

Orange Spiel



Juicy News from ASHRAE's Orange Empire Chapter



MEETING INFORMATION

TUESDAY, NOVEMBER 13, 2018

THE PHOENIX CLUB

1340 S. Sanderson Avenue
Anaheim, CA 92806

[CLICK HERE FOR DIRECTIONS](#)

Tech Session 5:30 – 6:30 p.m.
Social 6:30 – 7:00 p.m.
Dinner 7:00 – 9:00 p.m.

**PLEASE E-MAIL (PREFERRED),
OR CALL WITH YOUR
RESERVATIONS TO:**

Ryan Sibley c/o TK1SC
rsibley@tk1sc.com
Direct: 949.751.5923
Office: 949.751.5800

PRICE SCHEDULE

Member \$45.00
Non-Member \$50.00
Student \$10.00
Member Day of Event \$50.00
Non-Member Day of Event \$55.00

[CLICK HERE TO REGISTER ONLINE](#)

**IF CANCELLATION IS NOT
RECEIVED YOU WILL BE BILLED
FOR THE SESSION**

[SEE PAGE 6 FOR FAX ORDER FORM](#)

TECHNICAL SESSION

"Measurements and Verification, Part II: The Variable Air Volume Box!" by Travis English, PE CEP LEED AP

DINNER PROGRAM

"Future Thinking about the Net Zero Hospital!" by Travis English, PE CEP LEED AP

Orange Spiel Editor

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NOVEMBER MEETING NOTICE

THE PHOENIX CLUB IN ANAHEIM

TUESDAY, NOVEMBER 13, 2018



TECHNICAL SESSION MEASUREMENTS AND VERIFICATION, PART II: THE VARIABLE AIR VOLUME BOX!

Our speaker for both the Technical Session and Dinner Program is Travis English (see page 2 for bio).

This month's technical presentation will focus on the variable air volume zone box, and its vital role as the keystone of performance.

Last season, Travis presented *"Energy – Design and M&V,"* drawing on data collected from measurement and verifications of 19 real buildings, compared to their design energy models. Frequently, heating energy and fan energy far exceed the design expectation.

In this session, Travis will show data collected from initial trending of variable air volume (VAV) boxes. The sample of boxes, designed by different engineers, installed by different controls vendors, on different projects, have similarities which provide clues as to where and how energy is used differently from our best design intents. 🍊

DINNER PROGRAM FUTURE THINKING ABOUT THE NET ZERO HOSPITAL

Can hospitals really keep up? Net zero is everywhere! Not a month goes by without an announcement of new net zero achievement, or guideline, or policy.

But, hospital energy use is as high as ever, five to ten times that of other commercial buildings. Net-zero hospitals seem a distant goal. Most of the energy in hospitals goes to HVAC systems.

US hospital design is regulated by a set of prescribed air changes per hour for most spaces. These air change rates are largely historical, some pre-dating the turn of the last century. What possibility is there to update this design paradigm, incorporating learnings from best practices, and energy conservation?

Travis will present the possible: net zero hospitals are not so far off. New design ideas and code reform hold promise to move US hospital design towards the net-zero design ideal. 🍊



GREG'S BLOG

Well the Holidays are approaching fast, but the weather outside certainly would make you second guess that. If you reside in Southern CA for the weather you have to love this mid-70's in mid-November.

Last month we hosted another successful event at the Phoenix Club that featured a joint meeting with ASPE that had a turnout of 96 people! I believe that is our biggest joint meeting with them to date. Thank you to all who made it out. If you didn't, hopefully you can check out the new venue this month.

This month's dinner presentation will be on Future Thinking about the Net Zero Hospital by Travis English with Kaiser Permanente. Travis will



also be doing a tech session on Measurement and Verification, Part II: The Variable Air Volume Box! Surely these will be must see events.

Last week we hosted our 1st YEA (Young Engineers in ASHRAE) event in a couple of years and it was a smashing success. Thank you to all in attendance. We had over 40 young

engineers (and a couple not so young) attend and play in a ping pong tournament. The atmosphere was very relaxed, but the competition was pretty intense.

Thank you to Sigler for helping sponsor the event and to Southland Industries for hosting

the event in their new state of the art facility. I also want to thank our YEA Chair, Jack Walsh and Kevin Smith for all their hard work organizing the event. We are looking to do another event in the near future so stay tuned.

Last reminder to all of our student members that the deadline for society scholarships is 11/15. Society is providing 35 scholarships so please submit your application online through the Society website.

Also, don't forget next month's meeting on December 12th with our friends from the SoCal and Tri-County Chapters at the Energy Resource Center in Downey. That's right, we'll be having the event on a Wednesday evening. This was to accommodate the president of ASHRAE society herself, Sheila Hayter, who's making a west coast visit to Region X. Please come out to support the Women in ASHRAE.

Until next month, stay comfortable.... **Greg Glover** 🍊

SPEAKER BIO

This month's speaker, Travis English, PE CEP LEED AP, is the Chief Design Engineer and National Director of Engineering for Facilities Strategy, Planning and Design for Kaiser Permanente, the US's largest managed health care provider.

He is responsible for facilities standards, design quality assurance, and oversight of the commissioning program. The quality program includes energy targets, water use planning, total cost of ownership, delivered system performance, and sustainability.

Travis has a BS in Mechanical Engineering from Cal Poly Pomona and an MBA in management from Cal State Fullerton. He is a professional mechanical engineer with over 20 years of experience in design and construction of mechanical and energy system, with an emphasis on high performance design, indoor air quality, and building control systems.

In 2009, he received the ASHRAE technical award for the Environmental Nature Center,

a facility which used passive heating and cooling designs with 100% natural ventilation. In 2014, he was named one of Consulting-Specifying Engineering Magazine's "40 under 40".

Since 2012, he has actively advocated development and adoption of next-generation ventilation design principles and practices in the health care industry. Participating member of TC-9.6, SSPC-62.1 and SSPC-170. 🍊



Travis English

OCTOBER MEETING MINUTES

Date: 23 October 2018

Time: 5:30 - 6:30 PM

Place: The Phoenix Club
1340 S. Sanderson Ave.
Anaheim, CA 92806

MEETING ATTENDEES

- Ben Chesser (BC)
- Jeff Conrad (JC)
- Greg Glover (GG)
- Jeff Hanzel (JH)
- Craig Hofferber (CH)
- David Lawson (DL)
- Steve Rawski (SR)
- Ryan Sibley (RS)
- Kevin Smith (KS)
- Brian Sybesma (BS)
- Matt Waller (MW)
- Jack Walsh (JW)

CALL TO ORDER

1. Meeting called to order at 5:30 PM
2. Quorum Determination (Minimum Six Voting Members)
3. Introductions
4. Announcements
5. Next Meeting Date: November 13th

DISCUSSION ITEMS

1. Refer to Appended Chapter

- Meeting Agenda
2. Announcements
 3. Officer Reports
 - i. Research Promotion
 - Motion Approved to Donate 30% (\$4k) of Annual Region Goal to Society.
 - ii. Electronic Communications
 - RS to add Kevin Smith and Jack Walsh to YEA on website.
 - Need to find past email blast sent out via Constant Contact for Tech Award to use as a template to promote Tech Award this year.
 - iii. VP & CTTC
 - SR to forward latest correspondence to BC for December Joint Meeting with So Cal Chapter.
 - (1) BC to reach out to So Cal Chapter for information about December Meeting.
 - SR and BC to schedule Lunch Meeting with Honda Center for January Meeting planning.
 - (1) Have lunch and walk the path planned from Phoenix Club to Honda Center

- for Tour to prepare for January Meeting entourage.
- iv. Golf Chair
 - Jeff Hanzel did an outstanding job this year. Who wants to volunteer for next year?
 - (1) Suggest Teaming up on this next year by forming a Golf Committee.
 - (2) Suggest meeting within the next month to determine when and where to schedule next year's Golf Tournament.
 - (a) 10/3/19 and 10/24/19 only dates available at Coyote Hills.
 - (i) Need to Book Immediately.
 - (b) Black Gold or Oak Creek being considered for next year.
 - v. Membership Promotion
 - PAOE Point Goal was met.

NEW BUSINESS

None

ADJOURN

- End of Minutes -
Ben Chesser 



2019 ASHRAE Winter Conference & AHR Expo
Atlanta, GA
January 12-16, 2019

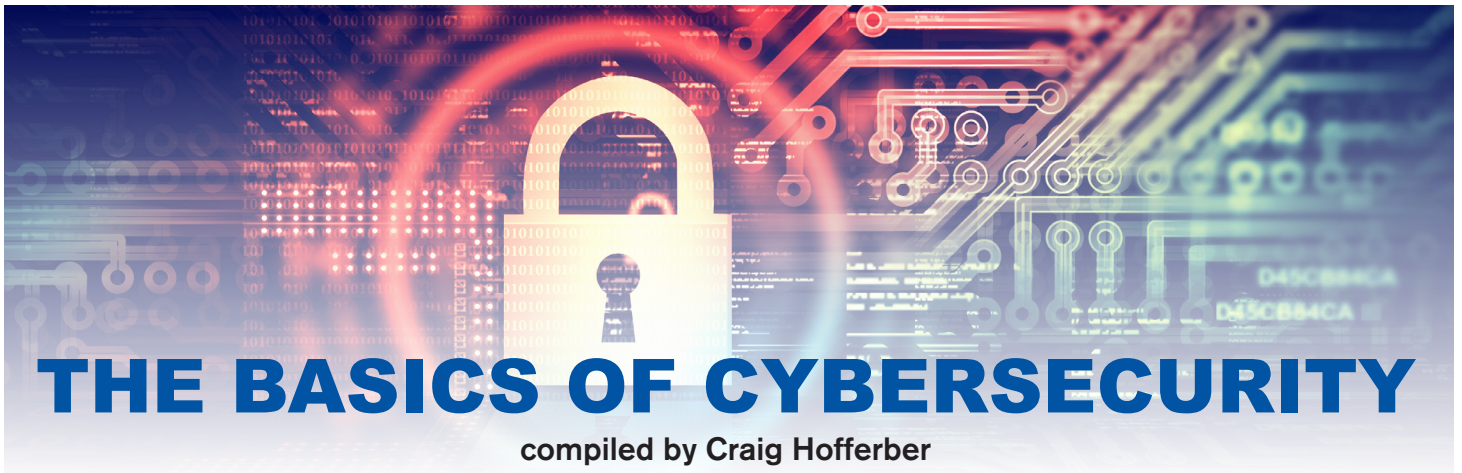


The 2019 ASHRAE Winter Conference will be held in Atlanta, GA! The Technical Program along with Committee meetings, Registration, the Bookstore and Speakers Lounge will be at the Omni CNN Center and the Georgia World Congress Center.

The AHR Expo will take place at the Georgia World Congress Center, Monday, January 14 – Wednesday, January 16.

Your ASHRAE Conference badge provides free entry to the AHR Expo show floor, or you can register for free until January 9, 2019. After January 9, 2019 the fee will be \$30 to attend the AHR Expo only.

[CLICK HERE FOR MORE INFORMATION](#)
[CLICK HERE TO REGISTER](#)



compiled by Craig Hofferber

Ensuring the safe operation of equipment is important both for preserving the safety of those working with and around these systems and for proper operation of the larger industrial ecosystems in which they work. Mechanical systems have remained largely the same from the standpoint of production and use, and now manufacturers wishing to innovate in the space are turning to technology.

The increasingly prevalent connectivity afforded by what is known as the Industrial Internet of Things (IIoT) is changing the HVAC landscape. Connected technologies are still fairly new, but manufacturers focused on every segment — residential, commercial, and industrial — are testing the waters and beginning to pursue new innovations in search of a competitive advantage. For component manufacturers, smart technology may offer the opportunity to optimize performance, improve energy efficiency, or even offer remote diagnostics and control but with changes, there are growing pains. The new technologies are creating unique challenges and require a dedicated effort to stay one step ahead.

Understanding Connected Technologies in the HVAC Industry

The risks associated with connected technologies are largely the same across the entire HVAC landscape, but before assessing these risks, let us first understand the basics of the technology itself.

In any industry or segment, a connected device is simply one that has access to a larger network or system which in turn has access to the device itself. Rather than connecting through actual physical access, these devices communicate over the internet, allowing them to share and transmit data and provide access to users who may not be on site.

Devices in these networks communicate with one another, meaning it is possible to create “smart” systems that work together to monitor the system, alert users to issues, and generally ease operation. In an ideal situation, the components in a network only communicate with one another and only authorized users will have access but ensuring this is the case requires manufacturers to remain diligent in their production and in the

quality of the connected systems they offer to their customers.

General Risks of Smart, Connected Technology

When something connects to a network, there is a risk that a bad actor — be it an individual looking to cause trouble, a company acting maliciously to steal intellectual property, or even a government-sponsored cyber-attack — may try to gain unauthorized access. Let us examine a few possible scenarios to understand how these risks can play out:

A company manufacturer a product and ships it to its customer, who then connects it to their network. A couple of months later, the customer finds it is locked out of the controls and they can no longer access the controls for other components in their facility either. What went wrong at the facility and who is to blame?

An engineer at a manufacturing facility receives an email from someone they do not know and clicks a link within. This link does not work or takes them to a website they do not need, so they close the tab and go on with their day. A week later, someone

(See **CYBERSECURITY** page 5)

CYBERSECURITY

(continued from page 4)

had gained access to the manufacturer's database and stole employee data, including personal information and sensitive client information. How did someone gain this access?

To control costs, a manufacturer switches supplier for a connected component. Its supplier passes basic due diligence and the components work well, but are they secure? Even if the manufacturer works to maintain the security of its own products, will this component become a weak link?

In each of these potential, real-world scenarios, the actual cause of the damage is impossible to see because it only exists in the software itself, yet data is potentially jeopardized, customers may be left exposed to damage, and the manufacturer's reputation is at risk.

Some manufacturers are already leading the market by working to understand potential risks and mitigate them whenever possible. Unfortunately, many others are still relatively in the dark, aware of risks and unsure how to act or aware and choosing to wait until regulations require next steps. Wherever

your business may fall on this spectrum, there is no time like the present to develop a plan or enhance your existing cybersecurity efforts.

Proactive Measure to Prepare for the Unknown

In some respects, it is impossible to fully understand the risks that exist due to the relatively young nature of our newly connected world. Technology is changing rapidly, new connected devices are joining networks every single day, and keeping up can feel impossible; however, despite this constant evolution and the lingering unknowns it creates, it is possible for you to secure your systems and feel better prepared for the road ahead. You can even engage cyber-experts to help you every step of the way.

Just as technology manufacturers and software companies have been busy connecting everyone and everything, third-party experts such as UL have been busy examining and evaluating these connections, understanding the needs of the market, and working to help shape what is needed. Engaging with a third-party allows you to take advantage of their knowledge and offers

added reassurance, confidence, and trust in your systems and processes.

At UL, we turned to our deep understanding of the HVAC industry and our long history of working with manufacturers, authorities having jurisdiction (AHJs), and professional organizations to help us understand this ever-changing landscape and the needs of manufacturers. Along with engaging policy makers, our work has led UL to develop services and training opportunities for manufacturers at every stage of the cyber-preparedness process. From introductory training on the ins and outs of IIoT, cybersecurity, and the importance of supply chain integrity, on to penetration testing and cryptanalysis, our cybersecurity professionals can work with your team to deliver a comprehensive understanding and help set you on a path to a higher level of cybersecurity.

Rather than waiting for a security issue to sneak up on you, take control into your own hands and face these issues head on.

To learn more about cybersecurity and how UL can help you stay prepared, visit UL.com/cyber or email us at ULCyber@ul.com. 🍊

OCTOBER 23, 2018 MEETING at THE PHOENIX CLUB in ANAHEIM



CHAPTER OFFICERS

President Greg Glover
 President-Elect David Lawson
 Vice President Ben Chesser
 Treasurer Brian Sybesma
 Secretary Mary Johnson

BOARD OF GOVERNORS

Jeff Conrad Craig F. Hofferber
 Eric Decker Stephen J. Rawski, P.E.
 Ken Golovko Matthew Waller, P.E.

CRC DELEGATE

Greg Glover

CRC ALTERNATE

David Lawson

**ASHRAE
 ORANGE EMPIRE CHAPTER**

**2018-2019
 PARTIAL ROSTER**

SPIEL DEADLINE
 The December deadline
 for articles or ads is
FRIDAY,
NOVEMBER 30, 2018

COMMITTEES AND CHAIRPERSONS

Attendance TBD
 Electronic Communications Ryan Sibley
 Government Affairs Chris Farrington
 Golf Tournament Jeff Hanzel
 Historian Chris Mellen
 K-12 STEM Greg Glover
 Membership Promotion Jeff Hanzel
 Newsletter Editor Robert Hagstrom
 Programs TBD
 Refrigeration Jeff Conrad/ Ben Chesser
 Research Promotion John Sawyer
 Student Activities Eric Decker
 Table Top Displays TBD
 Technology Transfer Ben Chesser/David Lawson
 Webmaster Ryan Sibley
 Women in ASHRAE Mary Johnson
 YEA Jack Walsh/Kevin Smith

**HAVE YOU PAID YOUR
 MEMBERSHIP DUES?**

We appreciate members paying their chapter dues at the same time they renew their Society membership. If you haven't paid your dues yet, please be sure to stop by the reception desk at the next Chapter meeting and we can accept your dues directly. *Thank you!*

ADVERTISE IN THE ORANGE SPIEL!

1/4 Page 25
 1/3 Page 35
 1/2 Page 50
 Full Page 100
 Business Card 25
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Email your editor today at
 Robert.Hagstrom@sce.com.



SHARE YOUR EXPERTISE!

Submit an article for publication in next month's Orange Spiel. Email your editor today at Robert.Hagstrom@sce.com.



PLEASE RSVP FOR THE NOVEMBER 13 MEETING

by Thursday, November 8, 2018 at noon, Cancellations by Monday, November 12, 2018 at noon
(non-cancellations will be billed)

Ryan Sibley c/o TK1SC

Direct: 949.751.5923 • Office: 949.751.5800 • E-mail: rsibley@tk1sc.com

MEMBER: \$45.00 | NON-MEMBER: \$50.00 | STUDENT: \$10.00

MEMBER Day of Event: \$50.00 | NON-MEMBER Day of Event: \$55.00

Name(s): _____



Company: _____
 Telephone: _____
 E-mail: _____

To be removed from our e-mail list, please notify Ryan Sibley at 949.751.5923 or email rsibley@tk1sc.com or Steve Rawski at e-mail srawski@semprautilities.com

PLEASE DO NOT CONTACT THE RESERVATION LINE TO REMOVE YOUR FAX NUMBER FROM OUR LIST

ORANGE EMPIRE CHAPTER

WINTER/SPRING 2018/19 SCHEDULE

MEETING LOCATION:

THE PHOENIX CLUB

1340 S. Sanderson Ave.
Anaheim, CA 92806

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SEPTEMBER 25, 2018

Tech: (Condensed) Centrifugal Pump Series

Dinner: U.S. Department of Energy Pump Conservation Standards

Theme: Energy Night

Place: Phoenix Club, Anaheim

OCTOBER 23, 2018

Dinner: Seismic Code Updates for Bracing of Distribution Systems (Duct, Mech Pipe, and Plumbing Pipe)

Theme: Joint Meeting with ASPE

Place: Phoenix Club, Anaheim

NOVEMBER 13, 2018

Tech: Measurements and Verification, Part II: The Variable Air Volume Box!

Dinner: Future Thinking about the Net Zero Hospital

Theme: Research Night

Place: Phoenix Club, Anaheim

DECEMBER 12, 2018

Dinner: TBD

Theme: Joint Meeting with So. California Chapter – YEA Night

Place: TBD

JANUARY 15, 2019

Dinner: Current and Future Chiller Refrigerants

Theme: Joint Meeting with ASHRAE Tri-County Chapter – Refrigeration Night

Place: Phoenix Club, Anaheim

FEBRUARY 26, 2019

Tech: Expansion Tank Sizing

Dinner: Hydronic Piping with PEX

Theme: Membership Promotion Night

Place: Phoenix Club, Anaheim

MARCH 19, 2019

Dinner: Designing Buildings and Systems for Occupant Comfort

Theme: Joint Meeting with San Diego Chapter

Place: El Adobe, San Juan Capistrano

APRIL 23, 2019

Tech: Designing for Design Build, Reducing Design Time and Contractor Costs

Dinner: Soft Skills and Keys to Success...from One Person's Perspective to Another

Theme: Student Night

Place: Phoenix Club, Anaheim

MAY 21, 2019

Dinner: 2019-2020 Installation Night Dinner

Theme: Officer and Board Installation

Place: TBD



Orange Spiel



www.orangeempirearise.weebly.com

MEETING SUMMARY

**TUESDAY,
NOVEMBER 13, 2018**

TECHNICAL SESSION

"Measurements and Verification, Part II: The Variable Air Volume Box!"

by Travis English, PE CEP
LEED AP

DINNER PROGRAM

"Future Thinking about the Net Zero Hospital" by

Travis English, PE CEP
LEED AP

Orange Empire ASHRAE

2312 Park Avenue, #407
Tustin, CA 92782