

BSNL enabling Digital India with Wi-Fi Strategy

India is a major power in the world both in terms of its population and contributions to telecoms. At the WBA Congress in New York, I had the privilege and pleasure to sit with Anupam Shrivastav, CMD, BSNL to discuss his views of where India is today with its broadband penetration and discuss the initiatives that BSNL is taking to address some of the challenges still in place. BSNL shared with us their strategy for network convergence, the role played by Wi-Fi and its technology partners as well as hot topics such as smart cities. Enjoy!



Adlane Fellah, Senior Analyst, Maravedis in conversation with Anupam Shrivastava, Chairman & Managing Director, BSNL at Wireless Global Congress 2017 in New York



Adlane: Could share with us what is the overall situation of broadband in India today?

Anupam Shrivastava: Yes. India is a big country with a large population. India has about 500 million broadband customers at this point of time which represents a mere 50% broadband penetration. This is a cause of concern for the government of India which BSNL is eager to address.

Adlane: What role is BSNL playing in resolving the digital divide?

Anupam: Well the digital divide currently is driven by the government's project to fill up that divide. The government has come up with a project which is called Digital India aimed at connecting about 250,000 bigger villages with optical fiber. The result will be to provide a capacity ranging between 100 Mbps to about 1 Gbps at each end point in these rural areas.

The phase one of that project is already complete where BSNL played its part in laying the optical fiber and contributed to 85% of the connectivity. We have laid about 200,000 kilometers of optical fiber. This country-wide backbone represents the fabric around which the digital divide is being bridged in India, complemented with ubiquitous low-cost Wi-Fi as we will discuss later.

Talking about digital divide, let me add here that there are three kinds of digital divide. One is intra-national digital divide. That means the digital divide that exists between the rural and urban

areas. Another is the international digital divide between respective countries.

There's also a third digital divide which is the inter-generational digital divide. And that is also has to be bridged, and BSNL is playing an important role there as well. So that we want our younger generation to adopt to the technology and older generation also to adopt to the technology and move forward.

Adlane: What can you tell us about your overall Wi-Fi initiative?

Anupam: Well, Wi-Fi in BSNL and in India is going forward quite well. It's a technology which we have adopted as an extension to the broadband connectivity. As mentioned earlier, BSNL is a wireline operator with the largest fiber network available with us.

Therefore, Wi-Fi comes as a natural choice to BSNL for providing the last 100-meter fixed and mobile broadband connectivity. We are integrating our mobile networks, 2G, 3G network with Wi-Fi network through a converged approach with the help of various vendors in India.

We have tied up with many Indian technology leaders such as Sterlite Tech and L&T to enable these Wi-Fi hotspots to also serve as 4G hotspots.

At this point of time we have already deployed about 15,000 Wi-Fi hotspots and aim to reach 100,000 within the next two years.

Adlane: Excellent. Now how are your customers responding to your Wi-Fi initiative?

Anupam: On one hand, Indian customers are now mobile data hungry. They use and need data on their smartphones, on their tablets in unprecedented ways; on the other hand, the level of competition has increased with the entry of new operators such as Reliance Jio which offers data at the highest speeds and lowest costs posing a serious challenge for mobile operators to monetize their infrastructure investments.

BSNL is trying to meet that challenge by rolling out the high-quality managed Wi-Fi hotspots with data rates equivalent or higher than the fastest 4G networks. The result is that customers are very satisfied with their experience and keep coming back for more.

We also welcome customers from other operators or from abroad to onboard on our hotspots which are deployed in popular tourist locations also and the response has been very positive so far.

Adlane: How has the Sterlite's Wi-Fi Service Management Platform enabled you to provide new services?

Anupam: The deployment helped us in many ways. **When a customer moves from 2G, 3G to these Wi-Fi hotspot area, their data session is transmitted seamlessly enabling a great customer experience**, which we take great pride in. In addition to this, once Wi-Fi hotspots are fully deployed and connected, various other services can be delivered and use cases supported. For example, smart city applications such as waste

management, e-Education and eHealth are only possible thanks to the low-cost broadband infrastructure we have put in place.

The government has recognized about 100 cities which are going to be candidates for smart City deployments and BSNL will play a central role in implementing the government's vision.

Adlane: Are you able to monetize Wi-Fi directly? Or is it part of a broader portfolio?

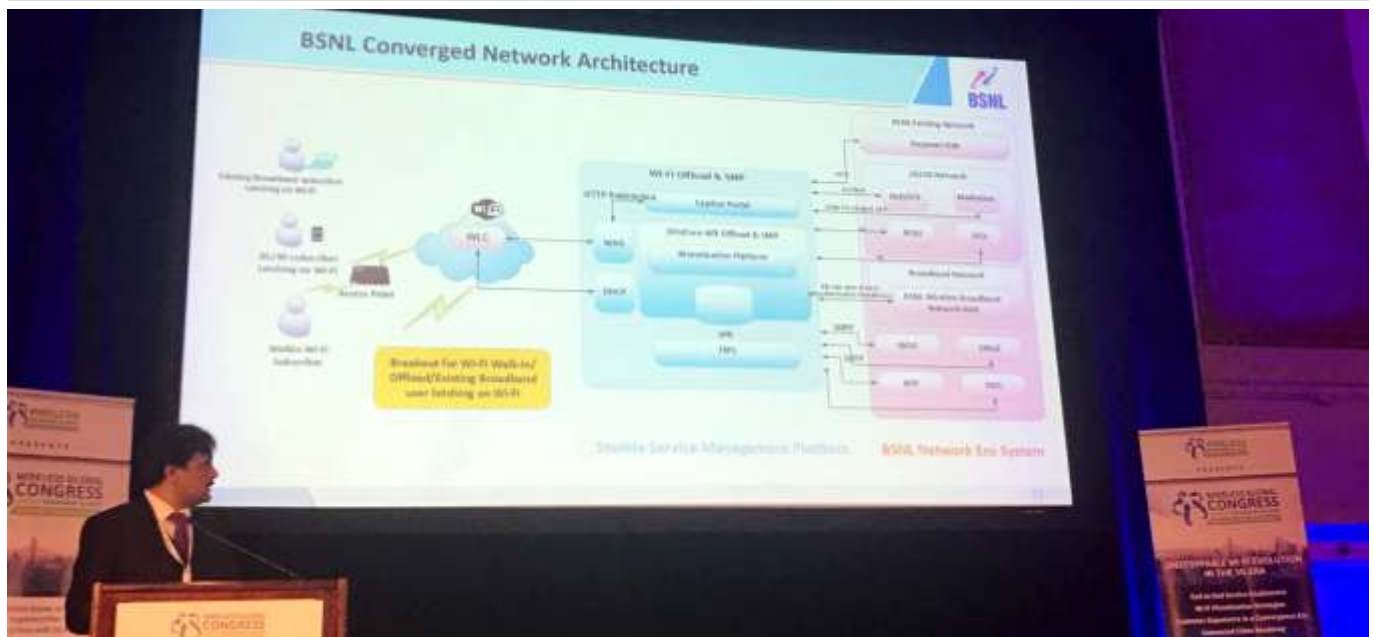
Anupam: Monetizing Wi-Fi is challenging because people assume that Wi-Fi comes free. But we have taken a number of successful initiatives to monetize W-Fi.

The first initiative was to establish a roaming agreement with Tata which in turn has roaming agreements with many operators in the world and a footprint of about 44 million hotspots. our partnership with Tata is one way to monetize Wi-Fi through data roaming packages. Similarly, we plan to adopt this Wi-Fi roaming model within India as well, where all those Wi-Fi hotspots will be shared amongst the operators.

We also monetize Wi-Fi by selling vouchers to use Wi-Fi. Once customers go to the Wi-Fi hotspot area, they buy that voucher, and use it on the spot. And thirdly we also engage in wholesale agreements to sell bulk bandwidth to public representatives who then provide free internet to villages for example. So, these are ways how we are able to monetize the Wi-Fi hotspot apart from advertising.

Customer Experience in a Convergence Era:

Anupam Shrivastava, Chairman & Managing Director, BSNL addressing Wireless Global Congress 2017 in New York



Adlane: Can you describe the role your technology partners played in enabling you to make your vision a reality?

Anupam: Absolutely. When we began the path towards Wi-Fi hotspot, we began with a model of revenue sharing to relieve us from the burden of CAPEX which represents a huge burden in this business.

With technology partners we started rolling out the Wi-Fi service on a revenue sharing model where the vendor assumed the responsibility of the CAPEX in exchange for a piece of the revenue. Having succeeded in that part, then we decided to do a Wi-Fi hotspot through our own CAPEX model with access points from various vendors.

Partners such as Sterlite and L&T came forward and started putting up Wi-Fi hotspot equipment for us with the latest technology from Cisco and Ruckus and others. So, partners have played a very, very important role in taking BSNL's Wi-Fi project forward and we are grateful to them.

Adlane: Now what challenges do you still see ahead to continue to implement the vision?

Anupam: We believe that Wi-Fi is always going to remain as a viable last 100-meter technology no matter what happens with LTE and 5G. We believe Wi-Fi is here to stay no matter what

generation of mobile version is implemented, even 5G. For BSNL, the challenge is to ensure we invest in the right technology to provide the best services at the most cost-effective level. We believe the combination of fiber + Wi-Fi is a winning one

Adlane: We're at this WBA conference and convergence is one central theme here. How important is convergence to BSNL? And what are you trying or hoping to get from the WBA Congress?

Anupam: Well convergence is happening in different areas. In India, there is convergence of technology, there is convergence of use cases, there is convergence of various companies putting their heads together.

Therefore, when we speak about convergence of technology, BSNL is already a converged operator both in terms of services that include fixed and mobile but also in terms of use of a great mix of wireline and wireless technologies. The WBA congress is an opportunity to engage with the leading stakeholders in the ecosystem, exchange views and ideas as well as influence the roadmap of the projects that the WBA is working on.

Adlane: And that's all, folks from WBA Congress in New York. Thank you.

Anupam: Thank you.

Anupam Shrivastava unveils Sterlite Tech - BSNL success story at Wireless Global Congress, 2017 in New York



(L to R) Akshat Joshi, Head - Wi-Fi Business, STL, Anupam Shrivastava, CMD, BSNL, LK Pathak, VP - Marketing, STL, RK Mittal, Director, BSNL