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No. 15-8/12/CA/PTA

July 31, 2012

CONSULTATION PAPER ON INTERNATIONAL PRIVATE LEASED CIRCUITS (IPLC), IP BANDWIDTH, DOMESTIC PRIVATE LEASED CIRCUITS (DPLC) & LINE SHARING CHARGES OF PTCL

This paper intends to seek opinion of all stakeholders including the ISPs, Local Loop, Long Distance & International, Cellular Mobile and Broadband operators. The stakeholders are requested to send their comments in writing or through email latest by August 22, 2012. This paper does not convey in any sense a decision of the Authority in respect of the issues discussed in this paper. Your responses may be addressed to Mr. Zeeshan Gul (zeeshan@pta.gov.pk), Director (Commercial Affairs), PTA, F-5/1 Islamabad Fax:2878133

Introduction

1. As per Pakistan Telecommunication (Re-organization) Act 1996 (the “Act”), the Pakistan Telecommunication Authority (the “Authority”) is responsible for the regulation of telecom sector of Pakistan. According to Sections 4 (c) and 6 (e) of the Act, the Authority is required to promote and protect the interests of users of telecommunication services as well as to ensure fair competition in the telecommunication sector. Section 4 (d) of the Act requires the Authority to promote the availability of wide range of high quality, efficient, cost effective and competitive telecommunication services throughout Pakistan.

2. Section 26 of the Act which deals with tariffs envisages that the level of tariffs for telecommunication services including basic telephone service shall be regulated by the Authority in accordance with the following general principles:

- a) The regulations shall be made with a view to achieving the greatest possible degree of pricing flexibility and stability compatible with safeguarding and protecting the interest of consumers.

- b) The regulations shall apply equally to comparable providers or users of any regulated telecommunication service.
- c) Tariffs shall be at a level which provides a reasonable rate of return on investments taking into account the cost of operation.

3. As per Rule 17(1) of Pakistan Telecommunication Rules 2000, “an operator shall be presumed to have significant market power (SMP) when it has a share of more than 25% of a particular telecommunication market. The relevant market for these purposes shall be based on sectoral revenues.”

4. Regulation 11 of Fixed-line Tariff Regulations, 2004 states that the tariffs for leased line services of an operator, who is determined to have SMP status in the leased line market by the Authority, shall be on cost. Until the determination of cost, the Authority may take into account the international benchmarks of comparable countries while setting / approving tariffs of leased lines.

5. PTA issued ‘Determination on PTCL’s bandwidth tariffs’ on October 6, 2006 after detailed consultations, deliberations and meetings with the industry including PTCL. At that time the broadband industry contested that the tariff structure of PTCL discouraged them to make investment in Pakistan, as it is cheaper to acquire these facilities from other Asian countries. During consultation, it was observed that the entire scenario had been hampering the broadband proliferation and has affected the growth of IT enabled services in Pakistan that are heavily dependent on bandwidth services. Keeping in view the demands of industry, the Authority rationalized PTCL’s bandwidth tariffs. PTA was of the view that in the absence of cost related information, the bandwidth tariffs of PTCL should be in accordance with the international benchmarks of countries where effective competition exists. By issuing the aforementioned determination, PTA reduced various categories of bandwidth tariffs of PTCL. In case of DPLC tariffs for voice services, the rates were reduced in the range of 20% to 30%. In the category of IPLC tariffs for data services, the charges were reduced in the range of 30% to 57% and in the category of IP bandwidth for voice services, the tariffs were reduced by 31% to 48%.

IPLC Tariffs for Data and Voice Services

6. Following reductions were made in the category of IPLC services:

Fig. in USD per month

Capacity	PTCL's then Prevailing Tariffs *		PTA Approved Tariffs	
	ISPs / DNOPs	LDI Operators	ISPs/ DNOPS	Voice Services
E-1 (2Mbps)	3,000	2,852	2,100	2,300
DS-3 (45Mbps)	48,000	-	16,800	18,400
STM-1 (155Mbps)	112,500	-	48,300	52,900

* Distance-less

** Up to landing station

IP Bandwidth for Data Services

7. In case of IP bandwidth segment, following tariffs were determined for data and voice services:

Fig. in USD per month

Capacity	PTCL's then Prevailing Tariffs	PTA Approved Tariffs
E-1 (2Mbps)	1,600	1,500
DS-3 (45Mbps)	25,000	24,000
STM-1 (155Mbps)	60,000	46,500

IP Bandwidth for Voice Services

Fig. in USD per month

Location	PTCL's then Prevailing Tariffs				PTA Approved Tariffs			
	2 Mbps	8 Mbps	34 Mbps	155 Mbps	2 Mbps	8 Mbps	34 Mbps	155 Mbps
Karachi	2,800	10,080	33,600	106,400	2,400	8,400	24,000	74,400
Lahore	7,500	29,500	91,800	310,100	6,500	22,750	65,000	201,500
Islamabad	8,700	34,350	106,350	361,000	7,700	26,950	77,000	238,700

DPLC Tariffs for Data Services

8. PTCL unilaterally reduced DPLC tariffs for data services during consultation on PTCL bandwidth tariffs in the year 2006. Therefore, the Authority agreed with the reduction made by PTCL for data services and approved following charges of DPLC:

Fig. in PKR. per Km per annum

PTA Approved Tariffs				
Capacity	0-200 km	0-600 km If exceeds 200km	0-1,000 km If exceeds 600km	0->1,000 If exceeds 1,000km
E-1 (2Mbps)	1,750	1,578	1,116	1,050
DS-3 (45Mbps)	33,246	29,982	21,204	19,950
STM-1 (155Mbps)	73,490	66,275	46,872	44,100

DPLC Tariffs for Voice Services

Fig. in PKR per km per annum

Capacity	PTCL's then Prevailing Tariffs				PTA Approved Tariffs			
	0-100 km If exceeds 25 km	0-200 km If exceeds 100 km	0-600 km If exceeds 200 km	0 - > 600 km If exceeds 600 km	0-100 km If exceeds 25 km	0-200 km If exceeds 100 km	0-600 km If exceeds 200 km	0 - > 600 km If exceeds 600 km
E-1 (2Mbps)	4,000	3,318	3,047	2,800	3,200	2,654	2,438	2,240
8 Mbps	13,552	11,613	10,664	9,800	9,486	8,129	7,465	6,860
E-3 (34Mbps)	46,464	39,816	36,564	33,600	32,525	27,871	25,595	23,520
STM-1 (155Mbps)	162,624	139,356	127,974	117,600	113,837	97,549	89,582	82,320

9. Soon after the issuance of PTA's determination, PTCL challenged the said determination in the court of law. However, the honorable Lahore High Court, Rawalpindi Bench, after hearing arguments of both the parties dismissed PTCL's appeal against PTA's determination on bandwidth tariffs on March 28, 2007. However, PTCL had again challenged the said determination in the Supreme Court of Pakistan and the case is pending adjudication in the honorable court.

10. Considerable time has passed since the issuance of said determination and several changes have occurred in the market during this period. Therefore, the Authority is of the view that fresh review of PTCL's bandwidth tariffs be initiated in consultation with the industry.

11. It is also pertinent to highlight that in February 2011, Link Dot Net and Micronet Broadband lodged a complaint against PTCL on anti-competitive activities and cross subsidy in the broadband market and in its complaint it demanded reduction in PTCL's wholesale internet bandwidth prices as well as abolishing of monthly local loop sharing charges of PTCL. In this regard, PTA carried out detailed investigation in order to probe allegations made by Link Dot Net and Micronet against PTCL. PTA vide its determination dated November 18, 2011 directed PTCL to prepare and submit audited separated accounts for retail and wholesale segment of broadband services in addition to the services already covered in Accounting Separation Regulations/Guidelines 2007 by December 31, 2011. However, the said determination was also challenged by PTCL in the court of law and the honorable court suspended PTA's determination vide a stay order passed on December 19, 2011. Nevertheless, the Authority is of the view that review of PTCL's bandwidth and local loop sharing charges can still be done as requested by the complainants.

Market Dynamics in Leased Lines

International Bandwidth

12. As indicated in the preceding paragraphs, new players have emerged in the provision of international bandwidth service besides PTCL. PTCL which is the incumbent operator has submarine cable connectivity through SEA-ME-WE-III, SEA-ME-WE-IV and I-ME-WE. Additionally Transworld Associates (TWA) has established Pakistan's first ever private sector undersea fibre optic cable system (TW-1) which connects Pakistan with rest of the world. Brief description on submarine cables connecting Pakistan are as follows:

SEA-ME-WE-III (SMW 3)

13. SEA-ME-WE III includes 39 landing points in 33 countries and 4 continents from Western Europe (including Germany, England and France) to the Far East (including China, Japan and Singapore) and to Australia. SEA-ME-WE III is the longest system in the world with a total length of 39,000 km. The use of Wavelength Division Multiplexing greatly increases the capacity of the network allowing high quality transmission all the way over distances as far as from England to Australia.

14. The System capacity has been upgraded and today it consists of two fibre pairs each carrying 8 wavelengths. Some wavelengths operate at 10G whilst others at 2.5G. In 2006, 2nd 10G Upgrade was completed which increased SEA-ME-WE III system capacity significantly. In May 2007, SEA-ME-WE III Management Committee announced the completion of another 10G upgrade for 48 wavelengths and subsequently the 5th Notional Capacity Expansion was distributed to all the owners. (Source: <http://www.smw3.com/smw3/SignIn/Background.aspx>)

SEA-ME-WE-IV (SMW 4)

15. A consortium of 16 international telecommunications companies signed construction and maintenance agreements for the new optical fibre submarine cable system linking South East Asia to Europe via the Indian Sub-Continent and Middle East with Terminal Stations in Singapore, Malaysia, Thailand, Bangladesh, India, Sri Lanka, Pakistan, United Arab Emirates, Saudi Arabia, Egypt, Italy, Tunisia, Algeria and France. The contract was awarded jointly to Alcatel Submarine Networks, France and Fujitsu Ltd., Japan.

16. The total length of the SEA-ME-WE-IV submarine cable system span approximately 20,000 km which consists of the main backbone across the Eastern and Western worlds plus the extension links in various countries. The system is amongst the most economical cable systems in the region and has been built with state-of-the-art Terabit DWDM technology to achieve ultra fast terabit per second connectivity. The project supports telephone, internet, multimedia and various broadband data applications. (Source: http://www.seamewe4.com/inpages/about_sea_me_we_4.asp)

I-ME-WE (IMW)

17. IMEWE (India-Middle East-Western Europe) submarine cable is an ultra high capacity fiber optic submarine cable system which links India & Europe via Middle East. This 3 fiber pair system with total length of approximately 12,091km is well complemented with 09 terminal stations forming a consortium of 09 leading telecom carriers from 08 countries. (Source: <http://imewecable.com/hpreadmore.jsp>)

TW1

18. Transworld is a joint venture of Orascom Telecom Holding, Saif Group and Omzest Group of Oman. TW1 is a 1,300km submarine cable system and has capacities on other regional

cables both on eastern and western sides for route diversity and resilience. TWA has peering in Middle East, Europe, US and Far East with Tier-1 operators to provide latency connections for Internet and data traffic.

Domestic Bandwidth

19. During the past six years, several Long Distance & International (LDI) operators have laid optical fibre connectivity throughout Pakistan connecting most of the cities and towns. Besides these operators, Universal Service Fund Company (USFCo) has also awarded projects to different operators and it intends to lay 8,313 kms of optic fiber cable in total. The following table summarizes the domestic optical fibre network in the country:

Sr. No.	Operators	Fibre Optic Backhaul
1.	PTCL	5,500 km
2.	Wateen	5,500 km
3.	Link Direct	5,000 km
4.	Multinet	4,500 km

Benchmarking of Bandwidth Tariffs with Regional Countries

20. Following countries have been selected for benchmarking purposes owing to similarity in market dynamics, demographic and geographic structure:

- India
- Bangladesh
- Srilanka

India

21. In the year 1999, Indian telecom market was opened up for private participation. As of 2003/04, there were only two state owned operators Bharat Sanchar Nigam Limited (BSNL) and Mahanagar Telephone Nigam Limited (MTNL) which were providing domestic leased line services all across India. In 2004, new operators such as Bharti Telenet, Reliance, TATA, HFCL and VSNL (now TATA Communication) emerged in the market and were offering domestic

leased line services in addition to BSNL and MTNL. Other state owned institutions such as Railtel, GAIL and Power Grid Corporation are also active players in the domestic leased line market. In 2004, TRAI determined maximum tariff ceilings for domestic leased line services. In case of international private leased circuits (IPLC), Bharti, Reliance Infocomm, Tata Communication and Data Access are providing IPLC services. International players such AT&T, MCI, Sprint and British Telecom are also offering IP bandwidth services but they are not directly offering IPLC services.

Bangladesh

22. The Government of Bangladesh issued 'International Long Distance Telecommunications Services (ILDTS)' policy in May 2010 wherein it liberalized its international voice and data segment. As per the new policy, Bangladesh Telecommunication Regulatory Commission (BTRC) has issued six licenses to different operators for provisioning of International Terrestrial Cable (ITC) systems. Additionally, it has also issued two (02) licenses for international internet gateway (IIG) services and four (04) licenses for international gateway (IGW) services. It may be noted that IIG operators are allowed to exchange data traffic whereas IGW operators are allowed to provide international voice call services including VoIP termination and origination. In case of domestic leased circuits, BTRC has issued two licenses in addition to incumbent operator Bangladesh Telecommunications Company Limited (BTCL).

Srilanka

23. The domestic telecommunication market (fixed-line and mobile) in Srilanka was liberalized in mid-90's whereas international long distance telephony was deregulated in the year 2003. As of March 2012, there are four (04) operators offering wireless and wired services in fixed-line segment. In case of cellular mobile service, there are five (05) operators whereas there are thirty-three (33) operators offering international long distance telephony services. Srilanka Telecom and Lank Bell are providing international fibre-optic connectivity to Srilanka. In case of domestic leased lines, Srilanka Telecom is the only operator which has presence all across Srilanka.

24. A brief comparison of Teledensity, GDP per Capital and Population Density of the above-selected countries is presented in the tabular format:

Countries	Teledensity as of May 2012 (%)	GDP per Capita* (USD) 2012	Population Density**
Pakistan	72	1,304	225
India	79	1,454	368
Bangladesh	55	700	964
Srilanka	109	3,138	315

(Teledensity - Regulator's websites, *IMF Estimates, **Wikipedia)

Comparison of IPLC Bandwidth Tariff with Regional Countries

PTCL's Tariffs

25. PTCL is offering IPLC services to ISPs, broadband and other operators. Tariffs charged by PTCL are presented below:

Fig. in USD per month

Capacity	PTCL Tariffs *	
	Data Services	Voice Services*
E-1 (2Mbps)	3,000	2,852
DS-3 (45Mbps)	45,000	-
STM-1 (155Mbps)	93,000	-

*excluding landing station and national backhaul charges.

26. It is pertinent to highlight that no significant decline in tariffs of IPLC has been observed despite passage of six years and emergence of new operator such as TWA. In July 2006, PTCL was charging USD48,000 and USD115,500 for DS3 and STM1 capacities respectively, however, these charges have been only reduced by 6% and 19% respectively. In case of voice tariffs, PTCL is still charging USD2,852 from LDI operators.

India

27. As indicated in the preceding paragraphs, there are many operators offering IPLC services in India. However, bandwidth tariffs are not publicly available. In case of India, two operators Reliance and Tata have displayed their retail tariffs on their websites and their tariffs have been selected for comparison purposes.

28. IPLC tariffs charged by Reliance and Tata are shown in the following table:

Fig. in USD per month

Capacities	Reliance	TATA		
		SMW3/SMW4/ FLAG/SAFE	CHENNAI TO SINGAPORE	CHENNAI TO US (WEST COAST)
E-1 (2Mbps)	1,943	1,599	976	1,072
DS-3 (45Mbps)	15,546	11,958	10,016	10,631
STM-1 (155Mbps)	44,694	32,885	28,058	29,232
Price Multiples	1:08:23	1:05:21	1:10:29	1:10:27

29. Reliance Communication is providing IPLC services to operators for the capacity connected between Reliance ILD PoP in Navi Mumbai to the designated PoP located in the foreign country. In case Reliance provides IPLC from a place other than Navi Mumbai, the charges for inter-city and intra-city capacity up to Reliance ILD PoP in Navi Mumbai will be in addition to IPLC tariffs. Tata Communication is charging different tariffs depending upon the destination. In case of SMW3/SMW4/FLAG/SAFE, Tata Communication is offering competitive tariffs in comparison to Reliance. It is also pertinent to highlight that both the operators have indicated that discounts on the above listed prices are also available on the basis of number of circuits, bandwidth in Mbps and commitment period.

Bangladesh

30. In Bangladesh, two operators BTCL and Bangladesh Submarine Cable Company Limited (BSCCL) are providing IPLC services. BSCCL is the root service provider of submarine cable bandwidth and handles country's submarine cable link from its Cox's Bazar Landing Station. In January 2012, another operator Summit Communications Limited (SCL) has commenced its services. According to SCL's website, the operator has planned to lay fiber optic network cross boarder and connect with fiber optic network in India, allowing connectivity with the submarine cable in Chennai and Mumbai. IPLC tariffs charged by BTCL are not available, however, BSCCL is charging following monthly recurring charges for different categories and capacities:

	Fig. in USD per month		
	Category-I (Singapore, Malaysia, Thailand, India, S.lanka)	Category-II (Pak., UAE, KSA, Egypt)	Category-III (Italy, France, Tunisia, Algeria)
E-1 (2Mbps)	1,000	1,200	1,400
DS-3 (45Mbps)	7,000	8,400	9,800
STM-1 (155Mbps)	10,000	12,000	14,000
Price Multiples	1:07:10	1:07:10	1:07:10

31. Bangladesh Submarine Cable Company Limited (BSCCL) has included both wet segment charge and backhaul charge in the existing IPLC connectivity price and is offering very competitive tariffs of IPLC for internet access. Moreover, BSCCL is offering long term discounts ranging from 10% to 15% as well as substantial discounts i.e. 60% on tariffs to IIG operators, software exporters/BPO/call centers/IT Enable service providers.

32. It may be noted that the above prices/tariffs are exclusive of above-mentioned discounts. In case, we consider discounts then the effective prices turn out to be far more competitive. Moreover, these prices have been determined by Bangladesh's telecom regulator BTRC and they have also determined price multiples of different capacities as follows:

Bandwidth	E1	34Mbps	DS3	STM1	STM4
Price Multiples	1	6	7	10	32

Srilanka

33. Two operators namely Srilanka Telecom and Lanka Bell are offering IPLC services to different operators in Srilanka. Lanka Bell has not displayed IPLC tariffs on its website, however, IPLC tariffs charged by Srilanka Telecom for different destinations and capacities are presented in the following table:

Fig. in USD per month

Capacity	Category- I	Category - II	Category - III	Categor y- IV	Categor y- V	Categor y - VI	Category - VII	Category - VIII
E-1 (2Mbps)	1,000	1,700	2,100	3,100	3,400	2,800	3,400	3,700
DS-3 (45Mbps)	3,500	5,800	7,500	10,800	11,800	9,800	11,800	12,900
STM-1 (155Mbps)	10,500	17,500	22,500	32,500	35,500	29,500	35,500	38,500
Price Multiples	1:04:11	1:03:10	1:04:11	1:03:10	1:03:10	1:04:11	1:03:10	1:03:10

(Category- I: India), (Category- II: Pakistan & Bangladesh), (Category – III: Thailand, Singapore, Malaysia, Indonesia, Myanmar), (Category- IV: Hong Kong, Brunei, Philippines, China, Taiwan, Macau, Vietnam), (Category- V: Japan, Korea, Australia), (Category – VI: UAE & Oman), (Category – VII: Djibouti, KSA, Egypt, Cyprus), (Category – VIII: Turkey, Greece, Tunisia, Italy, France, Morocco, Portugal, UK, Belgium, Germany)

34. From the above, it is evident that Srilanka Telecom is charging price multiples in the range of 1:03:10 to 1:04:11 for different destinations. In order to compare the above-mentioned tariffs with Pakistan, an average of tariffs of all the categories of IPLC service have been considered.

Comparison with Pakistan

35. A comparison with regional countries has also been carried out in order to compare level of PTCL's IPLC bandwidth tariffs. The following table shows comparison of IPLC tariffs:

Fig. in USD per month

Capacity	Pakistan		India		Bangladesh	Srilanka (Avg.)
	PTCL*	TATA	Reliance	BSCCL*	Srilanka Tel.	
E-1 (2Mbps)	3,000/ 2,852	1,599	1,943	1,200	2,650	
DS-3 (45Mbps)	45,000	11,958	15,546	8,400	9,238	
STM-1 (155Mbps)	93,000	32,885	44,694	12,000	27,750	
Price Multiples	1:15:31	1:05:21	1:08:23	1:07:10	1:03:10	

*including domestic media charges

36. In order to make more realistic comparison of PTCL's IPLC tariffs with India and Srilanka, domestic media charges of 200Km have been included in the IPLC tariffs. It is pertinent to highlight that BSCCL offer IPLC services inclusive of domestic media charges. The same is presented in the following table:

Fig. in USD per month

IPLC Tariffs inclusive of Domestic Media Charges (200Km)					
Capacity	Pakistan	India		Bangladesh	Srilanka (Avg.)
	PTCL	TATA	Reliance	BSCCL	Srilanka Telecom
E-1 (2Mbps)	3,000 / 2,852	2,113	2,457	1,200	3,075
DS-3 (45Mbps)	45,000	15,733	19,321	8,400	16,044
STM-1 (155Mbps)	93,000	43,008	54,817	12,000	47,418
Price Multiples	1:15:31	1:07:20	1:08:22	1:07:10	1:05:15

37. As evident from the table, Pakistan’s IPLC tariffs are on a higher side in comparison to its regional counterparts. PTA vide its Determination dated October 6, 2006 had presented analysis of global price multiples of competitive countries taken from Telegeography which revealed that price differential of E1 to DS3 should be in the range of 4 to 7 times and in case of E1 to STM1, it should be 8 to 17 times. The price multiples of India, Bangladesh and Srilanka appear to be in line with the global trends but in case of Pakistan PTCL’s tariffs are quite higher than the global standards.

Authority’s viewpoint

38. The Authority is of the view that PTCL’s IPLC tariffs are on a higher side as compared to neighboring countries. Moreover, no reductions have been made by PTCL for quite a long time. The operators in India, Srilanka and Bangladesh are offering very competitive tariffs. In case, efficiency factor is considered then there is a considerable margin available for reduction which could be passed on to the other operators.

Q1. In your opinion whether PTCL’s IPLC tariffs should be reduced keeping in view data vs. voice benchmarks? If yes, then how much tariffs should be reduced (%)? Give your viewpoint with plausible justification.

Comparison of IP Bandwidth Tariffs with Regional Countries

PTCL’s IP Bandwidth Tariffs for Voice Services

39. PTCL is offering following IP Bandwidth tariffs for voice services to different operators, based on different destinations:

Fig. in USD per month

Capacity	Voice Services		
	Karachi	Lahore	Islamabad
E-1 (2Mbps)	2,800	7,500	8,700
DS-3 (45Mbps)	42,000	112,500	130,500
STM-1 (155Mbps)	86,800	232,500	269,700
Price Multiples	1:15:31	1:15:31	1:15:31

40. PTCL has not changed IP bandwidth tariffs for voice services for the category of 2Mbps capacity since 2005/06. However, there has been slight reduction in tariffs for the category of 155Mbps. In 2006, for Karachi, PTCL was charging price differential of 1:38 for E1 to STM1 and 1:41 for destination of Lahore and Islamabad. However, there has been slight decrease in these price multiples and PTCL is now charging 1:15:31 for all the destinations under review.

PTCL's IP Bandwidth Tariffs for Data Services

41. PTCL is offering IP bandwidth services to ISPs, broadband operators and call centers. The tariffs for IP bandwidth services offered by PTCL are summarized below:

Fig. in USD per month

Capacity	Data Services	
	At Karachi	Other Than Karachi
E-1 (2Mbps)	1,000	1,200
DS-3 (45Mbps)	15,000	18,000
STM-1 (155Mbps)	30,000	36,000
Price Multiples	1:15:30	1:15:30

42. Since the issuance of PTA's determination dated October 6, 2006, PTCL has significantly reduced IP bandwidth tariffs for data services. The reduction in prices of IP bandwidth depicts that market forces have played its role and have forced operators such as PTCL to reduce prices and offer discounts to other operators. Another important factor which can be attributed to the reduction in IP bandwidth prices is the fact that PTA vide DSL Interconnection Agreement signed between PTCL and DSL operators allowed broadband operators to acquire IP bandwidth from any third party. This step has also compelled PTCL to offer competitive tariffs for IP

bandwidth services. Moreover, significant discounts on STM1 have also been offered to DSL operators by PTCL which range from 18% to 25% respectively under the agreement.

Bangladesh

43. In Bangladesh, BTRC has fixed maximum ceiling of IP Bandwidth tariff for leased internet access at Taka10,000/- per month per Mbps. Resultantly, following monthly tariffs for different capacities are calculated on the basis of this ceiling:

	In Taka	Monthly Charges In USD
E-1 (2Mbps)	20,000	244
DS-3 (45Mbps)	450,000	5,490
STM-1 (155Mbps)	1,550,000	18,912
Price Multiples	1:23:78	1:23:78

Comparison with Pakistan

Capacity	Fig. in USD per month					
	Pak. Voice Tariffs			Pakistan Data Tariffs		Bangladesh
	Karachi	Lahore	Islamabad	At Karachi	Other Than Karachi	
E-1 (2Mbps)	2,800	7,500	8,700	1,000	1,200	244
DS-3 (45Mbps)	42,000	112,500	130,500	15,000	18,000	5,490
STM-1 (155Mbps)	86,800	232,500	269,700	30,000	36,000	18,912
Price Multiples	1:15:31	1:15:31	1:15:31	1:15:30	1:15:30	1:23:78

44. As evident from the above table, IP bandwidth tariffs for data services offered by Bangladesh are very competitive in comparison to Pakistan. In case of Pakistan, PTCL is charging USD 15,000 to USD 18,000 per month for data services for the capacity of 45Mbps whereas BSCCL is levying only USD 5,490 per month. Similarly, for the category of 155Mbps, PTCL tariffs are two times higher in comparison to Bangladesh.

Authority's viewpoint

45. The Authority has also obtained IP bandwidth tariffs of other private service providers of Pakistan which shows that their tariffs are as low as 31% for the category of STM-1 in

comparison to PTCL. The Authority is of the opinion that new operators have managed to efficiently utilize their resources in deploying IP bandwidth services which have enabled them to offer lower tariffs. The Authority is of the view that higher tariffs charged by PTCL for IP bandwidth services can also be result of inherent inefficiencies, therefore, the level of tariff offered by PTCL should be reduced for higher bandwidth categories in order to pass on the benefit of reduction to other service providers.

46. Moreover, another important factor which needs consideration is the huge differential between the charges offered by PTCL for data and voice services. The Authority vide its determination dated October 6, 2006 had allowed PTCL to reduce tariffs subject to prior approval of the Authority and with the condition that such tariffs shall apply equally and non-discriminatory to all operators. However, PTCL has not taken any step so far which can demonstrate that PTCL is willing to reduce the disparity which exists between voice and data services. It is worth-highlighting that other local operators are not segregating IP Bandwidth tariffs between voice and data services in terms of tariffs. Also, in many developing as well as in advanced countries there is no segregation of IP bandwidth tariffs on the basis of voice and data service. The Authority is of the view that the disparity which exists between IP voice and IP data services should be reduced in a phased manner and then completely eliminated.

Q2. What is your opinion regarding level of IP bandwidths tariffs charged by PTCL?

Q3. Do you think that the disparity which exists between IP voice and IP data services should be abolished gradually or in one stage? Give your responses with justifications.

Comparison of DPLC Tariffs with Other Regional Countries:

PTCL's DPLC Tariffs

47. PTCL has also segmented its DPLC tariffs on the basis of voice and data services. PTCL's tariffs for data as well as voice services are presented in the following tables:

DPLC Tariffs for Data Services		PKR per KM per Annum		
Capacity	0-200km	0-600km if exceeds 200km	0-1000km if exceeds 600km	0->1000km if exceeds 1000km
E-1 (2Mbps)	1,750	1,578	1,116	1,050
DS-3 (45Mbps)	26,250	23,670	16,740	15,750
STM-1 (155Mbps)	54,250	48,918	34,596	32,550

DPLC Tariffs for Voice Services		PKR per KM per Annum		
Capacity	0-100km	0-200km	0-600km	0>600km
E-1 (2Mbps)	4,000	3,318	3,047	2,800
DS-3 (45Mbps)	-	-	-	-
STM-1 (155Mbps)	162,624	139,356	127,974	117,600

48. Since 2006, PTCL has not made any reduction on the lower capacity such as E1, however, tariffs of DS3 and STM1 capacities have been reduced by 21% and 26% respectively in comparison to its last reduction in 2006. The reduction in DPLC for data services can be attributed to emergence of several new players who are also offering DPLC services to different operators. However, there has not been any significant reduction in DPLC tariffs for voice services by PTCL.

49. Another important issue which has been highlighted by the industry is charging of abnormally higher tariffs on spur routes by PTCL. The operators have submitted their concerns that PTCL is exploiting the situation since the operators do not have any other choice but to avail the said facility from PTCL due to absence of competition on few routes. It has also been observed that although PTCL may be giving bulk discounts on DPLC services to operators where other operators are present but in case of spur routes the situation is being manipulated by PTCL.

India

50. In India, private operators as well as state-owned operators are offering domestic leased line services in addition to BSNL & MTNL. In India, no segregation between voice and data services has been made in terms of differential tariffs. Moreover, MTNL as well as BSNL (state owned operators) are offering uniform tariffs all across India which are applicable to all classes of subscribers without any distinction between voice and data services. DPLC tariffs offered by them are presented in the following table:

Fig. in USD per month

Capacity	200Km	600Km	1000Km	1500Km
E-1 (2Mbps)	514	1,520	2,537	3,807
DS-3 (45Mbps)	3,775	11,046	18,411	27,617
STM-1 (155Mbps)	10,123	29,624	49,379	74,073

51. While comparing DPLC tariffs of India, it is important to highlight that these tariffs are listed prices and no discount factor has been taken.

Bangladesh

52. As indicated earlier, BTRC has awarded two additional NTTN (Nationwide Telecommunication Transmission Network) licenses to Fiber@Home and Summit Communications Ltd (SCL) besides BTCL. BTRC has decided to separate transmission network from access network services in order to reduce duplication of investment in telecommunication infrastructure. This, in the opinion of the regulator, will enhance faster and wider expansion of infrastructure allowing services to come to an affordable level. Keeping this vision in mind, the above licenses have been issued by BTRC. In terms of deployment of infrastructure, Fiber@Home has so far laid 1,200 km transmission network across the country covering 23 districts and 90 sub-districts (upazilas) whereas SCL has built 680 km fibre optic network in major metro cities (Dhaka, Chittagong and Sylhet) and Dhaka to Chittagong connectivity. Both the operators are providing transmission network services to all major Internet service providers, mobile operators, Wi-max operators and cable TV operators and government agencies. Both the operators have not displayed their tariffs, however, tariffs offered by BTCL are listed below:

Fig. in USD per month

Capacity	BTCL Tariffs			
	200Km	600Km	1000Km	1500Km
E-1 (2Mbps)	400	1,447	2,411	3,616
DS-3 (45Mbps)	3,782	13,670	22,783	34,175
STM-1 (155Mbps)	4,286	15,493	25,821	38,732

53. Bangladesh has laid down smaller distance slabs and their maximum distance slab is 301km and above. Other distance slabs are in the range of 26-50km, 51-100km, 101-200km and 201-300km respectively. BTRC has mandated its incumbent operator to give 60% discount to call centers, ISPs, public education institutions and 65% discount to IIG and National Interconnect Exchange (NIX) operators.

Srilanka

54. In Srilanka, Srilanka Telecom is the only operator which is providing DPLC services. Since Srilanka is a relatively smaller country, therefore, the incumbent operator has also specified shorter distance slabs in comparison to India and Pakistan.

Fig. in USD per month

Capacity	99Km	150Km	200Km
E-1 (2Mbps)	213	318	425
DS-3 (45Mbps)	3,403	5,092	6,806
STM-1 (155Mbps)	9,784	14,639	19,568

55. It is pertinent to highlight that the total area of Srilanka is very small in comparison to India and Pakistan. Based on this, Srilanka Telecom has specified very small distance slabs and range of distance of its maximum slab is 166 km to 233 km. Due to small size of Srilanka, DPLC tariffs of Srilanka Telecom have not been considered for comparison purposes.

Comparison with Pakistan

56. In order to compare level of DPLC tariffs charged by PTCL, a comparison has been carried out with neighboring countries such as India and Bangladesh. The same is tabulated as under:

Fig. in USD per month

Capacity	Country	200 Km	600 Km	1000 Km	1500 Km
E-1 (2Mbps)	India	514	1,520	2,537	3,807
	Bangladesh	400	1,447	2,411	3,616
	PTCL Data	307	831	979	1,382
	PTCL Voice	702	1,746	2,673	3,684
DS-3 (45Mbps)	India	3,775	11,046	18,411	27,617
	Bangladesh	3,782	13,670	22,783	34,175
	PTCL Data	4,605	12,458	14,684	20,724
	PTCL Voice	Not Offered	Not Offered	Not Offered	Not Offered
STM-1 (155Mbps)	India	10,123	29,624	49,379	74,073
	Bangladesh	4,286	15,493	25,821	38,732
	PTCL Data	9,518	25,746	30,347	42,829
	PTCL Voice	28,531	73,345	112,258	154,737

57. For 2Mbps category, PTCL's DPLC tariffs for data services are the most competitive in comparison to India and Bangladesh whereas voice tariffs of PTCL for this category are higher than the countries under review for distances up to 1,000 km. In case of other categories i.e. 45Mbps and 155Mbps, PTCL data tariffs are comparable with the countries under study whereas PTCL's voice tariffs for the category of 155Mbps are the highest when compared with India and Bangladesh.

Authority's viewpoint:

58. The Authority after seeking data on DPLC tariffs for voice and data services from other LDI operators is of the view that the operators are offering comparatively lower tariffs as compared to PTCL. Although other operators have also differentiated DPLC tariffs for voice and data services but the differential is on a lower side. On the other hand, PTCL's differential between data and voice service is in the range of two to three times. The Authority is of the opinion that DPLC tariffs for voice services offered by PTCL can be further lowered in order to pass on the benefit of reduction to other operators. Moreover, lowering of DPLC tariffs for voice services can lead to minimizing the huge gap that exists between voice and data services.

59. The Authority has noted that PTCL has not shared its tariffs for spur routes in its submission. The Authority has also noted that no legal provision exists whereby PTCL can differentiate between normal voice / data tariffs and spur route charges being offered to operators without approval of the Authority. The Authority is of the view that any price differentiation by PTCL has to be submitted to the Authority, with full justification, for approval.

Q4. Do you think that DPLC tariffs for voice services should be reduced? If yes, kindly provide your viewpoint with complete justification.

Q5. What is your opinion regarding higher tariffs charged by PTCL on spur routes?

Line Sharing Charges of PTCL

60. PTCL is charging line rent from DSL operators in addition to the line rent from its own retail PSTN customers. DSL operators have been arguing for very long time that the charging of DSL line rent from the operators results in double charging for the same service. It may also be noted that PTA issued a consultation paper on 'Broadband Proliferation in Pakistan' in March 2006 which included PTCL line sharing charges or DSL line rent amongst other issues. The DSL operators during the consultation argued that DSL line should be reduced to a reasonable level in order to ensure level playing field with PTCL's own DSL services. During the consultation process, PTCL reduced line sharing charges from PKR 217 per month to PKR 150 per month. The reduction in line sharing / local loop charges was approved by the Authority vide PTA Determination dated August 3, 2007.

Comparison with Other Countries

61. PTA has also studied international practices regarding line sharing charges in order to assess appropriateness of the level of PTCL's charges. In Germany, the Federal Network Agency (FNA) in June 2010 has approved monthly line sharing charge of Euro 1.84 for access to the high bit rate portion of the loop. The said rate will be applicable till June 30, 2012. FNA has also listed charges of line sharing applicable in other countries which ranges from Euro0.4620 (Belgium) to Euro3.3587 (Finland).

62. In the UK, Ofcom in March 2012 has reduced line sharing charges from UKP14.70 per year to UKP11.92 per year for the financial year 2012/13. Ofcom has also indicated that the said charge will reduce further in the next year in accordance with Price-Control Formula RPI-15.9%.

63. In Singapore, the Infocomm Development Authority (IDA), the regulator, did not allow the incumbent operator to recover line sharing charges as in their opinion it will construe to double recovering of costs for the incumbent.

Authority's viewpoint:

64. The Authority is of the opinion that considerable time has passed since the last revision in line sharing / local loop charge therefore it is high time that the said charge should be reviewed. The Authority has noted that all around Europe, line sharing / local loop charges have been gradually reduced in order to promote broadband in their respective regions. It may be noted that monthly retail line rents charged by the incumbent operators in those countries are significantly higher which shows that major portion of line costs have been recovered from retail customers instead of other operators. In line with this approach, the Authority is of the opinion that PTCL's line sharing / local loop charge should be reduced in a phased manner to PKR100 per month and then to PKR50 per month on permanent basis.

Q6. Do you agree with Authority's proposal regarding gradual reduction in line sharing / local loop charges? Kindly provide your viewpoint with plausible justifications.

Q7. All stakeholders are also encouraged to offer comments pertaining to any other issue relevant to subject of this consultation paper.