

Wi-Fi Outlook – Hotspots Moving Wild and Rural

As in the beginning of 2016 the country crossed the landmark milestone of 1 billion mobile customers, voice is likely to take a backseat now, and the focus shifts to broadband. In the telecom, both for voice as well as data, the customer access, i.e., the last-mile has always been a challenge, which has already been addressed as far as voice is concerned, but for data and especially in rural areas, the last-mile challenge remains. Wi-Fi is one solution that can help to mitigate the last-mile challenge for data and broadband in a cost-effective and speedy manner. Though everyone has been talking about Wi-Fi in India for the last few years, on ground Wi-Fi is yet to become ubiquitous as we would have liked it to be. But now its time has come, and outlook for 2016 appears to be *Wi-Fi everywhere*, moving to rural areas where it was not even talked about.

Some developments, facts, and predictions pertaining to Wi-Fi Hotspots:

- The first railway station to get Google Wi-Fi facility – Mumbai Central becomes the first railway station in the country to get free high-speed public Wi-Fi connectivity through Google. And after Mumbai Central, railway stations in Allahabad, Patna, Jaipur, and Ranchi will get Google's Wi-Fi coverage. As per the railways minister, Wi-Fi Hotspots are to come up at 400 railway stations in India.
- Techies turn three villages of Madhya Pradesh into free Wi-Fi zone – Inspired by Prime Minister Narendra Modi's *Digital India* initiative, four techies from Madhya Pradesh's Rajgarh district have turned three remote villages into first free Wi-Fi hamlets in the country without government funding.
- First hill station to provide high speed Wi-Fi – Mussoorie has be-

come the first hill station to provide high-speed Wi-Fi service through a private operator.

- First beach in India goes Wi-Fi– Malpe in Udipi district of Karnataka has become the first Indian beach to have Wi-Fi facility for tourists.
- First rural institution to have wide-area outdoor Wi-Fi surfing – Barefoot College, Tilonia, in Ajmer district, was converted into an outdoor Hotspot powered by managed service solution of Bluetown, DK, using existing infrastructure of BSNL.
- Facebook to act as an ISP across rural areas for local entrepreneurs– After the launch of *Free Basics* in India, social media platform Facebook is likely to wear the hat of an Internet service provider (ISP) across rural areas in the country. This is to enable entrepreneurs to offer Internet in small data packages – as low as ₹10 – to consumers. Consumers can access Internet through Wi-Fi Hotspots. It is understood that Facebook plans to offer Wi-Fi-enabled broadband services under their initiative Express Wi-Fi, which is currently in beta phase.
- Wi-Fi data offloading – Emerging opportunity for public Wi-Fi Hotspots to decongest the precious licensed radio spectrum.
- Li-Fi – A new cousin of Wi-Fi – Li-Fi – or light fidelity – is a wireless technology that makes use of visible light in place of radio waves to transmit data at terabits per second speeds – more than 100 times the speed of Wi-Fi. Li-Fi offers great promise to overcome the existing limitations of Wi-Fi.
- Wi-Fi HaLow – HaLow is a low-power, long-range version of the IEEE 802.11 Wi-Fi standard. HaLow is based on the Wi-Fi Alliance 802.11ah specification. HaLow extends into the 900 MHz band, a part of the



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electromagnetic radiation spectrum that is well-suited for small data payloads and low-power devices. This lower part of the spectrum is also able to penetrate walls and other physical barriers and promises better range than the 2.4 and 5-GHz Wi-Fi bands.

- Wi-Fi Hotspot as a managed service– BlueTown, an innovative rural telecom solution start-up is teaming up with PSUs and private telcos having interest in rural India to set up Hotspots on a managed service (OpEx) basis.
- Rural Wi-Fi wishlist of PSU stalwarts – The erstwhile CMDs of BSNL and BBNL are on record about their rural Wi-Fi plans (BSNL – 80,000, BBNL – 2.5 Lakh rural Hotspots)

Way Forward to Rural Wi-Fi – It Is All about Funding

As an innovative Wi-Fi Hotspot solution having low cost, low power, and low maintenance has already been developed and demonstrated by Bluetown; technical, operational, and maintenance issues have been taken care of. But to make a sustainable business case in rural India, innovation in funding is also required. Managed service route, which is a type of vendor-financing, can meet only the starting demand. Other options can

be MP/MLA funds, *panchayats*/corporations funding, micro-credit, and maybe CSR support. All these avenues put together also will still not be able to meet the requirements of 6.5 lakh villages in the country. Hence, the option of last resort, tailor-made for such exigencies, the USO fund needs to be tapped. Instead of committing all the USO kitty, present and future, for creation of backhaul network a (miniscule) part of this should also be gainfully utilized for creating Wi-Fi access network to achieve end-to-end broadband connectivity for rural masses. They say, “*Need support for rural connectivity? USO fund Hai Na (is there).*”