

Leveraging Technology to Design Buildings of the Future

Today's Webcast starts at 1:00 p.m. Eastern.

You will not hear audio until the Webcast begins

Leveraging Technology to Design Buildings of the Future

Today's Moderator



Ed Sullivan

Editor

building
OPERATING
management

Leveraging Technology to Design Buildings of the Future

Today's Presenters

Matt Green



Matt Green joined Schneider Electric in 2001 and has served in various training and leadership roles including course developer, product instructor, and most recently as Director of SmartStruxure Launch and Technical Training Americas.

He is a 1981 graduate of the United States Military Academy at West Point and holds a Masters degree in Systems Engineering from the Naval Postgraduate school. Matt served in a variety of worldwide command and staff assignments during a 20 year Army career, retiring as an Airborne Ranger Infantry Lieutenant Colonel.

Director of SmartStruxure
Launch and Technical
Training Americas,
Schneider Electric

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Today's Presenters

Elvira Marie Chang



Sr. Commercial Marketing
Manager,
Schneider Electric

Elvira Marie Chang is Sr. Commercial Marketing Manager at Schneider Electric, a global specialist in energy management. Working with partners and offices worldwide, Ms. Chang is responsible for managing message development and global product marketing support for Schneider Electric's industry-leading building management system, SmartStruxure™ solution. An engineer by training, she understands how technology has impacted the industry and increased building management system access beyond traditional building owner and facility management personnel. This perspective is reflected in the company's global product go-to-market strategy and communications.

During her 13 years at Schneider Electric, Ms. Chang has held other product management and marketing positions, primarily for the Andover Continuum building management system. She holds separate Bachelor of Science degrees in Electrical Engineering and Computer Engineering from the College of Engineering at Florida International University in Miami.

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Today's Presenters

Doug Anderson



Energy Manager/
Programmer,
Davis School District

Doug Anderson is Energy Manager/Programmer at Davis School District in Utah, a leader in energy efficiency among K-12 schools. The District includes 59 elementary schools, 16 junior high schools, eight high schools and three alternative high schools totaling 10,000,000 sq. ft.: its 60th elementary school will be a net-zero energy ready building. In 2010, Mr. Anderson oversaw the District's transition to Schneider Electric's SmartStruxure™ solution building management system. Those efforts helped the school district earn the 2013 Excellence in Energy Award for Responsible Energy Development from Utah Governor Gary Herbert.

An AEE Certified Energy Manager (CEM), Mr. Anderson has installed and maintained energy systems for more than a decade and he holds a degree in Computer Science. Married for 14 years, he and his wife have three children ages 8, 5 and 2. He is an outdoor enthusiast and enjoys riding snowmobiles and four wheelers.

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Today's Presenters

Jarrod Curtis



Director of Engineering,
Utah Yamas Controls

Jarrod Curtis is director of engineering at Utah Yamas Controls. With offices in Utah, Nevada and Idaho, Utah Yamas Controls installs and services integrated and intelligent building management systems that seamlessly combine building energy management systems, lighting control, electrical distribution, video surveillance and access control systems.

A long-time Schneider Electric partner with over 18 years of experience in building automation and security, Mr. Curtis was a member of the preliminary design team tasked with defining the features and functions Schneider Electric' next generation integrated building management system, SmartStruxure™ solution. He also participated in Beta training on StruxureWare™ Building Operation, the software that powers SmartStruxure solution. To-date, Utah Yamas Controls has installed well-over 250 SmartStruxure™ solution projects for customers.

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Learning Objectives:

- Identify the major features and benefits of a complete, intelligent building management solution
- Understand the advantages of having an open BMS architecture
- Discover the importance of flexible user interfaces
- Leverage technology to improve processes, reduce energy and spend

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To ask questions:

Please use the question and answer panel on the right-hand side of the screen, and send to all panelists.

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Polling Questions

Today's event will include a multiple-choice polling question. Your participation is appreciated.

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Presentation Handouts

All participants will receive an e-mail by the end of the day with a link to download a PDF copy of today's presentation slides.

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CEU Information



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A group of four business professionals, two men and two women, are walking across a green lawn. They are dressed in business attire. The man in the center is gesturing with his hand while talking to the others. The woman on the far right is carrying a briefcase. In the background, a modern building with many windows is visible.

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Managing, understanding and improving building operations.

May 20, 2014

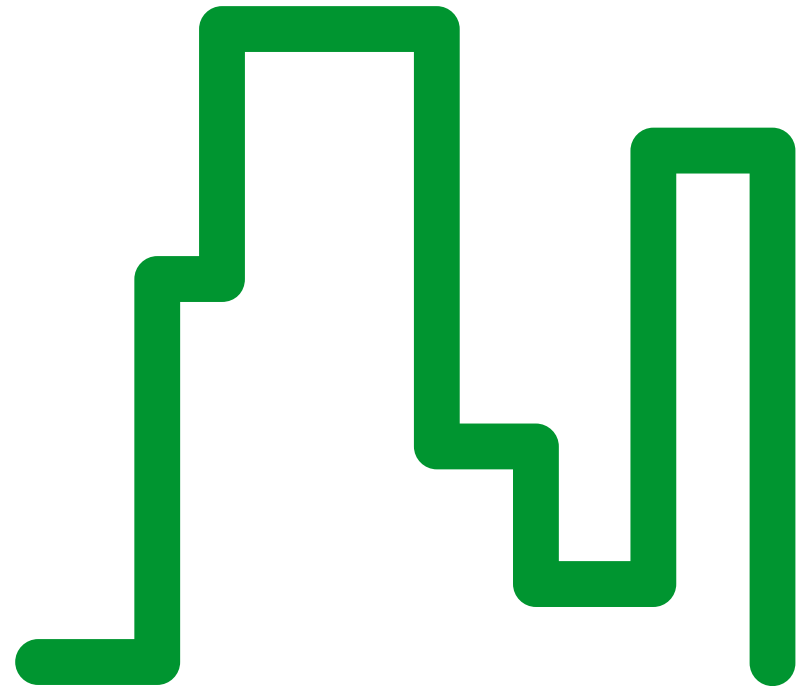
Schneider
Electric

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Our goal.



Helping customers optimize their energy consumption, maintain a healthy and productive environment, update aging facilities and provide anytime/anywhere access to their building systems.



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Challenges

What are some of the challenges and issues building and facility managers face today?



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Challenges

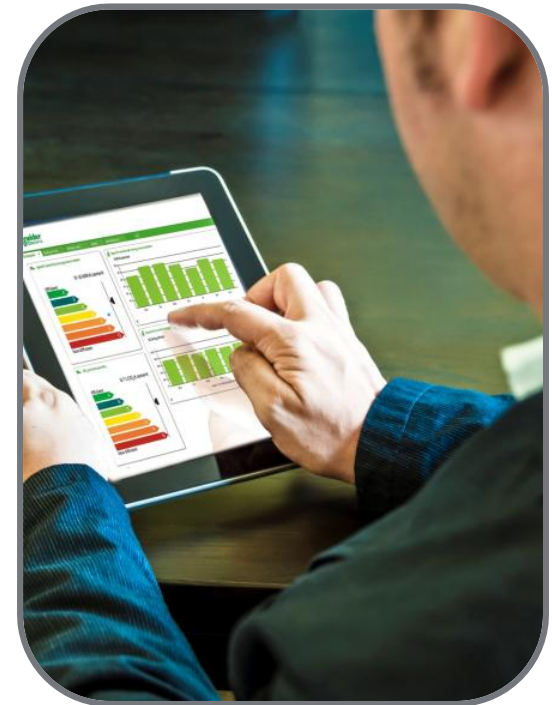
- Operating costs
- Increased technology = knowledge gap
- Leaner budgets
- Buildings are aging
 - Need to future proof with current technology
- More responsibility for efficiency and sustainability



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Challenges

- Internet of things
- Increase of technology
- End-users direct interaction with BMS/data



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Building Management Systems

What is the potential of
today's BMS?



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Building Management Systems

- Provide a wealth of data about the facility's operational performance and energy use
- Ensures optimal operations
- Responds, performs, notifies



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Today's BMS Technology

How do today's BMS technologies allow building owners, facility managers and occupants to improve their building's operation?



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Today's BMS Technology

Features & Benefits

- Open protocols
- Integration of disparate systems
- Scalability



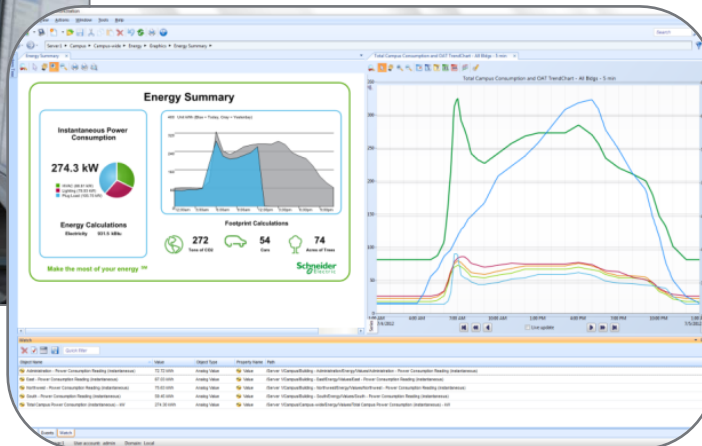
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Today's BMS Technology



Features & Benefits

- Anytime/anywhere access
- Mobile apps
- Reports



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Polling Questions

Today's event will include a multiple-choice polling question. Please make your selection to the right of this screen.



Case study: Davis School District

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Davis School District

- K-12 public school system in Davis County, Utah
- Serves 68,000 students
- 10 million ft² of classroom, office and data center space
- 90+ buildings and 340 portable classrooms



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Its goal: to be an energy efficiency leader

But ...

- 100-year old school system
- Aging facilities
- Disparate building systems
- No ability to analyze building data across the school system



VISION
Davis School District
provides an environment
where learning comes first.



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Challenge

- Protect investment in existing technology: no budget or time for a rip & replace
- Leverage current technology to address present needs as well as prepare for future needs
- Minimize disruption to day-to-day operations

➤ Turned to partner:



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Solution: a BMS that features...

- Open protocols
- Monitoring and control of different systems into one common front end
- Anytime, anywhere access to information
- Ability to see overall building performance across multiple sites
- Daily operations simplified



Smart**Struxure**

Powered by
StruxureWare Building Operation



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IT Building

Built in 2012

- Lighting connected directly to the Automation Server
- HVAC system and data center chiller pulled in directly via BACnet
- Access control system integrated
- Alarms emailed directly to mobile devices
- Integrate with data center using EcoStruxure Web Services



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King Elementary School

Built in 1977

- Converted the pneumatics to Xenta LON controllers
- Installed a BACnet meter to monitor the power system
- Upgraded the chiller to a BACnet system; added BACnet communication card to boilers
- Brought in all equipment under one platform



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Centennial Jr. High School

Built in 2011

- Data from the existing system is pulled into the new platform and displayed on a brand new touch screen and centrally-located interface



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Results

- Mostly software transition
 - Took less than 3 weeks
- Gained holistic view of all facilities for the first time
- Improved processes and reduced OpEx
- Teachers use energy dashboard as a curriculum tool to engage students in learning



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For extra credit

- Addressing the future: new zero-ready elementary school will feature SmartStruxure™ solution
- Recipient of Utah Governor's 2013 Excellence in Energy Award for Responsible Energy Development



Live Demo: SmartStruxure Solution



Conclusion

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Putting together an action plan

- 1 Evaluate:** Assess current needs of the building
- 2 Enlist a trusted resource:** Resource should be able to assist in developing a strategy
- 3 Develop and implement:** Act on a plan
- 4 Train:** Educate facility staff
- 5 Maintain:** Perform regular checks
- 6 Re-evaluate:** Continually evaluate results

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New technologies allow Facility Managers and Building Owners to demonstrate the ROI of system improvements and help to better manage, understand and improve a building's operations.

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Q&A

What questions do you have for us?

Contact us:

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Make the most of your energy

