

TELECOM REGULATORY AUTHORITY OF INDIA

Responses received on

Consultation Paper no. 14/2006 dated 17th November 2006

on

**‘Measures to Enhance Competition in Domestic Leased
Circuits (DLC) market in India’**

Revised on 11.1.2007.

INDEX

Question No.	Title	Response From	Page
	General Comments	1. BSNL 2. Asia Pacific Carrier's Coalition 3. Reliance Communications 4. ISPAI 5. HCL Infinet Ltd. 6. Tata Teleservices Ltd. 7. VSNL 8. Sify Ltd. 9. AUSPI 10. Shri Hetal Patel (M/s Motilal Oswal Securities Ltd.) 11. PowerGrid Corporation of India Ltd.	1-3 3 4 4-5 5 5 6 6-8 8-9 9-10 10-11
Questions for Consultation:			
Q. 1	What are the factors that limit competition in the DLC market in India?	1. BSNL 2. Bharti Airtel Ltd. 3. Asia Pacific Carrier's Coalition 4. Reliance Communications 5. ISPAI 6. HCL Infinet Ltd. 7. Tata Teleservices Ltd. 8. VSNL 9. Sify Ltd. 10. AUSPI 11. PowerGrid Corporation of India Ltd. 12. Consumer Care Society	12 12-13 13 13-15 15 15 15-16 16 16 17 17 17
Q.2(a)	Should the operator with Significant Market Power (SMP) be mandated to provide local lead for DLC and also for engineering CUGs to other operators when they also have option to create their own Access network?	1. BSNL 2. Bharti Airtel Ltd. 3. Asia Pacific Carrier's Coalition 4. Reliance Communications 5. ISPAI 6. HCL Infinet Ltd.	18 18-19 19-20 20-21 21 21-22

(b)	If so, justify with reasons. If not please give reasons.	7. Tata Teleservices Ltd. 8. VSNL 9. Sify Ltd. 10. AUSPI 11. PowerGrid Corporation of India Ltd. 12. Consumer Care Society	22 22 23 23-24 24 24
Q.3	Whether it is appropriate to make the prime service provider responsible for the security issues in case of usage of resources from multiple service providers in a CUG Network?	1. BSNL 2. Bharti Airtel Ltd. 3. Asia Pacific Carrier's Coalition 4. Reliance Communications 5. ISPAI 6. HCL Infinet Ltd. 7. Tata Teleservices Ltd. 8. VSNL 9. Sify Ltd. 10. AUSPI 11. PowerGrid Corporation of India Ltd. 12. Consumer Care Society	25 25 25 25-26 26 26 26 26 26 26 27 27
Q.4	Whether there is a case for considering provision of DLC as an interconnection element to be included in RIO? If yes, what should be the broad terms and conditions of the interconnection regulation for DLC services? If no, please provide reasons.	1. BSNL 2. Bharti Airtel Ltd. 3. Asia Pacific Carrier's Coalition 4. Reliance Communications 5. ISPAI 6. HCL Infinet Ltd. 7. Tata Teleservices Ltd. 8. VSNL 9. Sify Ltd. 10. AUSPI 11. PowerGrid Corporation of India Ltd. 12. Consumer Care Society	28 28 28-29 30 30 30 30 30 31 31 31 32
Q.5	Suggest any other measures that could be considered for promoting effective competition in DLC market?	1. BSNL 2. Bharti Airtel Ltd. 3. Asia Pacific Carrier's Coalition 4. Reliance Communications 5. ISPAI 6. HCL Infinet Ltd. 7. Tata Teleservices Ltd.	33 33 34 34-35 35 35 36

		8. VSNL	36
		9. Sify Ltd.	36-37
		10.AUSPI	37
		11.Consumer Care Society	37

**Comments of various stakeholders on the issues raised by
TRAI in its consultation paper no. 14/2006 dated 17th November
2006**

On

**“Measures to Enhance Competition in
Domestic Leased Circuits (DLC) market in India”**

General Comments

BSNL

The resources of PSUs have been termed as national resource in this paper. BSNL, being custodian of this important resource, should be allowed to decide its effective utilisation. By the same logic, any resource created in this country for delivering service to the public is a national resource. This has to be looked from the perspective of rapid multiplication of infrastructure without which country will be deprived of much needed infrastructure essential for its sustainable economic growth.

The private operators must have taken licenses being well aware of the risks, opportunities and returns in the market and would have prepared their business models accordingly. Government has already given lot of relaxations and incentives for development of infrastructure. If it is felt that more incentives are needed, the Regulator / Government can take such decisions. However, this should not be at the cost of other operators including BSNL. The private operators should not, however, be allowed to succeed in their profit motives at the cost of BSNL to promote policy changes. They have been given enough time till now and still more time is available at their free will to develop their own infrastructure.

During the discussions held on consultation paper regarding “Unbundling of local loop”, BSNL has already indicated that it has approximately 7 million copper pairs usable for providing broadband services. In fact, the leased data circuits will be provided out of these pairs only. BSNL has plans to use all these pairs and it will be impossible to spare the pairs for other operators. If sharing of these resources is enforced, it will prohibit BSNL from carrying out its business effectively, which, it is felt, is not the goal of the national policy.

As far as the question of ROW is concerned, like many other core sectors, there is a need to frame a harmonized national policy for early availability of ROW to all operators. Since ROW is a hindrance, it should be the effort of the Government/ Regulator to

remove the hindrance and not to make such a policy which harms the other policy objectives like development of infrastructure and also adversely affects the business prospects of a particular operator.

Due to negligible growth in the fixed wire line market, the last mile infrastructure of BSNL is hardly expected to grow. The only alternative solution lies in deployment of wireless systems. Some ISPs are already deploying such systems. Knowing this limitation, BSNL is also looking for wireless solutions. It is felt that all operators must be making plans in this direction. Govt./Regulator may encourage such use of wireless systems.

It may be of record that the licensing process started with a limited competition through invitation of bids and subsequently the Govt. decided to permit open entry of operators in the market. Apart from competition, one of the major objectives of this change in policy was to multiply the infrastructure at rapid pace all over the country. From time to time, policy relaxations were also given whereby ISPs were allowed to lay their own infrastructure for reaching the customer. Recent changes in NLD policy have also permitted NLDOs to develop their own infrastructure for end-to-end connectivity.

It is seen that despite policy changes and monetary/fiscal incentives etc, the private operators have limited themselves to comparatively profitable areas. They are giving an impression that last mile is a bottleneck facility whereby its sharing, which is targeted at incumbent operator, be allowed.

The incumbent operator i.e. BSNL has created infrastructure across the country at a very high cost while it is allowed to charge, by regulation, only a uniform uneconomic rate across the country for the lower end of the retail bandwidth market (nx64 Kbps circuits). It has also been seen in the market place that private operators are quoting unrealistically low rates to corporate/in lucrative areas which BSNL can not afford due to additional burden of uneconomic areas. To our understanding, the private operators have the larger share of high bandwidth market. This market situation indicates that the Significant Market Power (SMP) is actually enjoyed by some private operator and not BSNL.

The private operators also enjoy Significant Market Power (SMP) in the area of Metro DLC (Digital Loop Carrier) as theirs are comparatively modern networks and they are concentrating only such type of deployment in lucrative areas. Even if it is presumed that copper loop will be shared for leased circuits, there should be simultaneous policy of sharing of optical access network as well as Metro DLC set up by the private operators.

It is also pertinent to mention here that the Govt. has decided against unbundling of local loop with reference to the provision of broadband service. Sharing of the local loop for leased circuit will be nothing but the unbundling of the same type.

In the absence of a Cable Record Management System (CRMS) with BSNL, it shall be practically impossible to effectively keep a track of cable pairs out of service / utilised /

allotted to various agencies / operators. This is likely to lead to a chaotic situation in the technical area of cable pair distribution frame resulting in poor quality of service specially with respect to fault reporting and its repair.

If sharing of local lead is permitted, there will be a requirement of co-location of equipment of the private operators in BSNL premises. As of today, even for the purpose of interconnection, BSNL has constraints in providing adequate space. It may, therefore, not be feasible for BSNL to provide this space for co-location.

It is submitted that the solution of the “problem” lies with operators themselves. The regulator should not allow the deficiency of the operators to be covered by making a policy which is detrimental to the other operators and also against the national policy of infrastructure multiplication which is required at rapid pace. Telecom sector has shown the way as to how the growth can be achieved and no policy changes should be effected at this stage which has the potential to strangle this growth.

Asia Pacific Carrier’s Coalition

1. The Asia-Pacific Carriers Coalition (APCC) welcomes the opportunity to respond to the Telecom Regulatory Authority of India’s (TRAI) consultation in relation to competition in domestic leased circuit (DLC) market in India, paper 14/2006 (Consultation).
2. The APCC is an industry association of global and regional telecommunications carriers operating in Asia Pacific, formed to work with governments, National Regulatory Authorities (NRAs) and consumers in promoting open market policies and best practice regulatory frameworks throughout the region that will support competition and encourage new and efficient investment in telecommunications markets.
3. APCC welcomes the recent developments in the telecommunications market in India, in particular, the change in the restrictions on foreign shareholdings for both national long distance (NLD) licensees and international long distance (ILD) licensees as set out in the guidelines issued by the DoT on 14 December 2005 (Guidelines).
4. Experience in liberalizing markets has shown that the provision of domestic leased circuits (in particular local access circuits) in a timely, non-discriminatory and cost-oriented manner is a key element in the development of effective competition in markets where competition is not well-established. The provision of reasonable wholesale access to the incumbent’s DLCs is critical to the development of a wide range of services in India and will assist India in establishing and maintaining a competitive and attractive market for investors in both the telecommunications and other associated markets.
5. The Consultation highlights a number of substantial issues in relation to the DLC market in India. Please note that, given the timeframe available to respond to the Consultation, this response is not comprehensive. APCC would welcome the opportunity to discuss the issues further with TRAI.

Reliance Communications

The wireline access network is least competitive as new private operators do not have wide spread network infrastructure and are unable to match the economies of scale and scope of the copper loop network of the incumbents. The complete monopoly of the incumbents in the wireline segment is a result of the fact they rolled out copper local access network over a significant period of time using public money and protected by exclusive rights. The wide reach of their copper network is almost impossible to match by any other private operator. A similar trend is observed world over and copper local loop segment remains uncompetitive in spite of opening it for private participation. Since it is not possible to replicate the local access of the incumbents, many regulators world over have mandated shared access and full local loop unbundling, to promote competition and improve choice for all type of users.

The new local lead/local loop with high capacity optical fibre directly to major users is a specific market which is developing under competitive conditions with new investments. Therefore the local lead unbundling for fibre unlike the copper local lead is not a monopoly segment. World over, regulators do not enforce unbundling of fibre local lead and any infrastructure sharing has been left to commercial negotiations. Any proposal to unbundle fibre loop may adversely impact fibre rollout in the last mile. A copy of the European Commission's directive dated 26.4.2000 on Unbundling of the Local Loop is attached where copper and fibre access have been considered as separate markets and only unbundling of the copper loop was recommended (Copy attached). Therefore, we believe that the Authority should limit mandating the primary access to subscribers through copper local loop. The sharing of passive and active fibre infrastructure should be left to be decided commercially.

In view of the submissions made in the preceding para, following comments are offered on issues raised in the consultation paper:

ISPAI

Q. 1. Need for the operator with Significant Market Power (SMP) to provide 'local lead' for DLC and also to provide leased line resources for closed User Group (CUG) to other NLD operators.

Ans. Yes. It is very much needed. Operators with significant market power as well as other leading NLDOs are killing the potential competitions by refusing or delaying the resources to the other service providers like ISPs. It is becoming difficult for ISPs to apply for leased circuits between ISP node to customer's premises through operators with significant market power.

Very often there is no response neither confirming nor otherwise. Also delayed response is given that circuit is non feasible. It is seen that subsequently customer is solicited and connected by the same operator who had initially conveyed that the circuit is "Not Feasible" . There are instances where existing SMPs orally refuse to interconnect but do not convey in writing. This surely calls for first mandating to provide the connectivity and thereafter monitoring for effective implementation of the same.

Q. 2. To consider DLC as an Interconnection element among different service providers.

Ans. Yes.

HCL Infinet

Q1. Need for the operator with Significant Market Power (SMP) to provide `local lead' for DLC and also to provide leased line resources for closed User Group (CUG) to other NLD operators.

Ans. Yes. It is very much needed. Operators with significant market power as well as other leading NLDOs are killing the potential competitions by refusing or delaying the resources to the other service providers like ISPs. It is becoming difficult for ISPs to have leased circuits between ISP node to customer's premises through operators with significant market power. Very often there is no response from the operators, neither confirming nor otherwise or the delayed response that circuit is non feasible. It is seen that subsequently customer is solicited and connected by the same operator `saying non feasible' connecting the customer. There are instances also where existing SMPs orly refuse to interconnect but do not convey in writing. This surely calls for first mandating to provide the connectivity and monitoring for effective implementation of the same.

Q.2 To consider DLC as an Interconnection element among different service providers.

Ans. Yes.

Tata Teleservices Ltd.

We believe that apart from the high prices of DLCs, non-availability of DLCs in short span of time is one of the major impediments to the growth of internet and broadband services. Although the number of players have increased, `competition' is restricted to the areas where there are multiple service providers. One of the main reason to this is the incumbent behaviour. To spur the growth of the market, provision of domestic leased line services in a timely, non-discriminatory and cost oriented manner can make a positive contribution to the health of overall telecom & IT industry growth.

It is fact that new entrants perceive a significant risk in building out new high capacity networks since the capacity is bought over time and capital recovery is dependent on how quickly utilization levels can be increased. Therefore the choice of service providers to the consumers is limited. Absence of interconnect regulations for leased lines results in end users to rely solely on what is offered by the SMPs.

TTSL appreciate TRAI's initiation for creating competition in DLC segment in the present consultation paper. Our comments on the questions raised in the consultation paper are as

VSNL

Enterprises today have multiple offices spread across cities in India. These offices need connectivity to the central/ regional offices for Voice, Video and Data applications. DLCs are important elements in the telecom market that are used by service providers to provide such connectivity.

With the liberalization of licensing regime for the National Long Distance services, the number of NLDOs is expected to rise significantly resulting in an increased amount of competition as these new operators would roll out their Long Distance networks. This would essentially result in an effective competition in the trunk segment part of the DLC service. However, this competition would initially and largely be on the select routes linking metros and major cities which is already happening . We agree with the observation of the Authority that signs of lack of competition are evident in both ends of the end - to - end DLC i.e. local lead/"within city" circuit. In line with the existing international best regulatory practices, there is an urgent need to consider measures to promote competition in the DLC services by considering the following:

1. Interconnection regulation for different operators pertaining to provisioning of multi-operator, built-up leased circuits.
2. Intervention by Authority in this area by notifying guidelines as well as cost based ceilings for interconnection charges/co-location charges payable by alternative service providers like competing NLD licensees.

Private access service providers have rolled out fixed line infrastructure in select areas of big cities where there is a concentrated demand. However, their network still lacks the capillarity to be ubiquitous even in these cities. In view of limited roll out of fixed line infrastructure by Private Sector operators, the same has become a bottle neck facility for provision of DLC services by all NLDOs. It would, therefore, be appropriate to mandate the incumbent operators to provide local lead to NLD operators as the fixed wireline last mile has essentially become a bottleneck facility.

Sify

We appreciate this much-awaited and forward looking initiative by the Authority of initiating the consultation process for enhancing competition in the DLC market. Being the largest private ISP in the country we have trodden the path from the very beginning and have always looked forward for an enabling environment wherein ISPs can operate in a level playing field.

We appreciate the gradual and cautious approach taken by the Authority in liberalizing the telecom sector. We believe that the instant consultation process has been initiated at an opportune moment when the Indian telecommunication landscape is witnessing an explosive growth phase and careful regulatory intervention is necessary to sustain this

growth. We surely have traveled a long way from a monopolistic market to a competitive one. The degree of competition however, needs to be ascertained separately for separate licensees offering different services.

Looking back, the NTP 99 envisaged opening up the NLD service beyond service area to private operators. After a consultation process by your good office, NLD services were thrown open for private participation with effect from 1st January, 2000. In spite of this forward-looking decision by the licensor, the high entry price for the NLD license (Rs. 100 crores) and a high percentage of revenue share (15%) to be paid as annual license fee, kept it outside the financial purview of most private sector service providers. This resulted in very limited number of private service providers acquiring the license and infrastructure development by private players remained equally disappointing.

The order dated 14th December, 2005, wherein both the one time entry fee and the annual license fee was brought down to Rs 2.5 crores and 6% of AGR respectively, eased the entry barrier significantly and resulted in many new private player joining the NLDO league. In spite of these enabling steps, the competitiveness in the NLD market is still devoid of serious competition and the incumbents hold significant market power both in retail and well as wholesale domestic bandwidth. Even though the number of players has increased, development of infrastructure has not seen a proportionate expansion. The problem has been further accentuated by development of infrastructure only in select routes resulting in virtual monopoly in other routes. Before sharing our views on the specific questions mentioned in the consultation paper, we would like to deliberate few points on the competitiveness of the NLD market.

1. Competition analysis

As indicated in the consultation paper, an end to end leased circuit includes 'local leads' on both the ends along with the inter circle link. Lack of competition in any of these segments affects the end-to-end provision of leased circuits and VPNs. We feel that the lack of availability of local lead is the main limiting factor. As per your performance indicator report for the quarter April to June 2006, there are only eight access providers including the integrated players who can offer local leads.

S.No.	Name of service provider	Presence in no. of circles
1	BSNL	All except 2
2	MTNL	2
3	Bharti Telesonic Limited	16
4	Tata Teleservices (Maharashtra) Limited	2
5	Tata Teleservices Limited	18
6	HFCL Infotel Limited	1
7	Shyam Telelink Limited	1
8	Reliance Infocomm Limited	19

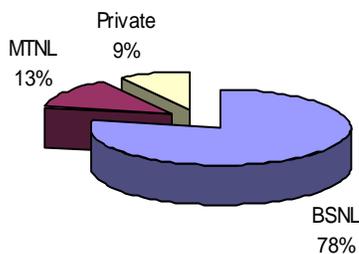
As evident from the above table, none of the service providers except the incumbent can provide copper local leads in all the circles. As you are aware that non facility based service

providers including but not limited to ISPs depend heavily on leased infrastructure from facility based operators, the choice narrows to a large extent and often results in inability to provide end-to-end solutions to end users.

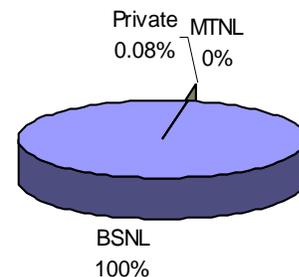
A closer look at the market share of service providers providing DELs (direct exchange lines) will give some indicative idea about the availability of local leads. It is pertinent to mention that though DELs cannot be directly related to the availability of local leads but it will surely indicate the presence of service providers in terms of their infrastructure development, especially in the last mile.

The above figure only reinforces a fact that is

Market share of DELs in Urbun area



Market share of DELs in Urbun area



widely known. Private players have a mere 9% share in the wire-line market while in the rural markets private players have no significant share. We strongly hold the view that adequate infrastructure that is sufficient for provisioning of end to end leased circuits (including local leads) is still not available. There has been some infrastructure roll out in the form of laid down fiber in key routes by private players. The lack of last mile copper infrastructure within cities and also in fringe areas, serves as the major bottle neck for end to end provisioning of leased circuits. The combination of local leads or last mile copper along with inter city fiber links makes a business case. Therefore, even there is some increased competition in the inter-circle links, the benefits of this is not being fully realized due to bottlenecks at both the ends.

AUSPI

Leased circuits are means of providing point to point transmission connection between customers for their exclusive use and are a very useful resource to various entities like new entrant service providers, corporate users, call centers, ISPs and individuals for dedicated voice and data connectivity. Suppliers of leased circuits are access providers, NLDOs and Infrastructure providers (IP-II).

Apart from being capital intensive, deployments of fixed network in cities/ towns face some hurdles, like prohibitive regulatory & other associated costs involved in laying cables and inordinate delay in obtaining right of way permissions from concerned bodies. In view of the above, it is very difficult for the service providers to lay last mile, particularly when it is available with the incumbent operator.

Excepting the routes connecting major cities and towns, DLC infrastructure in last mile for copper wire line of service providers other than incumbent is inadequate to meet the demand and consequently the market lacks competition. The incumbent has dominance in fixed line service having presence in all areas across the country including rural/remote areas and tries to abuse its dominant position.

The local lead through optical fiber directly to major users in a specific market which is developing under competitive environment. Therefore the local lead over fiber unlike the copper local lead is not a monopoly segment. Generally, regulators do not enforce unbundling of fiber local lead and any infrastructure sharing of fiber is left to commercial negotiations. Any proposal to unbundled fiber loop may adversely impact fiber rollout in the last mile.

Even European Commission's determination dated 26.4.2000 on Unbundling of the Local Loop is of similar nature wherein copper and fiber access have been considered as separate markets and only unbundling of the copper loop is recommended. Since it is copper loop which is ubiquitous and available upto consumer premises, we believe that the Authority should limit mandating the primary access to subscribers through copper local loop. Sharing of passive and active fiber infrastructure should be left to be decided commercially.

Comprehensive national competition is the real problem. Regulation is necessary to bring about just pricing in all segments in the country; otherwise the segment having sufficient providers of network would only benefit due to competition.

Shri Hetal Patel (M/s Motilal Oswal Securities Ltd.)

Trai had Recommendation Regarding the Maximum amount for Charges for Bandwidth Cost But Still the Operator are Charging Heavy with Local Lead Charges and Converter Charges .

Following is the Rates plan from Reliance give Access to 256 Kbps Bandwidth from Nasik - Mumbai (180 Kms) It Charges mere 58342 for NLD but when it come to Local Lead

1. They have aksed for Hefty Rs. 67324 for Local Lead .
2. Another Things Shocking about them is they are Compulsory Charging for Converter Rental on Both End Of Rs. 40,000 as they only Provide G703 Connection to Customer Trai must Look to the End Customer as They are Heavily being Looted by Private Operator for Leased Line on Different Charges Structure in Different Head, Rather Fixing the Leased Line Tariff Trai must see what Exactly the customer have to Pay and Not What Operator is Asking .

TRAI should look at following component:

1. National Bandwidth Charges

2. Local Lead Charges (most important)
 3. Converter Rental if operator can provide standard V.35
 4. Installation and Maintenance Charges Recurring
 5. Installation and Maintenance Charges One Time
1. There should be Law that should fix the Local Lead Charges, How that can be Transparent to customer.
 2. Local Lead Charges should be Fixed from 64 to 256 Kbps (Basic 64 Rate Should apply as in any case same modem is used and same pair of cable is used).
 3. Local Leas Charges should be fixed from 512 to 2 MBPS (Basic 512 Rates should be Apply as in any case same E1 or Channelised E1 link and pair of cable is used)
 4. There should be initiative for making multi vendor / multi Operator Leased Line so a end can be connected to BSNL and B End can be at Reliance or tata.

Following is the Reliance Plan (Which I got while Applying for Link) So in Website It says different but when We have to Pay the Actual Amount.

It catapult to 2 to 3 timer of what they say in Website

The break-up is as follows:

Bandwidth	Nashik Local Lead	Mumbai NLD	Converter Local Lead	Rentals	=	Total
64 kbps	10,207	18178	11,185	40,000	=	79,570
128 kbps	18,959	32,134	20,133	40,000	=	1,11,226
256 kbps	32,651	58,342	34,673	40,000	=	1,65,666

One-Time installation Charges - Rs. 10,000

Service Tax extra on all the above.

PowerGrid Corporation of India Ltd.

The basic objective of the Public Utilities such as Power Grid to enter into commercial Telecom business was to augment the existing public Telecom infrastructure while at the same time generating reasonable returns on the Capital deployed by leveraging existing infrastructure which could be ploughed back into the mainstream/core business to create/augment infrastructure in Capital deficient main stream Power Transmission business. To put it succinctly, the objective was to help common telecom consumers across the country by providing alternative service provider at an affordable cost as well to connect to the economically unviable sectors of the society residing in the remote corners of the country, where private players would always be reluctant to enter unless guaranteed returns on capital were assured. Thus the entire business model of IP-II providers needs to be viewed in a distinctively different manner from other private telecom players.

- A. Competitiveness of the DLC Market: the conclusion drawn in Section 3 that “DLC market lacks effective competition and hence regulation needs to be enforced even

further” is based on a research report which is dated Feb’05, i.e. almost 2 years old. However, radical changes/developments have happened in the last two years in the DLC Market. While the network size and operations of all the players have increased substantially, the competition in all the sectors has grown very significantly and is no more limited to metro/major cities. However, the exception still remains for the difficult and remote areas where not only the rollout cost is high but also the Maintenance cost of the network is high due to various problems such as law and order conditions, difficulty of the terrains and remoteness of sites etc. The premium for such areas are not eased. For other sectors, the apparent lack of competition is for reasons of capacity utilization, which we feel for most of the players is not up to acceptable standards.

- B. In this context, further attention is drawn towards Para 4.6, wherein it is stated IP-II operators have large spare bandwidth available which can be sold at a very low price thereby putting the Private Telecoms at a disadvantage. In fact the situation is exactly the other way round. IP – II operators have not built up huge capacities because Telecom business has been considered as an incremental business. Therefore, their costs per unit bandwidth are understandably higher than the Private Operators who have planned for significantly larger networks and who also keep on investing further in the capacities to drive the overall capacity costs further down. In fact the IP-II DLC market is essentially being driven by large private Telcos having much larger Market shares and deeper pockets indulging in price wars and forcing IP-II providers to sell at a prices below the costs. The prices in the IP-II Market have been artificially brought down by the Access providers having national infrastructure through cross subsidizing their Long distance from the profit margins in the retail access segment. This has put the viability of pure play DLC operators at serious risk and such tactics by the access providers need to be effectively controlled by regulation. As an illustration, a case in point is that of Low cost Airlines such viz Air Deccan who have chosen a business model to make flying affordable for the common man. However, bigger players in the aviation sectors have also reduce the price in the sectors of Air Deccan even below Air Deccan prices while pushing up their prices in the sectors where Air Deccan does not operate.

Q.1 What are the factors that limit competition in the DLC market in India?

BSNL

Competition in leased circuit market is not limited as is clear from the circle wise providers of DLC in the circle indicated by TRAI at Annexure A-1 of this consultation paper.

It is lack of will on the part of the private operators to develop infrastructure in all parts of their service areas and investment in wireless technology for this purpose.

Bharti Airtel Ltd.

At the outset, we welcome the initiative taken by Telecom Regulatory Authority of India (the Regulator), to address the issues, which are hindering the growth of the Domestic Leased Circuits (DLC) market in India.

With the intent of bringing effective competition and to offer adequate choice to the customer on fair and reasonable terms, based on Regulator's recommendations, in the year 2001, the DLC segment was opened to private participation when the Licensor issued National Long Distance Licences to private operators.

Although the private operators made substantial investments in building extensive infrastructure, however, in such a short span of time, it is difficult for them to match the massive infrastructure of the Incumbent operators. It is a well known fact that the Incumbent operator has established its network throughout the Country over a period of several decades with the support of Public Money / Government Grants / Subsidies. While, the private operators have been able to bring the effective competition in the areas where they have rolled out their infrastructure, however, the same could not be replicated in all the areas /routes. The said fact has also been admitted by the Regulator in its Consultation Paper.

As stated in the Consultation Paper, since, presently, the Incumbent Operator alone can provide the comprehensive national coverage, the customers / operators need transmission infrastructure in the form of Local Leads / Leased Lines from incumbent operator. The non-availability of Local Leads / Leased Lines from the Incumbent Operator is one of the bottlenecks for promotion of competition in DLC market and thus, the consumer' choice for service providers for end to end connectivity is still limited.

For instance, for setting up of nation wide CUG network for the projects of National Importance the effective support of the Incumbent operator is essential as they have far-reaching coverage in rural and remote areas. If such resources are not provided by the Incumbent operator, the effective competition in the market will not emerge in all the segments and the consumer's choice for service providers for end to end connectivity would always be limited.

Moreover, the Regulator has also admitted to this fact that it is not essential that the new operators create the parallel infrastructure till the existing infrastructure is fully utilized. The

relevant extracts of the Consultation Paper is being re-produced herein:-

1. The Regulator recognizes that there are many segments of the market where it may not be economically feasible, due to technical or financial constraints, for service providers to build all the elements of telecom infrastructure. The Regulator has therefore adopted other appropriate regulatory measures to promote competition, by making service providers and the sharing of bottleneck infrastructure facilities, with other operators, on cost based leasing....
2. As the cost of installing local lead instructions for a new operator can be substantial; it is in the national interest of economic efficiency that the existing infrastructure is fully utilized.
3. Competition in supply of all segments of end-to-end connectivity is vital to deliver retail products at a reasonable price to users.

Thus, it is essential that one operator provides local lead for DLC and also for engineering CUG to other operators. While, there is no restriction from the Government / Regulator on this aspect, however, in absence of mandatory provision, the same has not been translated into the desired extent.

Since, presently, it is not mandated for one Operator to provide the DLC to other operators, it is resulting into (i) insufficient competition in all segments of DLC (ii) limited choice to the end customer for end to end connectivity (iii) Unreasonable terms and conditions in the case of provision of DLC by one Operator to another operator.

Thus, the above factors are resulting into ineffective competition in DLC market.

Asia Pacific Carrier's Coalition

APCC submits that there are a number of key factors which limit competition in the DLC market in India, including:

- a. Prices for DLC elements including local lead segments
- b. Timeframe for delivery of DLC elements including local lead segments
- c. Service level agreements for DLC elements including local lead segments
- d. Licensing regime – restricting end customer access for certain types of licenses
- e. Unreasonable contract requirements – e.g. forecasting

These are discussed in more detail in the various sections.

Reliance Communications

The following factors, if thoroughly addressed, can lead to increased competition in DLC segment:

1. Difficulties associated with Right of Way (ROW) that involves huge cost and time of the operators since it requires coordination with various civic authorities coupled with reinstatement charges etc.
2. Issues of the incumbents, which do not want to share their huge capacity built up for the last mile. In case this capacity is freed up for the use of other service providers, duplication of costly infrastructure will be avoided.
3. The customer is not provided with the flexibility to terminate multiple service provider links on his CUG for higher reliability. This has discouraged the customer to demand links from multiple service providers, which in turn, has resulted in overall decreased demand from customers. Thus, there is diminished interest of the service provider to build the access network.
4. Provision of fiscal incentives in order to encourage service providers to lay copper would help in creation of much needed infrastructure to improve the overall competitiveness of the economy.
5. The above would not only result in increased competition in DLC segment, but also result in much-needed promotion of broadband in the country whereby the efforts of the Government and the operators to provide various e-initiatives (such as e-governance, e-medicine, e-education, e-commerce) to citizens will become more achievable.
6. Due to the availability of limited local leads in India, it is imperative that these be encouraged through the measures indicated above. We request the Authority to address these issues by formulating measures to increase the density of the local loops and in all the towns where the growth of DLCs is anticipated.
7. MW spectrum fees also need to be rationalized in terms of no. of carriers & frequency bands. As per the recent DoT circular dated 3rd November 2006, the MW charges beyond 2 carriers are prohibitive and should be rationalized to encourage service providers to use other wireless technologies besides copper.
8. Since the tele-density of fixed lines is registering a negative growth, thus further reducing the growth of DLC infrastructure, we suggest that various measures to incentivize the growth of fixed lines in the country be formulated. With the increase in fixed line tele-density, there will be a concomitant increase in competition in DLC segment as well.

One of the main barriers to entry for provision of end to end retail leased lines is the structure of the wholesale market. Even though private operators are rolling out local network, they still cannot match the ubiquity of the incumbents' networks and hence are dependent on them to provide an end to end retail leased circuit. The incumbents, in such cases, have the advantage of charging differently to their own and other operator's subscribers. The local lead is provided to competing operators at a retail price but the incumbents transfer charge to themselves at a wholesale price. This is one of the major

hindrances for private operators to effectively compete with their service.

Customers also express concern about multi-vendor circuits. Moreover, they face barriers due to the ubiquity of the incumbents' network that are able to offer shorter lead times in comparison to other operators who may not have existing network in place. Thus, customers may face some barriers in originating services with alternative suppliers.

ISPAI

Lack of competition at the last mile is the major bottleneck which limits competition in the DLC market. ISPAI fully endorsed Authority's observations that despite reduction in the entry barriers to NLD market, competition for end to end services in DLC segment is still not effective. Besides these, following are the other factors which limit the competitions :

- High capex, absence of uniform policy on ROW at state levels are the major deterrent.
- Non-cooperation of Operators with SMP with new NLDOs in sharing each other infrastructure.
- Existing IP II operators are not allowed to access end consumers.

HCL Infinet Ltd.

Lack of competition at the last mile is the major bottleneck which limits competition in the DLC market. HCL INFINET Ltd. fully agreed with the Authority's observations that despite reduction in the entry barriers to NLD market, competition for end to end services in DLC segment is still not effective. Besides these, following are the other factors which limit the competitions:

- High capex, absence of uniform policy on ROW at state levels are the major deterrent.
- Non-cooperation of Operators with SMPs, with new NLDOs, in sharing each other infrastructure.
- Existing IP II operators are not allowed to access to end consumers.

Tata Teleservices Ltd.

In the context of Authority's one of the major initiatives to drive growth of telecom infrastructure in rural areas, TTSL is of the opinion that mainly the following factors are limiting competition in DLC market in India:

1. Absence of interconnect regulations for provisioning of multi-operator leased circuits in a time bound manner from the incumbent and SMPs.
2. Incumbent having huge network infrastructure throughout the country lying idle. Due

- to non availability of local leads in time it is wastage of national resources.
3. Absence of clear regulatory and governmental policy on provisioning of DLCs in rural areas to stimulate ambitious e-governance plans of the Government.
 4. Costs associated in ROW and laying of cables in the city limits particularly in Metros and major towns are prohibitively high and thus, is a barrier for new operators in emerging as 'competitors'.

VSNL

- Non-availability of local leads at both ends of the data circuit.
- Only incumbent owns major share of the intra-city fixed wireline infrastructure and is reluctant to share local loops with private NLDOs for extending DLC service up to customer premises. It may be noted that this infrastructure is adequate to keep up with the growth demands of DLC services.
- The Incumbent is the dominant player/ only player in some of circles and at times this leads to unfair advantage/ monopolistic situation when customer wants multi-nodes connectivity with offices spread multiple cities.

Sify Ltd.

There are several factors that are limiting competition with varying degrees, in the DLC market. The single most crucial factor is sheer lack of availability of infrastructure. As already pointed out, more than 90% local loops are still owned by the incumbents who are the only one with a pan India presence. Some private operators also have presence in almost all the circles, but do not have sufficient wired infrastructure in the last mile. This is forcing non facility based operators like ISPs to look at other options to bridge the last mile gap. Wireless radio technologies are the next most viable option to build the last mile but have its own set of complications. High cost of wireless equipments complimented by a high revenue share payable as annual spectrum fees makes wireless last miles economically unattractive.

We are looking forward for some proactive measures from the Authority for increasing competition in the NLD market. One may argue that competition has increased by way of increased participation by private players after the entry barriers were eased. We must remember that mere presence of an operator does not increase competitiveness unless the new entrant is in a position to offer substitutable service to the same market segment. Though there are about 14 service providers who are in possession of the NLD license, very few of them have physical infrastructure especially in the last mile.

It is worth mentioning that as per the NLD license, NLD licensees are permitted to roll out their own last mile but only for provision of leased/VPN circuits and not for voice services. It becomes financially unviable to recover costs invested in setting up last mile from the revenues accrued from data services only.

AUSPI

AUSPI views the following as some of the factors that limit competition in the DLC market, particularly in the copper local lead segment in India.

- Non-availability of copper access other than incumbent in fixed line service.
- Incumbent abuse of its dominant position over DLC bottle neck.
- New entrants having no significant presence all over the country except major towns/ cities.
- Deployment of network being highly capital intensive apart from time consuming procedure for obtaining RoW permission etc from concerned bodies / agencies.

PowerGrid Corporation of India Ltd.

As brought out earlier, the DLC market has become sufficiently competitive in sectors where most of the operators have rolled out their networks. The prices offered are lower than the sustainable prices as the combined network capacity is higher than the demand as on date. It is only in the remote/far flung areas, where lesser operators are present, the discounts on TRAI caps are not as high as those in other areas. Therefore major factors limiting competition in the DLC Market are :

- High Capex/Longer rollout time required to put in transmission infrastructure of National level resulting in only 5-6 players owing the national level infrastructure. POWERGRID as an IP-II providers is significantly smaller in size compared to other major service providers.
- Unreasonably high Right of Way charges demanded by the Local bodies for permitting to lay OFC Infrastructure. Views have also been expressed that no RoW should be collected by the Local bodies by the charges collected should be towards re-instatement of the surface. Local bodies in metros like Mumbai, Delhi, Pune etc. are charging to the extent of Rs. 20 lakhs per km. This leads to a situation that even for a local lead of 200-300 mtrs, service provider has to spent 2-3 lakhs while TRAI Tariff is only Rs. 17,016/-. Further, it is extremely difficult to get back the security deposits from the local bodies.
- Time delays involved in getting RoW clearances from local bodies despite the payment of demanded RoW Charges.
- Reluctance of the Incumbent/bigger operators to provide the last mile to other operators.

Consumer Care Society

We agree totally with the Paras 1.2 and 1.3 on the factors which are limiting competition in the DLC market in India.

Q.2(a) Should the operator with Significant Market Power (SMP) be mandated to provide local lead for DLC and also for engineering CUGs to other operators when they also have option to create their own Access network?

(b) If so, justify with reasons. If not please give reasons.

BSNL

No. After a period of 10 years of entry of private operators in telecom market, the concept of SMP has no relevance. Secondly, in the case of leased circuits, it may not be proper to assume that the incumbent has Significant Market Power.

As already indicated in this letter, if BSNL is treated as SMP for local leads, in the same sense private operators should be taken as SMP in optical access network, Metro DLC/ Metro Ethernet market as well as for long distance bandwidths in/between lucrative areas.

The fact remains that the private operators have been driven purely by their commercial motives of serving high end customers in lucrative markets and now they want to cover up their own deficiency by riding on the infrastructure of other operator at a regulated cost. Therefore, there is no reason to mandate “unbundling” of local leads for leased circuits.

Bharti Airtel Ltd.

1. In the Consultation Paper, the Regulator has itself admitted to this fact that in case of network industries such as telecommunications, a provider with Significant Market Power (SMP) can easily foreclose potential competitors by refusing / delaying the necessary resources in the absence of establishing interconnection regulations, which is applicable in the DLC market as well.

Moreover, the International Practices indicated in the Consultation Paper, clearly evident that the regulators of the various Countries like France, Singapore, Belgium and EU etc. have mandated the interconnection for data service as well, treating DLC resource as an interconnection element.

In India, the Regulator is also aware that denial or refusal to provide last mile/leased lines by the Incumbent Operator is the main bottleneck, which is obstructing the emergence of true competition in the DLC market between the operators for providing the domestic leased circuits.

2. Presently, NLD operators can set up CUG customers for connectivity and communication within a group of organizations with some common interest. For the purpose of diversity and resiliency, customers prefer to take circuits from multiple operators and interconnect these private networks.

As per the existing Licence conditions, Interconnections of CUG provided by multiple operators is permissible. Our experience indicates that the term “*mutually agreed commercial agreement between the operators*” is a very open from negotiation perspective and therefore, the incumbent operator is reluctant for interconnecting the

CUG provided by them with other operators. As a result, operators find it difficult to provide the nationwide CUG network due to various constraints of resources, which precludes the true competition between operators for providing DLC.

Thus, we strongly recommend that the Incumbent Operator be mandated to provide Local Lead for DLC and also for engineering CUGs, on fair terms and conditions, which need to be defined by the Regulator.

3. Another issue to be addressed is the different technologies involved in the provision of last mile. Wireless options like Point to Point, WiMax, VSAT etc need to be facilitated by licensing / regulatory support like fast processing and permissions, sufficient and easier spectrum availability, lower spectrum costs, etc.

Asia Pacific Carrier's Coalition

APCC would support the principle that an operator determined to have significant market power should be mandated to provide local leads (i.e. access circuits into customer premises) to other carriers, for the provision of end-to-end DLCs. Local lead circuits are recognized as being bottleneck facilities which therefore require appropriate regulatory intervention to ensure fair competition. The determination of significant market power would need to be made following a market analysis of relevant geographic and service markets.

APCC would note that one of the major factors that impedes competition is the limited number of players available who can provision an end-to-end solution. While the TRAI documents in Annexure A1 the number of players active in the sector to be around 14, in reality there would be very few DLC providers who would be in a position to provision end-to-end solutions – in many locations only two. There are a few other operators who have regional strength, but are limited in respect of pan-India CUG coverage. With true country-wide competition limited to around two players the pan-India market remains largely uncompetitive.

In relation to CUG networks, the same mandatory requirements should apply. Under the revised NLD guidelines, NLD operators are given the right to access subscribers directly for the provision of services to CUGs. This is a development which APCC supports. For this proposal to enhance the development of competition in this sector, it is essential that NLD operators can obtain the relevant local lead segments on a transparent and non-discriminatory basis.

It is also important that operators can utilize the inputs of various service providers to provide CUG services to their customers. Historically the use of multiple service providers to provide CUG services has, from a practical perspective, been very difficult in India. This is primarily due to a lack of co-operation between incumbent carriers. As the consultation highlights, leased lines resources are currently mostly provided by the incumbents. In order to change this situation, it is key that these incumbent players are mandated (a) to provide relevant elements of the leased line resources and (b) to facilitate the

interconnection of these resources to elements provided by other carriers.

The mandatory obligation to provide local lead segments for DLC should also include (where relevant) the relevant access segment highlighted in figure 1 of the Consultation.

Even though other new operators have the right to establish their own access networks, at a practical level, building out multiple networks is likely to be too expensive and too time-consuming to provide an effective platform for a new entrant to compete with existing operators. The construction of multiple access network may also, in many circumstances, constitute an inefficient use of new entrant resources and investment in India.

There is significant international precedent supporting these proposals. The APCC is happy to provide to the TRAI additional details of such precedents should the TRAI believe this to be of assistance.

Under the European Union original regulatory framework (in force prior to 2003), the ONP lease Line Directive established the following principles:

- a. Member States shall ensure that lease line supplier publish information in respect of leased line offerings on technical characteristics, tariffs, supply and usage conditions, licensing and declaration requirements, and the conditions for attachment of termination equipment.
- b. Operators with significant market power (SMP) in the leased line market should provide a minimum set of leased lines (established in the Annex attached to the Directive) with defined network termination points.
- c. SMP Operator tariffs for leased lines should follow the basic principles of cost orientation and transparency.

In the existing EU regulatory frame (which primarily applies to markets which have been fully liberalized for a number of years), it is specifically acknowledged that for operators with significant market power, National Regulatory Authority are authorized to impose obligations on those operators in relation to interconnection and/or access including : transparency; non-discrimination; and access to and use of network facilities (including giving third parties access to specified network elements and interconnecting networks).

APCC would also flag that the obligations to provide are equally relevant to any bottleneck facility where there has been a determination of Significant market Power. This could potentially include mandatory access to trunk segments as well as local leads.

Reliance Communications

1. The incumbent operators, with Significant Market Power should be mandated to provide copper local lead for DLC.
2. We would like to reiterate that it is not easily possible for a new entrant to replicate the

ubiquitous copper access network of the incumbents and provide end to end lease circuit. If new entrants decide to build terminating segments, they incur high sunk costs which include costs of digging and ducting from a customer's premise to the POP. Thus, new entrants are deterred from entering the market because they face a significant risk in not being able to recover their fixed costs of entry.

3. The incumbents' economies of scale and scope, which are not available to the new entrants, reinforces their strategic advantage. The economies of scale and scope are, in part, due to the ubiquity of their network and legacy effects derived from their former monopoly status. The time lag for network rollout is another hindrance to the effective competition in the local loop segment.
4. The incumbents are hugely supported through ADC, which is not admissible to other new operators. The ADC support has further raised the entry barrier in the wireline segment. The risk involved for wireline network for the incumbents has been hedged as the Authority is ensuring full cost recovery of their copper access network but on the other hand these benefits are not available to new entrants. Sharing of local lead would provide additional revenue stream for the incumbents and reduce their dependence on ADC. Since the Authority is assuring full cost recovery, there is no evident reason for the incumbents to share their infrastructure.
5. Moreover, due to the incumbents' legacy and Government background, it is much easier for them to gain access to Roads/Highways for permission to lay down cables etc.

ISPAI

- (a) Yes.
- (b) It will help in optimum and effective utilization of resources as well as investments which will result in reducing the cost and ensure good quality of services to the end users. Setting up of Access Network is an expensive and cumbersome proposition and its operation and maintenance is also quite high.

Currently if an ISP takes leased line from a different operator and local loop from different operator, the same is refused by all the NLD operators.

TRAI should mandate all the Operators to provide the requisite resources to different service providers on non-discriminatory basis.

HCL Infinet Ltd.

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- (b) It will help in optimum and effective utilization of resources as well as investments which will result in reducing the cost and ensure good quality of services to the end users. Setting up of Access network is an expensive and cumbersome proposition and its operation and maintenance is also quite high.

Currently if an ISP takes leased line from a different operator and local loop from different operator, the same is refused by all the NLD operators.

TRAI should mandate all the Operators to provide the requisite resources to different service providers on non-discriminatory basis.

Tata Teleservices Ltd.

- (a) The incumbent has a huge legacy network infrastructure therefore timely provisioning of local leads to operators will not only give rise to full capacity utilization but also create healthy environment for the growth of the telecom sector. Further, rural penetration in telecom is the main focus of the Government / Regulator. Incumbent, having huge network in rural /Semi-urban areas, should provide timely provisioning of local leads to new entrants to facilitate faster roll out in rural areas. Similarly SMPs should also be mandated to provide DLCs in time bound manner. DLCs are an essential input in facilitating competition, however non-availability of DLCs in time is one of the major impediment in the growth of telecom sector, keeping this in mind TTSL is of the firm view that the Authority should immediately come out with a regulation under section 11(1)(b)(vi) to lay down a 30 days time period for providing local circuits (DLCs) by the Incumbent / SMPs from the date of receipt of payment. The Authority should also issue necessary regulations regarding terms and conditions governing leasing of local leads. Engineering of CUGs should be left upon the operators at initial stage.
- (b) New entrants find it difficult to compete in some of the segments specially the 'last mile'. The new telecom service providers are, to a large extent, dependent on the DLC infrastructure of SMPs / Incumbent. Deployment of network across the country specially by new telecom service provider is not only huge cost oriented but also will delay in achieving policy targets of the Government in e-governance initiatives and various broadband projects of State Governments. Therefore, an urgent necessity is felt for regulating the timely provisioning of DLCs from SMPs/Incumbent.

VSNL

- a) VSNL is of the view that the operator with Significant Market Power (SMP) should be mandated to provide local leads for DLC.
- b) Creation of local lead infrastructure is capital intensive and has long lead times.
 - I. This will avoid duplication of infrastructure whereas the existing infrastructure is sufficient to meet the growth demands.
 - II. Hurdles / delay in obtaining 'right of way' and other permissions from concerned bodies.
 - III. Laying local lead fixed wireline network only for provision of DLC is not cost effective and commercially viable.

Sify Ltd.

- (a) Yes, the operator with significant market share (SMP) should be mandated to provide local lead for DLC and also for engineering CUGs to other operators even when other operators have the option to have their own access network.
- (b) As mentioned earlier that though NLD licensees have the right to lay their own last mile, many of them are finding it financially unviable as they have to depend on revenue coming out of data services only. Most of the new entrants in the NLD market have migrated to NLD regime to ensure continuity of their VPN services for which a NLD license has been made mandatory. The Authority may be aware that for most ISPs who have now migrated to NLD, VPN forms a major source of revenue. Therefore, even though some of them have acquired the NLD license, immediate roll out of their own last mile is not possible due to financial constraints.

Looking beyond the access network, we can say that there are a whole lot of unused capacities that are lying unlit. As per the table given in Annex A2 of the instant consultation paper, only 1516845 Mbps out of 2484083 Mbps is utilized. Therefore the unutilized capacity amounts to 39% of the total equipped capacity. NLDOs offering leased circuits/VPNs lease bandwidth in bulk from infrastructure based service providers thus helping them utilize spare capacities and also achieve economies of scale to certain extent. The new entrants will be in a position to roll out their own infrastructure as and when the market matures and new entrants become financially strong. Till that time, the operator having SMP may be mandated to provide local lead to other service providers as per pre disclosed and transparent terms and conditions.

AUSPI

- (a) AUSPI is of the view that the operator with Significant Market Power (SMP) be mandated to provide local lead for DLC. As far as engineering of CUGs is concerned, it should be carried out by the operators themselves.
- (b) Due to non-availability of copper wire line network, the local lead can be mandated to be provided by the incumbent.
 - Hurdles / delay in obtaining 'right of way' and other permissions from concerned bodies.
 - Prohibitive regulatory and other associated costs involved in laying cables in many places.
 - As operators other than one with SMP also have the capability of engineering etc, it should be upto operators instead of mandating to SMP.
 - The incumbents are hugely supported through ADC, which is not admissible to other new operators. The ADC support has further raised the entry barrier in the copper wire line segment. The risk involved for wire line network for the incumbents has been hedged as the Authority is ensuring full cost recovery of

their copper access network but on the other hand these benefits are not available to new entrants. Since the Authority is assuring full cost recovery, there is no evident reason for the incumbents to share their infrastructure.

PowerGrid Corporation of India Ltd.

Yes, the Operator with SMP should be bound by regulation to provide the local lead to other service providers. This would help in avoiding duplication of scarce resources in providing the local lead by other operators as well as increase the capacity utilization in the SMP Operators local leads thereby driving down the prices. It would be a win-win situation for the operators / SMP operator as well as the consumer. However, the SMP operators fear that by providing the local lead, they might loose their long distance customers who would thereby get an option to migrate to alternative service providers. However, these fears are unreal and unjustified. Wherever the overall DLC cost come down, the market would expand at a much higher rate to compensate for the revenue loss as well as margin protection as we have witnessed so far in all the telecom sector so far.

Consumer Care Society

- (a) Yes, SMP should be mandated to provide local DLC and also for CUGs. After other operators reach a predetermined and reasonable level of Access Network share the position can be revisited.
- (b) Merely having option to create their own network by other operators does not alter the ground reality. Hence our views on their reaching a reasonable level of access network.

Q.3 Whether it is appropriate to make the prime service provider responsible for the security issues in case of usage of resources from multiple service providers in a CUG Network?

BSNL

1. It will be highly inappropriate to make the prime service provider (in most cases BSNL) responsible for the security issues. It will be double penalty on BSNL along with the penalty of unbundling of local lead.
2. Even if it is assumed that the prime service provider is made responsible for security issues, the final result could be that disputes will arise among the service providers and objective of unbundling will not be met.

Bharti Airtel Ltd.

In the provision of a circuit which has different components from different service providers, there has to be a lead provider who has to ensure not only compliance with the security issues, but also the QoS parameters and assurance of legal usage only. In turn he would require full support from other service providers for which an inter-operator SLA would be necessary. The modalities of this should be clearly defined.

Asia Pacific Carrier's Coalition

The Consultation does not explicitly state the nature of the 'security issues' and 'non-genuine usage of resources' which are being considered. Our understanding that this primarily relates to lawful service use and traffic bypass-i.e. the use of a CUG to bypass the PSTN for national/international voice calls.

We believe that the prime service provider can and should be responsible for these security issues as this issue can be dealt with directly in the relevant customer contracts. Where relevant, the prime service provider can carry out the monitoring required to ensure lawful service use. The incumbent operators should not be able to use security issues as a broad excuse for not providing services to competing operators.

Compliance with legal and regulatory requirements, including security issues and scope of service use, are common issues dealt with in a service provider's contract with their end customer. The wholesale contract between the incumbent provider and the relevant service provider can also address this issue. In effect the relevant contractual provisions can be set out in a back-to-back manner, through relevant provisioning operators, to the final end customer. The prime service provider (i.e. the provider who holds the end customer contract) will then take overall responsibility for the compliance of their customer. This provides all parties with contractual protection in relation to these issues and is the standard manner in which these issues are addressed in many markets.

Reliance Communications

In case resources from multi operators are used in CUG network, then prime service provider, defined as one who owns the customer, should be responsible for security issues.

Local lead Provider cannot address security issues. Also, prime service provider will devise its own back end arrangements with service providers.

ISPAI

Yes

HCL Infinet Ltd.

Yes.

Tata Teleservices Ltd.

We submit that every entity in this country is to abide by prevailing laws. The business contracts between the two entities are generally based on commercial agreements and these agreements fairly covers all aspects of adherence to the prevailing law of the country. In the context of this question, TTSL is of the view that in the present highly dynamic telecom & IT market, the complete responsibility of security issues must be with the CUGs themselves because service providers are merely carriers and have no control on the usage of network resources by CUG customers. The Authority in its direction dated 11.09.2001 also held that apprehension of illegal usage is not a rational ground to deprive benefits / facilities to bona fide users.

VSNL

- In case customer forms his own CUG by procuring links from multiple service provider, it should be the responsibility of individual service providers.
- In case customer gets into an agreement with prime service provider for Managed Services , like VPN's, it should be the responsibility of prime service provider.

Sify Ltd.

We feel any one single service provider should not be made responsible for security issues in case of usage of resources from multiple service providers in a CUG network. We have the technical feasibility to monitor security in the segments provided by us. Hence, it is best to make each service provider who is providing resources in a CUG, responsible to monitor security their own respective segment.

AUSPI

In case resources from multi operators are used in CUG network, then prime service provider, defined as one who owns the customer, should be responsible for security issues. Local lead Provider cannot address security issues. Also, prime service provider will devise its own back end arrangements with service providers.

PowerGrid Corporation of India Ltd.

As we are presently not providing CUG networks to Customers, we do not have first hand experience of the security issues involved in such networks. Therefore, we do not have any comments to offer on the security issues and the responsibility of security in CUG networks.

Consumer Care Society

No, Security is an important issue and cannot be the sole responsibility of the prime service provider. The IDABC Public Key Infrastructure adopted by EC (Para a.03 (iii) seems to be a good way of ensuring security and all the operators involved in provision of DLCs in India must commit to implement this. This could be mandated by the TRAI.

**Q.4 Whether there is a case for considering provision of DLC as an interconnection element to be included in RIO?
If yes, what should be the broad terms and conditions of the interconnection regulation for DLC services? If no, please provide reasons.**

BSNL

No. The unbundling of local loop can not be equated with interconnection. Interconnection amongst the operators is to ensure communication among the subscribers of interconnected operators or through them with any other operator's subscriber.

In the case of unbundling of this type (for CUG), one operator hires capacity from other operator for connecting its subscriber at both end of the circuit. Thus, there is no case for terming this as interconnection.

Bharti Airtel Ltd.

It would be a practical strategy to include DLC provision also as an interconnection element in RIO. Since different operators have to interconnect their networks for provision of voice connectivity, these same facilities can very easily be used for provision of DLC circuits.

This would ensure optimum utilization of resources and lead to lower costs for the customer. In the proposed regulation,

- a) The tariffs should be mandated as it would form the ceiling for basic terms and conditions between different service providers.
- b) the flexibility of volume based negotiation should also be available.
- c) Terms and conditions should also cover minimum QoS guidelines that TRAI prescribes for DLCs.
- d) Finally, it should be mandatory for all service providers to regularly interact with each others to address any bottleneck facilities issues and if no resolution to these is forthcoming, TRAI should intervene to resolve the same

Asia Pacific Carrier's Coalition

We like to submits that TRAI should consider the provisioning of DLCs or elements of an end-to-end DLC, by an operator determined to have significant market power, as either an interconnection element-to be included in the relevant reference interconnection offer (RIO), or similarly, as a mandatory wholesale access service. We proposes that both the trunk segments and the local leads should be regulated pursuant to the RIO or wholesale service tariff.

The approach of including leased circuits, and local access circuits in the relevant Reference interconnection Offer has been followed in the been followed in the European

Union and some other countries, such as Singapore.

In the original European regulatory framework (in force prior to 2003), the European Commission required that any leased line provider has the right and obligation to negotiate with other leased line providers for the interconnection of leased line part circuits in order to provide the customer with a complete end-to-end leased line between their premises. The European Commission noted that self-built infrastructure for “the last mile” may take too long or not be economically viable for alternative operators, and that due to the bottleneck nature of these access networks, competition in this segment is generally weak or non-existent in the early stages of market liberalization.

Under the current EU Framework, a national regulatory authority may require an operator to publish a reference offer, giving a description of the relevant offerings broken down into components according to market needs, together with the associated terms and conditions, including prices.

We have not, in the time available, been able to put together proposed comprehensive terms and conditions for the interconnection regulation of DLC provision. We submit, however, that the terms should include clear, non-discriminatory and transparent terms for the following:

- Ordering and provisioning process and timeframe
- Commitments to delivery-including associated credits for failure to deliver within the committed timeframes.
- Service level agreements for interconnection services
- Published charges for interconnection services.

APCC notes that in Europe, under a recommendation on the provision of leased lines, the European Union recommends that regulators ensure that operators providing leased lines should provide enforceable contracts covering “ all relevant aspects of the wholesale leased line services provided such as ordering, migration, delivery, quality, repair time, reporting and dissuasive financial penalties.”

The same recommendation also recommends that contractual delivery times are as short as possible for each category of wholesale leased line (which should at a minimum be better than the best current timeframe available from the same operator for same retail leased lines) and states that daily financial penalties should apply for delayed delivery of lines.

In Singapore, Sing Tel’s RIO includes an obligation on Sing Tel to provide local lead circuits (referred to as IRS Tail Circuits) to other licensed carriers. The relevant schedule sets out the detailed terms for the provision of these services including: timeframes for ordering and provisioning, service levels and service rebates (for delays in delivery times of failure to meet relevant service levels).

APCC would be willing to discuss the details of the appropriate terms and conditions, including proposed timescales and service levels.

Reliance Communications

Provision of 'Copper Local Lead' for DLC should be considered as an interconnection element to be included in RIO. Due to imbalance in the negotiating power of incumbents and other private operators, it would be better that the terms and condition for provisioning of copper local lead be decided by the TRAI. Prices for the local lead should be cost based. It should be made mandatory that the copper local lead is provided on a non-discriminatory basis at the same rate as that for its own customers.

ISPAI

No comments

HCL Infinet Ltd.

No comments.

Tata Teleservices Ltd.

Provision of DLC as an interconnection element in RIO is a welcome step and brings with it legal binding force to SMPs. TTSL strongly feels that provision of DLC must be the part of the RIO in similar lines as do exist / or amended from time to time for provision of interconnection, in the model RIO appended with the Telecommunication Interconnection (Reference Interconnect Offer) Regulation, 2002 dated 12th July 2002.

VSNL

- Intra-city DLC (local loops) should be included in the RIO which should be mandated to be issued by the incumbents who own major share of fixed wireline services as fixed wireline loop is a bottleneck facility.
- Suggested broad T&Cs for sharing of local loops among service providers:
 - One Time charges and Bandwidth pricing to be not more than the retail price offer by the Service provider directly to its customers.
 - All bandwidth slabs to be offered to other NLDOs (sub E1 rates, E1, E3, DS3, STMx), as those offered directly to own customers.
 - Non – Discrimination
 - Obligation to supply on reasonable request.

Sify Ltd.

We strongly feel that absence of a RIO that could facilitate provision of multi-operator leased circuits enables service providers having SMP to engage in anti-competitive measures like imposing price-squeeze and inducing delays for provision of infrastructure like local leads. Therefore, DLC should be strongly considered as an interconnection element to be included in the Reference Interconnect Offer (RIO)

AUSPI

AUSPI is of the view that there is a case for considering provision of Copper Local Lead for DLC as an interconnection element to be included in RIO.

The broad terms and conditions of the interconnection regulation for DLC Services may be similar to those in the Telecommunication Interconnection (Reference Interconnect Offer) Regulation, 2002 dated 12th July 2002.

PowerGrid Corporation of India Ltd.

At the outset we feel that in the present scenario most of DLC operators are already interconnected by way of taking / leasing capacity on other operator's networks to complete the circuits for their Customers.

However, the interconnection issue raised in the paper does not amply clarify the modus operandi of this "Interconnection". For instance, in the interconnection between various operators for switched voice telephony, Interconnection is to facilitate transfer of calls between two different parties i.e. the caller and the called, from one network to the destination network based on agreed termination / origination / call carriage rates determined in the Interconnection Agreement. In this context, it may also be mentioned that due to recent changes in NLD license conditions, IP-II operators such as POWERGRID and Railtel have begun migrating to NLD. Hence erstwhile IP-II (now NLD) need to interconnect with all incumbent NLD operators to carry NLD voice traffic.

However, in the case of pure play IP-II DLC providers, the utility of such interconnection is not understood clearly. If the intended purpose is to allow an IP-II provider reach the customers of other IP-II operator, then the issue of mandated last mile by the SMP / Incumbent shall address this also. If the Interconnection is meant for enhancing the reach of Individual IP-II providers to provide seamless connectivity throughout to their Customers across networks, the commercial and technical implication on this account shall be too complex and shall vary from route to route / circuit to circuit as different circuits have different costs and different commercial implications. Further to provide the Interconnection at IP-II / DLC level may require substantial investment by DLC providers to provide / upgrade capacity of their networks by procuring new Telecom equipment depending upon the sought level of Interconnection e.g. STM-1/STM-4 etc. Understandably, the level of Interconnection at DLC would not be E-1 or sub E-1 but much higher. Nevertheless even in the present scenario most of DLC operators are already interconnected by way of taking / leasing capacity on other operator's networks to complete the circuits for their Customers.

Consumer Care Society

Yes DLC should be included in the RIO.

Q.5 Suggest any other measures that could be considered for promoting effective competition in DLC market?

BSNL

It has already been indicated in our letter that there is enough competition in the DLC market. The regulator may devise methods to encourage the service providers to develop their own infrastructure. Reviving roll out obligations, which have been recently done away with after seeing the intense competition in the market, can also be considered.

If it is felt that ROW issues are a hurdle in expansion of the network, as already indicated in our letter, a nationwide comprehensive and harmonized ROW policy needs to be evolved and implemented urgently.

Bharti Airtel Ltd.

We would like to request that the early implementation of the above will bring the effective competition in the DLC market, which would be a win-win situation for the end customer. The Regulator may please ensure that the Incumbent Operators provide the DLC / Local leads to other operators, on fair commercial terms and conditions so that the end customer is benefited.

Asia Pacific Carrier's Coalition

DLC Pricing

APCC suggests that TRAI, once again, review the price ceilings for the various DLCs. As TRAI acknowledges in the Consultation, there are significant discounts available from the published ceiling tariffs-in some cases as much as 48% - and from the experience of APCC members, the percentage discount available may, in some cases, be even higher than this.

APCC submits that TRAI should lower the published ceiling rates to reflect the observed market rates. One important element required to encourage fair competition in a market is non-discrimination. This requires non-discrimination relating to both service availability and price. The fact that there are substantial differences between the published ceiling rates and those observed in the market indicates that there could be significant variations in the prices paid by different operators for the same services from a wholesale carrier. The consequence of this is that there is not a level playing-field for operators competing in the market as there is significant dependency on the discounts from the ceiling rates which can be obtained from the relevant operator.

APCC notes that the current price ceiling regulation provides for discounts to be transparent and non-discriminatory. We do not believe that this currently happens in practice. APCC believes that lowering the relevant ceiling rates will provide operators with greater certainty over the prices for DLCs.

TRAI recognizes in its current ceiling tariff order that it is transitioning DLC tariffs towards

cost-oriented levels. APCC encourages TRAI to continue to encourage more cost-oriented rates. These cost-oriented rates should be fixed, published rates, and not ceiling rates.

As TRAI will be aware, across many international markets, wholesale interconnection or access to incumbent networks is priced on a cost-oriented basis. APCC encourages TRAI to work towards ensuring that local lead and access circuits are provided at cost-oriented rates.

Under the current European Union framework, regulators in Europe may impose obligations on operators determined to have significant market power relating to cost recovery and price controls, including obligations for cost orientation of prices for the provision of specific types of interconnection and/or access. This is applicable in situations where a market analysis has indicated a lack of effective competition. APCC notes that, under this framework, the burden of proof that charges are derived from costs (including a reasonable rate of return on investment) lies with the relevant operator.

APCC notes that, under the EU recommendation highlighted in the Consultation, ceiling rates are set out but these only apply as a back-stop rate and that the governing principle for the pricing of leased line part circuits should be the costs of the underlying network elements and the services requested including a reasonable rate of return.

APCC recognizes that it may be difficult for pricing to be set at cost-oriented rates in the short/medium term across India. TRAI may consider using a benchmarking approach, using areas where competition between local access providers has driven prices downwards (towards cost). These prices could be used as an interim benchmark for local access prices across the country.

Restrictions in NLD/ILD licences

APCC welcomes the significant developments in the market with the publication of the new licence conditions. We believe that this is a very positive step towards a truly competitive telecommunications market in India. However, some of the restrictions in the licence conditions, for example relating to remote access, transfer of information and security, remain barriers for Indian markets becoming competitive. APCC has previously written to TRAI in relation to these issues.

Incumbent local access expansion

The availability of DSL access circuits is increasingly being demanded by customers in India. Such circuits are currently only available in limited areas. Competition could be further enhanced by providing some visibility of the proposed expansion plans for this service by the incumbent operators.

Reliance Communications

Besides the measures indicated above, the following measures can also help in promoting effective competition in DLC market:

1. Encourage building of access networks by fiscal incentives.
2. Permissions to commission multiple service provider circuits on Customer premises equipment should be granted without needing the network approval from any service provider including SMP, subject to compliance with security guidelines.
3. TEC wing of DoT is considering a proposal for setting up a Central Authority for fibre rollout. We request the Authority to consider proposing early setting up of this for rollout of fibre in the last mile.

ISPAI

TRAI should check the discriminatory prices being offered by leading NLDOs to ISPs vis- a - vis their own corporate customers.

TRAI should ensure that Operators with SMP must follow “Retail Minus Price” policy to ensure effective competition in the market.

We take this opportunity to request Authority to review the “Telecommunication Tariff (36th Amendments) Order” (3 of 2005) dated May 2005 dated 21 April 2005. It has been more than one and half year when the Authorised revised the ceiling of Domestic Lease Lines. Several DLC service providers are offering 25% - 48% discount on the ceiling fixed by TRAI. TRAI should consider special tariff of DLC for the ISPs connecting to nearest NIXI node so as to encourage them to join NIXI.

In view of the above it is high time to review the tariff for DLC immediately.

HCL Infinet Ltd.

TRAI should check the discriminatory prices being offered by leading NLDOs between ISPs and their own corporate customers.

TRAI should ensure that Operators with SMP must follow “Retail Minus Price” policy to ensure effective competition in the market.

We take this opportunity to request Authority to review the “Telecommunication Tariff (36th Amendments) Order” (3 of 2005) dated May 2005 dated 21 April 2005. It has been more than one and half year when the Authority revised the ceiling of Domestic Lease Lines. Several DLC service providers are offering 25%-48% discount on the ceiling fixed by TRAI. TRAI should consider special tariff of DLC for the ISPs connecting to nearest NIXI node so as to encourage them to join NIXI.

In view of the above it is high time to review the tariff for DLC immediately.

Tata Teleservices Ltd.

TTSL feels that there is an urgent requirement of regulatory intervention for mandating SMPs /Incumbent to provide DLCs in a time bound manner. This will not only spur growth in telecom sector as a whole but also enhance capacity utilization of networks and relax one of the major constraints in improving broadband penetration in India. The competition in DLC segment is not effective mainly because of two reasons viz; (1) new entrants perceive a significant risk in building out new high capacity network since the capacity is bought over time and capital recovery is dependent on how quickly utilization levels can be increased and (2) absence of interconnect regulations for DLCs.

VSNL

- Ease of procuring ROW permissions.
- Opening of RF frequency in the spectrums that are widely used / planned by international equipment manufacturers.
- Reduced clearance timelines for RF spectrum allocation.

Sify Ltd.

As rightly pointed out in the consultation paper, absence of a reference interconnect offer that facilitates obtaining infrastructure from the incumbent is a major bottle neck that needs to be immediately addressed. In addition, we would appreciate clear guidelines and simplification of processes involved in obtaining Right of Way (ROW) which will encourage new entrants to roll out their own infrastructure.

We also believe clear guidelines for sharing of infrastructure will not only encourage better utilization but also incentivize service providers to lay their own infrastructure. Looking one step further, providing fiscal incentives for network hardware and support from the USO fund for development of long distance transmission network to all service providers will catalyze infrastructure development to a large extent especially in rural and fringe areas.

Looking forward

The importance of bandwidth cannot be expressed better than the words of our honorable president, Dr. Abdul Kalam.

“The bandwidth is the demolisher of imbalances and a great leveler in the knowledge society. Making the bandwidth available is like the Government laying the roads. Movement of materials through these roads creates wealth in the industrial economy and the government recovers more than the investment on the roads by way taxes and enhanced prosperity of its people. In the modern digital economy driven by knowledge products, bits and bytes traverse the network and create

wealth and this will recover the cost of investments in the bandwidth. Thus a singular action of making the bandwidth available to all our people will bridge the perceived divide. The free bandwidth will make an economic sense if we cost the services offered using the bandwidth. We have the fiber infrastructure ready up to block level...”

President’s inaugural speech at India Telecom, 2006

As important stakeholders of the information society we have always looked forward for a level playing field for all and proactive forward looking policies enabling sustained growth. We hope our responses will be given due cognizance and the instant consultation process will result in increased competitiveness in the NLD market.

AUSPI

Following measures are suggested to promote competition for DLC:

1. Encourage building of access networks by fiscal incentives.
2. Permissions to commission multiple service provider circuits on Customer premises equipment should be granted without needing the network approval from any service provider including SMP, subject to compliance with security guidelines.
3. TEC wing of DoT is considering a proposal for setting up a Central Authority for fiber rollout. We request the Authority to consider proposing early setting up of this for rollout of fiber in the last mile.

Consumer Care Society

Paragraph A.03 2nd bullet explains the ECs recommends certain aspects relating to price fixation etc. We would recommend consider allowing certain incentives to the SMP to encourage him to provide LCs so that it becomes win win for all.