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PTCL BANDWIDTH TARIFFS

Date of hearings	:	22.09.2006 05.10.2006
Venue of hearings	:	Auditorium, PTA HQs, Islamabad
Date of issuance of the instant Determination	:	06.10.2006

The Authority present:

Maj. Gen. (R) Shahzada Alam Malik: Chairman
S. Nasrul Karim Ghaznavi: Member
Dr. Muhammad Yaseen: Member

The Issue:

"Reviewing and removing afresh the anomalies that exist in the tariffs of Domestic Private Leased Circuit (DPLC), International Private Leased Circuit (IPLC) and Internet Protocol (IP) of PTCL"

Revised/afresh decision/Determination of the Authority

1. PRELUDE:

1.1 Being mindful of its statutory obligations under the Pakistan Telecommunication (Re-organization) Act, 1996 (the "Act"), the Pakistan Telecommunication Authority (the "Authority"), keeping in view the worldwide trend of tariffs, decided to regulate Pakistan Telecommunication Company Limited's ("PTCL") bandwidth tariffs in order to bring it in line with the international benchmarks for promoting proliferation of ICT related services which depend on the same.

1.2 Through this determination the Authority desires to set and determine afresh the tariffs of Domestic Private Leased Circuit (DPLC), International Private Leased Circuits (IPLC) and Internet Protocol (IP) of PTCL.

2. BACKGROUND/FACTS THAT NECESSITATED ISSUANCE OF THE INSTANT DETERMINATION:

2.1 Succinctly, relevant facts that constrained the Authority to settle the captioned issue through the instant determination is that PTCL being the bulk provider of bandwidth in the country is likely to maintain its dominance in the market for the next few years. During the past few years, there has been noticed a major decline in the cost of building submarine cables. In the Trans-Atlantic region the STM-1 prices decreased by 70% in FY00, 65% in FY01, 26% each in FY02 and FY03, 25% in the year 2004. In the Trans-Pacific region, the price of STM-1 fell by 56% in FY03 and 40% in FY02. In the Europe-Asia region, the STM-1 dropped by 42% in FY03. The STM-1 prices in Asian region dropped by 50-60% in FY03.

2.2 PTCL is providing services to licensed operators as well as to end users such as Call Centres, Software Exporters etc. The bandwidth market can be categorized for wholesale and corporate end user market. The licensed operators acquire bulk bandwidth directly from PTCL. To the contrary, the corporate end users can obtain bandwidth directly from PTCL or from other licensed operators. The Authority is of the view that the wholesale market should be regulated as this will give boost to competition in the end user market. Furthermore, PTCL has claimed that it is subsidizing data services. However, in substantiating its argument, it has not provided the actual cost of data and voice services. Thus, requirement given under rule 16(4) of the Pakistan Telecom Rules, 2000 (the "Rules") having not been fulfilled by PTCL -- an SMP operator, it has become imperative for the Authority to issue the instant determination and also to remove the distortion between data and voice services.

2.3 Few instances leading the Authority to issue the instant determination are as under:

i. The Government of Pakistan issued the Broadband Policy in December 2004 (the "Policy") with the objective to increase proliferation of broadband in the country. The Policy recognized the fact that International IP bandwidth price is one of the major portions of the total cost of an ISP with up to 60% of the total operational expenses, and reducing the prices of international bandwidth will enable ISPs to offer better dialup and broadband services at affordable tariffs. Some of the salient features of the Policy are as under:

a. [Para 4.1.1 of the Policy]: *The existing International IP and associated bandwidth prices will be lowered to a level where the annual broadband user targets stated in this policy would be completely achieved by the services providers.*

b. [Para 4.2.1 of the Policy]: *The existing domestic bandwidth prices will be lowered to a level where the services providers will be encouraged to use local and national peering services and generate local and nationally hosted content.*

ii. The Policy considers that the content, international bandwidth and the domestic bandwidth make the three elements of the back end or 'backhaul' of the Internet and broadband supply chain and facilitation of these three elements has a major bearing on the service providers to offer cheap and affordable broadband services. The Authority is under legal obligation to implement the Policy.

iii. The Policy made comparison of Pakistan with other countries like Korea, Malaysia, China and India vis-à-vis Internet and broadband indicators.

iv. The Internet Service Providers Association of Pakistan (ISPAK) approached the Authority apprising that the bandwidth tariffs charged by PTCL are exorbitant. ISPAK claimed that due to high bandwidth tariffs of PTCL, the objectives of GoP's Broadband Policy could not be achieved and requested the Authority to intervene and regulate bandwidth of the Incumbent, as the same practice is being followed in many other countries.

v. A presentation was given to the President of the Islamic Republic of Pakistan by Board of Investment (BOI) on February 16, 2006, in which Chairman BOI along with a group of investors briefed the President on various issues relating to 'IT Investment in Pakistan'. During the said presentation, one of the Call Center Operator (Info Span) raised the issue of high bandwidth charges being levied by PTCL and contested that the current tariff structure of PTCL is discouraging foreign investors to invest in Pakistan, as it is cheaper to acquire such facilities from other countries such as Philippines, Argentina and India.

vi. The Ministry of Information Technology (the "Ministry"), vide its letter No. 7-2/2006 dated 4th March 2006 (Annex-I), issued instructions to PTCL to reduce its bandwidth tariffs so as to make it cheaper than India.

vii. The Ministry, vide its letter dated 6th March 2006 (Annex-II), advised the Authority to intervene and remove distortions from PTCL's IPLC tariffs. It was also urged that Pakistan's bandwidth tariffs should be made more competitive in comparison with India.

2.4 The Authority duly considered the aforementioned policy guidelines of the Ministry and issued its directive No.15-8/05(CA)/PTA dated 22nd March 2006 to PTCL under which the Authority clearly mentioned its intention to regulate the tariffs of international bandwidth of PTCL, in accordance with the provisions of the Act.

2.5 The Authority issued another directive No.15-8/05(CA)/PTA dated 22nd March, 2006 to PTCL in which it was directed to review/rationalize its bandwidth tariffs and to submit its comprehensive proposal to the Authority for the purpose of removing the distortions prevalent in its bandwidth tariffs. PTCL was also directed to obtain prior approval of the Authority before announcing any change in its bandwidth tariffs.

2.6 Apart from the foregoing, the Authority is in the process of awarding consultancy on cost based fixed and mobile interconnection charges where after the consultant will also determine the cost of domestic as well as international private leased circuit. Until the determination of cost, the Authority has no option but to determine PTCL bandwidth tariffs based on international benchmarks.

3. SETTLEMENT OF THE TARIFF BY THE AUTHORITY PREVIOUSLY:

3.1 The Authority earlier, vide its detailed determination No.15-8/06(CA)/PTA dated 23rd June, 2006 decided and settled the issue of PTCL's bandwidth tariff. However, the same was challenged by PTCL before the hon'ble Lahore High Court, Rawalpindi Bench, Rawalpindi, in FAO No.126/06 filed under sub-section (1) of section 7 of the Act. Along with the aforementioned FAO, there was also filed a CM bearing No.CM No.2/C/2006 for suspension of the operation of the determination passed by the Authority till final decision of the main FAO. The CM filed by PTCL in the aforementioned FAO was taken up for hearing by the hon'ble Court on 07.08.2006 and was fixed before the single bench of his lordship Mr. Justice Abdul Shakoor Paracha, J., and after brief hearing of the matter by the hon'ble Court, the parties i.e. PTCL (the Appellant) and PTA (the Respondent), agreed to fix the main appeal/FAO for hearing and with further consent of the parties, the impugned determination was set-aside by the hon'ble Court and the matter was remanded back to the Authority with the direction to decide the case strictly in accordance with the law after affording an opportunity of hearing to the parties within a period of sixty days. For ready reference, order of the hon'ble Court is reproduced as under:

Need not to dilate upon this application and to give decision because the parties agree that the appeal be taken upon today and the case be remanded for fresh decision within a stipulated period.

Let the appeal be fixed for hearing today. With the consent of the parties, the impugned order dated 23.06.2006 passed by Pakistan Telecommunication Authority is set aside. The case is remanded to PTA with the direction to decide the case strictly in accordance with the law after affording an opportunity of hearing the parties within a period of sixty days.

3.2 Abiding by the aforementioned directions of the hon'ble Court, the Authority re-started the process after observing all the required legal formalities, as required under the law as well as directed by the hon'ble High Court. All the interested parties i.e. the stakeholders and particularly PTCL were given a patient hearing on two dates i.e. 22.09.2006 and 05.10.2006. In light of the feedback received from all the parties present, through consultation papers as well as through hearing the parties particularly PTCL in the hearings, the Authority re-considered the issue at deliberate length and determined the same afresh vide the instant determination/decision.

4. RELEVANT STATUTORY PROVISIONS:

4.1 The Authority derives its powers of regulating the tariff for telecommunication services from the provisions of clause (e) of sub-section (2) of section 5 of the Act. The aforementioned provision of the Act empowers the Authority to set tariff for telecom services in the following manner:

> *(2) …, the Authority shall—*
> *…*
> *(e) establish or modify accounting procedure for licenses and regulate tariffs for telecommunication service in accordance with sections 25 and 26;*

4.2 Section 25 of the Act deals with accounting procedures, investments and contracts while section 26 deals with the tariff, which provides in the following words;

> *26. Tariffs. -- The level of tariffs for telecommunication services including basic telephone service shall be regulated by the Authority in accordance with the regulations and the following general principles, namely:--*
>
> *(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 to comparable providers or users of any regulated telecommunication service;*
>
> *(c) the criteria used for the establishment of tariff shall regularly be published three months before the criteria is adopted;*
>
> *(d) tariffs shall be at a level, which provides a reasonable rate of return on investments taking into account the cost of operation; and*
>
> *(e) there shall be no cross-subsidization of other telecommunication services by basic telephone service.*

4.3 Rule 17 (1) of the Pakistan Telecommunications Rules 2000 (the "Rules") provides that "*An operator shall be presumed to have significant market power 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*."

4.4 Rule 16 (4) of the Rules requires that *"The SMP operator's interconnection charges shall, as soon as practicable, be based on LRIC in the manner determined by the Authority and shall include a reasonable rate of return on LRIC costs but the SMP operator shall not be obliged to charge on the basis of LRIC until it has put in place the necessary accounting and management information systems which shall enable it to do so in accordance with a reasonable time table determined by the Authority. The SMP operator shall also be entitled to recover a contribution to its common costs in the manner determined by the Authority. For these purposes, "common costs" means costs that are incurred in connection with the production of multiple products or services and* *remain unchanged as the relative proportion of multiple products or services and remain unchanged as the relative proportion of those products or services varies. Pending the introduction of LRIC in accordance with this sub-rule the SMP operator's interconnection charges shall be based, as far as possible, on cost-oriented telecommunication charges for similar services provided by telecommunication operators in other countries providing comparable telecommunication services to those provided by the SMP operator".*

5. PTCL'S STATUS:

5.1 That the Authority, vide its Determination dated 25th August 2004, declared M/s Pakistan Telecommunication Company Limited as SMP Operator in the Local Loop Fixed Line Telecommunications Market, LDI Fixed Line Telecommunications Market, Leased Lines Market and National Interconnection Market of Pakistan.

6. CRITERIA FOR DETERMINING THE TARIFF:

6.1 Regulation 11 of the Fixed Line Tariff Regulations, 2004 requires that tariff for leased lines services shall be based on cost. However, as per the said regulation, until the determination of cost, the Authority may take into account the international benchmarks of comparable countries while setting/approving tariff of leased lines. Hence, as stated above, since the cost is yet to be determined, the Authority is left with the only option of determining bandwidth tariffs based on international benchmarks.

Benchmarking:

6.2 The purpose of benchmarking in the context of bandwidth tariffs is to make a comparison with other countries where the provisioning of bandwidth services is at a competitive level. However, every country has its own unique features and it is not always possible to base the benchmarking process for all issues purely on telecommunication related geographical, economic and social indicators. Moreover, rankings based on such indicators for a country like Pakistan generally result in placing Pakistan in such categories where the competition has not yet been introduced or effective and thus reliance on such comparison would not help in improving the rankings.

6.3 The Authority reviewed a few indices developed by international organizations that also suggest that dependence on peer based rankings can not be useful. Some of these indices are also discussed in the following paras.

6.4 It is also relevant to note that in the light of provisions of the Rules, benchmarking should be done with countries where tariffs are cost-based so that their tariffs can be considered as proxy figures. It was essentially based on this principle that the Authority determined PTCL's interconnect charges where PTCL itself had benchmarked its interconnection rates with the developed countries like United Kingdom, Malaysia, Australia, Ireland etc.

6.5 The Authority observed that cost orientation of tariffs can be established either through availability of cost information or through effective competition in the benchmarked countries.

6.6 Carrying out the benchmarking exercise may not be that effective as many countries that have similar social, telecom and economic characteristics become irrelevant as they do not meet the criteria of effective competition, competitive tariffs or cost based tariffs. Furthermore, the non-availability of tariff related data acts as a limitation which was also agreed by PTCL and with these limitations, the Authority's choice was restricted to compare international bandwidth tariffs with the most competitive and least competitive countries as published by reputed international telecommunication research organizations. If such a comparison is not made while benchmarking, the whole exercise can lead to making a comparison with peer countries that are already lagging behind in telecommunication development.

6.7 The level of competition varies from country to country. as also noted by the Gartner Report 2004 "*the most competitive markets for international bandwidth are Hong Kong, Singapore, Japan, Taiwan and South Korea, whereas the least competitive markets are Indonesia, India and Malaysia*".

6.8 In the list of countries chosen by the Authority, Bangladesh is the country where the international bandwidth provision is not yet open to competition and, therefore, can be excluded from the list for benchmarking.

6.9 There are various composite telecom indices that have been prepared by international organizations. A list of main composite indices is tabulated as given below:

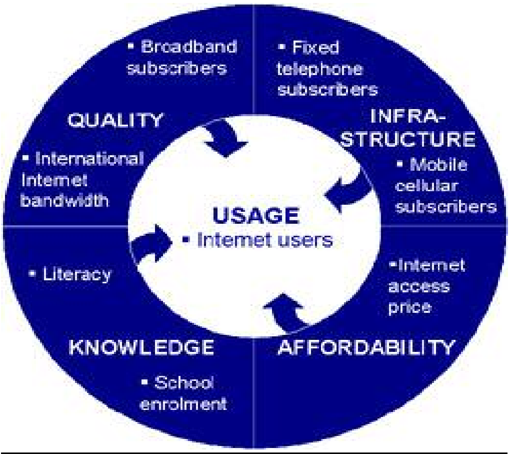
Name of index (organisation)	*Number of economies*	*Number of indicators*	*Latest data*	*Comments*
Digital Opportunity Index (ITU/UNCTAD/KADO)[20]	180	11	2004/05	Three clusters: *Utilization, Infrastructure* and *Opportunity* (see Chapter two).
ICT Opportunity Index (ORBICOM/ITU)[21]	139	17	2003	Compares '*Infostates*', '*Infodensity*' and '*InfoUse*' against an imaginary economy called 'Hypothetica'.
ICT Development Index (UNCSTD)[22]	180	8	2003	Four clusters: *Access, Connectivity, Usage* and *Policy.*
Informational Society Index (IDC)[23]	52	15	2004	Only sparse methodological data is disclosed.
E-Readiness Index (EIU/IBM)[24]	68	31	2004/05	Six clusters: *Connectivity, Business environment, Adoption, Legal and policy environment, social and cultural environment, Supporting e-services.* Uses a mix of quantitative and survey data.
Network Readiness Index (*Info*Dev/WEF/INSEAD)[25]	102	48	2003	Three clusters: *Environment, Readiness, Usage.* Uses a mix of survey, qualitative and quantitative data.
Digital Access Index (ITU)[26]	179	8	2002	Five clusters: *Infrastructure, Affordability, Knowledge, Quality, Usage.*
Mobile/Internet Index (ITU)[27]	171	26	2001	Three clusters: *Infrastructure, usage, market conditions.*
Technology Achievement Index (UNDP)[28]	71 (full data)	8	1998-2000	Four clusters: *Creation of technology, Diffusion of recent innovations, Diffusion of old innovations, Human skills.*

Source: WISR 2006

6.10 The Authority has studied three of the composite indices and their finding is briefly summarized as following:

Digital Access Index (DAI)

6.11 The ITU devised an index called Digital Access Index (DAI) in 2002, which measured the overall ability of individuals in a country to access and use Information & Communication Technologies (ICT). DAI is built around four fundamental factors that impact a country's ability to access ICT's infrastructure, affordability, knowledge and quality.



6.12 DAI was calculated for 179 countries in 2002. However, the index was not updated for the following years owing to the limitations in its methodology and now ITU has developed another index which is known as Digital Opportunity Index (DOI). The DAI has classified countries according to high, upper, medium and low ICT access. The DAI allows countries to see how they compare with their peers. As per DAI 2002, Pakistan was classified as a country with 'Low ICT Access'. Following is the list of countries having DAI around the same range as that of Pakistan:

Country	DAI Ranking	DAI Score	Country	DAI Ranking	DAI Score
Morocco	118	0.33	Vanuatu	128	0.24
India	119	0.32	Azerbaijan	128	0.24
Kyrgyzstan	119	0.32	Sao Tome and Principe	131	0.23
Vietnam	121	0.31	Tajikistan	132	0.21
Uzbekistan	121	0.31	Equatorial Guinea	133	0.20
Armenia	123	0.30	Lesotho	134	0.19
Zimbabwe	124	0.29	Kenya	134	0.19
Honduras	124	0.29	Nicaragua	134	0.19
Syria	126	0.28	Nepal	134	0.19
Papua New Guinea	127	0.26	Yemen	138	0.18
Pakistan	**128**	**0.24**	Bangladesh	138	0.18

6.13 As is evident from the above list of countries, Pakistan had a ’Low DAI’ in 2002 and was thus ranked at 128 amongst the lowest category of countries. The countries that come at par according to this index are mostly situated in the African continent while some of them are in Asia. It can also be taken safely from the details of the DAI that apart from India which was categorized in the “Medium” category, none of the countries mentioned in the list appear to have opened their international bandwidth services for competition.

Networked Readiness Index

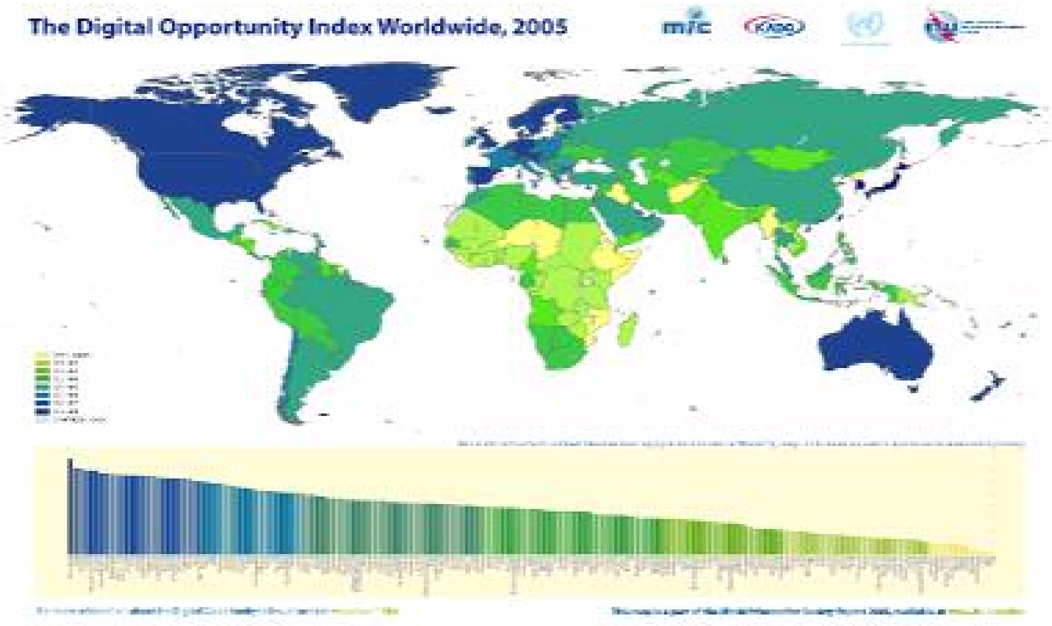
6.14 World Economic Forum has recently published “Global Information Technology Report 2005-06”. The Report uses the **Networked Readiness Index** (NRI), covering a total of 115 economies in 2005-06, to measure the degree of preparation of a nation or community to participate in and benefit from ICT developments. NRI is composed of three component indexes which assess:

(i) the environment for ICT offered by a given country or community
(ii) the readiness of a community key stakeholders – individuals, businesses and governments, and
(iii) the usage of ICT among these stakeholders

Countries	Score 2005	Rank 2005
Egypt	- 0.29	63
Bulgaria	-0.31	64
Uruguay	-0.31	65
Panama	-0.33	66
Pakistan	**-0.34**	**67**
Indonesia	-0.36	68
Costa Rica	-0.37	69
Philippines	-0.37	70
Argentina	-0.38	71
Russian Federation	-0.39	72

Digital Opportunity Index

6.15 The ITU has issued its World Information Society Report (2006) that presents the Digital Opportunity Index (DOI) for 2005 as a composite index, which was endorsed by World Summit for Information Society (WSIS) as part of the approved evaluation methodology. The Index consists of three sub indices that measure Opportunity, Infrastructure and Utilization against an ideal index which can be used to inform and enrich policy-making through benchmarking and analysis of performance.



6.16 The ranking of Pakistan in DOI is tabulated below

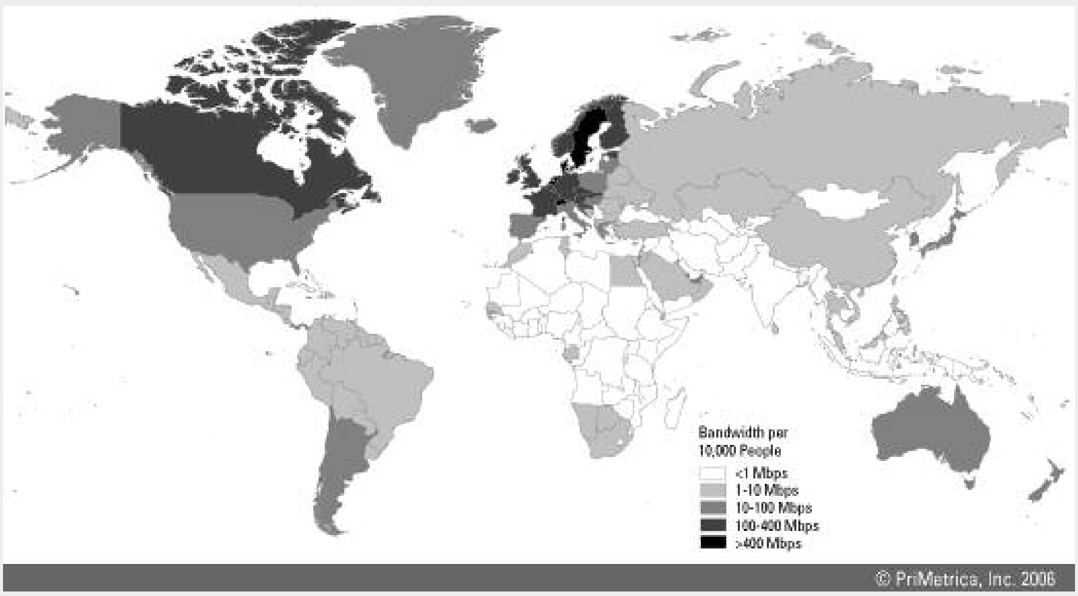
Economy	Opportunity	Infrastructure	Utilization	DOI	World Rank
India	0.8	0.04	0.04	0.29	**119**
Armenia	0.7	0.15	0.02	0.29	**120**
Guyana	0.72	0.13	0.01	0.29	**121**
Palestine	0.63	0.21	0.02	0.29	**122**
Vietnam	0.76	0.06	0.02	0.28	**123**
Yemen	0.78	0.06	0	0.28	**124**
Samoa	0.71	0.09	0.01	0.27	**125**
Cuba	0.76	0.04	0	0.27	**126**
Turkmenistan	0.72	0.07	0	0.26	**127**
Pakistan	0.73	0.05	0	0.26	**128**
E Guinea	0.73	0.05	0	0.26	**129**
Djibouti	0.74	0.04	0	0.26	**130**
Honduras	0.68	0.07	0.01	0.25	**131**
Nicaragua	0.6	0.07	0.06	0.24	**132**
Lesotho	0.65	0.03	0	0.23	**133**
Kyrgyzstan	0.55	0.09	0.01	0.22	**134**
Angola	0.6	0.02	0	0.21	**135**
Bhutan	0.59	0.02	0.01	0.21	**136**
Cameroon	0.59	0.03	0	0.21	**137**
Gambia	0.53	0.08	0.01	0.21	**138**
Bangladesh	0.6	0.01	0	0.2	**139**

6.17 It is evident that benchmarking based on the above parameters leads to comparison with peers which would not lead the Authority to an objective and realistic comparison.

6.18 However, owing to its better performance in all of the above noted indices, India becomes a reasonable choice for comparison and benchmarking. Some of the other reasons that can be considered in favor of benchmarking bandwidth tariffs with India are geographical proximity, similar level of Per Capita GDP, relatively effective competition and importantly access to same under sea cable networks i.e. SEA-ME-WE-3 and SEA-ME-WE-4 that are providing the bulk of international capacity to Pakistan.

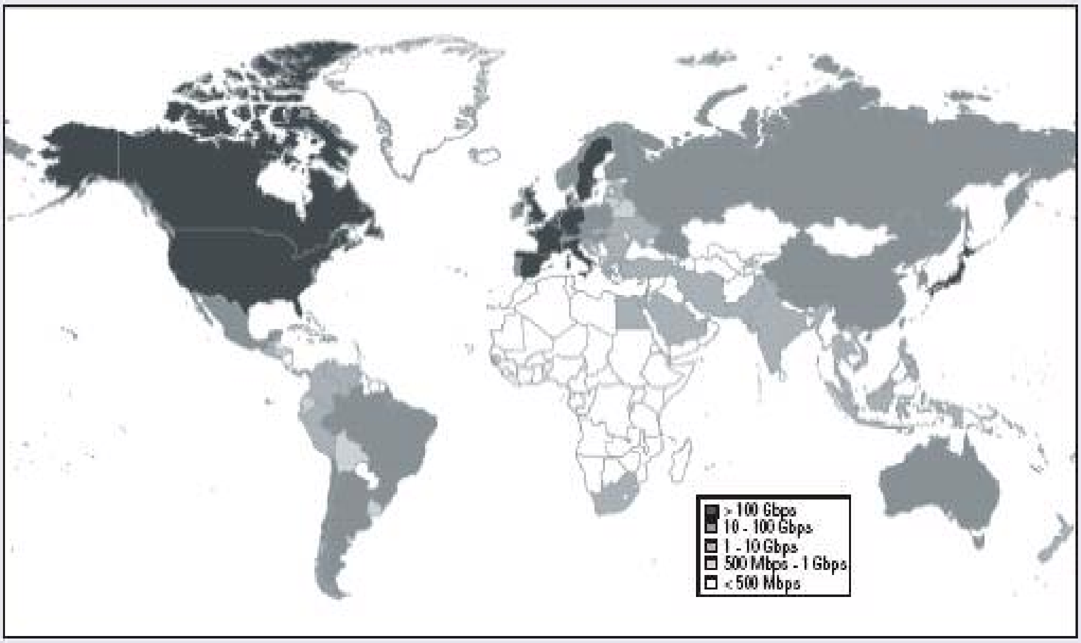
6.19 It is also important to note that the country statistics provided in the WB Report on Information and Communications for Development – Global Trends and Policies 2006 also show that per capita international bandwidth available to Pakistan and India is same at 4 bits. While per capita bandwidth in India is same as that of Pakistan, it has four (4) operators providing international bandwidth that shows the level of competition is much higher than Pakistan. Another important aspect is that as per findings of Telegeography, Pakistan and India are also grouped in the same category of countries for bandwidth availability and usage. The same is presented in the following maps.

Map of International Bandwidth Usage per Capita by Country, 2005



Source: TeleGeography research © PriMetrica, Inc. 2006

Map of International Bandwidth Usage by Country, 2004



Source: TeleGeography research © PriMetrica, Inc. 2006

6.20 It is worth mentioning here that Telecom Regulatory Authority of India (TRAI) faced similar situation in which their dominant operator (VSNL) appealed against the IPLC ceilings and contested the selection of international benchmarks. TRAI (during the hearing of Appeal filed by VSNL against TRAI on fixing of ceiling of IPLC half circuit tariffs) while submitting the comparison of Indian IPLC tariffs with international benchmarks highlighted the following:

> "*The international benchmark analyses suggest that prices for Indian IPLCs are substantially higher than in competitive markets especially for higher bandwidth circuits. It is therefore imperative that International bandwidth is not competitively priced in India when compared with many Asian countries some of which are India's competitors in global business processing operations. These prices are an integral part of the cost of broadband and thus should be specially considered in any strategy to remove constraints and boost broadband in India in particular rural India.*"

6.21 As a result, the argument of VSNL regarding comparison of bandwidth tariffs with less competitive markets was not considered.

7. COMPARATIVE ANALYSIS OF PTCL's IPLC, DPLC & IP TARIFFS:

IPLC Tariffs

7.1 PTCL's IPLC tariffs for ISPs, Call Centers and LDI operators are as follows:

Fig. in USD per month

Capacity	ISPs and Others	Call Centers	LDI Operators
E1 (2Mbps)	3,000	2,400	2,852
DS-3 (45 Mbps)	48,000	38,500	-
STM-1 (155 Mbps)	112,500	90,000	-
Price Multiples	1:16:38	1:16:38	-

7.2 PTCL is charging different tariffs to LDI operators and ISPs/DNOPs for providing IPLC. Moreover, PTCL's tariffs are distance less for data services whereas for voice services the tariffs are up to the landing station only.

7.3 The price multiples of PTCL for E1:DS3:STM1 are 1:16:38. Analysis of global multiples of competitive countries by Telegeography in 2004 revealed that the price multiple between E-1 and DS-3 range between 4-7 times, and between E-1 and STM-1 is between 8-17 times. This is illustrated in the following table:

	E-1 : DS-3 : STM-1
High Price Multiples	1:7:17
Low Price Multiples	1:4:8

Source: TRAI / Telegeography

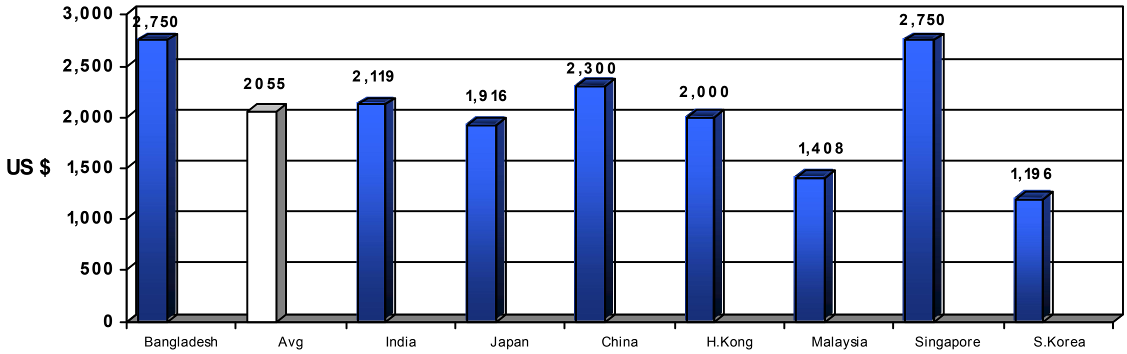
7.4 IPLC tariffs in the selected Asian countries up to the landing station are presented below:

Fig in USD per month

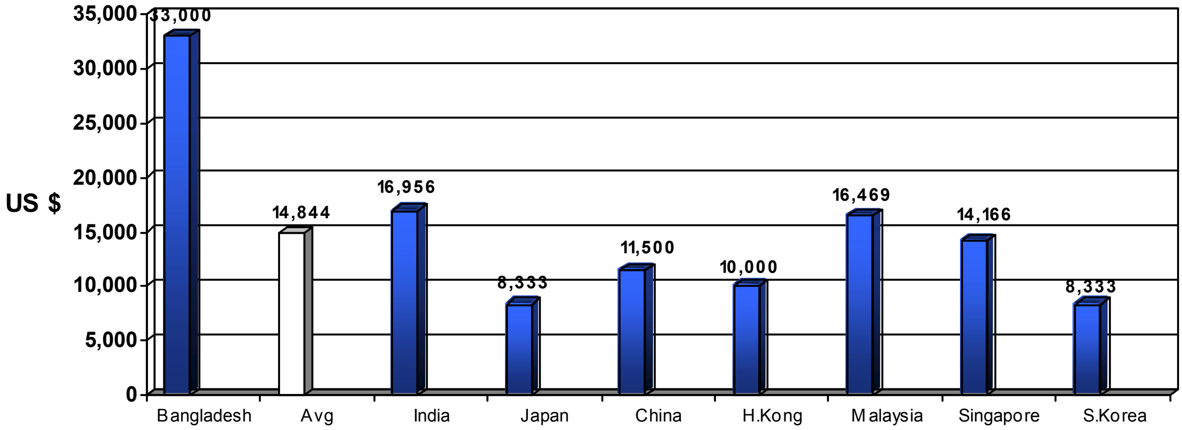
Capacity	India	B. Desh	Japan	China	Hong Kong	Malaysia	Singapore	South Korea
E-1	2,119	2,750	1,916	2,300	2,000	1,408	2,750	1,196
DS-3	16,956	33,000	8,333	11,500	10,000	16,469	14,166	8,333
STM-1	48,750	82,500	16,666	27,416	25,000	40,737	25,000	16,666
Ratio	1:8:23	1:12:30	1:4:8	1:5:12	1:5:11	1:12:29	1:5:11	1:4:8

Sources: Telegeograpgy 2004/ TRAI
BTTB
VSNL
Telecom Malaysia

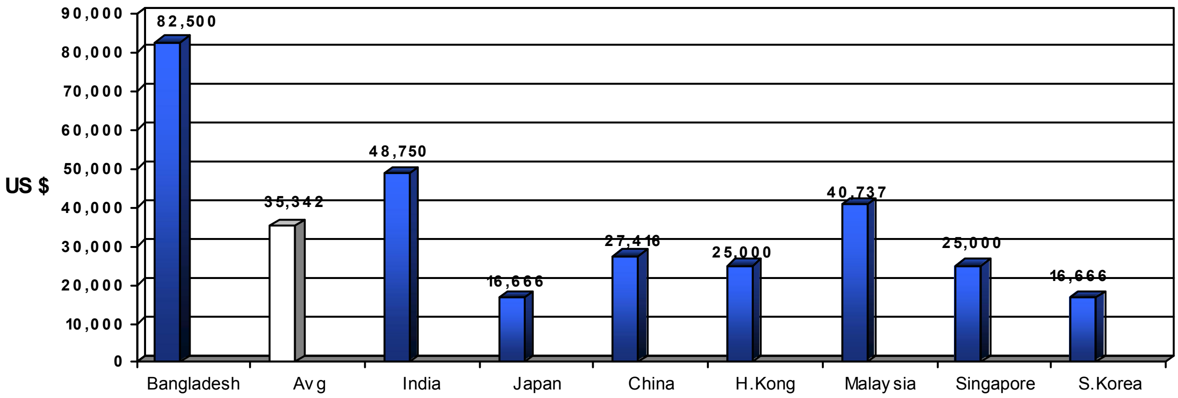
Prevailing IPLC Tariffs for E-1 Capacity in Selected Asian Countries



Prevailing IPLC Tariffs for DS-3 Capacity in Selected Asian Countries



Prevailing IPLC Tariffs for STM-1 Capacity in Selected Asian Countries



7.5 The Authority noted that in Malaysia, the incumbent operator (Telecom Malaysia) is also offering restorable and non-restorable IPLC via eight different routes. The tariffs of these routes are also lower than that of Pakistan.

7.6 In Bangladesh, the tariffs for Middle East segment (Median) have been included for IPLC services. For E-1 (2Mbps) capacity, the tariffs range from USD2,400 to USD2,900 for South East Asia and Western Europe Routes. In addition, BTTB (incumbent operator) is also offering discounted IPLC tariffs (for E-1 capacity) to software exporters, BPOs and call centers which ranges from USD1,800 to USD2,175 depending upon the distance. The details of IPLC tariffs in Bangladesh are tabulated as under:

Fig. in USD per month

Route*	***Software, BPO, CC***	***Others***
SEA (Singapore, Malaysia, Thailand, India & Srilanka)	1,800	2,400
ME (Pakistan, UAE, KSA, Egypt)	2,063	2,750
WE & WA (Italy, France, Tunisia, Algeria)	2,175	2,900

*The prices of IPLC for E-1 capacity are applicable through SMW-4 from Cox's Bazaar to cable landing station.

7.7 The Authority observed that although TRAI has fixed IPLC tariffs at USD2,462 per E-1, the end-to-end tariffs in India are still three to four times higher than Philippines as quoted in the TRAI order. In India, competition has now started to show results in terms of reduction in tariffs. Recently Videsh Sanchar Nigam Ltd (VSNL), one of the dominant operators in International long distance market of India has further reduced its IPLC tariffs that are summarized below:

Fig in USD per month

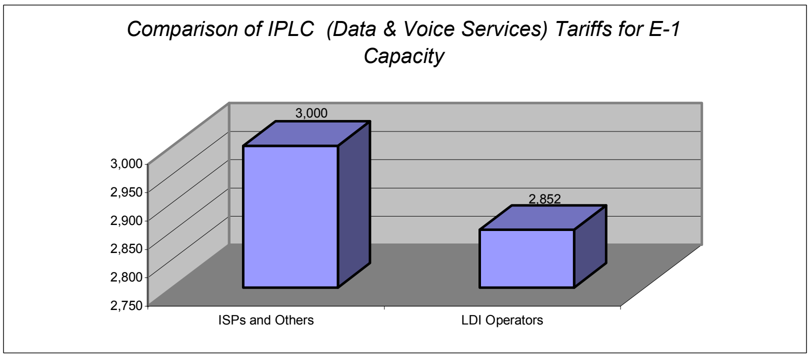
Capacities	**SMW3/SMW4/FLAG/SAFE**	**Tata Indicom For Singapore**	**Tata Indicom For US**
E-1	2,119	1,292	1,420
DS-3	16,956	14,203	15,072
STM-1	48,750	41,594	43,333

7.8 As apparent from the above table, a wide variety of services are available to VSNL customers alone and the tariffs range from USD1,420 to USD2,119.

7.9 Internationally, IPLC services are offered up to landing station only. Due to the allocation of DPLC portion in the IPLC tariffs, it is not possible to compare PTCL's IPLC tariffs with that of other countries. This issue has been elaborated in the Consultation Paper and PTCL was also asked to provide basis and details of the formula for calculating IPLC tariffs i.e. the formula that clearly depicts the basis for allocation of

IPLC tariffs up to the landing point and DPLC tariffs from landing point to the respective destinations. However, the required information was not provided by PTCL despite reminders from the Authority. The non-provisioning of this important information by PTCL leads the Authority to believe that there are very few customers of IPLC outside Karachi and the argument that averaged DPLC cost in IPLC prices is not realistic. Lastly, the real cost of IPLC up to the landing station is much higher than the international benchmarks.

7.10 The Authority noted that in developed economies, there is no differentiation between voice and data services and the same has also been decided by TRAI in its recent tariff order on IPLC bandwidth. Currently PTCL is offering uniform IPLC tariffs for Karachi, Lahore and Islamabad for data/ISP licenses. To the contrary, the voice services are offered up to the landing station only and the operators have to pay the domestic leg in order to connect in cities other than Karachi. The graphical representation of the inconsistency between voice and data tariffs for E-1 capacity is shown below:



7.11 As apparent from the above graph, the wide gap between the tariffs offered for voice and data services needs to be removed to remove the disparity that currently exists.

DPLC Tariffs:

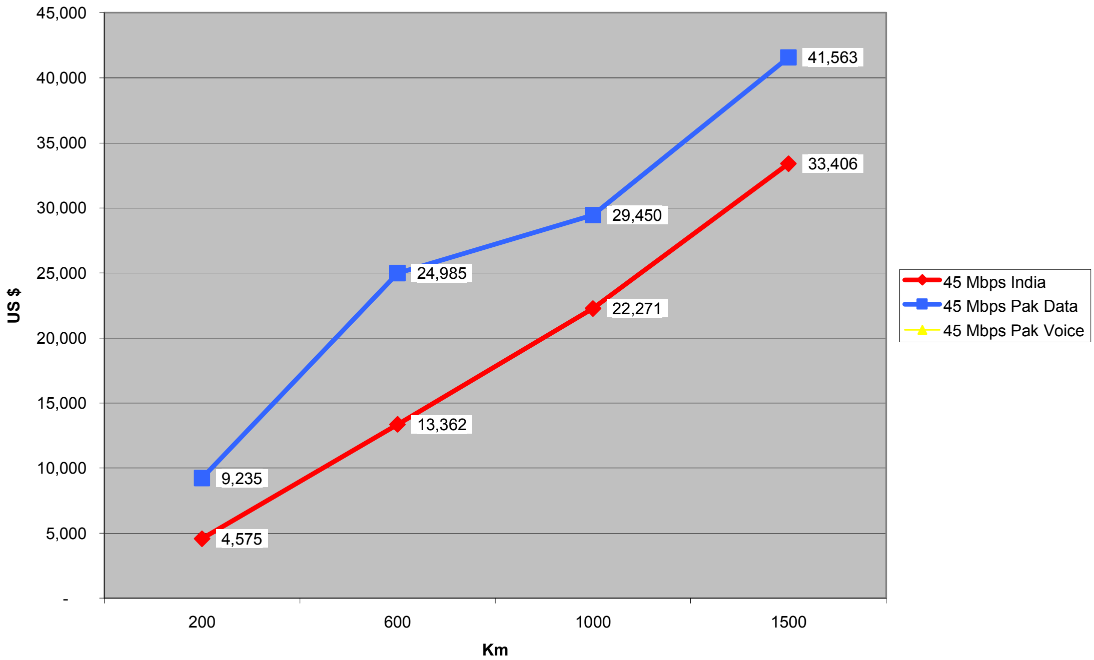
7.12 The Authority has approved PTCL's RIO, which contains DPLC tariffs for voice services. As per Para 19 of the Determination on PTCL Reference Interconnect Offer (RIO), the charges including DPLC charges were remain effective till June 2006. However, the Authority may review them earlier if the circumstances demand so.

7.13 In addition, while approving PTCL's RIO for Cellular Mobile, Ufone (a wholly owned subsidiary of PTCL) requested the Authority to rationalize PTCL's DPLC tariffs. In this regard, they also submitted their analysis to rationalize DPLC tariffs. The Authority, at that time, did not consider Ufone's proposal as the charges mentioned in RIO for fixed-line were applicable till June 2006.

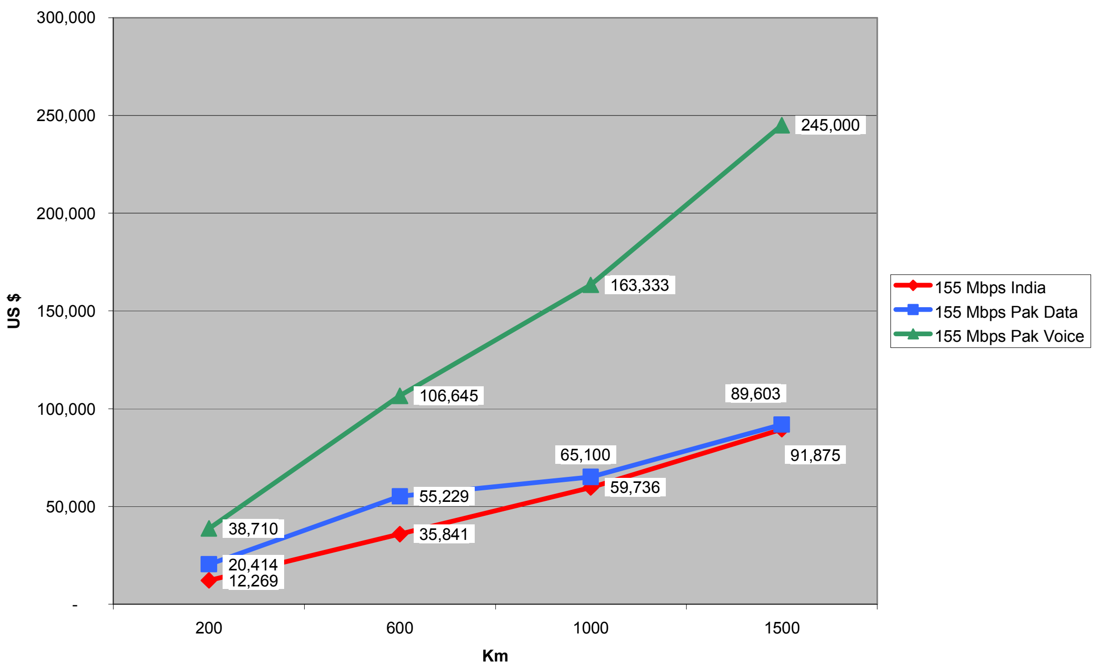
7.14 The Authority noted that although the consultation on revision of PTCL's RIO for fixed-line is in process, there has been no reduction in voice tariffs for DPLC since year 2004, which clearly indicates ineffective competition prevailing in the DPLC segment.

7.15 Following graphs and table show the comparison of domestic leased circuit tariffs between India and Pakistan. Analysis of DPLC tariffs depicts that Pakistan's data related tariffs are more competitive for lower capacities such as 2 and 8 Mbps compared to India. But as we move on to higher capacities, the situation is vice versa. For higher capacities tariffs of Pakistan are almost 2.5 times higher than that of India. However, in case of DPLC for voice services, Pakistan's DPLC tariffs are significantly higher than India all capacities and distance slabs.

45 Mbps Comparison



155 Mbps Comparison



<u>Comparison of PTCL's DPLC Tariffs with India</u>

Fig in USD per month

Capacity	Country	Km 200	Km 600	Km 1000	Km 1500
2 Mbps	India	623	1,844	3,074	4,610
	Pak Data	486	1,315	1,550	2,188
	Pak Voice	922	2,539	3,889	5,833
8 Mbps	India	2,182	6,454	10,757	16,136
	Pak Data	1,750	4,734	5,581	7,875
	Pak Voice	3,226	8,887	13,611	20,417
34 Mbps	India	3,990	11,802	19,671	29,506
	Pak Data	5,833	15,780	18,600	26,250
	Pak Voice	11,060	30,470	46,667	70,000
45 Mbps	India	4,575	13,362	22,271	33,406
	Pak Data	9,235	24,985	29,450	41,563
	Pak Voice				
155 Mbps	India	12,269	35,841	59,736	89,603
	Pak Data	20,414	55,229	65,100	91,875
	Pak Voice	38,710	106,645	163,333	245,000

7.16 As per LIRNE Asia, the tariffs in Pakistan for 2 Mbps and 8 Mbps are almost 1.5 times the equivalent rate in India while tariff for E-3 and STM-1 are nearly three times the equivalent cost in India.

7.17 PTCL has segmented its DPLC tariffs on the basis of voice and data services. However, recent reduction made by PTCL in DPLC charges for data services has further increased the disparity between the tariffs offered to ISPs and LDI operators. It may be noted that during the previous consultation on bandwidth tariffs, the local loop and LDI operators also requested the Authority to rationalize voice related DPLC tariffs.

7.18 The existing PTCL DPLC tariffs for voice services are given below:

Voice Services

Rs. per Km per Annum

Capacity	**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
E-3 (34Mbps)	46,464	39,816	36,564	33,600
STM-1 (155Mbps)	162,624	139,356	127,974	117,600

7.19 The DPLC tariffs for ISPs / DNOPs prior to the recent reduction by PTCL (Effective July 06) are given below:

Data Services

Rs. per Km per Annum

Speed	0-200 Kms	200-600 Kms	600-1000	Above 1,000 Kms
2 Mbps	2,333	2,104	1,488	1,400
45 Mbps	44,327	39,976	28,272	26,600
155 Mbps	97,986	88,368	62,496	58,800

7.20 As evident from the above tables, significant disparity prevails between tariffs for data and voice services. However, after recent reduction in the DPLC tariffs for data services (Eff. from July 01, 06) the disparity has further aggravated the situation.

Data Services

Rs. per Km per Annum

Speed	0-200 Km	200-600 Km	600-1,000 Km	Above 1,000 Km
Eff. Jul 06				
2 Mbps	1,750	1,578	1,116	1,050
45 Mbps	33,246	29,982	21,204	19,950
155 Mbps	73,490	66,275	46,872	44,100

7.21 PTCL has claimed several times that their DPLC tariffs for data services are below cost as they are providing subsidy for the promotion of IT services. On the contrary, PTCL reduced DPLC tariffs for data services on its own (as shown in the above tables) thus contradicting its own argument. Furthermore, PTCL has not provided any cost-based justification authenticating that it is subsidizing its data tariffs, which indicates that enough margins are available to PTCL. The Authority is of the view that in the absence of justification required under the Rule and PTCL license conditions, it becomes imperative for the Authority to remove the distortion between tariffs for data and voice services.

<u>IP Tariffs</u>

7.22 PTCL's tariffs for IP bandwidth for data services are summarized below:

Fig. in USD per month

Capacity	IP Tariffs
E-1 (2Mbps)	1,600
DS-3 (45 Mbps)	25,000
STM-1 (155 Mbps)	60,000

7.23 PTCL prevailing IP tariffs for **voice services** are recapitulated below:

Fig. in USD per month

Capacity	IP Tariff for Voice Services		
	KHI	**LHR**	**ISB**
E-1	3,500	9,373	10,842
DS-3	42,000	114,743	132,929
STM-1	133,000	387,602	451,252

7.24 PTCL has priced IP tariffs for E-1 capacity at USD1,600 (distance independent) for data services, whereas the tariffs for voice services range from USD3,500 – USD10,842 (depending on the distance). The recent reduction made by PTCL in IP data tariffs has further increased the disparity between the tariffs offered to data and voice services. It may be noted that the price multiples for higher capacities has not been rationalized by PTCL. Since IP for data service is distance independent, therefore the tariffs applicable for IP for voice in Karachi should be approximately the same as IP tariffs for data service.

PTCL Price Multiples for IP (Voice & Data Services)

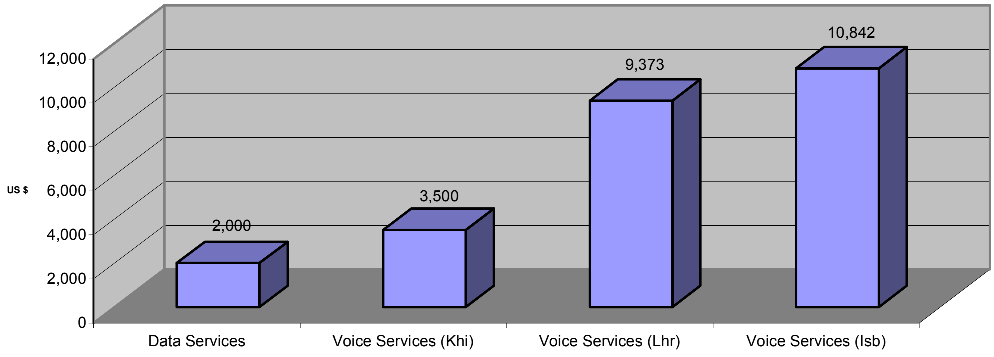
	Voice Services			**Data Services**
	Karachi	**Lahore**	**Islamabad**	
Price Multiples	1:12:38	1:12:41	1:12:42	1:16:38

7.25 As evident from the table above given, there is inconsistency between the price multiples of voice and data services. Moreover, the price multiples for STM-1 capacity for IP for voice are also inconsistent.

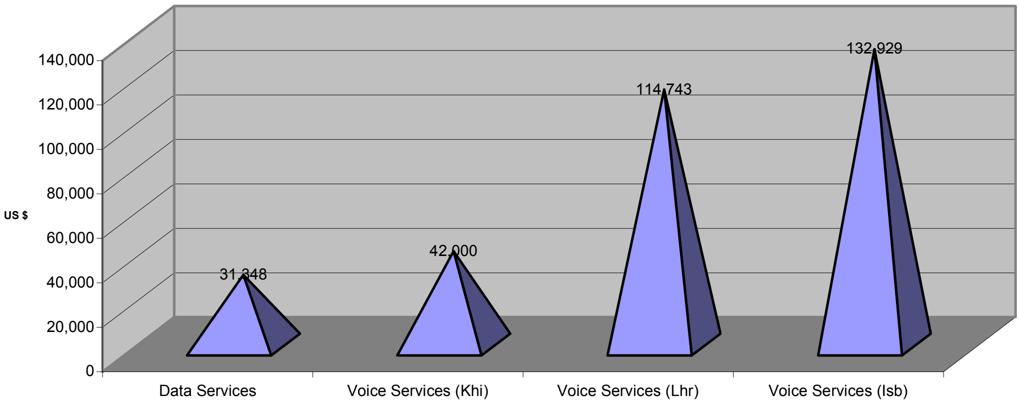
7.26 It is important to note here that in developed as well as in many developing countries IP tariffs are not segregated on the basis of voice and data. In addition, PTCL has also acknowledged in response to the Consultation Paper that IP tariffs have been consistently dropping due to technological improvements, operational efficiency, business synergy, whereby, a further drop is anticipated requiring no interference by the Authority. This clearly indicates that IP bandwidth tariffs could be reduced in order to provide relief to the industry.

7.27 The graphical representation of the inconsistency between voice and data tariffs is as below:

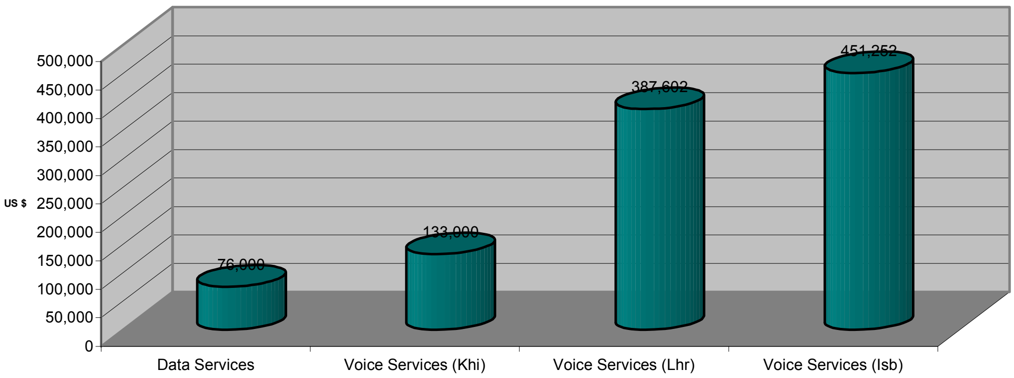
Data & Voice Tariffs (IP) for E-1 Capacity



Data & Voice Tariffs (IP) for DS-3 Capacity



Data & Voice Tariffs (IP) for STM-1 Capacity



7.28 The wide gap between the tariffs offered for voice and data services is obvious from the foregoing graphs which needs to be narrowed down in order to rationalize IP tariffs and remove the disparity accordingly. The above-mentioned tariffs appear to be discriminatory in nature and require rationalization.

8. DECLINE IN BANDWIDTH PRICES – INTERNATIONALLY:

8.1 As per Gartner Report 2004, International Bandwidth Prices were expected to continue to decline by 20% – 25% annually during the next three years i.e. from 2005 to 2007. Moreover, the monthly recurring charge for high traffic competitive routes that connect open markets such as Singapore, Hong Kong and Japan turns out to be approximately USD1,000 for an E-1 IPLC. When the cost per Mbps is calculated for higher speed links such as DS-3, it is as low as USD200 per month. In exceptional deals the prices can be below USD100 Mbps.

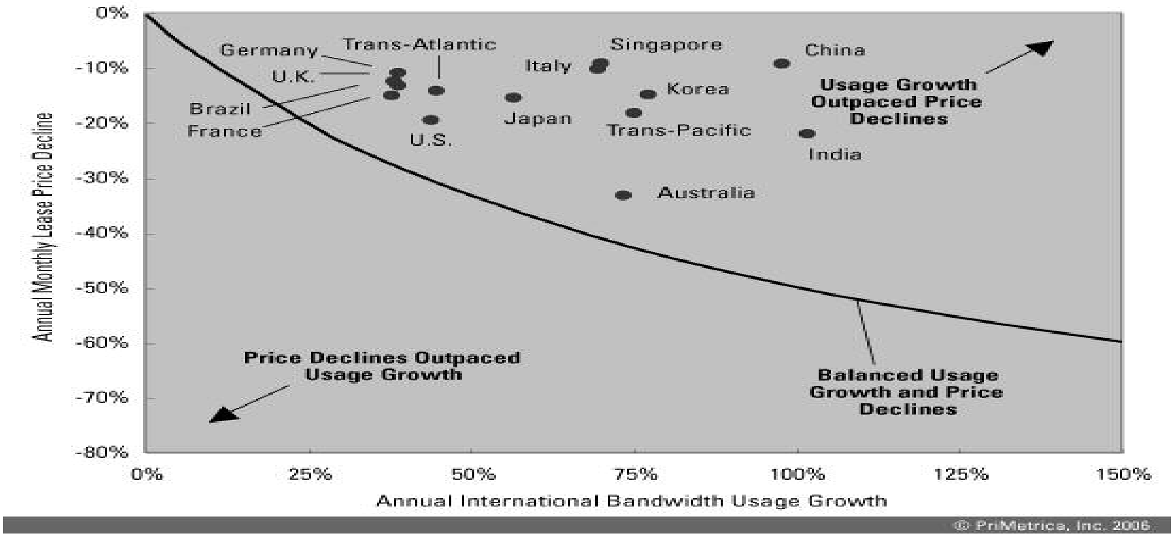
8.2 The Gartner Report further provides that in most of the Asia/Pacific markets, local access is still a virtual monopoly; even in more open markets there is no competition in the leased line market outside the major cities. Local access prices are, therefore, stable, while international prices have dropped, and as a consequence, local access is now more than 50 percent of the end –to-end cost for international bandwidth.

8.3 Most of the networks that entered service after the late 1990s did so with initial lit bandwidth far below their potential capacity. This relative restraint on the part of the network builders has allowed demand for bandwidth to catch up to the enormous supply of lit capacity on the most competitive routes.

8.4 It may be noted that as per Ovum's research report on '*After the Implosion: the Market for International Bandwidth*', the end of glut is a misplaced perception due to following reasons:

- Supply and demand are the critical factors;
- Geography still matters, market equilibrium depends on the region and the route; and
- Bandwidth shortages are now becoming a possibility on some routes, in some locations.

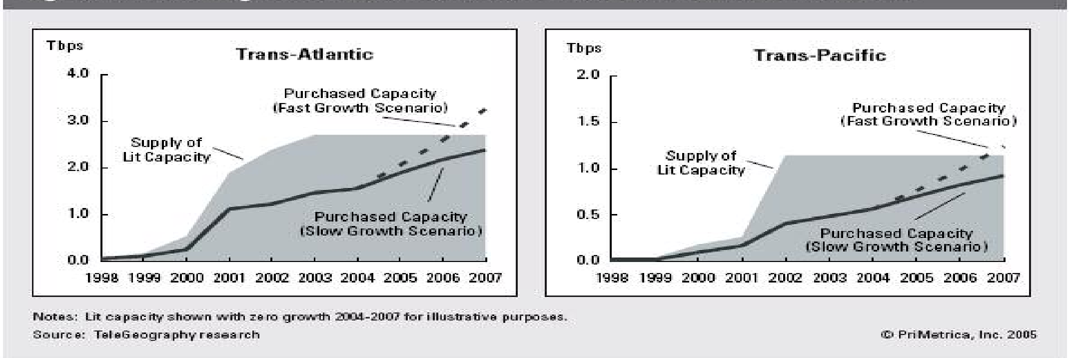
8.5 The following figure from Telegeography, shows International Bandwidth Prices Declines versus International Bandwidth Usage growth in selected countries and routes, 2004-2005:



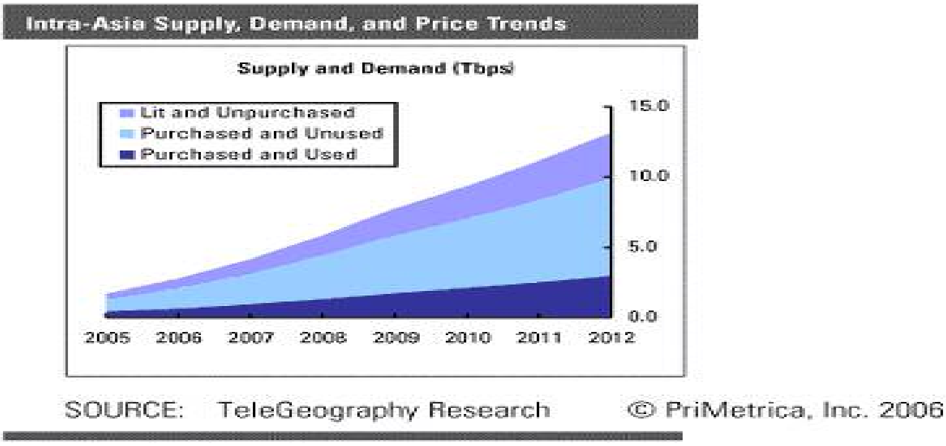
8.6 Telegeography also shows that by the standards of the wholesale bandwidth market, 2005 was a relative calm year. While median prices continued to decline, these decreases were often the result of the high-priced carriers bringing their rates in line with the prevailing market prices, rather than further reduction on the low end of the market. In 2005, median OC-3 prices on U.S domestic routes fell 21%, compared to 13% on European routes. Telegeography's analysis suggests that bandwidth demand has grown rapidly enough to offset price declines in much of the world.

8.7 As evident from the graph below, purchased capacity has increased in relation to lit capacity and it is this phenomenon which was titled by Telegeography as '*Bandwidth Glut is Over*'. Telegeography also mentions that persistent international bandwidth demand growth has depleted inventories of unsold circuits on many submarine cables and on some segments of terrestrial networks. This has led many network operators to light additional wavelengths and fiber pairs on need basis. Furthermore, as the network construction boom is still pending, most of the potential capacity in fiber networks remains untapped. Thus the idea that '*bandwidth glut is over*' as pointed in the PTCL's response on Consultation Paper is misunderstood and quoted out of context by PTCL.

Figure 4. Dwindling Trans-Atlantic and Trans-Pacific Bandwidth Inventories



8.8 According to the International Bandwidth Report 2005 by PriMetrica, Median prices on key intra-Asian routes continued to decline in 2005, but not as much as in 2004. For-example, Hong Kong –Tokyo median STM-1 prices fell 3% in 2005, a significant improvement over the 60% and 38%annual price declines in 2003 and 2004 respectively.



8.9 As shown in the above graph, most of the potential capacity in fibre network remains untapped. According to the latest analysis released in Telegeography's Global Bandwidth Research Service, by the end of 2006, approximately 14% of the potential capacity on major submarine cables will be lit.

8.10 Apart from the above examples, international research has showed a continuous declining trend in international bandwidth tariffs.

<u>PTCL claims its bandwidth tariff is cheaper than India:</u>

8.11 PTCL, at various forums has claimed that bandwidth tariffs prevailing in Pakistan are cheaper than that of India. In response to the MoIT letter vide no. 7-2/2006-DT dated March 04, 2006 whereby PTCL was asked to further reduce its related bandwidth tariffs to make it cheaper than India, PTCL claimed that its IPLC tariffs for 2 Mbps capacity over a distance greater than 500 Km, were cheaper than India. In addition, PTCL also used the tariffs data of Bangladesh, Srilanka and Malaysia for comparison purposes.

9. THE HEARING PROCESS:

9.1 M/s PTCL was duly afforded opportunity of hearing before issuing the previous determination on the issue, however, since the Authority has been directed by the hon'ble High Court to re-hear PTCL and decide the matter afresh, the process of consultation, collecting feedback from the market/industry and hearing the interested parties particularly PTCL, was reinitiated.

Collecting the Industry's feedback:

9.2 A consultation paper dated 04.09.2006 (the "consultation paper") was circulated and PTCL as well as the other stakeholders were asked to furnish their comments so that the matter could be resolved and decided by the Authority afresh, in light of their views and reservations, if any. Through the consultation paper the stake holders were requested to answer to the following eight questions:

i. Do you think that the list of countries should be further expanded for benchmarking purposes? The stakeholders can also send tariffs of other countries that are authentic and verifiable.

ii. Should IPLC be priced up to the landing stations in Pakistan? And DPLC charges for local access should be separated from IPLC tariffs?

iii. Do you agree with the level of tariffs in terms of E-1 capacity as well as price multiplies for higher capacities?

iv. Should IPLC tariffs for voice and data services be charged separately? Can different tariffs for IPLC be objectively justified on the basis of costs incurred in providing IPLC for voice and data services?

v. Should Price Multiple be kept at the same level as they were before the issuance of Broadband Policy?

vi. Whether PTCL should offer same tariffs for Voice and Data Services? Can different tariffs for IP services be objectively justified on the basis of costs incurred in providing IP for voice and data services?

vii. Should PTCL offer IP bandwidth on shared basis as offered in other countries such as India?

viii. Should DPLC tariffs for voice and data services be charged separately? Can different tariffs for DPLC be objectively justified on the basis of costs incurred in providing DPLC for voice and data services?

9.3 The Authority convened a hearing on September 22, 2006. Mr. Gul Ahmed, GM(RA), Mr. Zakir H. Satti, Director, Mr. Iftikhar A. Bashir, Legal Advisor, Mr. Abdul Rehman Darwaish, Mr. Ikram-ul-Haque, Mr. Sardar Imam attended the hearing on behalf of PTCL. Mr. Wahaj-us-Siraj of ISPAK, Mr. K. Malik of M/s TWA, Mr. Saad Saleem of

ISPAK, Mr. Syed Kashif Ejaz of M/s VNET Broadband, Mr. Syed Atif Ejaz of M/S Jinnah Public Pvt. Ltd. Mr. Azfar N. Jafri of M/s Ovex Pakistan, Mr. Wajid Mahmood of M/s Micronet Broadband, Mr. Aqeel Khurshid of ISPAK, Mr. Omar Khalid of M/s Transworld, Mr. Asim Hussain of M/s Transworld, Mr. Zahid Hussain of PSEB, Mr. Talib Baloch of PSEB, Mr. Yusuf Hussain of PSEB, Mr. Salman Ansari, Mr. Hamid Bashir Alvi Brig (R) of M/s UFone, Mr. Asad Manzur of M/s Future Connect, Mr. Sohail Qadir of M/s Worldcall, Mr. Mudassir Hussain of M/s Worldcall, Mr. Umar Durrani of M/s Worldcall, Mr. Fahd Mahboob of M/s Multinet, Mr. Shan-ul-Haq of M/s Telenor, Mr. Ashraf Tahir of M/s Multinet, Mr. Ahmed A. Siddiqui of M/s Nayatel, Mr. M. Farukh Alvi of M/s Burraq, Mr. Fawad Bhatti of M/s Burraq, Mr. Fayyaz Hussain of M/s Redtone, Mr. Abdul Rauf of M/s Comsats, Mr. Abdul Rehman Saeed of M/s Comsats, Mr. Bilal Sadiq of M/s Wateen, Mr. Abdullah Butt of Association of Call Center Operators of Pakistan, Mr. Amjad Farooq Alvi of M/s Brain, Mr. Tariq Sultan of M/s Link Direct, Ms. Samreen Malik of M/s Wateen/Warid, Mr. Asif Rumi of M/s Warid, Mr. Omer A. Haider of M/s Warid, Mr. Shahzeb Gardezi of M/s Wateen and Ms. Shahla Riaz of M/s GBIS/Diallog also attended the hearing.

9.4 The Authority convened another hearing on 5th October 2006 which was attended by Mr. Mashkoor Hussain, Mr. Gul Ahmed, GM (RA), Mr. Zakir Hussain Satti, Director, Mr. Iftikhar A. Bashir, Legal Advisor, Mr. Abdul Rehman Darwaish, Mr. Ikram-ul-Haque and Mr. Sardar Qaisrain from PTCL's side. Mr. Wahaj-us-Siraj of M/s Nayatel, Mr. Kamran Malik of M/s Transworld, Mr. Saad Saleem of M/s Micronet, Mr. Asim Hussain of M/s Transworld, Mr. Zahid Hussain of PSEB, Mr. Sohail Qadir of M/s Worldcall, Mr. Fahd Mahboob of M/s Multinet, Mr. Ashraf Tahir of M/s Multinet, Mr. Ahmed A. Siddiqui of M/s Nayatel, Mr. Fayyaz Hussain of M/s Redtone, Mr. Amjad Alvi of M/s Brain, Ms. Samreen Malik of M/s Warid, Mr. Asif Rumi of M/s Warid, Mr. M. Ali Khan of M/s Mobilink, Mr. Asim Ali of M/s Mobilink, Mr. Nadeem Akhtar of M/s Wateen, Mr. Mukhtar-ul-Haq of M/s DV Com, Mr. M. Kamil Khan Major (R) of M/s GBIS, Mr. Sohail Mehmood of M/s Ufone, Mr. Syed Hasnain Raza of M/s Pak Datacom, Mr. M. Ibad of M/s HRI, Mr. Riaz Abbasi of M/s HRI, and Mr. Sayyam of M/s Acsys Ltd. also attended the hearing.

10. INDUSTRY'S RESPONSE:

10.1 PTCL:

10.1.1 M/s PTCL, in response to the consultation paper, sent its comments dated 18th September, 2006 and raised various legal and other objections. The legal objections can be summarized as under:

i. the hon'ble High Court has vide its order dated 07.08.2006 set aside the earlier determination of the Authority dated 23.06.2006 on the basis of procedural and legal lacunas;

ii. hence, the previous consultation paper dated 17.04.2006 is no more valid since the entire process including the consultation paper which followed the determination was declared null and void and without backing of law by the hon'ble Court. The matter was remanded back with the direction to carry out the same in strict adherence to law;

iii. the consultation paper has no backing of law. There can be no regulation of tariff by PTA through such consultation paper/discussion. The term "Consultation Paper" does not figure either in the Act or in the Rules or Regulations or the Policy of the Fed. Govt.;

iv. the law does not validate the process of consultation paper for satisfying the purpose of identifying, reviewing and removing anomalies that exist in the tariff structure;

v. section 6(a) and 26(d) of the Act requires protection of the rights of PTCL whereas PTCL bandwidth tariff has been reduced to a level which is not a reasonable rate of return on investment;

vi. publishing of criteria for tariff three months before adoption has not been done, hence, against the provisions of section 26 of the Act;

vii. the consultation paper is in violation of section 5(2) of the Act;

<u>PTCL on Merits—Answer to the questions contained in the consultation paper:</u>

10.1.2 On merits of the issue M/s PTCL, in response to the consultation paper responded in the following words, which is reproduced below in verbatim:

The Authority under Para 27 and 28 of the Consultation Paper is cognizant of the fact that PTCL has been constantly and drastically reducing its Bandwidth Tariffs since 1998. PTCL reduced its bandwidth rates to 15%, 32%, 38%, 25%, 60%, 34% and 24% in July 1999, January 2000, May 2000, September 2000, June 2002, and August 2004. The last price cut was made in June 2006. The insistence of Authority to further cut down PTCL's recently revised Bandwidth tariffs is without justifications and without adhering to the procedural requirements mandatorily prescribed by law and is absolutely uncalled for

8. The Authority is not entitled to compare PTCL bandwidth tariffs on the basis of the international benchmarks it has selected, for the following reasons:

a) The primary obligation on the Authority is to set tariffs which are cost-based. The Authority has not done so.

b) *The Authority considers "the issue" to be that tariffs are not in line with those of other countries, which statement of the Authority is not supported by complete contextual analysis relating products types, supply and demand, total telephony demand, geography and GDP etc.*

c) *The Authority itself has not specified the basis of determining the costs, and has not provided the "costing methodology" to be adopted by PTCL despite request from PTCL, therefore, non-provision of cost does not arise at all. Had the Authority issued the criteria for costs as required, PTCL must have provided the requisite costs. Hence, it is pre mature to say that costs are not available.*

d) *In any event, the choice of the countries used for comparison is arbitrary and not supported by any reasoning. Rule 16(4) of the Pakistan Telecommunication Rules, 2000, requires these to be "similar services provided by telecommunication operators in other countries providing comparable telecommunication services to those of the SMP operator", and Regulation 11(1) of the Fixed Line Tariff Regulations, 2004, requires the international benchmarks to be from "comparable countries". No justification or reasoning is given in the Consultation Paper to suggest that the Authority is benchmarking on this basis.*

e) *The Authority has adopted an approach of 'pick and choose' vis-à-vis the tariff rates, claimed to be prevalent in different countries.*

f) *The figures relied upon are not verified.*

9. *At the conclusion of this process, the reduction in PTCL Bandwidth Tariffs is going to cause discouragement of future investment as the drastic reduction in tariff eliminates incentive to investors which is against the basic premise of GOP objectives, policy and the parameters and principles laid down in the policy to facilitate development / expansion of existing and alternate infrastructure.*

10. *The international comparisons contained in the Consultation Paper are not 'apple to apple' because:*

a) *Fiscal policies, incentives, subsidies in the referred countries are not the same nor known to the Authority nor disclosed nor discussed by the Authority in the Consultation Paper.*

b) *PTCL tariffs are essentially distance less while these are distance-based tariffs. Their cost would increase with distance from the Landing Station inwards, which would be a logical result of the order, but the Authority seems oblivious to it.*

c) *The tariff represents the rate at the Landing Station only, while PTCL provide the same rate to IPLC at Karachi and at Chitral.*

d) *The comparison with China is highly misleading and inappropriate. The Chinese government subsidizes almost every* *commercial and industrial activity and the rates are fixed accordingly.*

e) *Malaysia has more IT usage. Malaysia has eight cables, while PTCL has only two. Malaysian tariffs are also not distance based.*

f) *The price multiples of Japan and South Korea are not correctly calculated. Neither the distance less element is included nor the subsidies by the South Korean government noted.*

g) *Moreover, Japan and South Korea are not comparable countries, within the meaning of Rule 16(4) of the Pakistan Telecommunication Rules, 2000, or Regulation 11(1) of the Fixed Line Tariff Regulations, 2004. They are highly developed markets, saturated societies and in the case of Japan, Major portion of the population is concentrated in just four cities (Tokyo, Yokohama, Osaka and Hiroshima), all located in a narrow eastern corridor within a few hundred kilometers.*

h) *There is also no internationally prevalent tariff level or structure with which PTCL tariffs could or should be rationalized.*

i) *Moreover, the countries mentioned cannot be lumped as regional countries; on any basis, it is not correct to count Argentina as a regional benchmark.*

j) *There is no international prevalent tariff or structure on the basis of which IP Tariffs of PTCL had to be or could be rationalized. These tariffs have consistently been dropping due to technological improvements, operational efficiency, business synergy, whereby, a further drop is anticipated requiring no interference by the Authority.*

k) *ISPs, DNOPs, Call center operators and software exporters can avail the same tariff structure for IP & IPLC tariffs at Karachi, Lahore & Islamabad. Within the same class of license regime PTCL does not discriminate among the operators.*

l) *PTCL in compliance with the GoP policies regarding promotion of ICT in the country has been offering subsidy on various elements of the ICT based services like:*

i. *One local call, independent of duration and distance, for dial up internet access by user of internet services.*

ii. *VSAT connectivity as standby at PTCL cost at much higher price to Call Centre operators.*

iii. *IPLC, IP and DPLC bandwidth at highly subsidized rates.*

iv. *The telecom deregulation policy and broadband policy also stresses no increase for ICT related services.*

m) *The above concessions have been extended to ISPs, Call centers & DNOPs for the last 4/5 years and are in the knowledge of the Authority. All of a sudden these same concessions are now being viewed as discriminatory which are against rational logic. LDI operators are operating under different license regime and they are not in competition with ISPs, Call centers & DNOPs. Their* *domain of operation is different depending on the type of service. As such their licensing requirements and licensing fees charged by PTA is also different. Within each licensing regime, PTCL's tariffs are same. Thus there is no discrimination as alleged.*

Further Observations on the Merit of the substance in the Paper

11. The following factual errors in the text of the paper are pointed out.

a) The high and low multiples given in table 6 do not correspond to the text given in para 40 of the paper as well as the multiples given for various countries in table 4. For example in table 4, the multiple for Bangladesh is given as 1:12:30 whereas in table 6, the high multiples are given as 1:7:17 for E1:DS-3:STM-1.

b) In table 4, it is stated that IPLC tariff for E1 in Malaysia is US $ 1408 per month which is the lowest of the eight countries listed in the table including Japan & South Korea. However, in para 40 of the paper, it is stated that Malaysia is considered least competitive market by Gartner which appears to contradict table 4.

12. The Authority is requested to provide all the reports and material referenced in the paper since many of the reports and tariffs are not publicly accessible. This is required to ensure open and transparent proceedings as per Telecom Act 1996 (amended in 2006).

13. PTCL's tariffs for IPLCs are distance independent i.e. the tariff for a 2 Mbps IPLC from London (UK) to Karachi is the same for London – Lahore or London – Islamabad whereas in countries like India & Malaysia, IPLC tariffs are up to Cable landing stations and the domestic portion is charged separately. Thus for IPLCs it is not an apple-to-apple comparison. Moreover the products types like half circuit, full circuit, restorable and non-restorable etc have not been specified. Rates quoted in Table 4 are up to cable stations and does not include domestic leg, whereas PTCL's rates include both international as well as domestic leg. If PTCL is allowed to quote rates up to Karachi PTCL rates will be lower than many countries in the Table. UK is not a comparable country with Pakistan".

Answers to the questions:

10.1.3 The questions raised by the Authority in the consultation paper were replied to by PTCL as under:

i. Yes list of countries should be expanded to include countries comparable to Pakistan.

ii. Yes, IPLC be priced up to the landing stations in Pakistan.

iii. Tariff for voice and data should be kept separate till the cost based prices are introduced.

iv. Tariff for voice and data should be kept separate till the cost based prices are introduced.

v. PTCL has no hesitation in providing IP bandwidth on sharing basis. In fact PTCL offered such services in the past but discontinued the same due to lack of demand.

vi. As already stated, the same tariff for voice and data services should be based on cost.

<u>PTCL further argues:</u>

10.1.4 On the issue, apart from the foregoing, PTCL showed its following reservations:

i. The Gartner Report is old. According to Telegeography's research of April 2006, "bandwidth glut is over after several rough years and now there is price stability in bandwidth market."

ii. The Fixed-line Tariff Regulations 2004 vide Section 11(1) states that "…. *the Authority may take into account the international bench marks of <u>comparable countries</u> while setting / approving tariffs of leased lines*." Of the countries mentioned in the consultation paper Japan, Hong Kong, Singapore and South Korea are developed countries with high access to ICT services and can not serve as benchmark for a developing country like Pakistan.

iii. PTCL further added that with reference to "comparable countries" there is no single indicator which allows us to define them. To overcome this difficulty ITU has devised a new index called <u>Digital Access Index</u> (DAI) which measures the overall ability of individuals in a country to access and use new Information & Communication Technologies (ICT). It is composed of a few considered variables in order to include the widest number of countries and enhance transparency.

iv. The Digital Access Index (DAI) is built around four fundamental factors that impact a country's ability to access ICTs: infrastructure, affordability, knowledge and quality. A fifth factor, actual usage of ICTs is important for matching the theory of index with the reality in a country. Eight indicators are used to represent the five factors, as listed below.

- Fixed telephone density;
- Mobile telephone density;
- Adult literacy;
- Overall school enrolment;
- Internet Access price as a % of per capita income;
- Broadband density;

- International internet bandwidth per capita; and
- Internet users per 100 inhabitants

v. The Digital Access Index (DAI) has been calculated for 179 countries in 2002. They are classified according to high, upper, medium and low ICT access. The DAI allows countries to see how they compare to peers. It also provides a transparent and globally measurable way of tracking progress towards improving access of ICTs.

vi. From the above perspective the international benchmarking should be based on an average of few countries having DAI slightly higher than Pakistan and few countries having DAI slightly lower than Pakistan.

vii. Majority of the international carriers do not publicize their IPLC, IP & DPLC tariff which makes comparison more challenging and hard to verify and thus the reliance on 'cost-based tariff' becomes more logical instead of making subjective hasty decisions.

viii. PTCL kept on contending that it has been providing a distance-less tariff for IPLC for data operators in line with GoP's policy to proliferate ICT in the country. The existing distance less IPLC tariff incorporates a discount for locations beyond the landing station. In the competitive market DPLC charges for local access can be separated from IPLC tariffs and IPLC tariffs can be priced up to the landing stations; however this would result in higher tariffs for cities much farther away than the landing point. Our landing point is in Karachi while cities as far as Peshawar are more than 1500 km away, this would discourage ICT and broadband in northern areas of the country. This distinction would make ISP services more expensive in the northern areas than South. In this regard, consultation by the Authority with GoP would be more meaningful than unilateral removal of tariff differentials by downward matching non-ICT tariff with ICT tariff, squeezing any element of cross-subsidy.

ix. The tariffs for E-1 for voice services should not be clubbed with data service tariff since the IPLC voice tariff is part of RIO which is a separate contractual agreement. As the RIO is in process of revision, therefore IPLC voice tariff should be dealt with as part of the RIO.

x. With regard to IPLC data tariff for ISPs and Call centers, the existing tariff is lower on a regional basis keeping in mind the fact that it is distance-less. To further facilitate the growth of call centers and BPOs, bandwidth charges may be split in IPLC and DPLC parts and the DPLC part may be absorbed by GoP through R&D fund / USF, so that the end price for them may remains lower.

xi. PTCL IPLC tariff for ISP and data services were fixed in accordance with GoP policy to encourage IT enabled services. Thus PTCL is providing these services on subsidized rates. IPLC Tariff for Voice/ Data is recommended to be the same. However Tariff for Restorable & Non-Restorable connectivity should not be the same.

xii. First of all majority of international carriers do not publicize their IPLC, IP and DPLC rates making comparison more difficult. Before looking at price multiples we should also look at quantum of base price. Base price of E1 in Pakistan is lower than all countries except Malaysia. Also prices for DS-3 and STM-1 in Pakistan are lower than that of Bangladesh and prices of STM-1 compared against India are only USD3,444 higher, so the ratios should only be compared if the base line is the same.

xiii. Multiples in use in different countries / markets are the result of tariffs based on costs of different bandwidth capacities and varying the distances involved which in turn are dictated by demand, supply, input costs, geography, total basic telephony demand etc. To use such multiples without taking into account these factors and work back tariffs would lead to unrealistic and distorted conclusion. In the paper no normalized benchmarks are given for tariffs and multiples for higher bandwidths (DS-3, STM-1).

xiv. PTCL further stated that it never offered STM-1 capacity for IP prior to July 1, 2006. Prices quoted in Table 8 of the Consultation Paper are those of Flag Telecom and not PTCL.

xv. In Pakistan especially to promote ICT and broadband/Internet connectivity data circuit rates were discounted to current levels. In Western countries and even in India the ICT is developed to an extent that same rate can be offered to both data as well as switched circuits.

xvi. The distance-less Committed Information Rate (CIR) bandwidth cost for IP in Pakistan is comparable with the shared IP bandwidth price in India.

xvii. ISPs & DNOPs use CIR bandwidth at the backend since they resell bandwidth at the front end. Similarly, LDIs require CIR bandwidth to ensure quality of voice service.

xviii. The tariffs for DPLC voice should not be clubbed with data service tariff, as the DPLC voice tariff is part of RIO which is a separate contractual agreement. As the RIO is in process of revision, therefore DPLC voice tariff should be dealt with as part of the RIO. Once the cost basis is finalized for RIO, the same may be used for determining the price for voice as well as data DPLC.

10.1.5 PTCL argued further that the Authority is not entitled to determine tariffs on the basis of the international benchmarks it has selected in the determination, for the following reasons:

(i) The primary obligation on the Authority is to set tariffs which are cost based. The Authority has not done so.

(ii) The Authority considers the issue to be that tariffs are not in line with those of other countries. This is not a legitimate or relevant ground for concern, as it is not a criterion for the appropriateness of tariffs under Section 26 of the Act. Comparisons with other countries are only relevant as a fallback in the context of determining appropriate tariffs, and then only if costs information is not readily available.

(iii) The Authority itself failed to specify the basis of determining the costs, failed to provide, prescribe and decide the costing methodology to be adopted by PTCL despite reminder from PTCL and commitment from the Authority regarding development of costing models and methodologies. The Authority cannot rely on its own failure to abandon the primary requirement to have tariffs which are cost based.

(iv) The choice of countries used for comparison is arbitrary and not supported by any reasoning. Rule 16(4) of the Rules requires these to be "similar services provided by telecommunication operators in other countries providing comparable telecommunication services to those of the SMP operator", and Regulation 11(1) of Fixed-line Tariff Regulation 2004, requires the international benchmarks to be from "comparable countries". No justification or reasoning is given to suggest that the Authority benchmarked on this basis.

(v) The Authority did not consider relevant countries economies, telecoms infrastructures, business environments, tele-density, topography or market density in assessing whether or not the country or services concerned is comparable.

(vi) The choices made are arbitrary and capricious and include for example (i) countries such as China where tariffs are highly subsidized by the state (ii) Argentina which cannot be described as within the region (iii) exclusion of all countries but India in the DPLC tariffs.

(vii) The Authority adopted an approach of pick and choose vis-à-vis the tariff rates claimed to be prevalent in different countries.

(viii) The figures relied upon are not verified.

10.2 TWA:

10.2.1 Transworld Associate (TWA) commented on the issue as under:

(i) International bandwidth is no longer a monopoly. Hence there is no need for tariff regulation by the Authority and only market forces should be allowed to determine the tariff and price multiple in Pakistan.

(ii) The cost of IPLC should be from landing station to landing station. DPLC has a separate network cost. Hence, DPLC should be charged separately. These charges should be unbundled for PTCL.

(iii) For IPLC and IP services, content is important. Technically, voice and data are the same service and it is very difficult to differentiate among the two. Also, cost is the same for providing both services. Hence, tariffs should be the same also for both voice and data.

(iv) Impact of reduction in bandwidth tariffs on call centres is minimal. Moreover, there is only one operator that is utilizing STM-1 bandwidth and three operators utilizing DS-3 bandwidth from PTCL. All the other operators have acquired E-1 from PTCL. They insisted that the Authority should not regulate tariffs as the competition would automatically reduce tariffs.

(v) There is no relation of IRU with leasing of bandwidth as in the case of IRUs upfront payment for long-term rights is made where as in the case of leasing of circuits monthly recurring charges are paid.

10.3 MULTINET:

10.3.1 Multinet gave the following input:

(i) The countries mentioned in the Consultation Paper serves the purpose and there is no need to include other countries.

(ii) IPLC should be priced up to the landing stations and DPLC charge should be separately priced.

(iii) The bandwidth tariffs for voice and data services should be separate, as voice has a higher QoS requirement and has priority over data traffic.

(iv) The present level of multiple is justified and does not need any revision.

(v) The market is now competitive and there is no need to further re-adjust the tariffs.

(vi) The market should be allowed to decide what services and packaging can be offered.

10.4 ISPAK:

10.4.1 On the issue of IPLC: ISPAK (North) contested the submission made by PTCL regarding DAI whereby PTCL claimed that the data provided in DAI in 2002 is old. In addition, ISPAK stated that Pakistan falls in the category of low access countries. Countries like Syria, Zimbabwe, Honduras, and Papua New Guinea are above Pakistan whereas Nicaragua, Azerbaijan, Tajikistan and Lesotho falls below Pakistan. Therefore, benchmarking according to DAI would not give desired results.

10.4.2 ISPAK (South) further submitted that the countries mentioned in the consultation paper serves the purpose and there is no need to enhance the list of countries.

10.4.3 ISPAK (South) recommended price multiple of 1:4:8. ISPAK (North) suggested that the over all price of IPLC (including or excluding domestic) should be less than the prevailing tariff. Furthermore, ISPAK (North) submitted that international practice of offering higher discounts on bulk bandwidth should be adopted.

10.4.4 ISPAK (South) stated that the rates could be kept same for both the services

10.5 WARID TELECOM:

10.5.1 On the issue of IPLC: Warid Telecom submitted that while benchmarking tariffs, the set of variables should be identified such as traffic, tele-density, number of operators, number of licenses, GDP, Population and a correlation be explored among the depend and independent variables. In case, the GoP is providing subsidy then PTCL should be directed to reveal the percentage of subsidy being given by the GoP.

10.5.1 Warid Telecom submitted that both options should be available to customers i.e. IPLC should be priced up to landing station as well as up to the city where customer demands it. Interconnection should be allowed at landing station to facilitate the process where customer has all choices available to him.

10.5.2 Warid telecom submitted that they did not agree with the current tariff structure. The tariffs should be same for all categories of operator. Lower tariffs can contribute to widen the customer base and ensure better operating conditions for service providers. In terms of price multiples for higher capacities, the current tariff structure is playing an important role in limiting industry growth. The price multiples should be reduced to a level where they are at least less than that of Bangladesh i.e. 1:12:30.

10.5.3 Since IPLC rentals to foreign carriers is not segregated between data and voice therefore the same cannot be applicable for subleasing. Hence, PTCL should offer same tariff for voice and data service.

10.5.4 On the issue of IP: Warid telecom emphasized that price multiples should be brought in line to level prevailing prior to issuance of broadband policy.

10.5.5 PTCL should offer same IP tariff for voice and data service.

10.5.6 PTCL should offer IP bandwidth on shared basis to increase the number of choices for customers and reduce media cost which is main contributor of their expense. However, this should be subject to consent of the operator and price should be different for shared or clear bandwidth.

10.6 TOTAL TELECOM:

10.6.1 On the issue of IPLC: Total Telecom stated that the list of countries should be expanded.

10.6.2 Total Telecom insisted that prices of IPLC should be up to the landing station only. DPLC charges for local access should be separated to allow the DPLC sector to grow as a service market.

10.6.3 Total Telecom proposed IPLC price multiples for E-1:DS-3:STM-1 at 1:5:10

10.6.4 Total Telecom submitted that IPLC tariffs for voice and data services should NOT be charged separately.

10.6.5 <u>On the issue of IP:</u> Total Telecom insisted that PTCL should offer same IP tariffs for voice and data services

10.6.6 Total Telecom stated that PTCL should offer shared bandwidth to its customers as is offered in other countries such as India.

10.6.7 Total Telecom informed that there should be no separate tariffs for voice and data services.

10.7 CIRCLE NET:

10.7.1 <u>On issue of IPLC:</u> Circle Net submitted that the countries mentioned in the consultation paper serves the purpose and there is no need to enhance the list of countries.

10.7.2 Circle Net emphasized that the charges for local access should be eliminated and PTCL should provide international bandwidth up to Soft switch / Gateway of the LDI and domestic portion of IPLC be removed.

10.7.3 Circle Net proposed IPLC price multiples at 1:10:20

10.7.4 IPLC is a form of media and is transparent to the services provided through it. The construction and maintenance cost is also not affected by the service provided thereof. It is therefore recommended that IPLC tariff for both the services, voice and data should be the same.

10.7.5 <u>On the subject of IP:</u> Circlet Net submitted that the present level of multiples is justified and no revision is required .

10.7.6 Circle Net submitted that voice and data tariffs should be the same.

10.7.7 Circle Net stated that PTCL should offer shared bandwidth to its customers as it is technically feasible and cost effective.

10.7.8 Circle Net stated that DPLC tariffs for voice and data services should be the same.

10.8 WORLDCALL:

10.8.1 <u>On the subject of IPLC:</u> Worldcall emphasized that IPLC tariff should be distance independent irrespective of the industry. IPLC should include domestic leg charges for Karachi, Lahore and Islamabad.

10.8.2 Worldcall proposed IPLC price multiples at 1:8:23.

10.8.3 Worldcall informed that disparity in rates for different types of traffic, call centres, voice (LDI) data (DNOP) over the same resource is unjustified and must be removed. Technically, there is no difference between carrying data or voice over an IPLC.

10.8.4 <u>On the issue of IP:</u> Regarding rationalizing of Price Multiples for IP, Worldcall proposed price multiple of 1:12:28. Moreover, Worldcall contested the claim of PTCL regarding subsidization of bandwidth Tariffs. It informed that PTCL is providing STM-1 bandwidth at a high price of USD60,000 which clearly indicates that PTCL is not providing any subsidy.

10.8.5 Worldcall informed that there is no difference in carrying voice or data over the IP bandwidth. The disparity in rates for the two traffics is unjustified ad should be removed. The IP bandwidth offered to LDI operators is 623% higher than data service.

10.8.6 Worldcall agreed that PTCL should offer shared bandwidth to residential users or small offices as it is always useful and cost effective In all developed and developing countries, shared bandwidth is being offered which actually improves the quality and data speed on internet.

10.8.7 DPLC: Worldcall was of the view that price multiples of DPLC tariffs need to be rationalized. Worldcall further insisted that PTCL is charging 1:19:42 for data services whereas for LL/LDI operators it is charging 1:12:42 which should be changed to 1:8:27. In addition, they emphasized that discrimination in rates for voice and data traffic should be removed.

10.9 NEXLINX

10.9.1 On IPLC: They suggested that they have submitted price benchmarks of China and Philippines based on actual and verifiable data. Both these countries are comparable to Pakistan.

10.9.2 IPLC pricing could be bundled with DPLC or unbundled up to landing station in Karachi but overall prices to the customers should be less than the IPLC costs of Philippines that includes the domestic and local loops.

10.9.3 They submitted that the price of full circuit E-1 IPLC is USD1,800 per month whereas price of DS-3 for the same is USD14,817. The price multiples turns out to be 1:8:23. The same price multiples should be adopted by PTCL for both IPLC and IP. The price factor for STM-1 can be extrapolated to 1:8:19.

10.9.4 They informed that there is practically no difference of costs between IPLC/IP circuits to be used for voice and data services. In many countries, no such discrimination exists. They recommended that IPLC for voice services be revised under RIO and not under current consultation process.

10.9.5 They stressed that PTCL should provide documentary evidence regarding their argument that Chinese government provide subsidies to the businesses.

10.10 CYBERSOFT:

10.10.1 On IPLC: Cybersoft informed that SMW-4 cable system allows consortium partners to sell full circuits in any member country up to the landing station which means that Teleglobe can provide full circuit IP bandwidth in Karachi if the customer can arrange backhaul from the landing station to its site. In addition, they submitted that IPLC should be bundled with DPLC as PTCL’s DPLC costs are extremely unreasonable.

10.10.2Cybersoft strongly recommended that PTCL should not be allowed to offer any price multiples (for IPLC as well as IP) greater than 1:7:17. Cybersoft recommended that IPLC for voice services be revised under RIO and not under current consultation process.

10.10.3On IP: Cybersoft informed that there is no need for shared bandwidth product.

10.11 **TELENOR:**

10.11.1On IPLC: Telenor recommended that prices for data and voice both in terms of IPLC and DPLC should be merged together and there should be only one charge.

10.12 NAYATEL

10.12.1On IPLC: Nayatel suggested that it has submitted price benchmarks of China and Philippines based on actual and verifiable data. Both these countries are comparable to Pakistan.

10.12.2IPLC pricing could be bundled with DPLC or unbundled up to landing station in Karachi but overall prices to the customers should be less than the IPLC costs of Philippines that includes the domestic and local loops.

10.12.3Nayatel submitted that the price of full circuit E-1 IPLC is USD1,800 per month whereas price of DS-3 for the same is USD14,817. However, the same was contested by PTCL. PTCL informed that in case other international operators are offering cheaper services, then the operators are free to acquire their services. The price multiples turns out to be 1:8:23. The same price multiples should be adopted by PTCL for both IPLC and IP. The price factor for STM-1 can be extrapolated to 1:8:19.

10.12.4Nayatel informed that there is practically no difference of costs between IPLC/IP circuits to be used for voice and data services. In many countries, no such discrimination exists. Nayatel recommended that IPLC for voice services be revised under RIO and not under current consultation process.

10.13 Nayatel stressed that PTCL should provide documentary evidence regarding their argument that Chinese government provide subsidies to the businesses.

10.14 PAKISTAN SOFTWARE EXPORT BOARD (PSEB):

10.14.1Chairman PSEB informed that Pakistani IT industry is growing at about 50% per annum. He informed that the IT is a lucrative industry and has the potential to turn developing country into a developed country. He informed that high cost of bandwidth is discouraging foreign investors to set up their businesses in Pakistan. He stated that IT is a high growth industry and reduction in bandwidth tariffs will increase growth of IT industry. He informed further that Bandwidth comprises 10 to 15% of the operating cost of IT Enabled Services (ITeS) Companies such as Call Centers and Data Centers. Several leading Tier-1 companies, who are expected to drive industry growth in Pakistan have instead expanded operations into overseas locations rather than within the country – quoting the price of bandwidth as the key or one of the key motivators of such a decision.

10.14.2 He stated that at present there are over 400 companies in Pakistan that are actively participating in ITeS including about 250 call centres. Total bandwidth usage was around 600 Mbs in June 2005 in Pakistan as compared to about 6.21 Gbs in India. This is therefore, a large market that provides economies of scale to bandwidth providers and is also growing rapidly.

10.14.3 He revealed that a number of BPOs are leaving Pakistan due to higher bandwidth charges and emphasized that with such a growing elastic demand, the bandwidth providers should reduce costs to internationally competitive levels.

10.14.4 PSEB has been informed by Info Span and Ovex Technologies that the bandwidth charges in India are much cheaper than Pakistan. Ovex has stated that the bandwidth charges are cheaper than Pakistan.

10.14.5 He emphasized that with such a growing elastic demand, it would also make sense to bandwidth providers to reduce costs to internationally competitive levels.

10.15 Association of Call Centre Operators of Pakistan

10.15.1 Association of Call Centre Operator of Pakistan was of the view that operational cost of a call centre operator has a 10 to 14% implication from the bandwidth charges. As Call Centres mainly depend upon real time voice services, thus the quality of the circuit is of utmost importance for them.

10.15.2 In addition, the association highlighted their concern that PTCL provides downgraded service and that there is lack of technical support. Call Centres association recommended that PTCL should drop its IPLC charges over FLAG's full circuit and SMW-3 half circuit to approximately 5% lower than India. This will make Pakistan's ITeS sector somewhat competitive although it is a fact that Indian IPLC rates are 2 to 3 times more expensive than that of Philippines. They emphasized that PTCL should also offer bandwidth on usage basis. The IP bandwidth services provided by PTCL are of low quality and the same needs improvement.

11 THE AUTHORITY'S FINDINGS ON THE ISSUE:

11.1 We would first like to take and address the legal objections raised by PTCL on the process of consultation paper initiated by us for collecting industry's input and, secondly, the objection raised regarding the Authority's jurisdiction to settle the issue through determination by taking into account the international benchmarking.

<u>Legal objections—Reply to:</u>

11.2 Vide PTCL's comments dated 18th September, 2006 filed in response to the consultation paper circulated by us for having the industry's input on the issue, PTCL raised various legal objections, as mentioned in the foregoing paras. In the following lines, we are taking the aforementioned objections, one by one;

i. PTCL's objection: The first objection PTCL raised was that the hon'ble High Court has vide its order dated 07.08.2006 set aside the earlier determination of the Authority dated 23.06.2006 on the basis of procedural and legal lacunas.

The Authority's observations: PTCL's aforementioned objection is totally against the facts on record. We wonder how PTCL would establish this objection, if ever required by any legal forum, when record of the hon'ble Court is so clear. The earlier determination was set aside not on the basis of any legal or procedural lacunas but with the consent of the parties. It was in response to the request made by PTCL before the hon'ble Court that it/PTCL was not properly heard and be given another opportunity of hearing that the Authority very generously conceded before the august Court to provide another opportunity of hearing to it which the Authority had in fact fully provided to it also at the time of earlier determination. However, since it was PTCL's desire to be heard again, the Authority gave its consent before the hon'ble Court. Hence, it was a favor shown to PTCL otherwise the Authority was fully capable to contest its case and defend its earlier determination before the hon'ble Court on its own merits.

ii. PTCL's objection: The previous consultation paper dated 17.04.2006 is no more valid since the entire process including the consultation paper which was followed by the earlier determination was declared null and void and without backing of law by the hon'ble Court. The matter was remanded back with the direction to carry out the same in strict adherence to law;

The Authority's observation: The foregoing objection of PTCL is totally misplaced and misconceived. Only the determination was set aside and that also, as said above, with consent of the parties and not the process initiated before passing of the earlier determination.

iii. PTCL's objection: The third legal objection raised by PTCL is that the consultation paper has no backing of law. There can be no regulation of tariff by PTA through such consultation paper/discussion. The term "Consultation Paper" does not figure either in the Act or in the Rules or Regulations or the Policy of the Federal Government.

The Authority's findings: So far as the legal requirement is concerned, there is no legal bar on collecting industry's feedback through consultation papers. PTCL, even during the hearing, when was confronted with the question to point out the illegality in taking industry's view through such process, could not satisfy the Authority and remained unable to show the law which is allegedly being violated by such process.

Deregulation Policy (Para 3 (g)) requires the Authority to *"maintain an effective and well defined regulatory regime that is consistent with the international best practices"*. It is international best practice that regulatory bodies issue Consultation Papers for soliciting opinions of stakeholders before issuing final orders. The Authority while issuing its decision on the PTCL's bandwidth tariffs also acted on the same approach.

Besides the foregoing, circulation of the consultation paper was one among the other steps taken by the Authority for collecting the industry's response on the issue and knowing the stakeholders' views. Moreover, it is not the consultation paper which is made basis of the determination but the input received from the industry through it followed by the hearings on two dates.

Hence, the aforesaid objection is also frivolous and misleading.

iv. <u>PTCL's objection:</u> Next PTCL objected that the law does not validate the process of consultation paper for satisfying the purpose of identifying, reviewing and removing anomalies that exist in the tariff structure.

<u>The Authority's observation:</u> The aforementioned objection is repetition of the objection No. iii, hence, the Authority's findings on the said objection are reiterated here in response to the objection No. iv and is addressed as such.

v. <u>PTCL's objection:</u> That section 6(a) and 26(d) of the Act requires protection of the rights of PTCL whereas PTCL bandwidth tariff has been reduced to a level which is not a reasonable rate of return on investment.

<u>The Authority's reply:</u> The aforementioned reference is misleading. The section of the Act mentioned above are not PTCL specific but deals with all of the Authority's licensees and under the aforementioned provisions of law, the Authority is statutorily bound to protect the interest of all of its licensees. The issue of PTCL's bandwidth tariffs, being raised by the ISPs, DNOPs, fixed-line operators etc. and reinforced by the Government of Pakistan through its directive dated 6^{th} May 2006, has to be reviewed by the Authority in the best interest of the telecom sector as a whole.

So far as the extent of the reducing the level of tariff is concerned, merits of the instant determination will clearly show that the same has not been reduced to the level alleged by PTCL. The Authority is well aware of its legal limitations and responsibilities. The tariff's level has been reduced where necessary strictly in accordance with law. Moreover, PTCL has failed in discharging its burden of establishing before the Authority that the level has been reduced against the provisions of the Act.

vi. <u>PTCL's objection:</u> PTCL objected that publishing of criteria for tariff three months before adoption has not been done, hence, against the provisions of section 26 of the Act;

<u>The Authority's findings:</u> We understand that this objection is raised by PTCL in total ignorance to the provisions of the Fixed Line Tariff Regulations, 2004 (Regulations) and the Interconnection Guidelines, 2004. Regulation 11 of the Regulations provides in the following words:

"(1) The tariff for leased line services 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."

The aforementioned Regulations prescribes the criteria adopted by the Authority for issuing the instant determination and the Regulations have been made published on 9th July, 2004 and also through the Interconnection Guidelines, 2004. Hence, even much before the period of three months. In the instant case, the criteria adopted by the Authority is the international benchmarks of comparable countries and, as said above, the said criteria has already been published in the year 2004 so there was no need to get it published afresh.

vii. PTCL's objection: The consultation paper is in violation of section 5(2) of the Act;

The Authority's meeting of the objection: Section 5(2)(h) of the Act has no relevance to the matter in issue as apart from the provisions of section 5(2)(e) of the Act, the Authority has ample powers to make amendments in the Interconnection Agreement as per clause 1.4 of PTCL's RIO. Hence, the objection is misplaced.

The Authority's findings on merits:

11.3 PTCL also agitated the issued on its merits and raised a number of objections in this regard which are taken and addressed by the Authority in the following manner:

Objection regarding adopting the international benchmarking as the criteria:

11.4 PTCL's objection that the Authority is not competent to determine the tariffs on the basis of international benchmarks is repelled on the following grounds:

(i) The primary condition to set tariffs on cost-based could not be applied by the Authority as PTCL itself failed to provide its cost details to the Authority;

(ii) Having being failed itself to provide cost, PTCL is legally estopped to raise the objection. Considering failure on part of PTCL to provide its cost information to the Authority, the Authority is justified to use benchmarks for determination of PTCL's bandwidth tariffs, as provided in the Rules, Regulation and Guidelines;

(iii) PTCL is not justified in shifting its responsibility to provide cost details to the Authority on the pretext that the cost methodologies are to be provided by the Authority. The Authority noted that as per the tasks assigned by the Federal Government through its Deregulation Policy, the Authority is only required to develop 'Cost and Regulatory Accounting Guidelines' which deals with the manner in which PTCL will submit its Separated Accounts to the Authority to ensure fair trade practices. The Authority in this regard, has issued two Consultation Papers ('Accounting Separation Regulations' on 9th September

2004 and 'Costing Methodologies for Accounting Separation Purposes' on 29th January 2005) and is in the process of finalizing the 'Cost and Regulatory Accounting Framework', after which it will require PTCL to implement the same.

(iv) However, PTCL's misunderstanding of the 'Regulatory Accounting Framework' with that of 'Cost-based Interconnection Charges' does not seem to be valid as PTCL itself has previously been providing its cost details to the Authority for the years ending 30th June 1998 to 2004. Although, PTCL failed to provide the soft copy of its costing model to the Authority despite a number of reminders. The Authority noted that this new stance of PTCL is not only contravention with the provisions of the law but also contrary to PTCL's own earlier actions and statements.

(v) Moreover, the Authority has set mobile termination charges in July 2005 based on the cost study done by the mobile operators themselves, which was later modified by the Authority to determine their interconnection charges. PTCL was also part of the consultation process at that time and did not mention any such reservation to the Authority.

(vi) The Authority also made references to other regulatory bodies of the world, and could not find a single regulator who provides 'costing methodologies' to the operators for determining tariffs of services like IPLC, IP, DPLC etc. However, methodologies for preparing 'Regulatory Accounts' are generally provided by the regulators, as is the case in Pakistan.

(vii) PTCL while proposing its interconnection charges under the RIO, itself used international benchmarks and have made reference to countries like Australia, Colombia, India, Malaysia, Mexico, Morocco, Peru, UK, Belgium, France, Greece, Ireland, Portugal, Spain, Switzerland, Bolivia, Chile etc. These benchmarks were duly considered by the Authority while determining PTCL's interconnection charges in year 2005.

(viii) The Authority compared the bandwidth tariffs prevailing in Pakistan with those of India, S. Korea, Malaysia and China. These countries were also used by the Government of Pakistan in its Broadband Policy while making Internet and broadband comparison. Hence, the choice of countries is consistent with the benchmarking done by the Government of Pakistan.

(ix) The Authority considers that use of China and India as a reference for comparing Pakistan bandwidth tariffs is in line with the GoP approach, whereas Argentina can be dropped from the list on the request of PTCL, even though PTCL itself had made reference to many developed countries like UK, Ireland, Australia etc. while proposing its interconnection charges in the year 2004.

(x) The Authority regards the claim of PTCL of adopting an approach of pick and choose of countries as invalid based on the facts mentioned above.

(xi) PTCL has not mentioned the charges which are stated to be as not verified. All tariffs mentioned by the Authority are fully verifiable and the Authority have also mentioned the sources of such data in its Consultation Papers as well as the Determination.

Objection that Non-SMP operators are free to charge any tariff:

11.5 The Authority observes that PTCL's claim regarding discriminatory nature of the Authority's Determination whereby non-SMP operators are free to charge any rates, has no support of law. The Authority acted strictly in accordance with the policies of the Federal Government whereby only tariffs of SMP operators are to be regulated due to possible anti-competitive practices from them. Same approach is being used worldwide in those economies where the telecom sector is not yet fully competitive, as is the case of Pakistan. Moreover, PTCL can always match the tariffs of non-SMP operators to protect its business interest.

PTCL's arguments on other points — response of the Authority:

11.6 PTCL further argued that it has informed that the prevailing IP tariffs are competitive as they are providing the same at low cost. To the contrary, PTCL reduced IP tariffs for data services (from USD2,000 – USD1,600) contradicting its own argument. Furthermore, PTCL did not provide any cost justification authenticating the fact that they are subsidizing their data tariffs, which indicates that enough margins are available to PTCL. However, PTCL has admitted that technological advancements are expected to reduce these tariffs further.

11.7 PTCL has informed during the previously held consultative meetings that it is providing clean and unshared IP bandwidth, whereas some of the operators argued that PTCL is offering shared IP bandwidth. Furthermore, they also provided tariffs of Shared IP bandwidth prevailing in other countries and insisted that PTCL should match their IP tariffs in order to bring them in line with the international trends.

11.8 It is important to note that the stakeholders have shown their interest for shared bandwidth. However, PTCL claimed that it does not offer shared bandwidth as there is no demand for the said product.

12 THE AUTHORITY'S DECISION:

12.1 We, as directed by the hon'ble High Court, after strictly observing the law and the required legal formalities heard the parties at considerable length, both through consultation paper as well as through two hearings held on 22.09.2006 and 05.10.2006 have carefully considered the arguments and contentions advanced by the parties present, particularly PTCL. After analyzing the issue in light of policy directives of the Federal Government, feedback received from the industry through consultation paper, hearing the parties on the aforementioned dates and the assistance extended to us by our Commercial Affairs Division on the basis of their research work and deliberations, we hold and determine as under:

IPLC Tariff Ceilings:

12.2 The following ceilings for price as well as price multiples shall be applicable to PTCL for provision of IPLC, up to landing station i.e. Karachi.

Fig. in USD per month

Capacity	**Existing Tariffs ***		**Effective 1/1/07****	
	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
Price Multiples	1:16:38		1:8:23	1:8:23

* Distance-less
** Up to landing station

IP Tariff Ceilings

12.3 PTCL shall observe the following ceilings for provision of IP for data and voice services:

IP Tariffs for Data Services

12.4 The following ceilings for price as well as price multiples shall be applicable to PTCL for provision of Internet Protocol to **ISPs and DNOPS.**

Fig. in USD per month

Capacity	**Existing Tariffs**	**Effective 1/1/07**
E-1 (2Mbps)	1,600	1,500
DS-3 (45Mbps)	25,000	24,000
STM-1 (155Mbps)	60,000	46,500
Price Multiples	1:16:38	1:16:31

IP Tariffs for Voice Services

12.5 The current tariffs of PTCL for provision of IP **for voice services** are as follows:

Existing Fig. in USD per month

Location	**2 Mbps**	**8 Mbps**	**34 Mbps**	**155 Mbps**
Karachi	2,800	10,080	33,600	106,400
Lahore	7,500	29,500	91,800	310,100
Islamabad	8,700	34,350	106,350	361,000

12.6 The following price ceilings shall be applicable to PTCL for provision of IP **for voice services** with effect from 1st January 2007:

Revised Fig. in USD per month

Location	2 Mbps	8 Mbps	34 Mbps	155 Mbps
Karachi	2,400	8,400	24,000	74,400
Lahore	6,500	22,750	65,000	201,500
Islamabad	7,700	26,950	77,000	238,700

12.7 PTCL shall make proportionate reductions in tariffs of other capacities keeping in view the above ceilings of price multiples. PTCL may, however, reduce its tariffs as well as price multiplies below the above-mentioned ceilings, subject to the condition that such tariffs shall apply equally and non-discriminatorily to all operators within a service class (i.e. voice/data) and after getting approval from the Authority.

12.8 PTCL shall offer a shared IP bandwidth on 1:2 basis at USD1,000 for E-1 w.e.f. 1st January 2007.

DPLC Tariffs

12.9 PTCL shall observe the following price ceilings of DPLC for data and voice services:

DPLC Tariffs for Data Services

12.10 The Authority agrees with the DPLC tariffs of PTCL for data services, as announced on 30th May 2006, and hereby approves the following charges of DPLC for **ISPs and DNOPs.** PTCL may, therefore, continue to charge the same DPLC tariffs from the licensed data operators.

Fig. in PKR. per annum

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

12.11 The current tariffs of PTCL for provision of DPLC **for voice services** are as given below:

Existing Fig. in PKR per annum

Capacity	**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
8 Mbps	13,552	11,613	10,664	9,800
E-3 (34Mbps)	46,464	39,816	36,564	33,600
STM-1 (155Mbps)	162,624	139,356	127,974	117,600

12.12 The following price ceilings shall be applicable to PTCL for provision of DPLC **for voice services** with effect from 1st January 2007:

Revised Fig. in PKR per annum

Capacity	**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)	3,200	2,654	2,438	2,240
8 Mbps	9,486	8,129	7,465	6,860
E-3 (34Mbps)	32,525	27,871	25,595	23,520
STM-1 (155Mbps)	113,837	97,549	89,582	82,320

12.13 PTCL shall make proportionate reductions in tariffs of IPLC and IP for capacities not mentioned in this determination keeping in view the above ceilings of price multiples. PTCL may, reduce its bandwidth tariffs as well as price multiplies below the above-mentioned ceilings, subject to the condition that such tariffs shall apply equally and non-discriminatorily to all operators within a service class (i.e. voice/data) after getting approval from the Authority.

12.14 PTCL shall submit its proposal to the Authority for the purpose of removal of tariff anomalies of IP between voice and data services and among different regions within two (2) months of the issuance of this Determination

12.15 The charges mentioned in foregoing Paras, with the exception of IP tariffs, shall remain effective till 30th June 2007, unless earlier revised through Determination by the Authority based on the cost study it is planning to conduct. In case, the Authority does not revise these charges by or after the due date i.e. 30th June 2007, the charges as approved in this Determination shall remain in full force till the issuance of next such Determination by the Authority

12.16 This Determination shall be effective from 1st January 2007.

Dr. Muhammad Yaseen
Member (Technical)
Pakistan Telecommunication Authority

S. Nasrul Karim Ghaznavi
Member (Finance)
Pakistan Telecommunication Authority

Maj Gen. (R) Shahzada Alam Malik
Chairman
Pakistan Telecommunication Authority

Signed on this 6th day of October 2006.

Annex -I

Government of Pakistan
Ministry of Information Technology
(IT & Telecom Division)

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Subject : - **Brief in respect of Queries raised during Presentation on 16th February.**

Reference presentation made to the President of Pakistan by Board of Investment (BOI)) on February 16, 2006. The Minister of State and Chairman BOI alongwith a group of Investors from various sectors briefed the President on various issues. One of the investors from Call Center Industry, representing M/s INFOSPAN (Pvt.) Ltd., presented his Company's operation plans, structure and problems faced by them. It was agreed in the meeting that MoIT would examine the issues in detail with PTCL and take further actions in the matter. It is informed that following actions have been taken.

I. A comprehensive study has been made and a brief in respect of queries relating to bandwidth rates is attached.

II. Instructions have been issued to PTCL to further reduce its related bandwidth tariffs to be better than India.

III. Instructions have also been issued to PTA to oversee and ensure that PTCL broadband rates are cheaper than corresponding rates of India.

Encl: As Above

(Noor ud din Baqai)
Member (Telecom)

President's Sectt (Public) (Mr. Abdul Shafiq Director General), Islamabad.
M/O Information Technology U.O. No.7-2/2006-DT dated 4th March, 2006.

Annex -II

Government of Pakistan
Ministry of Information Technology
(IT & Telecom Division)

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No.7-2/2006-D.T. Islamabad, the 6th March, 2006.

Subject : - <u>IPLC Bandwidth Rates of PTCL - Brief in respect of Queries raised during Presentation on 16th February.</u>

Reference presentation made to the President of Pakistan by Board of Investment (BOI)) on February 16, 2006. The Minister of State and Chairman BOI along-with a group of Investors from various sectors briefed the President on various issues. One of the investors from Call Center Industry, representing M/s INFOSPAN (Pvt.) Ltd., presented his Company's operation plans, structure and problems faced by them.

2. Brief sent to the President Secretariat identifies distortion of the IPLC bandwidth tariffs especially for product-II. Kindly intervene in the matter and ensure that tariffs distortion as pointed in attached report are corrected and rates be realigned by PTCL so as to meet the bench mark to be the better then Indian IPLC tariffs.

Encl: As Above

(Noor ud din Baqai)
Member (Telecom)

The Chairman,
Pakistan Telecommunication Authority,
Islamabad