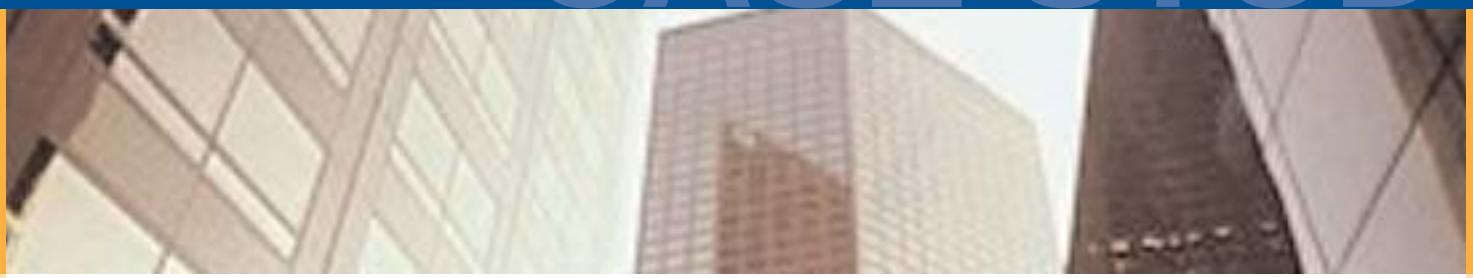
Millennial Net

CASE STUDY



WebGen Systems Goes Wireless to Tap New Markets

Opportunity

WebGen Systems provides advanced software for energy conservation and control in commercial buildings. The company offers a reliable suite of open protocol software tools which provide real-time control of energy usage to generate cost savings. Its Intelligent Use of Energy (IUE®) system accomplishes this by connecting all aspects of the building energy management, allowing it to automatically measure, monitor, and control energy consumption building by building, system by system, meter by meter, and device by device.

Looking to expand its reach into smaller (less than 50,000 square feet) properties and offer more flexibility to existing customers, WebGen evaluated several wireless options for its enterprise energy management systems. By employing wireless sensor network technologies, WebGen would be able to monitor and control difficult-to-reach areas and offer a cost-effective alternative to customers with wireless networking requirements.

Requirements and Solution

WebGen reviewed the wireless sensor networking technologies and products on the market to find the solution that best fit its needs: in addition to supporting ease of integration and fast time-to-market, WebGen needed a networking protocol that was reliable and scalable. Millennial Net's Mesh485 wireless sensor networking system-based on the MeshScape software platform-was selected to add the wireless capabilities to its Intelligent Use of Energy (IUE®) product line.

“After a careful evaluation of several technologies from different companies, we found that Millennial Net offered the most comprehensive and capable solution for our needs,” said Dirk Mahling, chief technology officer, WebGen Systems. “Millennial Net's wireless sensor networking system proved to be technically superior and easy to deploy. Using their Mesh485 system made good technical sense and good business sense.”

The wireless IUE system uses the web/i (WebGen's supervisory control and data acquisition (SCADA) unit) to interface with a building's control elements – such as the Basys thermostat. Millennial Net's Mesh485 Bridge interfaces directly to the web/i controller. The Mesh485 T-Base Router – a mesh node integrated with a Basys thermostat – replaces the existing thermostats. Mesh485 Standalone Routers are used to extend range or route around obstacles in the building. The web/i controller periodically polls the thermostats for their readings; that data is transmitted wirelessly through the mesh network.

Successful Initial Deployment

One of WebGen's customers, a large financial institution that has been using IUE across its largest office buildings nationwide, piloted the wireless connection to IUE in several of its smaller branches. Large office buildings – and even large branches – had been connected for several years, but installation in some of the smaller branch offices had not been included in the scope of the project, pending a more cost-effective installation solution.

“Many of our customers have a wide variety of buildings within their portfolios. The ranges include everything, from state-of-the-art skyscrapers to older and sometimes historical smaller buildings, therefore it was important for us to be able to develop a solution that could address the different needs that we would encounter,” stated Mark Noyes, president and chief executive officer, WebGen Systems. “In this particular case, we needed to find a cost effective way to connect the smaller branches to our enterprise energy management system and wireless provided that solution.”

Results

— **Fast time to market:** WebGen Systems was able to deploy a wireless sensor networking system in less than three months. Because Millennial Net's Mesh485 takes advantage of existing RS-485 device interfaces, the wireless network modules can be connected to existing controllers and thermostats without reworking the devices and enabling the company to focus its efforts on the application.

— **Easy, cost-effective installation:** Instead of having to run cables to network the thermostats to a gateway to communicate, WebGen Systems was able to replace the thermostats with ones that included wireless sensor networking technology and avoid running cables entirely.

— **Increased revenue through new markets and enhanced offerings to existing customers:** Providing an additional installation option that eliminates the wiring requirements enables WebGen to expand its reach into the less-than-50,000-square-foot commercial building market. Whether those properties belong to existing customers or are brand new accounts, the benefits of IUE can now be delivered into more buildings.

About WebGen Systems

Headquartered in Cambridge, Mass., WebGen Systems Inc. provides advanced software for energy conservation and control in commercial buildings. WebGen combines the highest level of industry expertise with a reliable suite of open-protocol software tools, called IUE©, to provide real-time command of energy use to generate savings. Its system connects all aspects of building energy management to automatically measure, monitor, and control energy consumption - building by building, system by system, meter by meter, and device by device. WebGen offers the most effective Enterprise Energy Management solution on the market today. Additional information can be found on the company website: www.webgensystems.com.

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