



CABA Intelligent Buildings Council (IBC)
Draft Meeting Minutes
Tuesday, October 12, 2021
12 NOON - 1:30 PM (ET) via Webinar

IBC Executive:

IBC Chair, Brian Ensign (Superior Essex Communications)
IBC Vice-Chair, Bob Allan (The Siemon Company)
IBC Vice-Chair, Harsha Chandrashekar (Honeywell International Inc.)
IBC Vice-Chair, Robert Lane (Robert H. Lane & Associates Inc.)

Present:

21st Century Energy, Bill Branham
ABB, Inc., Julie Petrone
Acuity Brands, Inc., Tanya Hernandez
Aircuity, Inc., Daniel Diehl
Aircuity, Inc., Sarah Callahan
Aircuity, Inc., Patrick Kelly
AKM Semiconductor, Inc., Carl Bengtsson
ALVI cleanair.ai.us, Michael Petgrave
Asahi Kasei Microdevices - Senseair, Patrick McGrail
Azteca Controls, S.A. de C.V., Alfonso Rivera
Banafa Qeshm Co., Hossein Hashemi
BC Hydro, Markus Zeller
Belimo Americas, Michael Knipple
Belimo Americas, Dennis Johannesen
Bell Mobility, Atul Goswami
BitStream Communications, Inc., Charles Baldwin
BitStream Communications, Inc., Isaac Knecht
Brainwave Research Corp., RenePardo
BranchPattern, Ravi Maniktala
Brookfield Global Integrated Solutions (BGIS), Andrew Penner
BSRIA Inc., Krystyna Dawson
BTGA e.V., Jyotsna Pydiah
CABA, Greg Walker
CABA, Conrad McCallum
CABA, Andrew Glennie
CABA, Sashien Godakandae
CABA, Marta Klopotoska
CACI, Stephen Lepper

Canadian Gas Association (CGA), Kevin Larmer
Center for Energy and Environment, Lester Shen
City of Crystal Lake, Ernie Hagenow
CommScope, Inc., Jane Bradshaw
CommScope, Inc., Morne Erasmus
CTIP: Consortium for Tech & Innovation in Pediatrics, Scott Witt
Delos Living LLC, Regina Vaicekonyte
Delos Living LLC, Amir Ebrahimifakhar
Delta Controls, A Delta Group Company, Kelly Jenkins
DesignLights Consortium, Liesel Whitney-Schulte
DFI Enterprises, Mark Bomberg
Digital Twin Consortium, Dan Isaacs
Distech Controls Inc., Asim Baig
Dojuz Eylul University, Selin Biçer
DTE Energy, Sue Littles
E2C Technology, Anno Scholten
Egan Company, Kirk Wahlstrom
Embedded Sense Inc., Tom Hawkett
Energy@Work Inc., Paula Galo
Enica Engineering, Laura Eckenrod
Entrepreneur, Francesco Mowrey
EnviroNet Systems, LLC, Roberto Martinez
ERG Energy Efficiency, Michael Dabbene
Evolved Lighting Solutions, Matt McCoy
exp. US Services, Inc., Jon Larry
Ferguslea Properties, Aodhan Sheahan
FNX-Innov, Joseph Szymula
Fujitsu Network Communications, Robert Selby
Honeywell International Inc., Peter Williams
Honeywell International Inc., Sathish Nanjappa
Honeywell International Inc., Harsha Chandrashekar
HTA Consulting Group, Ray Malki
ICONICS, Inc., Melissa Topp
Igor Inc., Kimberly Johnson
IMEG Corp., Jeff Carpenter
IMI Hydronic Engineering International SA, Bhumika Lathia
INGAGER, Mark Carvalho
International Corporate Expansion (ICE) / XME.digital, Matey Nedkov
International Corporate Expansion (ICE) / XME.digital, Iryna Manukovska
IQuity, Inc., David Emptage
J.L. Richards & Associates Ltd., Adam Frey
Jahan Noor Lighting Industries Company, Mohammad Javad Kalani
Johnson Controls, Inc., Marc Bertolin
Johnson Controls, Inc., Edward Shail
Johnson Controls, Inc., Arunkumar Vedhathiri
Kele, Richard Campbell
Ken Wacks Associates, Kenneth Wacks

KODE Labs, Walter Amicucci
Legrand North America, Shana Longo
Legrand North America, Pete Horton
Leviton Manufacturing Co., Inc., Todd Harpel
Lynxspring, Inc., Marc Petock
MARKINTEL, Katherina Sutter
Markland Consulting, John Bowen
METZ CONNECT USA, Inc., Hugh Daly
Mohawk College, FrankMesicek
Multi-Tech Systems, Inc., Dan Quant
Municipal District of Bonnyville, Joad Clement
National Electrical Manufacturers Association (NEMA), Bryan Holland
National Research Council Canada (NRC), Ajit Pardasani
National Research Council Canada (NRC), Marcel Lavoie
National Research Council Canada (NRC), Cal Koskowich
National Research Council Canada (NRC), Marcel Lavoie
National Research Council Canada (NRC), Natalia Cooper
National Research Council Canada (NRC), Rick Nowlan
NYSERDA, Thomas Yeh
NYSERDA, Ziggy Majumdar
NYSERDA, Rebecca Reohr
Object Management Group, Dan Isaacs
OLYMPIC CONTROLS, Ashkan Tehrani
Oxygen8, Eric Hebbard
Oxygen8, Israel Brito
Oxygen8, Erdem Kokgil
Oxygen8, Steve Lancefield
Oxygen8, David Newton
Padi, Inc., Anto Budiardjo
RBCG LLC, Ronald Bernstein
Robert H Lane and Associates, Inc., Robert Lane
SAUTER, Roland Hofstetter
Scherer Communications, Matt Schererr
Self, Lin Yu
Service Robotics & Technologies, Inc., Sam Kome
Service Robotics & Technologies, Inc., Sarah Chehade
Siemens Industry, Inc., Hans-Joachim Langels
Siemens Industry, Inc., Emmanuel Val
Siemens Industry, Inc., Richard Rivera
Sinclair Digital LLC, Luis Suau
Smart Home World, Adora Dmello
Sodexo Canada Ltd., Daniel Vander Veen
Somfy Systems, Inc., David Parrett
STABS, Trevor Buhagiar
Superior Essex Communications, Brian Ensign
Superior Essex Communications, Amir Sekhvat
Sustainable Resources Management Inc., David Katz

tekmar Control Systems Ltd., Gregory Leupin
tekmar Control Systems Ltd., Jay Vath
The Building People, Tony Tubiolo
The Building People, Peter Knowles
The Chicago Faucet Company/Geberit Group, Richard Nortier
The Siemon Company, BobAllan
Toggled, Rob Schmitz
Tynt Technologies, Inc., John Dwyer
UL LLC, Bradly Luft
UL Verification Services Inc., Brad Miller
Vaisala, Jim Moslander
Vaisala Inc, Justin Walsh
Volta Insite, Robert Hollands
WiredScore, Stefan Schmidt
WME, Sandeep Singh
Yorkland Controls Ltd., Gerry Cellucci

1. **Agenda** - Greg Walker (CABA)

Greg Walker (CABA) thanked everyone for attending, outlined the agenda and alerted everyone that the meeting was being recorded and will be made available to the industry.

2. **Call to Order, Welcome and Introduction** - Brian Ensign (Superior Essex Communications)

CABA Board member and IBC Chair, Brian Ensign (Superior Essex Communications) welcomed everyone and introduced: IBC Vice-Chairs, Harsha Chandrashekar (Honeywell International, Inc.), Robert Lane (Robert H. Lane and Associates, Inc.) and Bob Allan (The Siemon Company), IBC White Paper Sub-Committee Chair Ken Wacks (Ken Wacks Associates) and the Keynote Speaker Dan Diehl (Aircuity). Brian also outlined the role of the IBC.

3. **Administrative** - Brian Ensign (Superior Essex Communications)

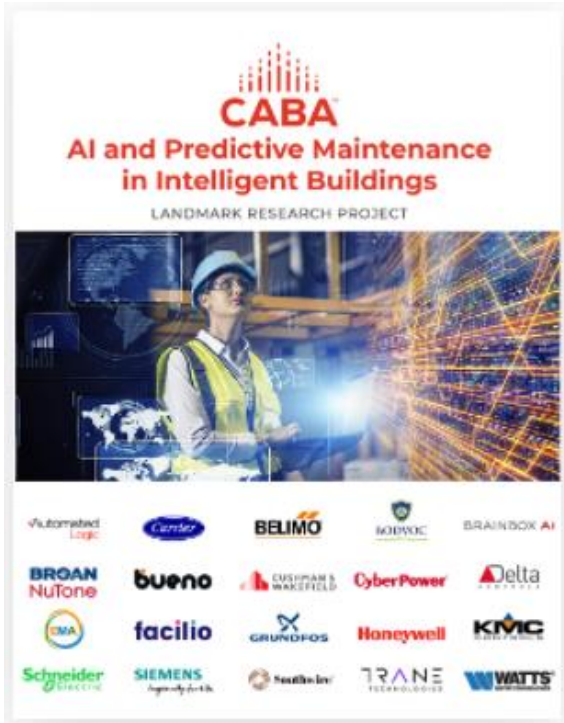
3.1 Motion to approve Past IBC Minutes

Brian Ensign (Superior Essex Communications) informed everyone that the meeting minutes from the July 22, 2021, IBC meeting were circulated and were posted on the CABA Web site in the IBC section: www.caba.org/ibc.

Motion to approve the July 22, 2021, IBC minutes was moved by David Katz (Sustainable Resources Management Inc.), and the motion was seconded by Robert Lane (Robert H. Lane and Associates, Inc.). Unopposed motion passed.

4. **Research Update** - Harsha Chandrashekar (Honeywell International, Inc.),
Greg Walker (CABA)

4.1 **2021 IBC Landmark Research “AI and Predictive Maintenance in Intelligent Buildings”** - Harsha Chandrashekar (Honeywell International, Inc.)



Harsha Chandrashekar (Honeywell International, Inc.) gave a brief overview of this 2021 IBC Landmark Research Project, “AI and Predictive Maintenance in Intelligent Buildings”. Only the funders will receive the full \$130,000 of research but the Executive Summary of the research will be available to CABA Members. Harsha Chandrashekar mentioned that the IBC is actively seeking funders for this research and outlined the funding levels (starting at \$5,000).

Nineteen (19) CABA members funded this research project:



4.2 Annual “BACS Market Sizing North America” - Greg Walker (CABA)

Greg Walker (CABA) gave a brief overview of a new, invitation-only, market sizing study focusing on building automation control systems.

Eight (8) CABA members have agreed to fund and participate in this research project:



5. “Intelligent Ventilation In the age of Net Zero & COVID” - Bob Allan (The Siemon Company), Dan Diehl (Aircuity)



Dan Diehl
CEO



Description: There is a world-wide resurgence of carbon reduction or even net zero carbon goals for companies, universities, and government agencies. Additionally, recent U.N. data found that 28% of global greenhouse emissions are from building operations. Coupled with the emphasis on the environmental impact of buildings is the continuing COVID-19 pandemic and the need for a healthy workplace. Intelligent ventilation is the most significant way to address both of those issues simultaneously by optimizing efficiency and the health and safety of occupants.

Dan Diehl: ddiehl@aircuity.com

6. White Paper Sub-Committee Update - Ken Wacks (Ken Wacks Associates)

An overview was given of the IBC White Paper review process, completed IBC White Papers and papers in progress. IBC White Papers are secondary literature review articles that are approximately 10-20 pages in length. These papers are

written and distributed free of charge to inform the industry. For the papers to be approved by the IBC White Paper Sub-Committee (WPSC), they must have significant technical material of relevance to IBC members. They must not contain marketing material or promote an agenda. Any CABA member can and is encouraged complete the new one (1) page white paper proposal template and submit it to klopotowska@caba.org.

All completed and approved CABA White Papers are placed in the CABA Public Library, Members Library, CABA NewsBrief, CABA Twitter Feed, CABA LinkedIn Group and promoted at industry events. To view the IBC White Paper terms of reference, previous IBC White Papers and additional information, please go to: www.caba.org/ibc. All completed CABA White Papers, and those under development, can be found at: www.caba.org/whitepapers.

IBC White Paper Sub-Committee:

- Ken Wacks Associates, Kenneth Wacks
- Consultant, Steve Samson
- Frost & Sullivan, Dilip Sarangan
- National Research Council Canada (NRC), Heather Knudsen
- Sustainable Resources Management Inc., David Katz

If you or someone that you know would like to join one (1) or more of the following White Paper working groups, please contact Marta Klopotowska (CABA) at klopotowska@caba.org.

6.1 Recently Completed:

“The Commercialization of LiFi”

Ken Wacks (Ken Wacks Associates) gave an overview of this paper and those in the Working Group.

- Wharton County Junior College (Chair)
- BKS Digital Connectivity Solutions
- Control4
- CRANTEC
- Dibangoup sinilux
- Du
- GETAC
- Ken Wacks Associates
- Li-Fi LED CI
- National Electrical Manufacturers Association (NEMA)
- Nav Wireless Technologies Pvt. Ltd.
- Nokia
- Orange
- PureLiFi
- Quantum-Resistant Crypto (QRCrypto SA)

- Telecommunications Industry Association (TIA)
- University of Strathclyde

“Bipolar Ionization and its Contribution to Smart and Safe Buildings”

Ken Wacks (Ken Wacks Associates) gave an overview of this paper and those in the Working Group.

- Pure Air Control (Chair)

6.2 In Progress:

“Impacts of Automated Shading in Building Projects”

Ken Wacks (Ken Wacks Associates) gave an overview of this paper.

- TRC Energy Services (Chair)
- Axis Lighting Inc.
- Draper, Inc.
- exp. US Services, Inc.
- Ken Wacks Associates
- Lawrence Berkeley National Laboratory (LBNL)
- Legrand North America
- Lutron Electronics Co., Inc.
- Mecho
- NYSERDA (New York State Energy Research and Development Authority)
- PLC Multipoint, Inc.
- Somfy Systems, Inc.
- Sustainable Resources Management Inc.
- Vistar Energy Consulting
- Window Products Management

“Fire Alarm Systems in Buildings”

Ken Wacks (Ken Wacks Associates) gave an overview of this paper.

- Canadian Fire Alarm Association (Chair)
- AML Encore Corp./Canadian Fire Alarm Association
- exp. US Services, Inc.

“Architecting Intelligent Self Learning Adaptive Smart Campus Framework for Smart Cities”

Ken Wacks (Ken Wacks Associates) gave an overview of this paper.

- NAVTAT Solutions (Chair)

7. Other Business - Mark Carvalho and Dan Isaacs (D&M Engineering LLC, INGAGER), Brian Ensign (Superior Essex Communications)

7.1 “Health Assurance” - Mark Carvalho and Dan Isaacs (D&M Engineering LLC, INGAGER)

Mark Carvalho and Dan Isaacs (D&M Engineering LLC, INGAGER) gave a good presentation on INGAGER and their portfolio of advanced technologies to assess and ensure building health, with Digital Twin active management of Smart Buildings and surrounding environment for carbon efficient operations. Environmentally friendly, non-toxic water-based coatings for Anti-Viral and microbial protection are a key feature of this solution, as well as light-activated air purification with efficient drone-based applications and advanced scanning, tracking, and monitoring technologies.

Mark Carvalho: mwcarvalho60@gmail.com

Dan Isaacs: DAN_ISAACS@comcast.net

7.2 Other new IBC business - Brian Ensign (Superior Essex Communications)

Brian Ensign (Superior Essex Communications) made a call for new business such as: future IBC Guest/Keynote presentation topics and speakers, new IBC White Papers, new research projects and meeting ideas, etc. He also indicated that the next IBC meeting will be held December 7, 2021 with details to be forwarded soon.

8. Announcements - Greg Walker (CABA)

8.1 Past Events Overview

[Greenbuild](#) - September 21-23 | San Diego, CA USA

Upcoming Events

[LightFair](#) - October 25-29, 2021 | New York, NY USA

[Realcomm | IBcon](#) - November 2-3, 2021 | Scottsdale, AZ USA

[The Buildings Show](#) - December 1-3, 2021 | Toronto, ON Canada

[BICSI](#) - January 30 - February 3, 2022 | Orlando, FL USA

[AHR Expo](#) - January 31 - February 2, 2022 | Las Vegas, NV USA

9. Adjournment (1:30 PM ET) - Brian Ensign (Superior Essex Communications)

[Next IBC Meeting, December 7, 2021](#)

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CABA IBC meetings are open to CABA Members and invited guests, and everyone is encouraged to participate. [CLICK HERE](#) for more info on the IBC, past minutes, participants, and terms of reference. Any CABA Member that attended as a guest will be added to the IBC unless they notify the CABA office by November 17, 2021 that their name should not be added. Non-CABA members that attended this meeting as a guest, should contact Marta Klopotoska klopotoska@caba.org, to indicate if they wish to join the IBC or CABA. [CLICK HERE](#) for more information on the CABA Benefits and please circulate them to others in your organization.

Regards,

Greg Walker, CAE
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Continental Automated Buildings Association (CABA)
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Web site: <http://www.caba.org>

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