A new concept - Unnat Bharat Abhiyan - initiated by the Union Government aimed at transformational change in the rural development process may bring a phenomenal change in Uttarapalli, located near Kandi in Medak district.

The Indian Institute of Technology, Hyderabad (IITH), has been in the process of developing self-powered chipset working on solar power.

This was a project sanctioned by the Department of Electronics and Information Technology (DeitY) with a funding of Rs. 3 crore for a three-year period.

**Low cost**

As part of improving technology for low cost communication system, a team of IITH led by Dr. P. Raja Lakshmi developed a low cost ZigBee transceiver (transmitter and receiver), also known as the IITH Mote.

Dr G.V.V. Sharma is spearheading the development and deployment of these Zigbee motes for providing internet access in a village by interfacing with cheap android devices.

Dr. Ashudeb Dutta is developing a low cost solar cell customised for the IITH mote, suitable for a Village Area Network (VAN).

While the imported ZigBee in the open market may cost about Rs.30,000 with vendor and transport charges, the transceiver fixed instrument developed by IITH may cost about Rs. 6,000, including research and development cost.

The instrument is expected to transmit both voice and data while an earlier experiment conducted by IIT Mumbai in 2010 extended only voice-based service under the Rural Technology Action Group (RUTAG).

Based on the guidelines of the Ministry of Human Resources Development, the IITH has decided to develop three villages - Aliabad, Uttarapalli and Guntapalli - and meet their requirement by developing low-cost tailor-made technology beginning with Uttarapalli.

VAN would be developed there by using low cost transceiver fixed ZigBee devices with which locals could be able to access voice and data at any given time.

“It was assessed that by fixing 50 Zigbees we can cover the entire village and provide communication facility to all villagers having net connecting phones. Some of the educated youth in the village can be trained to manage the
network and we want to implement the project by the year-end,” Dr. G.V.V. Sharma told The Hindu adding that they may hand over Zigbee enabled Aakash tablets to students who can access information.


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