

Hogeschool Utrecht – Netherlands

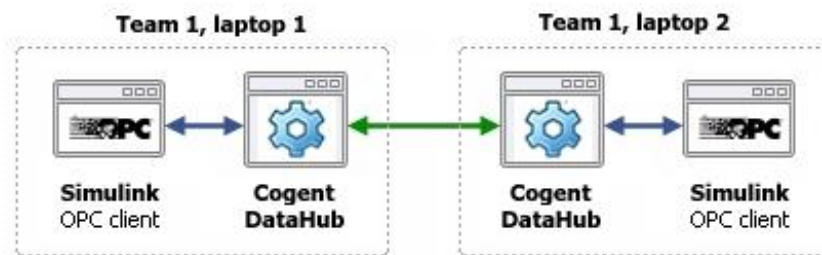
Cogent DataHub supports real-time security monitoring

As the world grows ever more aware of corporate break-ins and industrial espionage, there is an increasing demand for high-tech systems to keep a close watch on key office spaces. Recognizing this demand, sixteen students at the Hogeschool Utrecht University of Applied Science in the Netherlands recently completed a pilot project to integrate data from video surveillance cameras on an office floor. Working in teams of two, the students used the Cogent DataHub to integrate data from each of their cameras, creating a unified data set for the whole floor, distributing their results to every other team, and publishing an overview of the floor security status on the web.

“The project simulated a real-world situation,” said Ko Stoel, the faculty member overseeing the effort. “Each student had a laptop with a webcam attached. They were paired up into teams, and each team had to secure two sectors of an office floor. In the first phase of the project, the two students had to make their two laptops communicate with each other to exchange the data of the detected targets.”

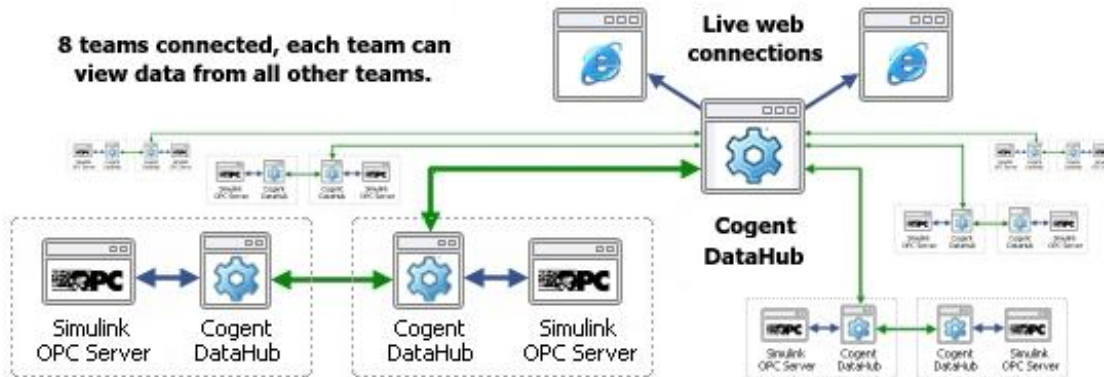


On each laptop, the webcam was connected to MathWorks' Simulink for signal processing. Then the MathWorks OPC Toolbox™ was used to convert the signals into OPC. The OPC protocol is sophisticated enough to allow the students to exchange analytical data like the position, speed, and color signature of potential intruders. But there was a problem with this approach. The OPC Toolbox from MathWorks only provides an OPC client for Simulink. There is no OPC server capability. They needed a way to connect one Simulink OPC client to another.



“When we found out we needed an OPC client-to-client connection, we searched the Internet and found the Cogent DataHub,” said Mr. Stoel. “We thought it might be possible to have it act as an OPC server for a Simulink OPC client, and we found out that it works very well.” Each student in each team installed a Cogent DataHub on his or her laptop, which allowed them to connect their two Simulink OPC clients on the network, and easily exchange webcam inputs.

With the students in each pair now exchanging data, Mr. Stoel was ready for the next phase of the project—to build a complete picture of the whole office floor. He installed a Cogent DataHub on his own server, and configured OPC tunnelling connections between it and each of the eight student teams. Then he allowed read-only access from each team to the data from all other teams. With very little effort, each student was now able to view the data from every other team.



“When we were all able to see the data for the whole office floor, we had achieved the goal of the project,” said Mr. Stoel. “It worked so well that I started thinking about something more. Would it be possible to monitor the whole system remotely, on the web? This would help me to oversee the project more effectively, and would also simulate remote monitoring of the security system.”

With that thought in mind, Mr. Stoel activated the DataHub Web Server and designed a web page for the data display. He found that the data updates came through as quickly and reliably as the network allowed. Now he can view the system from the convenience of his office, classroom, or even at home in the evenings.

“The project went very well,” he said. “Cogent helped us out with some excellent support, and the DataHub really rocks! It’s many features are intelligently accessible via an efficient GUI, and the web interface is a handy asset. We found it essential for linking our Simulink OPC clients, and look forward to using it again in future projects.”

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The Cogent 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 Cogent 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 provides versatile and reliable middleware products to enable real-time data integration and access for industrial, embedded, and financial systems. Customers include Siemens, ABB, Honeywell, IBM, GE, Statoil, Goodyear, BASF,



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