

Student Project - USA

The OPC DataHub supports bio-medical engineering project

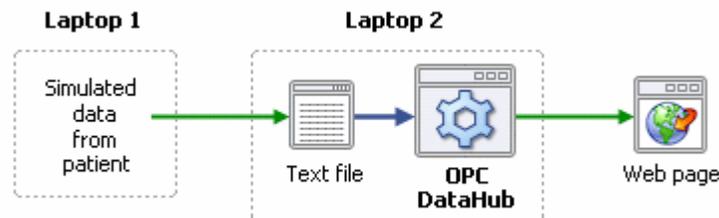
DeVry University, with over 90 locations in the United States, prides itself on preparing students for the real world by giving them hands-on education. For their final, showcase project, two DeVry engineering students, Chris Wiersbe (Biomedical Engineering Technology) and James Mitra (Computer Engineering Technology), used the OPC DataHub to support data communications on a Dementia Patient Detector that helps hospital staff track vital signs of dementia patients.



People suffering from dementia are often in good physical condition, and need to exercise and move around. Because of their mental state, however, they can easily wander off and get into trouble. Physicians need to know where their patients are at all times, and it is very helpful to have some basic vital signs as well. The Dementia Patient Detector is designed to meet this need, adding heartbeat and temperature monitoring to a commercially available patient tracking system.

“Dementia patients wear a box on the ankle that tracks their location, and sounds an alarm when they are out of range,” said Chris, “giving them freedom to move within a certain area. We wanted to provide vital signs to make it easier for a nurse or doctor to monitor the vital signs remotely, as well as their location. And we wanted to track data for multiple patients, putting it on the web.”

For the pilot project, Chris and James ran a demo on two laptops—one representing the device on the patient, and the other to compile and display the data. On the first laptop the data was collected and logged to a text file, which was then sent to the second laptop via a Bluetooth wireless connection. On the second laptop, the OPC DataHub parsed the text file and displayed the data in a web browser.



The project was completed under very tight time constraints, and the OPC DataHub was one of the final elements in the system. “We didn’t have much time left when we ran into a problem,” said Chris. “Reading the text file became increasingly tricky and slow as the file grew longer and longer. But really, we didn’t need all that data. We got in touch with Cogent, and they sent us a script to pull in just the most recent values. The script was perfect for what we needed, and it worked well from then on.”



The day before the project was due everything was running smoothly, and the data was being logged and displayed in the web page. Chris and James were confident in the system. However, events outside their control conspired against them. As they were setting up their demo before the faculty panel, both their Bluetooth connection between the laptops and the university's wireless network failed. Without data connectivity, it was impossible to demonstrate the system live. Fortunately, though, they had created a video of the project. Showing that, with a detailed explanation, the two were able to demonstrate the overall validity of the project.

"The final demo didn't go completely according to plan," said Chris ruefully, "but we got the point across. In any case, the OPC DataHub worked very well for what we needed it to do. I would definitely recommend it to others."

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The OPC DataHub is a highly optimized integration tool for real-time data. It provides quick, reliable and secure access to valuable process and production data and makes it available to management systems, database archives, and remote clients. Combining a number of innovative technologies, the OPC DataHub makes it easy for you to access the real-time data you need to make informed and timely decisions that save time, reduce waste, and increase profitability.

Founded in 1995, Cogent Real-Time Systems is the leader in real-time data integration between Windows, Linux and QNX systems. Customers include the Bank of Canada, Cadbury Chocolate and the European Space Agency. Cogent leverages its experience in real-time data communications to provide the next generation of OPC products. For more information, please contact Cogent at info@kogent.ca or visit our web site at www.opcdatahub.com. You can also call us at +1 (905) 702 7851.