

# Mr. Kumar Chakravarthy, featured in Voice & Data's In building solution story

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## ■ WIRELESS SOLUTIONS ■

# Strong Within

**With increase in indoor mobile traffic and data usage, operators are exploring the neutral host model of using infrastructure on cost-sharing basis for enhancing in-premises connectivity**

**M**any a times every mobile subscriber would have experienced a situation where he/she would have had to run out of a meeting room or basement to make and receive calls due to poor network inside. The very fact that phones are no longer meant to stay connected on the roads, and increasingly being used inside offices and homes is an indication towards the need of improving the in-premises wireless infrastructure.

Of all the mobile calls originating and terminating, over 60% are indoor. Traditionally, in India mobile service providers have been handling the in-building connectivity, but within an increased emphasis on quality of service India too is experimenting with a 'neutral host' model where a third party will pay for the system and then 'lease' the access rights to a carrier or carriers.

Ubico Networks, a carrier neutral in-premise telecom solutions company providing active infrastructure on a cost sharing model, is in talks with some of the telecom giants in the country. The company offers end-to-end solution from acquiring the right of way for in-premise, planning, deploying, and maintaining the telecom solutions infrastructure and spread its wings to six metros, including Delhi, Mumbai, and Bengaluru. The others that may be in the race for such a business of providing host services are Quippo and the Bengaluru based Kavveri Telecom Infrastructure that has recently signed a ten year contract with an operator, whose name the company refuses to disclose. Kavveri Telecom plans to invest Rs 100 crore over a

period of two years to set up in-building telecom infrastructure in over 200 buildings.

Another player, GTL infrastructure has wired thirty odd buildings.

A 'neutral host provider' sets up infrastructure for multiple service providers. It charges rent from the telecom service providers for providing in-building coverage solution (IBS) which offers plug-and-play service to operators. The hosts identify high footfall areas, proactively acquire sites and seek exclusive right of way to the building.

"Enhanced in-premises coverage has become crucial for the service providers as the indoor mobile traffic has gone up remarkably, it is interesting that many families have replaced their fixedline phones with mobile phones," says Udit Mehrotra, director, Ubico Networks. The idea is to provide ubiquitous mobile connectivity, he adds.

### Why buy IBS from hosts?

- Greater connectivity within buildings and campuses, thus better customer satisfaction, likely to increase stickiness to an operator, especially in the MNP era
- Likely to drive greater revenue from in-premises mobile clients (increased Indoor usage due to better quality of service)
- Lead to better utilization of existing resources
- No capex required, thus better return on investments
- Cost sharing leads to lesser cost of servicing these in-premise customers satisfactorily
- Operator can focus on core competency (acquisition and retention of customers)
- Smaller network management team required

John Spindler, director, product management, ADC Telecommunications, says, "By deploying an in-building solution and creating an indoor cellsite, wireless traffic can be off-loaded from the outdoor macro-network, thereby freeing up capacity and ensuring indoor and outdoor users are not contending for the same capacity. In addition, the use of in-building wireless solutions provides pinpoint coverage and capacity, efficiently delivering service where it's needed to all users within a facility."

### In-building Potential

Across the globe, the operators are focusing on QoS, hence comes the role of in-building wireless solutions. Asia Pacific is the largest in-building wireless market in the world. ABI Research has estimated the total in-building revenue in Asia Pacific in 2009, at a value greater than \$2 bn. However, there are no specific numbers available regarding the size of the market in India.

The global market for this segment continues to expand, with a CAGR forecast of approximately 20%. This will continue due to the continuing increase in wireless usage penetration, the rollout of 3G and 4G networks at higher frequencies (the higher the frequency, the tougher it is to penetrate a building from the outside), and the expansion of data applications which require increasing amounts of bandwidth.

Operators in India are increasing their investment in in-building solutions as they invest in 3G and 4G technology. Again, while the market has largely been price driven in the past, operators are increasingly more open



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to solutions which—while they may be a bit more costly—offer higher performance to support 3G and 4G.

At present in India the leading operators do not sound too enthusiastic about this model. They feel they are competent to handle their within the premises connectivity. The maddening race to acquire maximum subscribers, is likely to attract them to this model.

Atul Charturvedi, COO, Idea Cellular says, “The big operators are already very conscious about the consumer satisfaction, they themselves are proactively working towards in-building connectivity, and we always share this kind of infrastructure as well. I do not get help from this kind of a model, but this can really work for a new entrant in the market who have to compete with the existing players.”

According to Tata Teleservices’ senior VP and head, corporate business development, Sukanta Dey, “This new concept of plug-and-play facility will help new telecom service providers to significantly reduce their time to market as they need to roll out fast and also they will be able to escape the capex on the in-building signal enhancement initiatives.”

Kumar Chakravarthy, head, in-building business, GTL Infrastructure agrees, “For the new operators first focus will be building their macro network. In that case, buying services from a host is the best option rather than just focusing on the macro network and do nothing about in-building connectivity,” he says.

Besides there are a large number of enterprises, and such a model makes sense. “For an enterprise, they certainly would have one system go at once, rather than one operator doing it time and again. Certainly there are issues of speed and convenience that argues for carriers partnering amongst themselves,” says AK Bhargava, PGM, MTNL.

The in-building wireless market definitely seems bullish. Vendors and integrators have started customizing their products and services around specific verticals such as healthcare,

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—Udit Mehrotra, director, Ubico Networks

office/multi-tenant buildings, hospitality, universities, stadiums, and airports.

### Femtocells vs DAS

The femtocell can ensure both coverage and capacity in a small venue, thus enabling wireline displacement. However, they do not scale well in terms of covering larger venues, and there are various technical challenges if you attempt to deploy multiple femtocells in a facility. Femtocells are really not competing with distributed antenna systems (DAS), as the markets they address are different.

### Quality Concerns

The industry feels in-building solutions will be key to ensuring QoS requirements are met, particularly for emerging data services.

“And with mobile number portability coming, it will be more difficult to keep users from ‘churning’, and in-building solutions can be used as a means of enhancing service and retaining users,” says Spindler of ADC Telecommunications.

Bhargava says MNP will keep the operators on their toes. Trai’s been emphasizing on consumer satisfaction. In such a scenario, in-building

wireless solutions can help the operators retain their subscribers.

“Data consumes more BTS capacity, once 3G comes in fully, the data usage is likely to see a fillip, then IBWS will play an important role,” says Mehrotra.

3G will usher in an era of increased data usage. In case of only voice services, a call drop does not cause a major loss to the customer, but things will change when people start using their mobiles to access data.

“When a call drops, the subscriber can ring up again, but while downloading data, the network cracks, the user will have to begin all over again. This is likely to give bill-shocks to the user and definitely can cause loss of subscribers to the operator,” Chakravarthy of GTL infrastructure says.

This market is a function of urbanization. Also the competition is not very intense as this requires high investment and pace of RoI is slow. Most of the solution providers are right now proactively acquiring sites and wiring up the building as proof of concept to sell the idea to the telecom biggies in the country. India is fast developing and there is a huge market in the tier-1 and tier-2 cities waiting to be transformed thus there seems to be a rich opportunity for these hosts.

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