

Local Loop Sharing

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- Local loop unbundling (LLU) refers to the process, in which incumbent carriers lease, wholly or in part, the local segment of their telecommunications network to competitors.

- Full unbundling (sometimes referred to as access to raw copper) occurs when a new entrant leases the copper pairs, connecting a subscriber to the MDF, by the incumbent.
 - The new entrant takes total control of the copper pairs and can provide subscribers with all services including voice.
 - The incumbent still maintains ownership of the unbundled loop and is responsible for maintaining it.
- Line sharing allows the incumbent to continue to provide voice service while the competitor provides broadband (xDSL) services on the same copper pair.
 - Consumers can obtain broadband service from the most competitive provider without installing a second line.
 - A primary difficulty of line sharing has to do with technical interface problems such as interference.

- Bitstream access provides ISPs with a wholesale xDSL product from the incumbent.
 - the incumbent maintains control over the subscriber's line but allocates spectrum to an access seeker.
 - Unlike full unbundling and line sharing, the access seekers can only supply the services that the incumbent designates.
 - some countries that do not view bitstream access as coming within the scope of unbundling policy. It is treated merely as interconnection arrangement.

- Unbundling, as a policy, is built on the recognition that incumbent carriers have a dominant position in the provision of local communication access by virtue of their control over the local loop.
 - The local loop is often considered as an essential facility that cannot be economically replicated by alternative operators.
- According to one set of views unbundling reduces the incentives for network owners to make risky investments in new facilities or platforms because they allow entrant-arbitrageurs to drive prices quickly to costs if the platform investment is successful.
 - Often LLU is excluded from the purview of LLU

- Is the local loop underutilized ?
- Can it be shared ?
- Should sharing be mandated ?
 - Local Loop Unbundling

Wireline subscribers (millions)

	Urban	Rural	Total
Mar-09	27.38	10.58	37.96
Mar-08	27.78	11.64	39.42
Mar-07	28.19	12.56	40.75
Mar-06	35.49	14.68	50.18
Mar-05	32.74	13.45	46.2

Wireline subscribers of BSNL and MTNL

(millions)	Mar -09	Mar-08	Mar-07	Mar-06	Mar-05
BSNL	29.34	31.55	33.74	37.51	37.04
MTNL	3.57	3.68	3.73	3.87	4.06
Total (all operators)	37.96	39.42	40.75	50.18	46.19

Internet and Broadband

Quarter ending	Dec 2007	Dec 2008	Dec 2009
Subscriber's Base (in million)			
Internet	10.36	12.85	15.24
Of which Broadband Connections (>=256 Kbps download speed)	3.13	5.52	7.82
Wireless Internet *(Mobile data services)	57.83	101.10	149.03
Minutes of Use (Dialup Internet) (MOU/ subs/month)	210	214.23	324
ARPU (Dialup Internet) (Rs/subs/month)	210	221.97	

ISPs

ISP	Subs (million)	Share
BSNL	8.52	56%
MTNL	2.26	15%
Bharti	1.25	8%
Reliance	1.16	8%
Grand Total	15.24	100%

MTNL

	2006-07	2007-08	2008-09	2009-10
(000s)	FY	FY	FY	Q3
Wireline (incl. WLL-F)	3,802	3,807	3,695	3,618
- Delhi	1,598	1,602	1,556	1,566
- Mumbai	2,204	2,205	2,139	2,052
Internet connections				
- Broadband	469	571	696	768
Internet	1,293	1,356	1,429	1,491
Total	1,763	1,927	2,124	2,259

Subscriber Base of Data Services

Dec 2009

	millions	share
Bharti	66.99	45%
BSNL	35.08	24%
Vodafone	27.75	19%
Idea	10.54	7%
Total	149.03	100%

Chart 1.14: Internet Access (including Broadband)
Technologies & Market Share (Dec 2009)

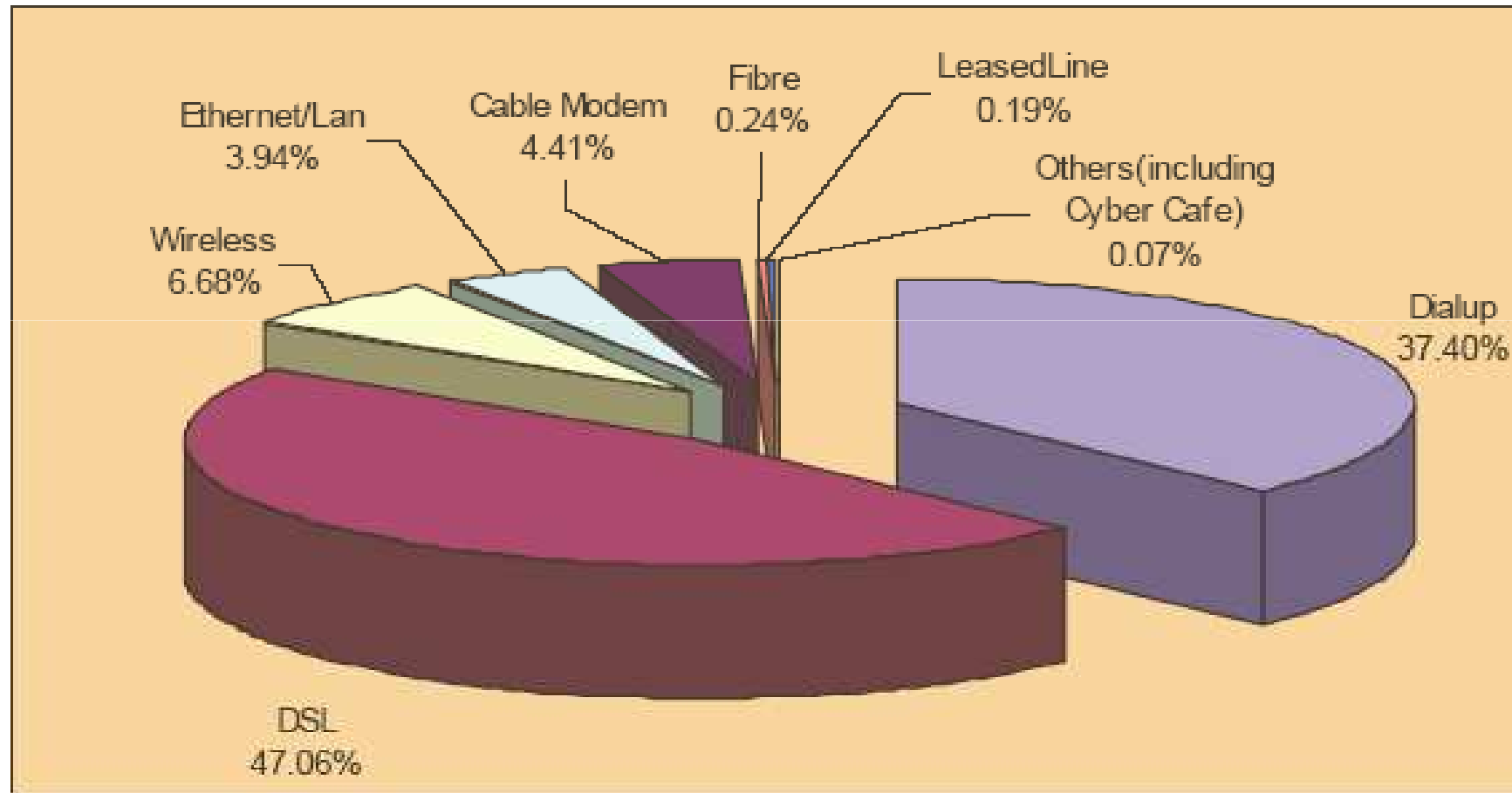
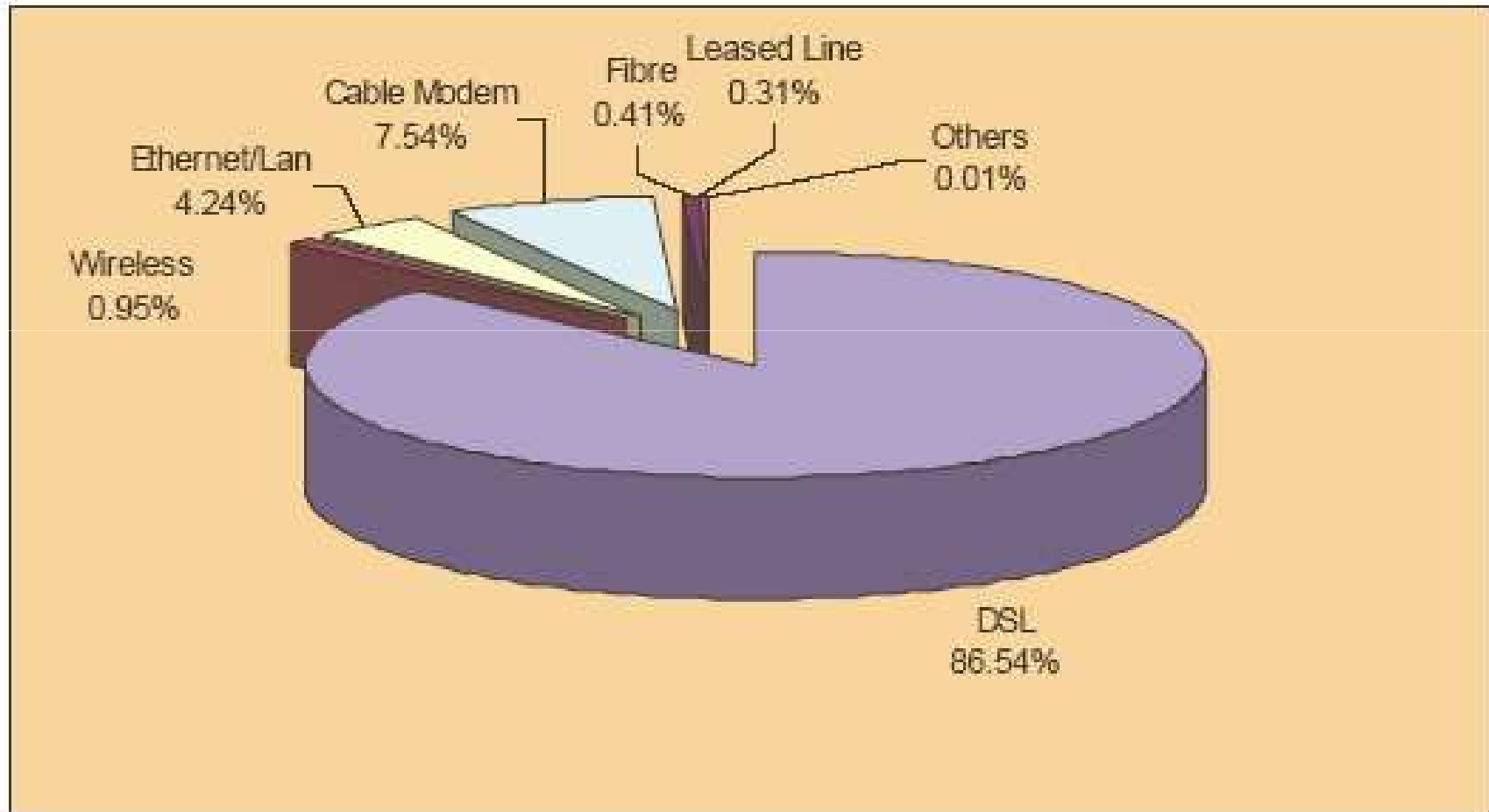


Chart 1.15: Broadband Access - Technologies & Market Share



Name of ISP		BSNL	MTNL	TOTAL	Share
Dialup		3,784,906	1,490,031	5,700,161	93%
Leased Li	<256Kb	597	27	5,217	
	>256Kb	2,416	159	24,346	
DSL	<256Kb	0	0	404,255	0%
	>256Kb	4,730,260	768,037	6,768,726	81%
Cable Mod	<256Kb			82,124	
	>256Kb			589,639	
Ethernet L	<256Kb			268,956	
	>256Kb			332,315	
Wireless	<256Kb			943,199	
	>256Kb			74,565	
Total	<256Kb	597	27	1,709,238	0%
	>256Kb	4,732,676	768,196	7,822,483	70%
Cyber cafe	Franch ise	3,442		7,490	
	Non franch		30	2,083	
G. Total		4,736,715	768,253	9,541,294	58%

Broadband Access Potential

TRAI Reports

	Millions
Total copper loops (MTNL/BSNL)	40
Rural loops	14
Urban loops	26
Broadbandable	
TRAI (30%)	8
CII	16.5
Cable modem	
Total connections	71
Broadbandable	7

Broadband India (April 29, 2004)

Recommendation

- except the incumbents BSNL and MTNL, all stakeholders agree that non-discriminatory local loop access is required.
- the reasons cited by BSNL and MTNL for not supporting local loop unbundling are the complications that this type of regime has introduced in other countries, without seeming to benefit the end-consumer, as well as the low teledensity levels in India.
- BSNL, has successfully run trials of a modified version of local loop unbundling through commercial franchising arrangements in some cities
 - Franchise model does not provide the much needed competition that ensures that DSL services grow quickly and in a way that is most beneficial to consumers.

Shared Unbundling

- nondiscriminatory local loop unbundling (LLU) should be executed in a time bound manner for both Shared Unbundling and Bit Stream Access.
- To continue to promote roll-out of new broadband-capable infrastructure, LLU will be implemented only for lines that are five years old from 2004-2005.
 - The same principle shall apply for all installations in the future once they complete five years.
- The Authority will undertake the LLU program in a time bound phased manner, with each phase being 3 months.
 - For those exchanges in which the LL Operators choose not to provide Bit Stream Access (or are unable to provide) in the first phase of the LLU program, LL Operators should be mandated to provide Shared Unbundling and collocation facilities.
 - The Authority will review the implementation during each phase and take action as appropriate to achieve the objectives.

Broadband Roadmap for Inclusive Growth 2009-2014 (CII)

- the significant challenge is to first leverage the existing infrastructure to deploy broadband.
- In all, there are 16.45 million unutilized DSL capable wireline connections which are now reaching households and enterprise segment
- Recommendations.
 - Bundle broadband with existing wire line connections to increase the uptake of broadband.
 - Infrastructure created with public money to be made sharable amongst all players in an equitable manner.
 - Adoption of the franchise model by incumbent would provide equal opportunity to the operators to act like a franchisee and work through PPPs (Public Private Partnerships)

LLU Implementation

- LLU requires close co-operation between access seekers and incumbents who are also competitors.
 - Because such co-operation is difficult to impose through regulation, self-regulatory frameworks, which encourage all market players to reach agreement on the different technical and commercial aspects of LLU, are important.
 - industry based multilateral forum for resolving technical and operational issues
- In some cases, the extent of conflicting interests in LLU is too great to be able to rely on a voluntary regulatory mechanism in the market. Therefore, adequate arbitration mechanisms are also critical for implementation of LLU.

OECD review of Unbundling

- Policy makers in 28 of the 30 OECD markets have adopted unbundling as a way to introduce competition into broadband markets.
 - The decision to unbundle is usually seen as a “second-best” alternative to extensive infrastructure-based competition
- most countries still rely on unbundling to ensure broadband competition.
 - Even countries with both cable and DSL broadband networks have implemented unbundling and continue to rely on the increased competition it allows.

- In contrast, other countries with infrastructure competition have taken a more targeted approach to unbundling.
 - For example, the United States still requires incumbent telephone companies to unbundle some types of legacy copper loops for competitive operators, but has capped unbundling in areas where the presence of unbundled network elements suggests that facilities based competition is viable.
 - The United States has limited the obligation to unbundle access to next-generation networks based in part on the greater subscribership to cable modem service, as well as policy makers' concerns about possible investment disincentives.
- unbundling has been very successful in a number of OECD countries and less successful in others.

Operational/functional/structural separation

- Some policy makers have suggested that separating the ownership of infrastructure and the provision of services is one method for improving broadband competition in the economy.
 - Supporters of structural separation argue that it would bring the incumbent's incentives into alignment with a non-integrated carrier. This could guarantee non-discriminatory access to (components of) the incumbent's networks and promote competitiveness
 - Opponents of separation suggest that it would remove incentives to invest in new networks and that it would be costly to implement.
- Policy makers in some OECD countries have adopted functional separation while other governments have strongly opposed it.