



**CABA Intelligent Buildings Council (IBC)  
Draft Meeting Minutes**

Tuesday, Nov 1, 12 NOON – 1:30 PM (ET) via Webinar

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**IBC Executive:**

IBC Chair, Trevor Nightingale (National Research Council)  
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:**

BC Hydro, Tommy Yim  
Belimo Americas, Christoph Graf  
Belimo Americas, Dennis Johannesen  
Brainwave Research Corp., Rene Pardo  
CABA, Andrew Glennie  
CABA, Ron Zimmer  
CABA, Sashien Godakandae  
Cimetrics, Inc., Anto Budiardjo  
CSA Group, Rodger Redd  
CSA Group, Stephen Brown  
CSA Group, Stephen Michell  
Cyber Power Systems, Inc., Daniel Niewirowicz  
Eagle Technology, Inc., Harshad Shah  
Ei Electronics US, Inc., Barry Donahoe  
Electronic Systems Professional Alliance (ESPA), Jeff Gardner  
Enolgas USA Inc., Vittorio Bonomi  
exp US Services, Inc., Chris Larry  
Fleet Complete, Galina Korshunova  
Fleet Complete, Katerina Gavrikova  
Fleet Complete, Maryann Ike  
Fleet Complete, Sandeep Kar  
GE (General Electric), Chris Auger  
GE (General Electric), Jeremy Yon  
GE (General Electric), JP Camardo  
GGI Solutions, Sylvie Lafreniere  
Honeywell International Inc., Debra Becker  
Honeywell International Inc., Harsha Chandrashekar  
Howard W. Campbell Consultant Corp., Howard Campbell

Ingersoll Rand, Chris Hsieh  
JLL, Jiri Skopek  
Johnson Controls Inc., Alison Hong  
Ken Wacks Associates, Kenneth Wacks  
LonMark International, Ron Bernstein  
National Research Council, Trevor Nightingale  
New Buildings Institute (NBI), Ralph DiNola  
New York State Energy Research and Development Authority (NYSERDA),  
Matt Miller  
Panduit Corp., Marc Goodman  
PLC Multipoint, Inc., Ronda Luhrs  
Public Services and Procurement Canada, Marek Dziedzic  
Realcomm Conference Group, LLC, Cameron Saunders  
Siemens Industry, Inc., David Thurow  
Siemens Industry, Inc., Maria Marks  
Siemens Industry, Inc., Michael White  
Siemens Industry, Inc., Richard Rivera  
Signify, Kelly Seeger  
Stantec Consulting Ltd., Gary Rodgers  
Sustainable Resources Management Inc., David Katz  
Telecommunications Industry Association (TIA), Harry Smeenk  
TELUS, Danny Sran  
The Siemon Company, Bob Allan  
UL LLC, Adam Lilien  
UL LLC, Dustin Steward  
University of Maryland, Qingbin Cui

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** - Bob Allan (The Siemon Company)

Bob Allan (The Siemon Company) informed everyone he will be filling in for the IBC Chair, Trevor Nightingale (National Research Council) for the first portion of the meeting. Bob Allan (The Siemon Company) welcomed everyone and introduced: IBC Chair Trevor Nightingale (National Research Council), IBC Vice-Chair Robert Lane (Robert H. Lane & Associates Inc.), IBC Vice-Chair Harsha Chandrashekar (Honeywell International Inc.), IBC White Paper Sub-Committee Chair Ken Wacks (Ken Wacks Associates) and Keynote Speaker Sandeep Kar (Fleet Complete). Bob also outlined the role of the IBC.

### 3. **Administrative** - Bob Allan (The Siemon Company)

#### 3.1 Motion to approve Past IBC Minutes

Bob Allan (The Siemon Company) informed everyone that the meeting minutes from the August 14, 2018 IBC meeting were circulated and were posted on the CABA website in the IBC section: [www.caba.org/ibc](http://www.caba.org/ibc).

Motion to approve the August 14, 2018 IBC minutes was moved by David Katz (Sustainable Resources Management Inc.) and the motion was seconded by Ron Bernstein (LonMark International). Unopposed motion passed.

### 4. **“Growth Opportunities Enabled by Connected Vehicle’s Interaction With Smart Infrastructure” (30 min)** - Sandeep Kar (Fleet Complete)



**Sandeep Kar**  
Chief Strategy Officer  
**Fleet Complete**

Abstract: Approximately 30-40 percent of all commercial vehicles in North America are connected to the world outside and vice versa through telematics technologies, a figure that is expected to double by 2025. These vehicles are reshaping smart mobility business models and not only driving efficiencies in freight and passenger mobility, but also creating new opportunities for smart buildings and related infrastructure. Sandeep Kar, Chief Strategy Officer at Fleet Complete, shared views on digitization and its impact on connected vehicle eco-systems and discuss emerging business models that will drive connected vehicles’ interactions with smart buildings and vice-versa. Location based data, autonomous driving, freight digitization, smart parking, and several other emerging technologies and applications were the focal points of this presentation.

Bob Allan (The Siemon Company) introduced Sandeep Kar (Fleet Complete Inc.) and outlined his experience. Sandeep gave a 30 minute presentation on “Growth Opportunities Enabled by Connected Vehicle’s Interaction With Smart Infrastructure”. [CLICK HERE](#) to access the recorded presentation and PowerPoint slides.

5. **Research Update** - Trevor Nightingale (National Research Council), Harsha Chandrashekar (Honeywell International Inc.), Bob Allan (The Siemon Company)

5.1 **“Phase 2: Improving Organizational Productivity with Building Automation Systems”** - Trevor Nightingale (National Research Council)



Trevor Nightingale (National Research Council) gave a brief overview of this \$150,000 US CABA Boutique Multi-Client Research Project. Due to the importance of this research, the research funders have generously and unanimously decided to release the full research for free to the entire industry. [CLICK HERE](#) to download the full research report and presentation.

CABA, the National Research Council (NRC) and the IBC are planning to pursue Phase 2 of this research shortly. Phase 2 will deploy the productivity frameworks from Phase 1 using partner-supplied human resources and real-estate data to demonstrate the value of specific building features and technologies. The CABA Board of Directors has created a Task Force to help create the prospectus and deliverables of Phase 2. If you would like to know more about Phase 2 of the research or would like to join Phase 2, please contact Greg Walker (CABA) at [walker@caba.org](mailto:walker@caba.org). More information on Phase 2 of this project will be posted shortly [HERE](#).

CABA members currently signed up to support Phase 2 of this project:



**Phase 2 Task Force:**

Bianca Van Der Zande (Philips)  
Brandon Buckingham (Steelcase Inc.)  
David Sapoznikow (Intel Corporation)  
Greg Walker (CABA)  
Jennifer Veitch (National Research Council)  
Rachna Stegall (UL LLC)  
Rimes Mortimer (Microsoft Corporation)

Ron Zimmer (CABA)  
Stephen Becker (Kimberly-Clark Professional)  
Trevor Nightingale (National Research Council)  
Tucker Boren (Acuity Brands, Inc.)

## 5.2 “Monetization of Intelligent Buildings” Update - Harsha Chandrashekar (Honeywell International Inc.)



Harsha Chandrashekar (Honeywell International Inc.) gave brief overview of the \$150,000 US 2018 IBC Landmark Research Project, “Monetization of Intelligent Buildings”. This important research project had 22 funders and the research was successfully completed by Harbor Research Inc. All CABA members have received an Executive Summary and it has also been posted in the CABA Members Library. This \$150,000 research project will be available shortly to CABA members for only \$4,900. For more information please contact Greg Walker (CABA) at [walker@caba.org](mailto:walker@caba.org). [CLICK HERE](#) for the full research prospectus and webinar recording.

Twenty-two (22) CABA members funded this research:



Only the funders and those who purchase the research will receive the full research report and raw data.

## 5.3 2019 IBC Landmark Research Topic? - Bob Allan (The Siemon Company)



Bob Allan (The Siemon Company) lead the discussion on potential topics for the next IBC research.

Bob Allan (The Siemon Company) suggested “Intelligent Buildings and Market Sizing North America (Version 3)2019” as a topic.

David Katz (Sustainable Resources Management Inc.) suggested net zero buildings market sizing as a topic.

Trevor Nightingale (National Research Council) suggested how buildings interact with utilities and distributed energy behind the meter as a topic.

Bob Allan (The Siemon Company) suggested smart cities as a topic.

Anto Budiardjo (Cimetrics, Inc.) suggested cybersecurity as a topic.

## **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. In order for the papers to be approved by the IBC White Paper Sub-Committee (WPSC), they must contain significant technical material of relevance to IBC members – it must not contain marketing material or promote an agenda. Any CABA member can, and is encouraged to bring forward a 1-2 paragraph White Paper proposal to the WPSC. If needed, CABA will secure a writer and/or a working group for the paper. All completed and approved IBC 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](http://www.caba.org/ibc). All completed CABA White Papers can be found at: [www.caba.org/White-Papers](http://www.caba.org/White-Papers).

IBC White Paper Sub-Committee:

Ken Wacks Associates, Ken Wacks (Chair)  
Frost & Sullivan, Dilip Sarangan  
Independent Consultant, Brittany Hack  
National Research Council, Heather Knudsen  
Public Services and Procurement Canada, Marek Dziedzic  
Siemens Industry, Inc., Raphael Imhof  
Sustainable Resources Management, 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 Greg Walker (CABA) at [walker@caba.org](mailto:walker@caba.org).

**6.1 Recently Completed:**

**“Human Skin Cells: A Potential Source of Building Contaminants”**

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

Working Group

Environmental Diagnostics Laboratory (EDLab) at Pure Air Control Services, Inc.

**6.2 In Progress:**

**“Impacts of Automated Shading in Building Projects”**

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

Working Group

Axis Lighting Inc.  
Ecotay Inc.  
HunterDouglas  
Ken Wacks Associates  
Lawrence Berkeley National Laboratory  
Legrand  
Lutron Electronics Co., Inc.  
MechoSystems, Inc.  
NYSERDA (New York State Energy Research and Development Authority)  
PLC Multipoint, Inc.  
Screen Innovations  
Siemens Industry, Inc.  
Somfy Systems, Inc.  
Sustainable Resources Management  
TRC Energy Services  
Vistar Energy Consulting  
Window Products Management

**“Energy Metering and Power Quality Metering: Energy Management and Billing Services for Commercial, Institutional, Multi-Family, and Industrial Applications”**

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

Working Group

ArcoLogix LLC

Asian Institute of Intelligent Buildings

Brainwave Research Corp.

CMG Consulting LLC

Convergint Technologies

CopperTree Analytics Inc.

Current, powered by GE

Cyber Power Systems, Inc.

Domotz

Enercare Connections Inc.

EZ Meter Technologies

Honeywell International Inc.

Ken Wacks Associates

Public Works and Government Services Canada

Renesas Electronics America Inc.

Robert H. Lane and Associates Inc.

Schneider Electric

Sustainable Resources Management

Triacta Power Solutions

Zinwave

**“Automated Control Systems for Zero Emission Buildings”**

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

Working Group

Ecotay Inc.

**“IoT cyber security guidelines, standards and verification systems”**

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

Working Group

Agelight Digital Trust Advisory Group

ARC Advisory Group

ArcoLogix LLC

Automation Standards Compliance Institute

BC Hydro

CANASA (Canadian Security Association)

Compass Intelligence, LLC

Consultant

Control4



CopperTree Analytics Inc.  
CSA Group  
Domotz  
eMcRey  
EXP  
George Brown College  
Honeywell International Inc.  
Johnson Controls Inc.  
Ken Wacks Associates  
LonMark International  
National Electrical Manufacturers Association (NEMA)  
RYCOM Corporation  
Sustainable Resources Management Inc.  
Syska Hennessy Group  
TC9, Inc  
The Siemon Company

7. **New Business** – Andrew Glennie (CABA), Trevor Nightingale (National Research Council)

7.1 **New CABA Member Benefit: CABA Affinity Program** - Andrew Glennie (CABA)

Andrew Glennie (CABA) gave an update of this CABA Member Benefit. The CABA Affinity Program allows CABA member research firms to offer discounts to CABA members. Participating CABA member research firms provide CABA members with a promotional code for a set percent discount off their research. CABA has a wide range of research firms as members. [CLICK HERE](#) for more information.

7.2 **New Business** - Trevor Nightingale (National Research Council)

Trevor Nightingale (National Research Council) 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 in January, details will be forwarded in the near future.

8. **Announcements** – Ron Zimmer (CABA)

8.1 **Past Events Overview:**

- [IBcon 2018 – Realcomm, June 6-7, Las Vegas, NV](#)
- [InfoComm 2018, June 6-8, Las Vegas, NV](#)
- [BICSI Fall Conference & Exhibition, Sept 29 – Oct 3, Las Vegas, NV](#)

**8.2 Upcoming Events:**

- [Greenbuild International Conference & Expo, Nov 14-16, Boston, MA](#)
- [AHR EXPO HVACR Trade Show, Jan 14 – 16, Chicago, IL](#)
- [DistribuTECH Feb 5 – 7, San Antonio, TX](#)

**9. Adjournment** (1:30 PM ET) - Trevor Nightingale (National Research Council)

[Next IBC Meeting, Jan](#)

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CABA IBC meetings are open to CABA Members and invited guests, and everyone is encouraged to participate. More info on the IBC, past minutes, participants and terms of reference can be found at: <http://www.caba.org/IBC>. Any CABA Member that attended as a guest will be added to the IBC, unless they notify the CABA office by Nov 30, 2018 that their name should not be added. Non-CABA members that attended this meeting as a guest, should contact Greg Walker, CABA Research Director, to indicate if they wish to join the IBC.

Regards,

Greg Walker  
CABA Research Director  
Continental Automated Buildings Association (CABA)  
Email: [walker@caba.org](mailto:walker@caba.org)  
Phone: 613.686.1814 x227  
Website: <http://www.caba.org>

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