the need to redefine roll out obligations so that growth of Internet can be boosted both in urban and rural areas? Give suggestions.***

Fostering the growth of the Internet throughout urban and rural areas, is a complex challenge, one part of which is the consideration of possible roll out obligations. As a provider whose focus is primarily on providing service to large multinational customers. We believe that the development of a robust market for Internet services, including those used by large enterprises, is an important part of expanding Internet access and deployment in India. Therefore, we would offer the observation that ISPs should be free to find their target markets—and to decide what kind of Customers they feel they can best serve.

***8. Do you feel that ISPs who want to provide unrestricted Internet Telephony and other value added services can be permitted to migrate to UASL without spectrum charges? Will it boost Internet Telephony in India? What should be the entry conditions? Give suggestions.***

Our view is that ISPs should be permitted to offer a wider scope of services without the need to obtain a higher class of licenses, including UASL, which Verizon Business respectfully submits is of such a high cost that few if any ISPs (moribund or not) will be attracted.

As regards to ISPs wishing to provide Internet and other value-added services on wireless platform, we do see this as an important element of the Indian telecommunications scene in the immediate future. We suggest that TRAI carefully study lessons learned by foreign regulators and municipalities before embarking. Verizon Business does not feel that the Indian marketplace, or consumers, will be served by sky-high, gold-rush frequency slot auctions. Rather, we suggest that some form of largely co-operative use of low-power, low cost, wifi-type infrastructure be tried as is being done in Singapore, Hong Kong, the United States and elsewhere.

***9. UASL/CMSP licensees pay higher regulatory levies as compared to ISPs for the provision of similar services. Do you feel that similar levies be imposed on ISPs also to maintain level playing field? Give suggestions***

The licensing regime for service based operators should be distinct from that for facilities based operators. Any attempt to impose USAL/CMSP-type regulatory levies may have an undesired effect of discouraging existing active ISPs and further discouraging moribund ISPs from serving the market. Facilities based operators enjoy cost-advantages arising from facilities ownership and such facilities ownership goes hand-in-hand with higher regulatory levies.

In sum, Verizon Business feels that TRAI ought to be focusing on lowering the non-productive financial burdens on ISPs rather than finding ways to increase them.

***10. Virtually there is no license fee for ISPs at present. The amount of performance bank guarantee (PBG) and financial bank guarantee (FBG) submitted by ISPs is low. Do you feel the need to rationalize the license fee, PBG, FBG to regulate the Internet Services?***

Verizon Business is of the view that the non-productive financial burdens on ISPs such as license fees and costs of bank guarantees ought to be kept as light as is consistent with protecting the Indian Customer. As mentioned above, we are of the view that TRAI ought to actively explore ideas and schemes with the aim of ***lowering*** such non-productive financial burdens.

11. ***At present ISPs are paying radio spectrum charges based on frequency, hops, link length etc. This methodology results in high costs to ISPs prohibiting use of spectrum for Internet services. Do you feel that there is a need to migrate to spectrum fee regime based on percentage of AGR earned from all the revenue streams? Give suggestions?***

One theme that runs through all of Verizon Business' views is that ISPs ought to be free to explore their own ideas and create their own market niches without undue regulation and without having to bear heavy unproductive expenses. Some ISPs depend heavily on radio spectrum of one sort or another, and some do not. Verizon Business is of the view that TRAI ought not to try to allocate costs from ISPs who chooses heavy use of radio spectrum to ISPs that do not. Verizon Business is firmly of the view that such reallocation would further discourage ISPs (moribund or not), and would do nothing to benefit the Indian Customer.

Verizon Business does, however, suggest that existing radio spectrum allocation schemes, developed in an era of dedicated analog and primitive digital high-power spectrum use, are out-dated and ill-suited to encouraging innovation in the Indian marketplace. Verizon Business suggests that TRAI consider broad study of other models with the aim of allowing ISPs to experiment with low-power wifi-type infrastructure and associated businesses. Verizon Business' experience in India has taught it that Indian engineers and businesspeople are amongst the most creative in the world, and feels that such experimentation would materially benefit India and Indian Customers.

12. ***The consultation paper has discussed some strategic paths to boost Internet Telephony, bring in level playing field vis-à-vis other operators, and regulate the Internet Services. Do you agree with the approach? Please give your suggestion regarding future direction keeping in view the changing scenario.***

The proposal allows ISP Operators access to a full suite of services, including Unrestricted Internet Telephony, Internet Telephony (Only using SIP/H323), Internet Telephony on E.164 numbers, IPTV, IPVPN, MPLS VPN and other application based services, conditional upon a willingness to migrate to UASL. Verizon Business is of the view that ISPs should enjoy the ability to offer such products under the existing ISP licenses. We are particularly concerned by the ***sheer magnitude*** of the unproductive cost that would be imposed under the UASL license scheme:

1. **Minimum net worth** (paid up capital and free equity) requirements:
   a. Category A Service Area: **INR 100 Crores** (approximately US$23M)
   b. Category B Service Area: **INR 50 Crores** (approximately US$11M)
   c. Category C Service Area: **INR 30 Cores** (approximately US$7M)
2. **Annual Licence Fees** at 10, 8 and 6% of Adjusted Gross Revenue for category A, B and C service areas respectively.
3. **Significant and burdensome** Network/Service **deployment obligations**

Verizon Business suggest that only the very largest existing Indian corporations could bear such financial burdens, and then only if their Customers were subject to extremely high charges—charges out of step with the international marketplace.

Verizon Business respectfully suggests that the Indian Customer and the Indian marketplace will benefit most from a loosening of the restrictions which are weighing down the creativity and energy of the existing Indian ISPs. Verizon Business also suggests that TRAI would best serve the Indian marketplace by implementing regulations ensuring that ISPs can sell the full spectrum of telecommunications products and services, and that ISPs can create such products and services using components sourced from NLDOs, ILDOs, and other ISPs.