

***□ In an interview with tele.net, Dr. Vikram Saksena, executive vice president and chief technology officer highlighted the company's plans in the country and its growth strategy. Excerpts..***

**What technological challenges have you faced in the past two years, since you've been associated with Tellabs?**

We are driving a very strong focus on mobile internet, which implies to us an explosion in devices and applications in 3G and 4G networks. This evolution will be driving the shift from a voice centric network to data centric network. Earlier, wireless networks were driven by voice and SMS. But, more recently, because of the explosion in devices like smart phones and iPhones, android applications have gone up. For instance, more than seven billion applications are being downloaded from the Apple store itself today. The industry's focus has shifted from delivering just pipes and bandwidth to delivering applications. Because what end users care for at the end of the day is applications and not just having higher speed connections. This shift in paradigm excites us, and we are investing in technologies and platforms that are geared at delivering a rich user experience over the smart devices.

**Is India prepared for 3G and 4G technology?**

We have a very sophisticated consumer base in India. Their needs and demands are no different from their western counterpart, since the technology gap has shrunk between India and the rest of the world.

**What kind of issues would 3G services bring into the market?**

If you look at various devices and smart phones, they have become very much like PCs. They are very sophisticated, and come with a high powered CPU and memory. They are very much capable of running applications. All these features entail the same set of problems, which were earlier associated with PCs. Security is definitely a big concern, because there are a lot of attacks, both originating and coming towards the device. Secondly, the hunger for applications must be catered to. The PC model evolved, because more and more applications were created. The same thing is happening on the mobile networks. Newer applications, especially videos would require 3G type infrastructure, which would further drive more data-centric products. All the services which were earlier built on wired broadband will happen on wireless networks. That

has its own set of challenges, since wireless spectrum and bandwidth do not follow Moore's law.

**What kind of technologies is Tellabs focusing on developing vis-à-vis the 3G network?**

We are developing technologies for video delivery and for providing targeted services, which can also be called push services. Through targeted services, the operator will be able to give more personalised service to its consumers. For instance, if a user arrives in Mumbai and asks for directions to an Italian restaurant, then his preference for Italian food would get stored in the network history. And next time, when the user arrives in Mumbai, the operator would be in a position to push related services to him.

**What infrastructure investments has Tellabs made in the recent past?**

We acquired a company called WiChorus about a year back that worked on the SmartCore platform, which is a layer-7 Operating System. It enables you to access the application layer and track all the transactions (analytics) which are happening. This helps in creating a user preference database. The software which gathers these analytics and creates a subscriber profile was developed by us.

**Which operators in India do you cater to?**

We cater to a lot of tier-I operators, such as Bharti, Bharat Sanchar Nigam Limited (BSNL) and Power Grid Corporation of India Limited (PGCIL). In Sri Lanka, we are working with Sri Lanka Telecom.

**How has your experience been with Bharti, and what services have you been offering to the operator?**

We have helped Bharti with their optical networking. All these applications ultimately boil down to traffic which is to be carried in fibre. Operators need equipment with intelligence, which should power this fibre.

**Can you mention a few technologies that Tellabs thinks would be relevant to the Indian telecom market at this point in time?**

Currently, we are focusing on four technologies. First is the SmartCore platform, which is used to build a packet core in 3G and 4G network. It is the base layer and provides fundamental intelligence in a network. Second is analytics. They are transactions, which are used in creating a subscriber's preference portfolio. Enhanced codex is another technique, which is likely to become popular. It is a coding technique in the network, which is used for videos. It helps in

optimising and adjusting the video to the constantly changing radio band width. Mobile Security will also be a concern, and we are looking into that. Besides these, the trends in the Indian market vis-à-vis the international markets would more or less be the same. All consumers are looking for the same fundamental capabilities. Only the content might be different.

**Is there any definitive time frame within which, you think that the 3G services would become popular in the India?**

It will take three to five years for the services to mature. The technology is already there, but, there are scale problems. Lot of things will start early, but it will take time to reach masses, and that is primarily because the Indian market is so huge. For instance, 60 million subscribers on Verizon network in USA is a very big number, but here more than 100 million subscribers exist on Bharti.

**What strategy should the technology solution providers have for the future?**

The most important thing is to have the right technology, which can scale to the levels of the Indian market. In data, the scalability is very different from that on the voice side as there are huge overheads in terms of control planes and session set-up rates and so on. Plus, if you are delivering videos, and trying to catch intrusion, then the processing power goes up even more. In the end, it is the ability to scale in multiple dimensions that becomes important.

This is where the innovations and investments that we have made in technology would help the Indian operators. We have a technology which is purpose-built for 4G and 3G networks, whereas others are taking older technology – from 2G – and are trying to grow it into 3G and 4G.

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