



The Newsletter of the National Capital Chapter Building Commissioning Association



Letter from the President

By Gretchen Coleman

Welcome to the first Newsletter of 2008! The new board, elected in late 2007, is committed to resurrecting the National Capital Chapter. We have a lot of activities planned for the year and hope to see you at one or more of them.

Being a viable chapter takes participation by more than just the board members. We are all very busy, business is booming despite the lazy economy. Most of us are small firms where we are doing most of the work, not just managing people. It is hard to participate in extra curricular activities under these circumstances. But participate we must or our chapter will go the way of previous years and we could lose our chapter status. Those who did all the paperwork in the first place can attest to the fact that we don't want to let that happen!

So, how do we generate participation when the chapter covers such a large territory? Our chapter covers the District of Columbia, Maryland, Virginia, West Virginia, Pennsylvania, and Delaware. Well, we are kind of bucking the national system. The requirements to have a chapter are pretty stringent and make it difficult to do outside of a major metropolitan area. So, we want to establish local groups within the larger chapter. These local groups will have their own programs throughout the year. Quarterly, the chapter at large will hold programs for all members. Locations will be centralized to make it easy (or equally difficult!) for everyone to attend. It is possible as well that two of these events will be held in conjunction with the NCBC conference and the BCA Expo.

Each local group will have a liaison to the board of the chapter. Quarterly, the liaison will *attend* the board meeting via conference call to report on local activities and to help plan the quarterly events and their locations.

To start us in this direction, the board is spending this year holding a series of Meet and Greets around our territory. As you can see elsewhere in this newsletter, the first one in DC was really fun. The next event will be in Harrisburg, PA on May 22nd. This is a joint meeting with the local USGBC chapter. We will present the program "Commissioning for LEED". Following Harrisburg, there will be a Meet and Greet in Roanoke, VA on July 23rd. Several more events will be held in the late summer and fall. Please make an effort to come to the event closest to your location. For even more fun, take yourself a mini vacation and travel to a meeting not so close – meet your fellow commissioners, exchange ideas and information, and have some refreshments.

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The BCA-NCC Meet & Greet

Washington, DC Capitol City Brewery, March 26.
Thanks to *BRINJAC* Engineering for sponsoring
this event!



Pic #1 – Welcome to the Meet & Greet



Pic #2 - BCA-NCC Officers/Board Members (left to right); Treasure Ken Hahn, Secretary Derek DeJesus, President Gretchen Coleman, Board Member Mike Bilecky, VP Tom McCune



Pic #3 – The region was well represented with members attending from as far away as Roanoke & Tidewater (VA), Harrisburg (PA), and Baltimore (MD).

NCC members attend the NCBC Conference

By Emmillee Hogan

The 2008 National Conference on Building Commissioning was held April 22nd through April 24th in sunny Newport Beach, CA. The preceding Monday, April 21st, was BCA day, where the national board and national committees, as well as local chapters, met.

The National Capital Chapter had a couple of members attend the conference, and we did have the chance to meet over some refreshments on BCA day. We discussed the need of the chapter to attract more members to participate. Please see the Letter from the President (on the previous page) for some of the ideas discussed.

The 2008 NCBC conference may have been the best one yet. And not just because it was in Newport Beach – although that helped!

There were plenty of good technical presentations, rousing roundtable discussions, sessions on the business side of commissioning, and a whole days worth on retrocommissioning.

Emmillee Hogan led a roundtable on Training and Education, and Gretchen Coleman led one on the usefulness of Prefunctional Test Checklists.

For more information about those and the rest of the National Conference proceedings see http://www.peci.org/ncbc/2008/ncbc_proceedings_08.html.

The next NCBC will be held in Seattle, WA, the birthplace of the BCA! Stay tuned for more information about this conference on 2009

While you are waiting for that, start planning your attendance at the BCA Expo October 5-7, 2008. The event will be held in Hauppauge, NY at the Hyatt Regency Long Island. For more information see <http://www.bcxa.org/events/expo2008/index.htm>.

Joint Meeting with BCA and USGBC May 22nd

Location: Harrisburg, PA

[Appalachian Brewing Company on Cameron Street in Harrisburg.](#) There will be a cash bar and the meal will cost around \$30.

Time: Socializing begins at 6:00 pm and the meeting begins at 7:00 pm.

<http://www.abcbrew.com/harrisburg/index.htm>

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530/135

Trend Reports FPVAV-08 6/19/2007

| Date | TIME | FPVAV-08 | FPVAV-08 | FPVAV-08 | FPVAV-08 | FPVAV-08 | FPVAV-08 | FPVAV-08 | FPVAV-08 |
|-----------|-------|----------|----------|----------|-----------|-----------|---------------|-----------|------------|
| | | Fan | Fan | BoxFlow | DamperPos | FlowSetPt | HeatingOutput | SpaceTemp | SupplyTemp |
| | | Command | Status | CFM | % | CFM | % | °F | °F |
| | | VALUE | VALUE | VALUE | VALUE | VALUE | VALUE | VALUE | VALUE |
| 6/18/2007 | 7:00 | ON | ON | 135.61 | 18.50 | 133.49 | 0.00 | 70.14 | 69.44 |
| 6/18/2007 | 8:00 | ON | ON | 131.37 | 18.50 | 133.49 | 0.00 | 70.02 | 68.76 |
| 6/18/2007 | 9:00 | ON | ON | 131.37 | 19.50 | 133.49 | 0.00 | 70.05 | 69.49 |
| 6/18/2007 | 10:00 | ON | ON | 654.73 | 51.50 | 133.49 | 0.00 | 69.51 | 66.22 |
| 6/18/2007 | 11:00 | ON | ON | 718.30 | 51.50 | 133.49 | 0.00 | 66.67 | 59.45 |
| 6/18/2007 | 12:00 | ON | ON | 714.06 | 51.50 | 133.49 | 0.00 | 66.15 | 59.54 |
| 6/18/2007 | 13:00 | ON | ON | 735.25 | 51.50 | 133.49 | 0.00 | 65.86 | 59.22 |
| 6/18/2007 | 14:00 | ON | ON | 724.66 | 51.50 | 133.49 | 0.00 | 66.13 | 59.86 |
| 6/18/2007 | 15:00 | ON | ON | 752.20 | 51.50 | 133.49 | 0.00 | 66.09 | 60.01 |
| 6/18/2007 | 16:00 | ON | ON | 720.42 | 51.50 | 133.49 | 0.00 | 65.82 | 59.61 |
| 6/18/2007 | 17:00 | ON | ON | 718.18 | 51.50 | 133.49 | 0.00 | 65.23 | 59.38 |
| 6/18/2007 | 18:00 | ON | ON | 724.66 | 51.50 | 133.49 | 2.06 | 64.83 | 60.01 |
| 6/18/2007 | 19:00 | ON | ON | 716.18 | 51.50 | 133.49 | 19.33 | 64.85 | 59.34 |
| 6/18/2007 | 20:00 | ON | ON | 709.82 | 51.50 | 133.49 | 100.00 | 64.06 | 58.55 |
| 6/18/2007 | 21:00 | ON | ON | 703.47 | 51.50 | 133.49 | 100.00 | 64.08 | 59.29 |
| 6/18/2007 | 22:00 | ON | ON | 711.94 | 51.50 | 133.49 | 100.00 | 63.95 | 59.31 |
| 6/18/2007 | 23:00 | ON | ON | 718.30 | 51.50 | 133.49 | 100.00 | 63.37 | 59.18 |
| 6/19/2007 | 0:00 | ON | ON | 697.11 | 51.50 | 133.49 | 100.00 | 63.28 | 58.89 |
| 6/19/2007 | 1:00 | ON | ON | 697.11 | 51.50 | 133.49 | 100.00 | 63.05 | 58.33 |
| 6/19/2007 | 2:00 | ON | ON | 699.23 | 51.50 | 133.49 | 100.00 | 62.89 | 58.05 |
| 6/19/2007 | 3:00 | ON | ON | 699.23 | 51.50 | 133.49 | 100.00 | 62.80 | 59.00 |
| 6/19/2007 | 4:00 | ON | ON | 720.42 | 51.50 | 133.49 | 100.00 | 62.56 | 58.14 |
| 6/19/2007 | 5:00 | ON | ON | 697.11 | 51.50 | 133.49 | 100.00 | 62.44 | 58.08 |
| 6/19/2007 | 6:00 | ON | ON | 709.82 | 51.50 | 133.49 | 100.00 | 62.37 | 59.07 |

Figure #1 - Trend Report for a Fan-powered VAV box

Automation System Trends Enhance HVAC Sampling Performance Verification

By Mike Bilecky

Automation system trends can be used to analyze the performance of all incremental or terminal type equipment on a project and further identify those that should make the “sampling pool” for field verification. The art of commissioning a mechanical system lies in the practitioner’s ability to discern performance issues and to effectively communicate these issues to the Owner, -Contractors and Design Team. A key element in performing HVAC commissioning is the review of automation system trends. Provisions must be made in the contract specifications to provide for the submission of seasonal trends for review. Once the TAB work is complete, the trends can be prepared by the controls contractor and submitted for review by the commissioning agent. Issues discovered during the trend review must be consolidated and reported in a systematic fashion; weather data, building occupancy zoning control, performance of the central plant system, air handling systems, terminals, exhaust systems, etc. Results need to identify systems operations that appeared proper and those that displayed discrepancies or deficiencies that need rectification; conveying the issues in a fashion that, where possible, identifies the responsible party: control contractor, electrical or mechanical contractor, design team, or owner.

Automation system trends review, coupled with the testing and balancing report, reduces the time spent on site validating systems operations; and provides a road map to guide the on-site commissioning team to problem areas while minimizing time spent checking out systems that were shown to function properly. The trends review improves upon sampling techniques used for performance verification of VAVs, FCUs, etc. as all terminals operations are assessed in the trends; sampling then is focused on those that appeared questionable or problematic. Trends afford analysis of energy management systems routines such as occupied/unoccupied operations, optimum start/start, night set-back/set-up, etc. that are difficult to verify and time consuming on-site via simulation.

Conclusion

The commissioning agent can effectively and professionally complete the performance verification for the HVAC systems best by employing a *comprehensive review of automation system trends*. Deficiencies discerned in trends are identified for correction prior to the commissioning team going on site for performance verification, improving systems operations, and minimizing all parties time spent in performance verification and re-verification.