



**Letter from the President**

By Ray Smith (GHT Limited)

Happy New Year Everyone!

2011 was a busy year for us, and we hope to build upon that in 2012. To recap what and how we did in 2011:

- Feb. Leadership Retreat in Las Vegas, NV
- March 31 Meet-n-Greet in Washington, DC
- Seminar to the Student Chapter of ASHRAE @ UMD, College Park campus.
- April 13 Cx “Roundtable Discussion” @ ASHRAE NCC in Ballston, VA
- May 12 participation in the Lehigh Valley, PA Green Building Council event.
- August: CxA presentation at the annual ASHRAE Chapter's Regional Conference in Scranton, PA.
- Nov. 17 seminar in Philadelphia, PA at the National Museum of Jewish History.
- Financially, we started the year with \$11,920.37, and ended with \$16,313.41.
- Published four (4) newsletters (including this one).
- Transitioned over to an AVECTRA based website that serves our membership better, and among other improvements it allows for Social Networking.

Ok, that’s “yesterday”, now let’s look forward to (some but not all) 2012 Goals above and beyond the requisite 4 events per year;

- Hold Events in all states we represent. States we didn’t get into include; W.Va. and Delaware.
- Develop an “Accepting Bids” section in our website for Owners to solicit active BCA providers.
- Increase BCA membership.

In closing, by the time you get this newsletter the board will have elected its officers for 2012. I consider it an honor and a privilege to have served as your chapter president for 2011.

As always,  
Best Wishes, Ray

**Table of Contents**

|                             |   |                               |   |                              |   |
|-----------------------------|---|-------------------------------|---|------------------------------|---|
| Letter from the President   | 1 | Capitol Exhibit Commissioning | 4 | Measurement and Verification | 7 |
| CxA - A Global Affair       | 2 | Social Networking             | 5 | Board Member Info            | 8 |
| BCA Fall Event-Philadelphia | 3 | Thanks to Our Sponsors!       | 6 |                              |   |

### **Commissioning – A Global Affair**

by James I. Givens, CxA, Field Services, RMF Engineering, Inc.

I have recently been involved in the commissioning of MEP systems on a large international project. As daunting as the endeavor sounds, and as uncertain as I was of how the commissioning process would convey while working abroad; this experience has instead enabled me to realize that commissioning is essentially a universal application. It has also made me embrace that old adage that patience is a virtue. In today's digital age, the world really has become a global marketplace. Commissioning services are no exception, and can actually bridge the gaps in some respects. Even though the locations change and the surroundings may be unfamiliar, the basic principles and fundamentals inherent to commissioning remain the same. The commissioning process remains largely unchanged, even in a foreign atmosphere. That's not to say that there are no challenges along the way however.

One such example is the fact that many American-style design standards that we have come to know may be unfamiliar outside of the USA. Conversely, working in the USA we tend to think in terms of American standard units and may not readily anticipate or grasp metric equivalents without the aid of conversion formulas. However, these hurdles are easily overcome with a bit of time, review, and patience.

Another challenge that comes with being on site while working abroad is that it is not conducive to the "notify me when you're ready and we will come back" scenario. Instead, a lot of hand-holding was required with numerous visits and revisits to issues both in the paperwork and in the field. In addition, a substantial amount of testing and retesting took place to demonstrate functionality of the systems. Of course, in addition to the challenges, there are also positive points about commissioning on a global scale. One such example is the opportunity to introduce 'new' design applications and approaches to a foreign audience; and to be able to see it to fruition with them from design, through construction, and into actual use and application.

Another gratifying detail is the sense of accomplishment and value that commissioning on an international project has brought to a global atmosphere of 'green' thinking and sustainability. Just as it is here in our own backyard, commissioning is an effective tool to demonstrate and validate the effectiveness of innovative designs and smart technologies abroad. It can be said that many parts of the world are actually ahead of the USA in terms of "forward thinking" when it comes to design, construction, and energy consumption standards and requirements. MEP commissioning provides an engine with which to demonstrate the effectiveness of such protocols; and being an American commissioning provider enabled us to close that global gap just a bit.

### **Late Breaking News! 2012 NCC Officer Election Results**

President: Ray Smith  
Vice President: Tony Dileonardo  
Secretary: Tracey Jumper  
Treasurer: Jim Givens

## Building Commissioning Association Fall Event

National Museum of Jewish American History

by Tony DiLeonardo, BCA NCC Vice-President and Regional Representative, WFW Engineering

The NCC-BCA held a full day Commissioning Event on November 17 at the National Museum of Jewish American History in Philadelphia, PA. This proved to be a nice venue for such an event, and it was well-attended by approximately 30 people. There was a diverse crowd of building owners, vendors, commissioning providers, architects and contractors that made up the group.

The day started out with a presentation on Building Enclosure Commissioning. This presentation reviewed the process and tasks involved with commissioning and testing of enclosures for new and existing facilities. The speaker described how enclosure commissioning is different because it is not tunable or adjustable; once the enclosure is built, it is very difficult to repair or alter the situation. The presentation included examples of various enclosure “mock ups” and what type of testing can be done.

The second presentation reviewed Retro Commissioning and Measurement & Verification Energy Savings. The presentation went through a very comprehensive look at common automated controls deficiencies in existing facilities and the associated value of retro commissioning. The presentation went on to note the typical energy usage types in the building and the top energy consumption items to be aware of. The speaker identified what leads to system degradation and obstacles in identifying building system problems. There were



*Tony DiLeonardo thanks the two Gold Sponsors for this event. RADIUS Systems and The Façade Group each contributed \$1,500*

some real life scenarios reviewed with the attendees as well.

The third presentation consisted of a case study and the procedures for commissioning exhibit cases in a museum. The existing exhibit cases had stringent environmental conditions such as specific temperatures and humidity limits that had to be maintained. In particular, the presenter described and reviewed in detail how the cases were tested for air leakage using dry ice.

Overall, the event was a success and seemed to be well received. Catering for the event included a light breakfast selection and a delightful lunch of wraps, sandwiches, salads and desserts. Continuing Education Credits of 3.0 CEUs will be awarded to the attendees that signed up to request them, and a certificate will be mailed to them.



*Food was wholesome and plentiful.*

The Board welcomes any input from members regarding events such as this one. We would like feedback - whether it be where to hold an event, what sort of informative material to be presented, or anything to help the evolution of local BCA Chapter events.

### Capitol Visitor Center Museum Display Case Commissioning

Presented at the National Museum of Jewish American History  
by Ruffin Tyler and Benjamin Dupslaff of Sebesta Blomberg

For more info on Sebesta Blomberg – Click link below  
<http://www.sebesta.com/#>

This third presentation of the day discussed how commissioning is different for museums than in standard office buildings. The commissioning process is a unique blend of trade expertise, communication, and teamwork. It is important for the commissioning team to bring information from the controls, the engineer of record, and testing and balancing to ensure proper testing and validation of performance. And then transfer that knowledge to the O&M staff.

For this museum commissioning the focus was precisely controlling conditions for the exhibit display cases. To help ensure the longevity of the exhibit material conditions are kept stable and typically cool. Art is picky and comfortable in a small range of control. Design reviews focused on temperature and humidity control. After construction of exhibit display case HVAC systems we review trends before and after functional testing. Typical commissioning activities included pre-functional checks, system readiness checklists, and we also witnessed point to point verifications and testing and balancing work. Trending review before testing helps determine system readiness and saves money by reducing the number of site visits.

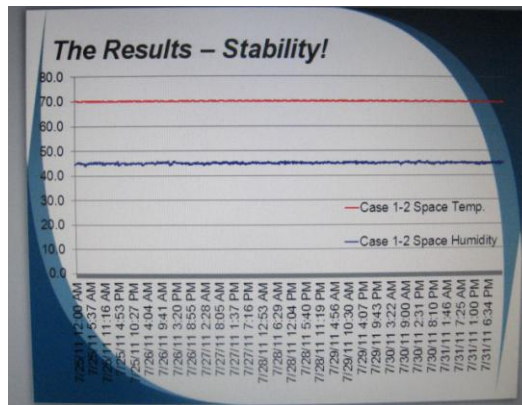
This commissioning project was unique and challenging. Precise airflows, esoteric filtering, and very tight temperature control and humidity control! Engineers solve problems. We do that by being creative! This project required the team to consider many options to validate proper conditions in the display cases which included portable data loggers and also monitoring of the airflows within the display cases with dry ice testing.

Several lessons learned included the value of sealing ductwork, precise air balancing, and related to humidity control was the value of controlling to dew-point temperature and not just relative humidity. Also a robust control system with lots of sensors, excellent graphics and the ability to trend data is invaluable for diagnostics and testing. Experienced tradesman carefully selecting chilled water control valves, water filtering and softening systems, and proper start-up and control of humidifiers were also critical.

Post trending for several weeks ensured the system continues to operate correctly. At this time O&M personnel have taken over and continue to monitor operations are proper for each weather season.



Exhibit Display Cases in Capitol Visitor Center



Post trending to ensure stable control of temperature and humidity in Display Cases.



## Thanks to Radius Systems and The Façade Group for Making the BCA Fall Event Possible



<http://www.radiusystemsllc.com>

Radius is a full service provider of HVAC and Lighting Control Systems, and Indoor Environmental Quality systems and services, and Security Systems in the mid-Atlantic region. We are an action-oriented, results driven organization dedicated to providing innovative automation/control solutions. We seek to do business with building owners, engineering firms, ESCOs, and construction firms that are interested in long term high performance systems that maximize energy and operationally efficiency.



<http://facadegroup.com/>

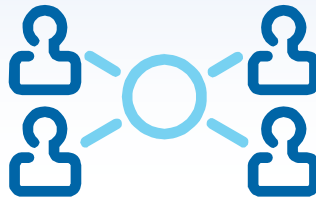
The Façade Group are building enclosure and detailing specialists who value artistry and performance in equal measure. Our multi-disciplinary experts assist clients in achieving their design goals through elegantly crafted details and practical, innovative, cost-effective facade solutions. The facade is the emotive first contact point of a building—the expression reflected out to the community. We understand, however, that the exterior enclosure is more than just a facade—it must be durable, provide shelter from the environment and comfort for the occupants. The Facade Group supports your project team in creating building enclosures of integrity. We provide consulting, documentation and verification services to improve a buildings performance while expressing its beauty simultaneously.

## Updated BCA Websites & New BCA Social Community

There are three ways to keep in touch with BCA activities:

1. New BCA website (powered by AVECTRA) [www.bcxa.org](http://www.bcxa.org)
2. New Social Community: Follow link at bottom of navigation pane at [www.bcxa.org](http://www.bcxa.org)
3. Updated National Capital Chapter website: [http://www.bcxachapters.org/national\\_capital](http://www.bcxachapters.org/national_capital)

QUESTIONS? Email your chapter website administrator, Tracey Jumper at [tjumper@keystonecommissioning.com](mailto:tjumper@keystonecommissioning.com)



## BCA Launches New Online Networking *announcement from The Checklist (2<sup>nd</sup> Qtr. 2011)*

### BCA Launches Online Networking

The BCA has just launched a new online social networking community that's like LinkedIn, only better, because it's all about commissioning.

Now, you can connect with colleagues in any location, day or night. Get instant updates on chapters, committees and topics that interest you the most.

Connecting is simple. Go to [www.bcxa.org](http://www.bcxa.org) and log in. You'll find the community at the bottom of the navigation bar on the left side of the home page. Once inside, your personal dashboard allows you to access industry feeds, participate in discussions, make recommendations and find new contacts with similar interests. The community also has an all-association calendar, which makes it easy to see what's happening across the association.

Only one thing is missing...you! The community gets better with participation, so log in and see what it's all about. Need help navigating the community? Check out the Resources section. Still have questions? Let us know at [webadmin@bcxa.org](mailto:webadmin@bcxa.org).



## **BCA National Capital Chapter Sponsors**

**CHAPIN  
ENTERPRISES,  
LLC**

**PRITCHETT**  
C O N T R O L S

**Butler Balancing  
Company, Inc.**

### **Measurement and Verification – Potential Technologies & Strategies**

(per LEED 2009 for New Construction and Major Renovations)

The intent of Measurement and Verification is to provide for the ongoing accountability of building energy consumption over time. The M&V period must cover at least 1 year of post-construction occupancy and should provide a process for corrective action if the results of the M&V plan indicate that energy savings are not being achieved.

Develop an M&V plan to evaluate building and/or energy system performance. Characterize the building and/or energy systems through energy simulation or engineering analysis. Install the necessary metering equipment to measure energy use. Track performance by comparing predicted performance to actual performance, broken down by component or system as appropriate. Evaluate energy efficiency by comparing actual performance to baseline performance.

While the IPMVP (International Performance Measurement & Verification Protocol) describes specific actions for verifying savings associated with energy conservation measures (ECMs) and strategies, this LEED credit expands upon typical IPMVP M&V objectives. Measurement and verification activities should not necessarily be confined to energy systems where ECMs or energy conservation strategies have been implemented. The IPMVP provides guidance on M&V strategies and their appropriate applications for various situations. These strategies should be used in conjunction with monitoring and trend logging of significant energy systems to provide for the ongoing accountability of building energy performance.

## **We Need Volunteers!**

*Participate · Build Your Resume · Get Published · Enhance Your Commissioning Industry Network*

Opportunities for:

- Publication of short and medium length articles in regional and national publications
- Support logistics and marketing for regional events
- Participate in National trade conference booth on behalf of the BCA
- Openings in Membership, Events and Communications Committees
- Business development and fundraising opportunities

Contact an NCC-BCxA Board Member for further information (See next page)!

## Your BCA National Capital 2012 Chapter Board Members

The following individuals consider it a pleasure to serve you as board members. Feel free to contact any one of them for information on committee work, events or what it means to be a board member.

Ray Smith  
BCA NCC President  
GHT Limited  
<http://www.ghtltd.com/>

Tony DiLeonardo  
BCA NCC Vice-President and  
Regional Representative  
WFW Engineering  
<http://www.wfweng.com/>

Tracey Jumper, Keystone Cx Group Ltd.  
BCA NCC Secretary and Website  
adminstrator  
[www.keystonecommissioning.com](http://www.keystonecommissioning.com)

Jim Givens  
BCA NCC Treasurer  
RMF Engineering  
<http://www.rmf.com/>

Wayne Williams  
Newsletter Layout Editor  
Architect of the Capitol  
<http://www.aoc.gov>

John Runkle, P.E.  
BCA NCC Member-at-large  
Architectural Testing Inc.  
[www.archtest.com](http://www.archtest.com)

Will Wright  
BCA NCC Member-at-large  
Bruce E. Brooks & Associates  
[www.brucebrooks.com](http://www.brucebrooks.com)

**RMF ENGINEERING, INC.**



**WFW**  
Wick Fisher White

**Sponsor an Event or Serve on  
the NCC BCA Board and  
Have your Logo include in this  
newsletter!**



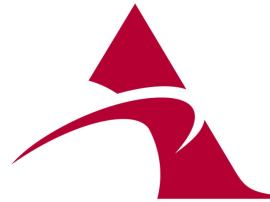
**FESS** | CONSTRUCTION +  
ENGINEERING  
SERVICES



**BRINJAC**  
ENGINEERING  
since 1955



**GHT**  
LIMITED



**Architectural Testing**