



Next Stop-Rural India

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TELECOM TOWERS

As of March 31, 2009, the total number of towers in the country was approximately 2,00,000. Out of these, 102000 towers were owned by operator driven joint ventures, 71,000 were owned by tower companies set up by operators, 60,000 were owned by operators, and 10,000 were owned by independent tower companies.

Growth Catalysts

Aggressive roll-out plans of infrastructure leasing companies and telecom operators are the biggest growth drivers. Standalone tower companies and telecom operators (both existing and new entrants) have charted out aggressive telecom towers roll-out plans on the back of sound fundamentals of the telecom industry. The regional operator Aircel is aggressively rolling out a pan-India net work. Its tower requirements will

be met by its own towers, and towers from carrier-owned tower companies as well independent tower companies. Majority demand for towers, generated by established carriers is expected to come from BSNL and Aircel. BCOM provides GSM services in 11 circles and has lined up full-scale pan-India GSM plans. Hence, it will need a high number of ready tower slots for its GSM rollout and will definitely outsource a section of its demand to independent tower companies.

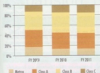
Telecom Regulatory Authority of India (TRAI) has set period specific rollout targets for the new licensees. Failure to achieve these targets will lead to these operators being severely penalized. The new entrants also face an already crowded telecom market with intense competition. Thus, they need their tower infrastructure to be in place over a short period of time to meet these requirements. The stiff price-war

that has begun post their entry, have necessitated leaner capex models, to enable operators run their operations profitably. All these factors would entail complete outsourcing of tower requirement to tower companies.

Another important factor driving growth is the need to improve services on the back of intensifying competition. With increasing number of operators and the likely introduction of MNP and MVNO, consumers would be more demanding in terms of Quality of Services, thus coercing operators to provide better and wider coverage. All these above-mentioned factors would lead to a rapid growth of telecom towers market in India.

The wireless subscriber base is swelling by an average 12-14 million every month. The estimated subscriber base growth and change in all India subscriber mix (based on circle cluster)

is as follows:



In order to enjoy the full benefits of this growth in demand of telephony, the wireless operators in India have heavily invested in the expansion of current infrastructure and installation of new networks. The investments are targeted mainly toward setting up new cell sites to support 2G-centric voice services and next-generation technologies such as 3G and Mobile WiMAX.

Introduction of new technologies like 3G and WiMAX, is another important catalyst. Using 3G technology, operators are likely to gradually step up the peak data transfer speeds offered to consumers. However, the present day hardware cannot transmit data to distant base stations beyond certified limits. Hence, the higher transmission frequency (2,100MHz) and the greater data rate that operators would like to offer will necessitate more cell sites for 3G coverage. The high 3G license fees that the operators are expected to cough up will make sharing an inevitable and profitable option for the operators to start their rollouts. As mobile wireless data services continue to proliferate, the tower companies will become even more critical for operators to deliver high throughput volumes.

Besides, the all-India wireless penetration is around 34 percent, while the same is just

Project Demand from Operators for Cell Sites Till End of 2012

	FY 09	FY 10	FY 11	FY 12
Other	66	80	100	115
Vodafone	32	60	82	91
BSNL (including 3G)	45	67	88	102
RCOM	45	50	70	80
Wipro	21	41	57	69
TTL (including GSM)	17	32	46	61
Aircel	15	30	48	68
Others	10	17	23	30
New Operators	0	25	70	120
3G Operators	0	10	54	90

13 percent in rural India, implying a huge untapped market. The current rural ARPU is estimated to be around Rs. 166. For an Operator, the lower per-subscriber profitability and higher cost of reaching their customers justify the need for infrastructure sharing in the rural areas. The new rural customers are being added at progressively lower ARPU. The returns generally expected by operators can be sustained in a few areas only. Shared Infrastructure helps the operators to increase and sustain their profitability in a cost-effective way.

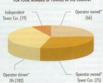
Popular Trends

In spite of the slowdown phase, the tower market in India did not shrink. The reason being, that new licensees are providing their own towers, since at many locations the existing towers of other operators may not be

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has set period specific rollout targets for the new licensees. Failure to achieve these targets will lead to these operators being severely penalized. The new entrants also face an already crowded telecom market with intense competition.

BREAK UP OF OWNERSHIP FOR TOTAL NUMBER OF TOWERS IN THE COUNTRY



* Operator owned consists of portfolio of ISM, Aircel, BSNL etc.



Green Crusaders

GTL

The eco-friendly solutions with the potential to resolve rising power and fuel expenses identified by the GTL are: use of CNG/LPG and bio-diesel based power generator sets; alternate energy sources like fuel cells and eco-friendly batteries; and use of bio-fuels/waste cooking fuels to power generators. The company is also planning to employ geothermal cooling methods at its cell sites. It has entered into a Memorandum of Understanding (MoU) with leading domestic as well as international technology providers to deploy these solutions.

Guppe

Guppe Telecom Infrastructure is an environment friendly company. On the infrastructure part, initiatives undertaken are: All the DGs comply with Central Pollution Control Board norms; using high capacity battery backup in order to reduce DG set running and hence controlled the emissions; installed solar power systems at some sites in Karnataka that are under trial with an aim at reducing the DG running at the sites. Upon successful completion of trials it may go for more of these sites; installed fuel catalyst in our 1000 DGs that result in reduction of pollutants.

Aster

Aster offers solar power systems and Hydrogen fuel Generators for cell sites based on customer demand, though we do not manufacture them. We have also started R&D in various green initiatives, especially that could reduce power / fuel consumption at telecom sites but these are at the initial stages now.

suitable for coverage. Another major factor is that during initial days of the cellular service provision, many operators made their towers for satisfying immediate demand only, and these towers are incapable of bearing another operator's infrastructure due to strength and height issues. However, the trend in the past couple of years is to design and construct towers for sharing at least two more operator's requirements. The extra investments made in many such cases are more than compensated by monthly revenue due to sharing.

Some of the operators are even upgrading their existing towers and foundations so that they can be shared with others or used for augmentation of their own network. Another development in these directions is introduction of multiport RF antennae, so that even antennae can be shared, thereby reducing the load on the tower.

Presently, India is witnessing two novel solutions in telecom infrastructure space which are amongst the first in the world. The first is the emerging concept of sharing of passive telecom infrastructure for the in-building coverage of wireless signals. Providing in-building solutions has gained an increasing importance amongst telcos in order to differentiate service offerings. Sharing of passive infrastructure

presents a compelling business case for independent infra-owning companies like Indus, Reliance Infratel, and Bharti Infratel, and in-turn for services companies. Another emerging concept is the use of pre-cast concrete towers and poles in place of conventional steel structures. Use of pre-cast structures reduces the lead time and thus results in faster deployments of telecom infrastructure.

What's Worrying the Players?

There are several concerns which are creating stumbling blocks in the growth of tower industry. The perennial delays in getting electricity connections at tower sites are a real hurdle. Barring a few circles, getting a connection at the site is very expensive because of the various state government policies. Getting a NOC from local administration is another difficult and long-drawn out process. Besides, the high capital cost of alternative sources of energy such as solar energy acts as a deterrent to adopting these for powering the tower sites.

The government could lead a helping hand by actively engaging with the industry. Tower companies could be given the status and associated benefits of being Infrastructure Companies. Certain measures like preferential allotment of space for site build-up on

government lands, hassle-free single window site approvals, priority provisioning of electricity connection to sites, and policy support with regard to usage of alternative sources of power could go a long way into sustaining growth in the telecom towers market.

Future Calls

The outlook for telecom turnkey roll-out services continues to remain robust in view of factors like high growth rate of subscribers, on-track capex plan of all major telcos, and additional opportunities emanating from new telecom operators. Infrastructure roll-out plan of existing and new operators looks very much intact on the back of opportunities provided by continued healthy subscriber addition and untapped rural market. In addition, fall in prices of key inputs (RFS, microwave, steel, copper, lead, etc.) is acting as an incentive for telecom companies to continue with their infrastructure roll-out plans, since it results in lower capex per site.

Of course it will come to a saturation stage as far as number of cell sites are concerned, the remaining area for growth being the rural market. Once coverage is done on a pan-India basis, further growth shall be only based on customer density per sq.km. ■