

# ENGAGING AUSTERITY THROUGH INNOVATION...

*On page two please see how Extreme Endeavors will be helping out in Mali Africa*

## ***Emergency Communication Towers***

While driving down the road, you will notice a plethora of communications towers. The majority of these towers are communication links such as cell phone towers and/or emergency communications. In Extreme Endeavors' quest to expand our products into different venues, we are developing a product line specifically for remote monitoring of these towers.

Sensor fusion, cloud computing and some very innovative ideas are allowing us to give a full picture of the status of the tower. Our system provides monitoring of everything from fuel level of the emergency backup generators to cameras for protection against vandalism.



## ***What Is Happening at Hellhole and Schoolhouse Caves?***

Extreme Endeavors recently spent the day at Hellhole. A lightning strike damaged one of the sensors so we spent the day navigating the 180 foot drop and replacing the sensor. The new sensors are redesigned with a special arm that puts the temperature sensor approximately 1.5 feet from the other electronics, decreasing the reaction time of the sensor element to temperature changes and increasing the accuracy of the sensor. All the sensors placed in the cave are now calibrated against a thermometer which is traceable to the National Institute of Standards and Technology. A benefit from this development is that the new location of the sensor is giving us results that are demonstrating the layering of the microenvironment inside the cave!

## ***INSCADA Now Controlling the Central Barbour Public Service District***

Central Barbour Public Service District is now in control of their INSCADA system, a Nodalynx Product. The system is controlling 5 tanks and pumps stations. Their district is considered small based on customers; however their system stretches from Philippi to Back Bone Mountain.

The operators of the Central Barbour PSD used to spend 7 days a week driving to the different pumps stations and manually turning pumps on and off. Now a central computer in the main office automatically controls the system; the operators can log onto the computer from home and insure everything is working. The first thing the water district saw when the INSCADA system became operational was employees overtime expense drastically dropped, giving them funds for other needed maintenance items.

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## *New Technology Developments*

### **Rain Gauge**

Industry must meet a Total Maximum Daily Load (TMDL) level in streams around their facility in accordance with the West Virginia Department of Environmental Protection permitting process. Greer Industries contacted us about this issue and the need for more advanced monitoring technology to assist them in reporting requirements.



A venture was then initiated to give them a solution. Extreme Endeavors developed a networked rain monitoring system that uses infrared technology to sense the individual rain drops and adds up the amount of rainfall. This product is fully developed and sells for \$495. Partnerships, negotiations and distribution channels are being lined up to accelerate the use of this small, innovative, and specialized product for consumer use.

### **Single Node**

In response to our customer's requests, Extreme Endeavors has developed a product called the "Single Node" to provide a low-cost solution for network connectivity to a variety of equipment. The single node is a key component behind many of Nodalynx's products and provides a valuable tool that enables us to meet the customer's every monitoring and control need, no matter how strange or diverse that may be.

## *Sensor Fusion through the Cloud!*

Work has been undertaken to place sensors on equipment, infrastructure and critical assets all around the world. We are able to place sensors at sites that were impossible 10 years ago due to the advancements in technology. So what do we do with all this data? Is this data meant for one person to utilize, an organization or the entire world? Extreme Endeavors might not know the answer to these questions directly, but what we can do is to provide a solution utilizing "the Cloud", which allows each customer to pick their level of sharing. A perfect example of this is the data from our rain sensor. While industry will utilize this information to provide reporting for their TMDL limits, Emergency services can use this data to monitor for flooding. Other uses will come from your imagination.

## *Extreme Endeavors' Mission outside the Office....*

### *Looking for Your Support*

Extreme Endeavors is working to assist the Koutiala Women's and Children's Hospital in Mali, West Africa ([www.koutialahospital.org](http://www.koutialahospital.org)). We will be working with the Christian Missionary Alliance to use our knowledge of technology in remote regions and telemedicine to assist in bringing health care to rural regions in Africa. We are looking for cooperate sponsors to assist with this endeavor which will embark in June of 2012. Please email Mike at [mfm@extreme-endeavors.com](mailto:mfm@extreme-endeavors.com) if you can support this. Your tax deductible donations would be greatly appreciated.