Successful Field Trials of aerostat based wireless communications system

Prof. Uday Desai of Electrical Engg. Deptt., IITB and Prof. Rajkumar S. Pant of Aerospace Engineering Department are spearheading a sponsored research project titled "*Long Distance Wireless Communication for Rural Connectivity, using a tethered Aerostat*", which has been sponsored by OneWorld South Asia, an NGO based in New Delhi, under their "*Ek-Duniya Grassroots Innovation Fellowship on Technology* (EGIFT) initiative that supports fellowship(s) to transform innovative technology ideas to reality – right from their concept stage to design, prototype development, and field-testing.

Under this project, an aerostat capable of lifting a payload of 20 kg at an altitude of 100 m has been designed, developed and fabricated by Mr. Amol Gawale, Project Engineer, LTA Systems Laboratory of Aerospace Engineering Department. On this aerostat, a wireless communication equipment based on IEEE 802.11 standard assembled by Vinit Gawande, final year Dual Degree Student, Electrical Engg. Deptt. was installed. A team consisting of these two, three summer interns, and two project staff members along with Prof. Pant conducted field trials of this system between 23rd and 28th May 2007 in the premises of Dr. Babasaheb Ambedkar Technological University at Village Lonere, Distt. Raigad, Maharastra, which is located approx. 160 km from IITB, off the Mumbai-Goa NH-17. During these trials, wireless communications at various points upto a maximum distance of approx. 7 km was successfully established. This system is a re-locatable, and easily re-configurable, and can be used for providing low cost data and voice communication in remote areas, especially for disaster management.