

## **Wireless Broadband in Nepal - Current Policy and Status**

Nepal is a landlocked country having 83% of the territory occupied by hills and mountains having inhabited by 53% of the total population of Nepal. Most of these places are remote and rural. Only 57% of the total population has access to at least one telephone. Rest of the population is deprived of telephone as well as internet access. Aerial distance in hills and mountains is far more less than the actual walking distance. To deploy copper wire or optical wire in these places is not feasible due to complex terrain structure. Hence, fiber to home concept which is blooming all over the world is hard to implement in the rural and remote part of the country like Nepal. Hence for this problem one of the viable solutions for achieving national goal of ICT is through wireless broadband access.

To foster telecom and ICT development in rural areas Nepal Government has adopted the policy of using appropriate information and communication technology for poverty reduction and development of the rural areas. Government has also decided to provide services pertaining to information and communication through the Community Centre once the target of Universal Service Access is met. The policy is clear about bringing effectiveness in the development activities as the rural development and construction of infrastructure, the governmental and non-governmental person and entity shall be caused to fully use the information and communication technology as Internet by developing necessary capacity up to the District and village level. Rural Telecommunication Development Fund (RTDF) can be used for the development of the rural telecom infrastructure.

In Nepal, term 'broadband' is not specifically defined in terms of bandwidth. The general understanding of broadband is "Always on access". Telecom policy does not bar any Internet Service Providers to use specific technologies for providing internet services. Hence, any ISPs can use any technologies to provide Internet services. Leading ISPs of Nepal like Mercantile, Worldlink, Vianet are using conventional dial up as well as cable internet and point to multipoint wireless access to provide Internet services. Currently ISPs are given permission to use frequencies in ISM bands on non-exclusive basis for providing point to multipoint internet services. Customers can get minimum data rate of 64kbps from these connections. Spectrum fee is levied for each pair of frequencies used.

The main problem faced by Nepal in getting high speed data rate broadband with the rest of the world is due to its inability to join the global consortium internet backbone of optical fiber. To connect with the international internet backbone, Nepal has to rely on satellite communication technologies (eg: VSAT) which is quite expensive in terms of bandwidth and charge. Recently established Nepal Internet Exchange (NPIX) has helped in saving this expensive international bandwidth in this aspect.

Regarding rural telecentres, a Pilot Project to install 15 rural telecentres in 15 different VDCs in 9 districts is underway being managed jointly by Ministry of Science and Technology, National Information Technology Center and the United Nations Development Program (UNDP). Each telecentre will provide telephony, Internet access etc. and the ultimate plan is to extend to 1,500 such sponsored telecentres. In addition to that, the UNDP funded Local Government Programme is setting up-to 30 District Info and Documentation Centers with a networked computer. The project is linked with social development approach to form Community Based Organizations.