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# When Two Worlds Collide

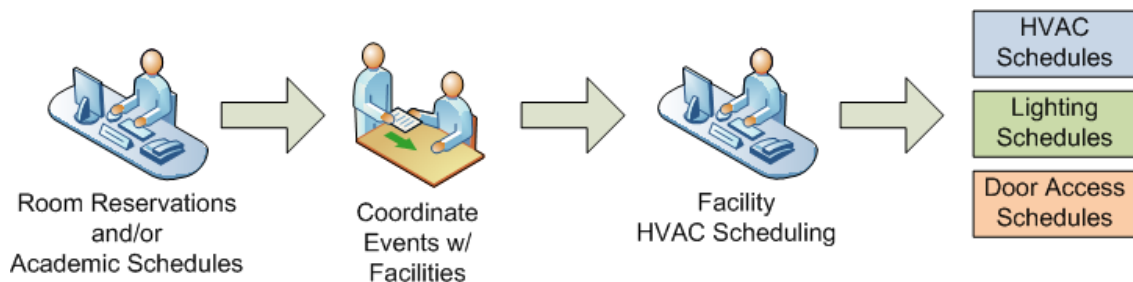
When two worlds collide and a synergistic integration achieved, the results can be beautiful and beneficial to the entire building automation industry.

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Events2HVAC

When two worlds collide, it's not always pretty. But in the case of the world of facility managers and the world of event planners it can save facilities a lot of money. The difficulty lies in getting the two worlds to work together seamlessly.

Facility managers are in charge of the building automation system, which controls HVAC equipment and possibly lighting, security, and other systems. Meanwhile, event planners are in charge of scheduling events in the building. So how does coordination between them usually work? Let's look at a couple of common scenarios.



**Scenario 1:** Event planners schedule events using event planning software.

Periodically, each day or each week, the event planner sends the updated schedule to the facilities department either in print or by electronic means. Then someone in the facilities department manually schedules the HVAC equipment for each room based on the event schedule. This basic process is repeated day after day, and week after week, as schedules are constantly added and altered.

It takes tremendous effort to manually schedule HVAC systems down to the room level in order to save energy. To illustrate the inefficiency in the above scenario, consider this description of making changes in an HVAC system, provided by Jeff Goebel, Physical Plant Manager at Minnesota State University Moorhead:

*"I actually sat and counted the number of mouse clicks. In one case, in one system, it took 11 mouse clicks to make one change. And in another system, it took 17 mouse clicks. And those didn't seem terribly significant if you're the supplier of the software because you're thinking in terms of making a single change. But we have over 13,000 events per year; that's a lot of mouse clicking to do."*

In the next scenario, the approach is just the opposite.



**Scenario 2:** Event planners schedule events using event planning software. They send the schedule to the facilities department as in Scenario 1, but the facilities department is small and does not have the manpower or time to manually schedule the HVAC equipment down to the room level. So, they schedule by the building, from the beginning of the first event to the end of the last event. If there is an event in one room at 8 am, and the last event in the building is over at 9 pm, they run the whole building from 7 am to 10 pm.

Let's take a look at one more possible scenario, a balance between scenarios 1 and 2.

**Scenario 3:** Event planners and facility managers operate as in Scenario 2, except that the facilities department schedules HVAC equipment in "blocks" of time during the day, rather than just from the start of the first event to the end of the last event. This strategy is a balance between saving energy and keeping labor costs low.

This third scenario was in effect at Savannah Christian Church in Savannah, GA. Employees created schedules for each air handler in four-hour blocks of time. Then they looked over the event schedules for each room and scheduled the units to be on for a block of time if an event was taking place during that block. This was done to strike a balance between saving energy and the labor-intensive process of manually scheduling HVAC equipment down to the room level for each event.

Now, what if there was a way to let these two systems (and departments) work together so that once the rooms are scheduled in the event planning software, the HVAC systems are automatically coordinated to the room level, saving energy, labor, and money? And what if the system could also control lighting and security automatically based on scheduled events?



This is the goal of Events2HVAC event automation software, which pulls room scheduling data from either Dean Evans EMS® or CollegeNET® R25 software to control building automation systems and HVAC equipment including Johnson Controls MSEA®, Net/X™ thermostats, and all systems that are BACnet/IP enabled.

Sean Moyer, Facilities Manager at Savannah Christian Church, who is now using the software said, “When we have our big events, our weekend services, our mid-week services, we just go on and verify that everything turned out like it needed to be. We don’t have to really do anything; it works kind of seamless.”

As a result of implementing Events2HVAC campus-wide at the University of Minnesota Moorhead, Jeff Goebel, Physical Plant Manager, has received two prestigious awards and says he is saving \$1 million dollars per year in energy expenses. He says the software has also changed how he views building automation systems in general.

“Both in terms of any kind of control systems, whether its energy management control, door access control, or even lighting control, now become more attractive to me because we would not have to work hard to manage them,” Goebel explained. “They’ll be managed seamlessly by a single person scheduling the use of the space. Where I previously would have been opposed to adding those systems simply because of the requirement of operating them, now I’m actually attracted to putting in more access controls and lighting controls that are centrally managed just because I won’t have to work harder to keep it operational.”

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### About the Author

Brian Russell, President/Owner of Streamside Solutions, has more than 20 years of experience in HVAC controls and software development. After eight years working as an engineer for Johnson Controls, Inc., Brian began developing custom HVAC solutions. In November 2010, Streamside Solutions released the public version of Events2HVAC, which integrates room scheduling software with HVAC control systems to automate scheduling and save energy. With Events2HVAC, Streamside Solutions is working to help facilities become more energy efficient.