Regulatory framework for FTTH

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Why FTTH ?

- Anatomy of body has increased a few centimeters to generate data;
- Moving from Video to Virtual Reality;
- 5G/Small cells
- Smart cities

Important extracts from NTP 12

- To revise the existing broadband download speed of 256 Kbps to 512 Kbps and subsequently to 2 Mbps by 2015 and higher speeds of at least 100 Mbps thereafter;

- To encourage Fibre To The Home (FTTH) with enabling guidelines and policies, favouring fast transformation of cities and towns into Always Connected society;

- To establish appropriate institutional framework to coordinate with different government departments/agencies for laying and upkeep of telecom cables including Optical Fibre Cables for rapid expansion of broadband in the country.

Growth projections by CISCO

- Busy hour Internet traffic will grow 7.2-fold from 2015 to 2020, a compound annual growth rate of 48%
- Internet traffic will be 135 Petabytes per day in 2020, up from 30 Petabytes per day in 2015
- Internet traffic will reach 3 Gigabytes per capita in 2020, up from 1 Gigabytes per capita in 2015
- Busy hour Internet traffic will increase 7.2-fold by 2020 and will reach 58 Tbps.

Constraints

- High Capital investment required
- RoW issues
- Policy for fibre cut
- Demand side issues:
  - Attractiveness (availability of relevant services)
  - Affordability
  - Awareness for adoption of FTTH

End to End CAPEX for Access Network of FTTH

Sr No.	Particulars	Captive FTTH					
		Flat Bed or Single Family Unit (SFU)			High Rise or Multiple Dwelling Unit (MDU)		
		Per Home pass (Rs.)	Utilisation Factor	Per Connected Home (Rs.)	Per Home pass (Rs.)	Utilisation Factor	Per Connected Home (Rs.)
1	**Control Office**						
	Optical Line Terminal (GPON - OLT)	1,800	50%	3,600	1,800	50%	3,600
	Control Office and other equipments (Power Plant, EMS, Anti -Static Flooring, Generator,Access Control, Fire Fighting, Air Conditioning, Interior, Racks, UPS etc)	250	50%	500	250	50%	500
2	**Out Side Plant** Per mtr cost (Including Right Of Way) 1200 Per Home Cost (Including ROW)= Per Mtr Cost* 1.5/5 Mtr per user (For High Rise@ 1.5 mtr per user and for Flat Bed @5mtr per user)	6,000	40%	15,000	1,800	30%	6,000
3	**In Side Plant (Material and Services) - OSP Manhole to Splitter** (Fibre , Duct , Splitter, Conduit, G I Pipe, Fibre Management Unit IP 65 Box , Splitter Box etc.)	1,500	100%	1,500	1,500	30%	5,000
	Sub Total-Total fixed network cost	**9,550**		**20,600**	**5,350**		**15,100**
4	**Customer Premises Box**						
	ONT	5,600	100%	5,600	5,600	100%	5,600
	Power Connection, CATV Cabling etc.	400	100%	400	400	100%	400
	Total Tangible Cost	15,550		26,600	11,350		21,100
5	Interest cost on fixed network upto the peak utilisation	1,146		2,472	642		1,812
6	Project Planning and Coordination (10% of tangible project Cost)	1,244		2,128	908		1,688
	Cost per Connected Home	**17,940**		**31,200**	**12,900**		**24,600**

End to End OPEX for Access Network of FTTH

		Annual Opex per Home					
	Network Opex	**Flat Bed**			**High Rise or MDU**		
1	Duct and Fiber	1.5%	16,500	248	2.0%	11,000	220
2	Electronics and support Infra	8.0%	10,100	808	8.0%	10,100	808
3	Annual Maintenance Opex per Annum			**1,056**			**1,028**
4	Opex for Fault Repair and L1 Support			550			550
5	(3) + (4)			1,606			1,578
6	Annual cost of Overheads per Annum			400			400
7	Approximate cost per subscriber per Annum for Internet Leased Line			3000			3000
8	**Total Opex per Annum**			**5,006**			**4,978**
9	Opex per month			417			415

Regulatory/Licensing Interventions

- Active Infrastructure sharing has been allowed (11th Feb 2016)
- RoW rules are notified
- Pilot project at Deoghar in Jharkhand for Common Duct policy
- Introduction of concept of PDOs dated 09th March 2017;
- BharatNet project

Thank You

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