



## BACnet®-based Alerton solution more than passes muster in Seattle VA healthcare facility

The Department of Veterans' Affairs (VA) operates a two-division facility called VA Puget Sound Health Care System in Seattle and Tacoma. The two campuses make up the largest VA facility in the region, providing annual care to more than 46,000 veterans and hosting the most comprehensive research program in Washington State. More than 400 medical and investigative staff members deal with issues such as cardiology, pulmonary medicine, cancer, dementia, substance abuse, mental health, rehabilitation, and infectious disease and diabetes.

When the Seattle facility's existing building automation systems grew increasingly archaic and expensive—and vendor responsiveness and value dwindled—VA

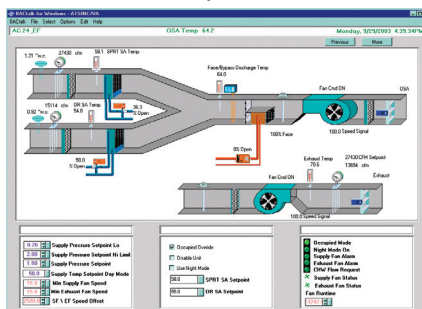
Puget Sound chose Alerton solutions to implement a dramatic improvement.

At the beginning of the vendor selection process, in early 1999, the VA Puget

Sound was familiar with BACnet, the approved open protocol for building automation. In spring 1999, ATS Automation—Alerton's Renton, Wash.-based dealer—presented VA Puget Sound with a BACnet-based system design for the extensive retrofitting. Because VA Puget Sound is a government-affiliated healthcare facility, there were considerably stricter protocols to follow.

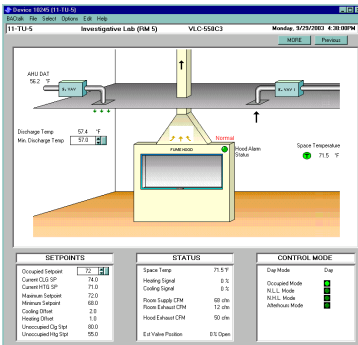
The diverse nature of VA Puget Sound's facilities also required a flexible solution. Research laboratories called for cooler temperatures to store chemicals and samples, while patients and visitors needed comfortable environments.

The first building ATS tackled was a magnetic resonance imaging (MRI) laboratory. The direct digital control (DDC) and pneumatics of the existing system belonged to at least two vendors and were too antiquated for the hospital's needs. ATS upgraded the building controls to a design based on an Alerton BACnet system. The overall installation includes multiple air handlers, variable air volume (VAV) controllers, fans, fume hood controls, and domestic hot water. Operator workstations—distributed over the facility's Ethernet network—run Alerton's



The BACtalk screen for VA Puget Sound's air conditioning shows setpoint data to precisely maintain environments.

## VA PUGET SOUND ■ CASE STUDY



Air handling units for an investigative lab in Building 11; BACtalk's intuitive graphical interface screens realistically show equipment for quick, real-time adjustments.

BACtalk® software to manage the building's functions.

To monitor temperature and humidity of differently occupied areas within VA Puget Sound, ATS ascertained precise setpoints with varying differentials. This ensured each zone was ideally heated or cooled

for the patients or staff working within them.

The hospital houses some areas that require negative pressurization within them to contain odors and airborne pollutants. To accomplish this, ATS established a pressure differential between the labs and adjacent hallways by installing VisualLogic® controllers (VLCs) and humidity sensors. Since the areas were designed with a 100% outside air system—meaning no inside air is recirculated within the facility—ATS set up a fume hood exhaust system to induce airflow and expel odors.

VA Puget Sound needed better control of the distribution of Energy Management and Control System (EMCS) messages. To solve this issue, ATS installed its own Ethernet network, which closely monitored who received the messages. When BACnet/IP capability was later developed and approved, ATS returned to VA Puget Sound and set up an Ethernet wide area network (WAN) of its own.

BACtalk allows users to establish numerous critical alarm conditions to monitor their facility's precise temperature, humidity, and air pressure setpoints. ATS established about 100 alarms for VA Puget Sound, which hospital staff locally monitor at three separate workstations.

Though the hospital's construction team of facility and project managers was a tight-knit group, ATS still faced the challenge of following very specific and detailed protocols. With input gathered, ATS worked with VA Puget Sound to successfully establish, communicate, and achieve realistic goals—on time and on budget.

With Alerton's native BACnet systems in three of its 14 buildings, VA Puget Sound is well on the way to achieving its goal of standardized building controls operating under one flexible and scalable protocol. With Alerton's BACnet-based interoperable solutions, VA Puget Sound enjoys the freedom to assemble a combination of components—regardless of the vendor—to meet its very specific needs.

VA Puget Sound's early adoption of BACnet—within weeks of its approval—was a "controlled experiment" that subsequently proved to be an outstanding success. Alerton solutions combined with expert design and customer service from ATS continue to exceed the hospital's expectations, providing the value and performance lacking in its previous system.

"The product is consistent and trouble-free," said Lucy Gedney, vice president of sales for ATS Automation. "We're providing a much more responsive and professional level of service than their previous controls service provider."

