Application Brief: Michigan State University Foundation

The Challenge

Deionized (or "DI") water is an indispensable staple in chemistry and biology laboratories, and Phil Hegge, responsible for providing DI water to several research laboratories, was running dry.

Hegge is Facilities Director at a large biotechnology research center owned by the Michigan State University (MSU) Foundation. Located just off the MSU campus in Lansing, Michigan, the center houses MBI, an "incubator" organization that helps to move early biotechnology innovations through the startup phase and into commercial applications.

Participating researchers at MBI receive services and resources, including the use of several bench-scale laboratories. Each lab taps DI water produced by the building's central water deionization and filtration system. This works well except when the labs use DI water faster than the water deionization system can replace it. When this happens, the storage tank can run dry. In the laboratories, the impact of this shortage varies; it's an inconvenience to some, but to researchers far along in a protracted experiment it can be a major problem.

Hegge knew that installing a larger capacity water deionization system and storage tank would solve the problem, but he also knew that this costly and labor-intensive solution wasn't likely to occur soon. In the interim, Hegge thought that researchers could benefit simply by knowing how much DI water was available in the tank at any given time. With a quick check of the water level in the storage tank, a researcher could know if there was enough DI water to complete an experiment, or if the experiment should be rescheduled.

The Solution

Hegge wanted to make checking the water level as easy as possible, and he found a way to do this when local Opto 22 distributor OptoSolutions showed him the *groov* mobile HMI system. The entire facility had recently undergone a major retrofit that replaced the original pneumatic HVAC controls with precise electronic ones wired to Opto 22 I/O and controllers. With *groov*, Hegge could create web-browser-based interface screens to monitor and control these systems from almost any mobile device.

Hegge bought a *groov* Box hardware appliance and created a simple display to show the current tank level. "To check the tank," says Hegge, "researchers use their phone, a tablet, or a laptop. It's just like they're going to a website."

Now Hegge is expanding the *groov* interface to monitor and control HVAC, lighting, and other building systems. "I've completed a variety of projects over the past twenty years thanks to the flexibility of Opto 22 products," says Hegge. "*groov* is another Opto product that's going to make a lot of projects easier."
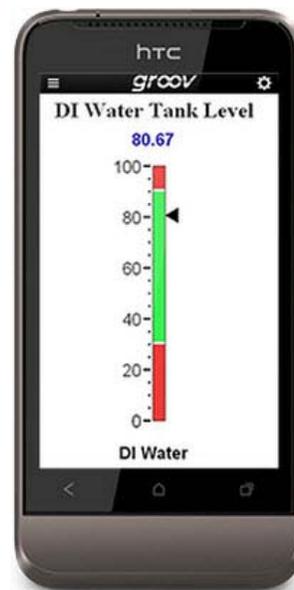
A simple display shown here on a smartphone, provides the DI water tank level.

The Customer

Michigan State University Foundation
http://msufoundation.msu.edu

Abou t Opto 22

Opto 22 develops and manufactures hardware and software for applications involving industrial automation and control, energy management, remote monitoring, and data acquisition. Designed and made in the U.S.A., Opto 22 products have an established reputation worldwide for ease of use, innovation, quality, and reliability. Opto 22 products, which use standard, commercially available networking and computer technologies, are used by automation end-users, OEMs, and information technology and operations personnel in over 10,000 installations worldwide. The company was founded in 1974 and is privately held in Temecula, California, U.S.A. Opto 22 products are available through a global network of distributors and system integrators. For more information, contact Opto 22 headquarters at +1-951-695-3000 or visit www.opto22.com.