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Forecasting for all

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Ashok Jhunjunwala, 57

Innovation: Indradhanu, an automatic weather monitoring system

Cost: Between Rs 25,000 and Rs 50,000

What it does: Measures all parameters of weather through a kiosk, which will allow data to be analysed instantly and provide accurate forecasts



Jhunjunwala with Indradhanu

According to the National Crime Records Bureau, more than 16,000 farmers committed suicide in 2008. "While nothing much can be done to change catastrophic weather which destroys crops, advances in meteorology can help farmers prepare for emergencies," says Sameer Sawarkar, CEO, Neurosynaptic Communications. The needs of these primary segments are met by one device-Indradhanu. This automatic weather monitoring system has been jointly processed by Ashok Jhunjunwala, one of the finest minds in the country, who leads the Telecommunications and Computer Networks Group (TeNeT) at IIT-Madras, and the Neurosynaptic Communications in Bangalore. The system measures atmospheric temperature and pressure, relative humidity, wind speed and direction as well as rainfall. "There is a strong need to develop and deploy high density and cost-effective indigenous weather stations that can enable models like micro-weather prediction, weather-based crop insurance, disaster mitigation activities in such areas," says Jhunjunwala, whose TeNeT set up the Rural Technology and Business Incubator in 2006 to allow technology to enable business to encompass a bright rural future. Currently, 900 Indradhanu systems are in operation all over the country.

The TeNeT Group, led by him, has incubated many telecom and banking products for the rural markets, from low-cost ATMs to a remote medical diagnostic kit to a soil testing system. Jhunjunwala conceived Indradhanu in 2005 following which his team conducted a study to understand the requirements and domain of such a product. It took them 18 months to develop it to the prototype stage. The product was finally

deployed in the villages of Tamil Nadu in 2008. A single traditional weather station cannot process accurate data and farmers cannot afford too many of them as the cost is estimated to be around Rs 1 lakh. Indradhanu, however, is priced at a minimum of Rs 25,000 and can go up to Rs 50,000.

There are two types of models, wireless and wired. The wired model connects to a computer and sends the data to a server through the Internet. The wireless model sends the data directly to the server through GSM. There is a two-way communication between the weather station and the central stations. One can configure data updates every 10 minutes from the server of each of the weather stations. These updates can also be stored for later use.

It took his team about 18 months to bring the system to the prototype stage.

Jhunjhunwala, who has done much to bridge the India-Bharat digital divide, is no novice to success. Before Indradhanu, his corDECT system, which provides connectivity in remote areas through the wireless local loop technology, saw a huge response. CorDECT was first used in 2000 in 25 villages in the Kuppam Taluk of Andhra Pradesh's Chittoor district within a 25-km radius. To develop this technology, Jhunjhunwala talked to some of his former students working in various companies to set up new companies to assist him. His idea has always been not just to create an environment for youngsters to achieve the impossible but also ground them in the realities of India, where the customer is no more at the mercy of the market, but God.

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