



December 2009

## The Campbell News

In this issue we introduce the first of Elcome Technologies' staff who help integrate Campbell systems and provide technical support for our customers. To familiarize our customers with Elcome's team we hope to share a little about each team member in the next several issues. Some of the team have been to Canada (during the warm months) for factory training and we continue growing by adding new members and with on-going training. This issue features Mr. Deepak Gupta, the Campbell Scientific product manager for India.

The application article highlights an interesting meteorological site at BIT Ranchi. There is so much equipment at this site that if Campbell products were nuclear, I believe the sky would glow at night.

Enjoy this third edition. If you have any suggestions or have a project that may benefit other users, please contact Elcome Technologies Pvt Ltd. (see back). We are always interested in our clients' projects and sharing these with other Indian users.

Sincerely,  
Robert Herfst, International Marketing Manager  
Campbell Scientific Canada

## Featured Employee – Deepak Gupta, Elcome Technologies Pvt. Ltd



**Deepak Gupta,**  
Elcome Technologies PVT. Ltd

Deepak started with Elcome Technologies in August 2007. He is now the Product Manager overseeing Campbell Scientific customers in India. From the beginning, Campbell Scientific wanted Indian customers to have local support from well-trained, experienced persons who understand their needs and are able to respond rapidly to their challenges.

Since joining Elcome, Deepak has configured many research projects for clients and executed numerous installations. These projects include 50M tower profiles, glacier weather stations, CO<sub>2</sub> Flux stations, greenhouse monitoring, weather station networks, and machinery monitoring. Customers have been very pleased with the level of support they receive from Deepak and the team at Elcome. The scientific community is one he appreciates working with to help solve their problems. He loves the challenges they bring and what they have taught him about their work. In his personal time, Deepak enjoys reading inspirational books, listening to music and watching Discovery Channel.

For more information on how to reach Campbell Scientific in India, please visit the "[Contact Us](#)" section of our website

## 32 Meter Tower Profile at BIT Ranchi

One of the most highly-outfitted Campbell Scientific monitoring stations in India is located at BIT Ranchi. On site there is a 32 Meter air profiler tower with temp, RH, wind speed and direction, one level 3-D sonic anemometer with fast response, electrical field meters and net radiometers. Sensors include 6 levels of air temperature, net radiation, soil and moisture temperatures, soil heat flux, air pressure, and rainfall. All parameters are measured using two data loggers, the [CR3000](#) and [CR1000](#). The loggers communicate to each other and all data is gathered on one CF card making for easy data retrieval.

The region has marine characteristics in the east and semi-arid in the west. Convergence of these two associated air masses creates interesting dynamics which differ during the monsoon and non-monsoon season. This zone is often under low winds, therefore the [CSAT-3](#) sonic anemometer is used to measure air flow eddies. Because soil temperature and moisture evolve during the monsoon, a profile going down 1 meter into the soil was also installed measuring these parameters. Data from this station will be used to model and validate flux formulations during stable and unstable conditions.

Prof. N.C. Mahanti and Dr. Manoj Kumar are the coordinators of the project. Mr. Anil Kumar along with, Mrs. Sangita Sinha and Mrs. Mita Pal work together in their drive to better understand the atmospheric processes at work in this location.

For more information feel free to contact:

Dr. M. Kumar at [msinha\\_09@rediffmail.com](mailto:msinha_09@rediffmail.com), or +91-651-2276183 (W), +919431901969 (Cell), +91651-2275 921 (H).



Dr. Manoj Kumar



Prof. N.C. Mahanti



32 Meter Tower Installation

### COM320

Campbell Scientific's [COM320](#) Voice-Synthesizer Modem is smaller, lighter, and costs less than its predecessor, the COM310. The COM320 gives speech capability to a [CR800](#), [CR850](#), [CR1000](#), or [CR3000](#) datalogger, thus enabling the user to call the datalogger for a spoken summary of real-time or historical data. When used as a standard phone modem, the COM320 can communicate faster than the old COM310, which transmitted data at 9600 bps. Communication rates up to 115.2 kbps between the COM320 and datalogger are supported. (Note: your phone lines may limit transmission rate.)



Watch for our next issue to be released in March 2010