# Visualization

By Sarah Erdman, Marketing Director, QA Graphics

As the building automation industry evolves, building performance data and other information continues to become more visual and more accessible. QA Graphics has been a leader in making building concepts more visual, from BAS graphics, high-end equipment models and animations, to energy dashboards. Having provided design services for the building automation industry for over a decade now, we're proud to be at the forefront of these industry changes.

Graphics and user interfaces can make a variety of building information available via desktop, mobile, and other platforms to easily access data, help the decision process and make day to day functions easier. QA Graphics isn't directly involved in managing systems or monitoring data, but can provide graphics or interfaces that can serve as a central resource that allow users to access information in way that's quick and easy to understand. Information can be presented in a variety of ways; it really just depends on what information you want to make available and who the end user is.

A trend that continues to remain popular, is the use of a dashboard to display complex building performance data in a simpler format. We help companies implement our solution, the Energy Efficiency Education Dashboard®, in order to share building performance feedback in a way that's easy to understand. This dashboard is different in that it's primarily used for occupant awareness or to provide executive management with an overview. A feature that we've really seen take off in the last year is organizations comparing this performance data among different buildings or floors within a building to encourage occupants to participate in reducing resource use. This type of solution is also more commonly being used on iPads or tablets in addition to a touchscreen or kiosk in the building lobby.
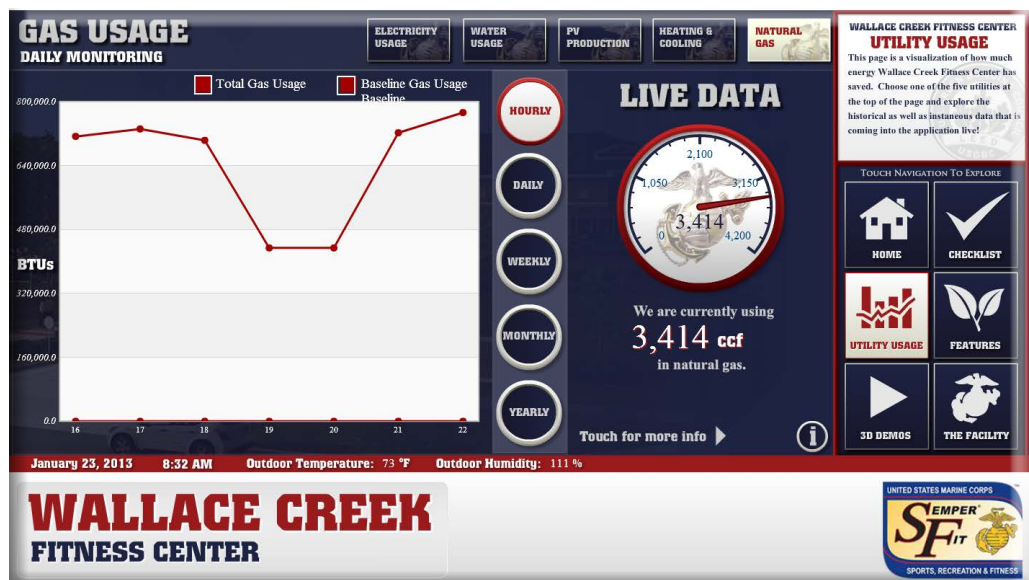
We are also often asked about 3D graphics and how more realistic graphics can be utilized. 3D graphics are not limited to any specific building automation system and are becoming more popular industry wide. We work on a number of projects where all of the BAS graphics are required to be photorealistic; clients want the graphics to accurately represent their campuses, buildings, floor plans or equipment. This allows them to view an exact duplication of their building and equipment that is sitting in the mechanical room. Sometimes it's requested to provide an interior view of equipment, which shows how it functions. This can give the operator a better reference on component locations.

Working with a 3D environment within your BAS software offers a number of benefits. We anticipate that user interfaces will increasingly be used in the near future. An interface can serve as a central resource to view equipment and access a variety of data. Having a piece of equipment that can be interacted with on a computer or mobile device before even seeing the equipment would be a very powerful tool. For example, operators can pull up a photorealistic image of the equipment at their computer with the ability to see the equipment from different angles and review performance data.

Onsite, the same interface could be used on their phone or tablet, to access spec sheets, take notes and log maintenance data. An interface could also be used for preventative maintenance, equipment analysis, alarm notifications, remote monitoring, etc. These types of graphic solutions and interfaces offer a number of benefits. Not only do graphics allow information to be presented in a way that's more visually appealing and quick to understand. They can help reduce training times and enhance the user experience.

Realistic equipment representations are only the beginning. A real push needs to be made in the industry to give end users what they really want, the ability to efficiently take over the operations and maintenance of the buildings they paid for. An opportunity exists within the building automation industry to provide end users with an interactive environment of their facility; providing them updated operation and maintenance procedures, real-time views into their equipment, and other important information on all HVAC assets.

With more and more architects providing building information modeling (BIM) during the design phase of a building, the information needed to effectively hand over a building exists. Why can't this information be made available to the facility's operation staff during commissioning and startup? Why can't this information be integrated into the building automation software? Why can't this be through an interactive 3D environment with real-time and historical data from the BAS? It can, and it should.

About QA Graphics
QA Graphics is a leading provider of design services for the building automation industry, specializing in control system graphics, energy dashboards, mobile applications, and other user interfaces. To learn more, contact 515.965.3403 or visit www.qagraphics.com.