

## UC Berkeley Partners With Dharamsala's AirJaldi

*Berkeley's TIER Research Group Has Joined Forces With Dharamsala's AirJaldi To Integrate Long Distance & Mesh Networks*

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Today AirJaldi - A leading player in community wireless mesh networks - is proud to announce its partnership with the University of California at Berkeley's Technology and Infrastructure for Emerging Regions (TIER) research group. TIER has a special research focus on 'WiLD', or WiFi-based Long Distance networks. TibTec has developed an internationally acclaimed wireless mesh network. Together TIER and TibTec will develop software solutions that link long distance and mesh networks. The partnership was announced at the AirJaldi Summit in Dharamsala.

'We honored to contribute to the ongoing success of the TibTec community WiFi network', said Professor Eric Brewer, Director of the TIER Research Group. 'We believe that our technology for high-bandwidth long-distance links will enable TibTec to connect more villages and bring connectivity to wider areas. Conversely, the TibTec mesh software will enable our partners to cover their villages with mesh networks and support for voice over IP'.

WiFi-based Long Distance (WiLD) networks are emerging as a potential low cost alternative to traditional connectivity solutions for rural regions. The primary cost gains arise from the use of very high-volume off-the-shelf 802.11 wireless cards intended for industrialized markets, but reused for long-distance links via high-gain directional antennas. Another important advantage is the low weight and volume, and the low power of these links, all of which reduce costs. One current use is for rural telemedicine with the Aravind Eye Hospital in Tamil Nadu, which handles about 2000 patient exams per month.

AirJaldi's community wireless mesh network in Dharamsala came to life in February 2005, following the deregulation for outdoor use of WiFi in India (28, January 2005). By the end of February 2005, the mesh had already connected 8 campuses. Extensive testing during February of 2005 showed that the hard mountainous terrain is most suitable for Mesh networking, as conventional point-to-multipoint networks, cannot overcome the line-of-sight limitations presented by the mountains. Mesh topology also offered much larger area coverage, while the 'self healing' nature of Mesh routing, proved to be essential in places where electricity supply is very erratic at best.

Both TIER and AirJaldi are committed to environmentally friendly technologies that include solar panels and non-intrusive installations.

### **About Technology and Infrastructure for Emerging Regions (TIER)**

<http://tier.cs.berkeley.edu/>

TIER is a research group at the University of California at Berkeley, investigating the design and deployment of new technologies for emerging regions. TIER focuses on developing a hardware/software infrastructure explicitly designed for the physical, political and economic realities of developing areas. It will build on existing research at Berkeley and elsewhere, but also face a number of new technical and organizational challenges. This project addresses these challenges with novel technology, while validating the impact of through real-world deployments.

### **About The AirJaldi Summit 2006**

<http://summit.airjaldi.com>

The AirJaldi Summit will address some of the ways that wireless solutions can be used to provide affordable Internet access in rural communities. The conference will focus on the advantages that wireless networks can provide, by enhancing the quality of education, governance and health-care, increasing economic development, and promoting cultural exchange. Special emphasis will be placed on identifying best practices for rapidly increasing connectivity for regions most in need.

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### **About AirJaldi**

AirJaldi is a wireless technologies incubator project located at the Tibetan Children's Villages School (TCV). AirJaldi's first project is the Dharamsala Community Wireless Mesh Network. The Mesh backbone includes over 30 nodes, all sharing a single radio channel. Broadband Internet services are provided to all mesh members. The total upstream Internet bandwidth available is 6Mbps. There are over 2000 computers connected to the Mesh, and about 500 have Internet access.

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You can also visit [www.airjaldi.com](http://www.airjaldi.com) for more information.