

American Auto-Matrix's Aspect on Networked Area Control

By Rocky Moore, Director of Business Development

Over the last few years Building Automation has grown to encompass new capabilities as a result of specific demands in the market. One of the largest developments has been the introduction of the web enabled area controller. As the Internet has become more and more prevalent of a tool in our society, the need for systems that harness the convenience and power of such capabilities has grown along with it.

As most of us have seen, a large number of companies offer internet connectivity to their control solutions. This has been manifested in basically two ways: embedded web functionality with standard web browser communication capabilities, and proprietary software solutions that allow work station Ethernet connectivity. While both solutions are capable of delivering control in an efficient manner, they both have something in common: inhibited use of the internet to maintain proprietary control over solutions, which equates to utilizing the Internet merely as a pipeline for communication.

As we have seen BACnet become an ever increasing presence in the market, it has become apparent the customer's desire for open solutions has been a significant driving force. As there are multiple philosophies associated with control through various manufactures, it has been a challenging task for some manufacturers to relinquish some of their beliefs for the sake of interoperability. This is an understandable situation and one that American Auto-Matrix has struggled with as well. And it is through this struggle that we have arrived at the development of our newest control solution, the AspectFT Control Engine and the Matrix Network Area Controller.

As we began working on this solution, our philosophies for openness as well as flexibility took the proverbial trip down the rabbit hole that led to a solution that, like many of its competitors, utilizes standards that have become commonplace in the market (Internet connectivity, visual programming, BACnet IP communication, etc...). Yet there was something else that happened as it "did gyre and gimble in the wabe," we came upon a Jabberwocky of an idea: Why not create a solution that revolves around openness and utilizes the Internet in more of the manner in which it was intended? Why not create a product that is a consumer as well as a provider of data services that, in addition to utilizing commonplace programs to improve the user experience, also offers an Internet experience that is similar to what users are more familiar with in their everyday lives? With this, the AspectFT Control Engine came into being and was amply named Aspect, because we feel it is a new aspect on Networked Area Control.

The AspectFT Control engine is the Facilitating Technology that has been architected from the ground up to leverage web technologies. With Aspect, IP is everywhere: IP is used between the Matrix Area Controllers, and remote nodes communicate via IP directly to the driver (eliminating the need to create intermediate objects to pass data). The operating system for running Aspect is Linux, and the software

utilizes Java™. Through this, even custom programming no longer requires a special class at the manufacturer and can be learned at most community colleges and universities.

Another example of openness in combination with true Internet functionality is the use of MySQL database functionality. This functionality comes standard with all versions of AspectFT and allows for not only the storage of data in MySQL format, but also integration with other programs through MySQL. If an application can write to an SQL database, Aspect can use that data in its control algorithms, thereby eliminating the need for many expensive drivers.

Another aspect of the software is the interaction with standard open scheduling tools through the iCalendar format. (Over 45 program use this protocol, among them are Outlook 2007®, Google™ Calendar, Apple® iCal, and Facebook®.) Through this out-of-the-box functionality, users can create schedules and events as well as view and modify restrictions through a calendar tool they are familiar with as opposed to something of a more proprietary nature. This also means that different users can have calendars that are specific to them, and that they can access them from most web enabled devices, provided they contain the capability to browse and use iCalendar format programs.

As Building Automation technology continues to evolve, it will be in direct correlation to the technologies that are evolving around it. As we have seen thus far, openness and flexibility are essential pieces to the automation puzzle. As developers of technologies that are directly integrated into the fabric of societies across the globe, it is important that we offer products that not only meet the basic demands of the market, but meet the standards of the technologies that are being utilized as a tool to assist in meeting that demand. It is our job to step through the looking glass and gain a new aspect.

For more information go to www.whatsyouraspect.com