

Cobb County Schools

Automated Logic - Georgia

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Cobb County School District Streamlines Maintenance and Reduces Energy Costs with Automated Logic's WebCTRL® Building Automation System

The Challenge

- Retrofit historical college campus with modern, centralized control system.
- Optimize productivity of technicians via remote monitoring and control.
- Empower technicians with easy-to-use building automation system.
- Reduce energy use and costs across rapidly expanding school district.

The Players

As the second largest school system in Georgia and 23rd largest in the U.S., Cobb County School District (CCSD) employs nearly 15,000 employees who work hard every day to educate 112,000 students in a diverse, constantly changing suburban environment. As the communities in Cobb County, Georgia have experienced tremendous growth over the past 10 years, so has the school system, which now includes 114 schools across 7.2 million square feet of space. This growth drives the CCSD Maintenance and Utility Department to continuously look for new ways to streamline maintenance and reduce energy use and utility costs by partnering with Automated Logic Corporation (ALC).

One of the more recent and challenging projects the team worked on together was a control system upgrade at the historical McEachern High School in Cobb County. Formerly a college campus that was built in 1908, McEachern is comprised of 14 separate buildings. The majority of these buildings had existing control systems that had become out-of-date and were not functioning properly. The existing system also required technicians to program thermostats locally. This meant that technicians had to go on-site - sometimes numerous times daily - to program setpoints and schedules based on the changing needs of the buildings.

The Solution

The first step was a complete retrofit of all existing building controls to ALC controls throughout the 14-building campus. The individual control systems in each building were then combined to form a single, unified network, allowing the WebCTRL® building automation system to provide centralized control over all HVAC equipment on campus. Technicians can now access any of the buildings from anywhere, at any time, using any internet-connected computer or mobile device, without having to travel to the site. This has resulted in significant labor savings for the school district.

The new WebCTRL system also allows the CCSD HVAC team to proactively manage virtually every facet of their HVAC systems - including temperature, humidity, and carbon dioxide levels - using intuitive tools that are built into the WebCTRL system. Thermographic color floorplans provide technicians instant insight on how well the HVAC systems are controlling each building, and they can modify settings on-the-fly to increase efficiency. The majority of the time, technicians can see an issue and are on-site to resolve it before the school administrators or students even know there is a problem. In addition, alarms are configured to proactively notify technicians of potential problems, preventing troubleshooting calls and wasted energy.

Energy saving strategies, such as scheduling and setpoint limiting, have also been implemented campus-wide, allowing setpoints to be maintained automatically without human intervention. In addition, special events can be programmed in advance so that HVAC systems only run when needed, and parameters can be set in individual classrooms to limit significant fluctuations in temperature. Both strategies have further reduced operating costs for the district.



Thermographic color floor plans provide a snapshot of the building's operating conditions.

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The WebCTRL system has been deployed in nearly all of the schools in the district. As such, CCSD technicians are now empowered to remotely monitor and manage the settings of all of their schools for increased efficiency. According to Gene Trull, an 18-year veteran of HVAC/energy management systems and executive director of maintenance and operations for CCSD, "When my technicians come in each morning, they are able to quickly check their schools for any concerns by simply logging into their computer. They can even click through to a specific classroom to help diagnose any potential issues. This not only helps us save on travel costs, but also helps us keep our schools and students comfortable and happy."

With the labor and energy savings that the WebCTRL system provides, the team is able to support the growth of the school district without having to grow the number of technicians required to service the schools or increase utility expenses.

According to Trull, the CCSD has not experienced an increase in its utility budget in several years, even though the square footage has increased significantly. "With the ALC system in place, we are able to reduce the amount of energy our school system uses, which has translated into real dollars for our district," said Trull. "In fact, last year, we were able to give back \$3.5 million from our budget. This allowed Cobb County to give all 15,000 employees one furlough day back. This felt really good, and I was very proud of the hard work we all did together to save our school district millions of dollars."

CCSD technicians have utilized ALC's advanced training resources and are now certified to perform many installation and maintenance functions. "As the school district continues to grow, we are able to do much of the work ourselves. If we ever have a problem or need assistance, we know the Automated Logic field office will be right there to support us with the same commitment to high quality and high standards that we uphold. We've been working with ALC for many years, and we are always confident that things are going to get done on-time and on-budget," said Trull.



"Ninety percent of the time, my technicians are seeing the problem and are on-site to resolve the issue before the school administrators or students even know it is there." Gene Trull, Executive Director of Maintenance and Operations, Cobb County Schools



Project Summary

Savings:	\$3.5M in savings over time with partnership, enabling CCSD to give back one furlough day to all 15,000 employees in the county school district
Location:	McEachern High School, Cobb County School District, Georgia
Project Type:	Retrofit
Building Size:	14 separate buildings on multiple, outdated control systems
Building Usage:	High school campus
Objectives:	Upgrade historic system and provide centralized control mechanisms to reduce energy costs
Design Considerations:	1908 college campus converted to large high school
Major Decision Drivers:	Dependable and predictable quality service and easy to use system providing centralized control and better use of human resources
Dealer:	Automated Logic - Georgia
Installation Date:	2015 - 2016

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