The Checklist
The quarterly newsletter of the Building Commissioning Association

2012 Second Quarter

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Would you like to suggest a topic for The Checklist?
E-mail checklist@bcxa.org
Letter from the President

Greetings,

It has been a few exciting months since the last publishing of The Checklist and I would like to share three developments.

The first is the successful completion of the 20th National Conference on Building Commissioning (NCBC) in Nashville, once again co-hosted by the BCA and PECI. The 20th annual NCBC was very well attended, and feedback from attendees on the educational programming and the venue has been very positive. Three concurrent tracks of educational events were held May 15 and 16. Contributing to the event’s success was the endorsement by two key contributors to the commissioning industry: the American Society for Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) and the National Institute of Building Sciences (NIBS).

Highlights from the agenda included a pre-conference workshop on May 14 produced by the Southeast Chapter of the BCA (SERBCA) entitled, “The Next Step in Building Performance Verification: Automated On-going Commissioning” that featured unique tools for the Cx trade. The NCBC’s keynote presentation by Dr. Susan Mazur-Stommen on human behavior and the commissioned building was enlightening. As most BCA members are engineers and providers focused on the technical aspects of building commissioning, it was interesting to take a step back and look at all the different human elements involved in commissioning, including the relationships and interactions with designers, architects, engineers, O&M staff, and occupants. Our lunch session on the second day of the conference was a retrospective on the history of the commissioning industry. This walk down “Memory Lane” looked back at the start of commissioning in 1977, the first NCBC hosted by Sacramento Municipal Utility District (SMUD) in 1993, and then stepped through each year to the present, including the formation of the BCA in 1996.

We wrapped up the 20th annual conference with details on NCBC 2013 to be hosted by the Southwest BCA Chapter in Denver, Colorado. The NCBC 2013 will be held May 6-8 at the Omni Interlocken Resort and will feature a pre-conference golf tournament and excellent educational events. You might even be able to get in some skiing before the conference (if the weather cooperates), so please save the date and plan to come early.

The second development is successful conclusion of New York City’s Local Law (LL) 87 Retro-commissioning (RCx) Training. As many of you are aware, NYC has passed some of the most progressive green building legislation in the country, which requires RCx to be performed on all public and private commercial buildings over 50,000 sq. ft. The BCA, with support from the New York State Energy Research and Development Authority (NYSERDA) and the NYC Mayor’s Office, held half a dozen training classes on the BCA’s Existing Building Commissioning “Best Practices” and LL 87 at New York University and the City University of New York over the span of six months. The training was well-received by attendees, with an audience including Cx providers and consultants, energy auditors, building owners and engineers, and university graduate students. While the program was focused primarily on those within the New York State SBC service territory, we had attendees come from as far as Alaska and Mexico.

The third development is ongoing discussion and dialogue on what are the traits and experience of a qualified Commissioning Authority (CxA). The BCA Board continues to work on a statement of the attributes of a qualified CxA. Both the National Renewable Energy Laboratory (NREL) and PECI/BCA have recently completed job task analysis documents that define the required Knowledge, Skills, and Abilities (KSAs) for CxAs. The KSA documents have been used in the creation of the curriculum for the PECI/BCA commissioning authority training currently under development. A panel session was on the agenda for the first afternoon at NCBC to discuss these KSAs and what attributes a CxA should possess. A lively discussion ensued which will help further define the BCA’s position on the topic. We will keep you updated on progress on the BCA website and future installments of The Checklist.

Sincerely,

Mark F. Miller, PE, CCP
BCA President
The National Conference on Building Commissioning Turns 20!

By Liz Fischer

This year marked the 20th anniversary of the National Conference on Building Commissioning (NCBC). This year’s conference was held in Music City USA: Nashville, Tennessee. It was a great city to visit—whether you enjoyed Music Row, the Country Music Hall of Fame, or Andrew Jackson’s plantation—you were sure to find some great southern hospitality.

I have had the privilege of being part of the planning and producing of this conference for all 20 years. What always impresses me the most are the amazingly talented and dedicated speakers that provide quality education.

This year we recognized a speaker who has presented at every conference. Wayne Dunn has had a presentation on everything from energy management control systems (Let Them Know You’re Coming – 1993) to solar PV commissioning (Catching Rays – Solar PV Commissioning 2012). Wayne is not only one of our most entertaining speakers but one of the industry’s most knowledgeable. Thanks again to Wayne for 20 years of awesome presentations!

Each year we look for a keynote presentation that helps us to step back and look at the bigger picture of sustainable, energy efficient buildings. This year Dr. Susan Mazur-Stommel opened our conference with a look at how human behavior affects the process of commissioning. She provided insight into our communications and behaviors that influence the outcome of our projects. By taking a look at our history and culture, we can make small changes to ensure our commissioned buildings continue to provide owners and tenants the buildings they want.

Again this year we had three concurrent tracks that produced 36 educational presentations. Every year we have at least one session that creates a lot of discussion and some strong opinions, and this year was no different. There has been much discussion in the industry and among BCA members on the attributes of a commissioning authority (CxA). What does it take to do the job? What is the job description? What skills are needed? This year our President Mark Miller moderated a session that included a presentation from Bradley Brooks on the recent work conducted by PECI to evaluate the Knowledge, Skills and Abilities (KSAs) needed to perform commissioning. These KSAs were established to aid in the design of a large-scale training program being developed by PECI in partnership with BCA. Mike Eardley presented the Building Commissioning Certification Board’s programs: the Certified Commissioning Professional (CCP) and the Associate Commissioning Professional (ACP). The BCA Board members took notes and will be producing a white paper on the Attributes of a CxA. This paper will be finalized July 1.

At lunch on the last day Craig Hawkins, one of BCA’s founding members, and I took a look back at the history of the commissioning industry, the conference and the BCA. It was interesting to see how far we have come in making commissioning “business as usual” and to see the road ahead with still a few hills to climb. The planning committee for NCBC is already gearing up to bring you a quality educational program in 2013. So please join us in Denver, Colorado as the Southwest Chapter of the BCA hosts the 21st National Conference on Building Commissioning. The call for abstracts will be released in September, and we would love to hear your ideas.

To check out all of the great presentations at NCBC 2012 go to http://www.peci.org/ncbc/2012/agenda.html.

Liz Fischer is the Executive Director of the BCA.
NCBC 2012: Supporting Technical Papers

In case you were unable to attend NCBC 2012, we received three technical papers in support of the excellent presentations given in Nashville. Synopses from each paper are included below, and you can read the papers in their entirety on the NCBC conference website at http://www.peci.org/ncbc/2012/agenda.html.

COMMISSIONING THE PROJECT SCHEDULE

Matthew S. Malinosky, PE, LEED AP BD+C, CCP
Molly B. Meyer, PE, LEED AP BD+C, CEM
Questions & Solutions Engineering, Inc.

Typically, the General Contractor or Construction Manager is charged with maintaining the project schedule, and we’ve observed that often there are issues with communication and understanding which lead to scheduling problems. This can be avoided quite easily by understanding what activities are on a project’s critical path (including Commissioning) and by using accurate information to plan the remaining work. Mismanaged schedules can create confusion, delays, and unnecessary frustration for Owners as well as other project team members.

In order to obtain a comprehensive (and accurate) project schedule, it is vital that all parties whose activities are on the schedule’s critical path are regularly solicited to provide accurate information. It is also imperative that those who are charged with managing the schedule understand the differences between substantial completion, Owner turnover, and project completion. All of this becomes even more essential with increasing project size and complexity, as with phased turnovers, fast track, or multi-bid package projects, for example. The critical path ends with Owner turnover which, in our experience, is one of the Owner’s highest concerns and the more the turnover date moves, the more difficult their job becomes.

The intent of this paper is to educate the reader on what typical commissioning-related critical path activities are, how they influence the project schedule, and how to commission a project schedule. We will also use real project examples which include end-of-project issues largely caused by problems with the construction schedule. We will also explain the importance of defining the terms that describe the end of a project and offer some suggested definitions.

MONITORING BASED COMMISSIONING FOR LEED BUILDING PERFORMANCE OPTIMIZATION

Boban Ratkovich, M. Eng. P. Eng, CEM, BESA, LEED AP ID+C
Thomas Martin, CMVP, LEED AP BD+C
Slobodan Vukadinov, M. Sc., C.E.S. Engineering Ltd.

This document describes Monitoring-Based Commissioning (MBCx) as a method for ensuring optimized performance of LEED buildings during the first year of operation, utilizing synergies between building energy simulations, measurement and verification, and post-occupancy evaluation. The paper includes case studies and recommendations for implementing MBCx in real-world projects.

continued on p. 7
The American Institute of Architects (AIA) National Convention immediately followed NCBC this year May 17-19. I’ve attended five out of the last six AIA conventions, missing the 2010 event. I generally attend between 10-12 sessions each year. Up until now building commissioning was mentioned in only a few sessions each year. In 2012 building commissioning was mentioned in all but one session I attended.

Over the past year the AIA made a conscious effort to promote and educate the values of energy modeling and building commissioning to its members and the building community during design, construction and post occupancy phases. In summer 2011 the National Institute of Building Sciences (NIBS) and AIA began collecting benchmark data on high-performance building attributes, including safety and security, accessibility, cost effectiveness, water use and indoor air quality. In February 2012 AIA and NIBS signed an agreement to work together on promoting building industry research and knowledge.

In November 2011 the AIA asked a small group to participate in a discussion about building sciences with the goal of forming a Building Sciences Knowledge Community (KC). KCs provide members information on research, industry news, programs and opportunities to network in a specific area of interest. There are a total of 21 KCs. The AIA Board of Directors approved the Building Sciences KC, and the Technical Design for Building Performance (TDBP) KC began in January 2012. There are about 5,100 members in the TDBP KC, making it one of the largest KCs in the AIA and reflecting architects’ thirst for building operations knowledge.

In March 2012 the AIA issued “An Architect’s Guide to Integrating Energy Modeling in the Design Process” for peer review by a select group of its members. Also in March 2012 the International Code Council (ICC) released the first printing of the International Green Construction Code (IgCC). Building commissioning is a major part of the IgCC and the AIA’s energy modeling provides architects information about the Cx process, including participating in design and design reviews. During NCBC the AIA released “The AIA Guide to the IgCC”. The guide takes a practical look at the IgCC from the perspective of an architect and addresses the implementation within a project and the practice of architecture. There are two significant design areas within the IgCC: energy performance and the inclusion of building commissioning. This opens architects to many new opportunities in the practice area, including energy modeling and building commissioning.

The IgCC makes a strong link between design and performance. The architect and design team has more responsibility for considering performance in design decisions. Architects will need to understand the fundamentals of energy modeling and either perform in-house energy modeling services or engage outside consultants. The architect has the opportunity to oversee or provide building commissioning as it relates to the building envelope. This means the architect will require additional skills and knowledge in order to achieve the goals of the IgCC. The AIA guide recommends architects read the IgCC, understand its principles and look for education opportunities through local AIA chapters and other resources. The BCA Chapters have an opportunity to reach out to local AIA chapters and provide educational sessions on building commissioning.

BCA members should also read the IgCC and the ICC 2012 Guideline for Commissioning to understand the principles of the code and guidelines. Contact your local AIA chapter and ask them what the BCA can do to help educate its members on building commissioning.

Michael Chelednik, AIA, is Secretary of the BCA International Board of Directors, the BCA AIA Liaison and active in the AIA as an Advisory Group member of the Technical Design for Building Performance Knowledge Community (TDBP KC). He also represented the BCA in the ICC 2012 Guideline for Commissioning.
ment and verification (M&V) and building commissioning (Cx). Monitoring-Based Commissioning is an up-coming LEED credit in the new USGBC LEED 2012, and is part of an industry-wide movement towards performance-based contracts of design and construction. It is currently the most comprehensive process that validates equipment and systems performances during the first year operation period.

OPTIMIZING BAS INFORMATION FOR OPERATOR EFFECTIVENESS AND OPTIMAL CONTROL

Len Beyea, CBCxP, EBCxP, HBxP, CEM, LEED AP
RetroCom Energy Strategies, Inc.

Building automation systems (BAS) have become standard tools for facility operation and monitoring, and commissioning providers use them routinely to gather data and to test system operation. But for O&M staff responsible for day-to-day facility operations, the usefulness of a BAS may be limited to simply spotting out-of-range conditions in order to take action before the condition results in a complaint or a breakdown. In most cases the information provided does not facilitate recognition or evaluation of problems, especially in regard to the efficiency of operation or overall system performance. Developing displays that present information in such a way that performance problems can be quickly recognized can make a difference both in how appropriate or effective corrective actions are, and in how engaged operators are in maintaining performance of controlled systems.

This paper presents some examples of how BAS displays and overrides can be configured to allow operators to carry out daily responsibilities while protecting the integrity of optimization programs in the BAS. Examples are taken from retro-commissioning work the author is engaged in with Los Rios Community College District, a California community college system with four large campuses and four satellite campuses.

We’ve Moved!

Please pardon our appearance as the dust is still settling, but the BCA has a new home! Please update your contacts to reflect the new address below. Our toll-free number remains the same, but we have a new local phone number. Stop by whenever you’re in the area and say hello!

Building Commissioning Association
1600 NW Compton Drive, Ste. 200
Beaverton, OR 97006
Phone: 971-245-6068
Toll-free: 877-666-BCXA (2292)
Is the Speed of Light Taking Commissioning Places?

By Candice B. Rogers

Today’s world moves so fast, it seems our cruise control is set on the speed of light. Speaking with members at the National Conference on Building Commissioning (NCBC) in Nashville, the common answer to “How are things?” was “Busy.”

I think that comment often leads to the question many of us ask, “Does this pace equate to growth, advancement?” In other words, are we getting anywhere? The BCA had a similar question relating to how our members were faring and what they believed this busyness means for their businesses.

To gauge members’ opinions and inform a collective picture of the membership at large, the BCA set out to prove or disprove two hypotheses:

1. BCA Members’ businesses are growing.
2. BCA Members are engaged in total building commissioning throughout the project life cycle.

The BCA wanted to ask more than “Yes/No” questions relating to each hypothesis. We wanted to know about the degree of certainty in business growth for today and tomorrow. We also wanted to know what was being commissioned across the membership profile.

Before delving into the results, a few comments are in order about our membership. The BCA is unique in the diversity of our association. We are diverse in geography, market segment, nationality, and focus area. We include providers, owners, architects, engineers, contractors, utility companies, suppliers, and partners. Therefore, we were excited to see the results because this is more than just a response from “Southeast Commissioning Providers Serving the Educational Market.” Our responses would enable us to see the commissioning industry on a broader level, spanning geographical boundaries, project types, and project roles.

When we sent out the survey, our thought was, “Please respond folks!” There was overwhelming response from over 25% of our membership. Statistically, that gives us high confidence that our results are representative of our membership profile.

The first hypothesis—that BCA Members’ businesses are growing—proved true. Using a scale rating, responses to the following questions were predominantly either “Improved” or “Remained the Same.” The degree of certainty about future opportunities can be assessed by members’ willingness to hire, expend capital, and increase pricing. Answers to these questions demonstrated that there are no plans to shrink, but rather respondents plan to stay the course. We can theorize on reasons for these responses—I’ll leave that to your own musings. What we can conclude is that there is growth and opportunity, but perhaps not excess. Fortunately for our industry, we are not anticipating contraction in the next 12 months.

2. Compared with a year ago, business conditions in my domestic market have .
   improved .................................................. 43%
   remained the same ................................... 47%
   worsened .............................................. 10%
   Total .................................................... 100%

3. During the next 12 months, I expect the overall economic conditions in my domestic market will be . than now.
   better ..................................................... 52%
   about the same ...................................... 42%
   worse ................................................... 6%
   Total .................................................... 100%

4. My business’s total fixed investment expenditures are likely to . during the next 12 months.
   increase .................................................. 39%
   remain about the same ............................ 54%
   decrease ............................................... 7%
   Total .................................................... 100%
5. I anticipate that my business's revenues will ____ during the next 12 months.

- increase ........................................... 56%
- remain about the same ....................... 35%
- decrease ........................................... 9%
- Total .............................................. 100%

6. I expect my business's profitability to ____ during the next 12 months.

- improve ............................................ 45%
- remain about the same ....................... 47%
- worsen ............................................ 9%
- Total .............................................. 100%

7. I expect prices for commissioning services to ____ during the next 12 months.

- increase ............................................ 14%
- remain about the same ....................... 65%
- decrease ........................................... 21%
- Total .............................................. 100%

8. I expect my business's total number of employees will ____ during the next 12 months.

- increase ............................................ 45%
- remain about the same ....................... 49%
- decrease .......................................... 6%
- Total .............................................. 100%

The second hypothesis stating BCA Members are engaged in total building commissioning throughout the project life cycle also held true. Providers, owners, and specifiers of commissioning services are no longer looking at the basic systems as the scope of a project. Nor are commissioning services currently limited to functional testing in the construction phase. Again, many theories can be derived as to why total building commissioning is gaining popularity. Perhaps it's the valuable services offered by BCA Member providers. Perhaps it's the education and understanding of those members who procure and specify commissioning services. Perhaps it's new legislation being adopted in our various regions. I personally would wager that all these factors, and more, have driven our membership to new levels of commissioning. Regardless, the outcomes support that the BCA membership is actively involved in a multitude of systems with services beginning in Pre-design and completing well into Warranty Phase. (Please note: this survey did not fully delve into the existing building commissioning services offered by many of our members. This is an item that we will correct in future efforts!)

12. What systems do you commission (or require to be commissioned)? Check all that apply.

- HVAC .............................................. 100%
- Plumbing – Domestic hot water only ........ 75%
- Plumbing – entire plumbing systems ........ 63%
- Lighting and Daylighting ...................... 93%
- Normal Power .................................. 67%
- Emergency Power ............................... 80%
- Fire Alarm ........................................ 61%
- Security ........................................... 48%
- Fire Suppression ................................. 49%
- Elevator .......................................... 26%
- Envelope .......................................... 51%
- Roofing Systems ................................. 31%
- Solar .............................................. 64%
- Wind .............................................. 32%
- Hydro ............................................. 21%
- Other, please specify ........................... 13%

continued on p. 10
One of the other points of interest in our BCA Member survey was really learning about the challenges our businesses currently face. Pulling from the notion that our membership is diverse, we anticipated to see some interesting responses. Two responses stood out: 1) Economic Uncertainty and 2) Increasing Competition. These could be considered a cause and effect cycle—uncertainty leading professionals into the commissioning industry with its promise of growth which then creates more competition for the incumbents. Additionally, I perceive that the economic uncertainty played into members’ responses relating to their business outlook. Below is a summary of the other challenges your fellow members currently face.

13. Of the commissioning projects you are involved in, the following are included:

- Top number is the count of respondents selecting the option.
- Bottom % is percent of the total respondents selecting the option.

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<th>Rarely</th>
<th>Sometimes</th>
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Member Spotlight

with Bill McCartney

Home city and state:
Toronto, Ontario, Canada

Employer:
Isotherm Engineering Ltd.

Position:
Vice-President,
Director of Commissioning Services

BCA member since: 2002

Years practicing commissioning: 23

Volunteer positions held in BCA:
Board Member, Eastern Canadian Chapter

Let’s start off with your personal background before we talk about your work with the BCA Board of Directors.
How did you get involved with commissioning? What drew you to it?
As a member of ASHRAE Technical Committee (TC) 7.3 (was 1.7) Operations and Maintenance Management in the mid-80’s, I was drawn into the development of the new commissioning guideline (eventually GD 1-1989). In 1989 I presented a paper in Chicago on commissioning from the contractors’ point of view, along with representatives from the owner, the consultants, and the operators. The seminar so impressed me that upon my return home I formed HVAC Commissioners Inc. I felt my experience as a design/build/maintenance contractor with extensive involvement with the new DDC control systems put me in the perfect position to provide the commissioning process as described in the guideline.

What’s your biggest accomplishment in the field?
Having a contractor’s background and a trade license as a refrigeration/air conditioning journeyman I believe gives me the opportunity to deal with the mechanical and electrical trades people on the site from a different perspective. The very nature of the construction industry forces a separation from the owner/design team and eventually the facility operators since the relationship (friendly at first) eventually evolves to adversarial. Notice I didn’t mention the general contractor since for the most part the commissioning process is considered an added interference and layer of effort that they don’t get paid for. Obviously there are exceptions that we’ve been lucky to have repeat business with.

Where do you see the field of commissioning going in 10 years?
It will have to progress to the Total Building Commissioning Process, meaning there will be larger firms that either pull the necessary expertise in-house or smaller companies will form strategic alliances. Unfortunately, the next ten years also means that the “pretenders” will crawl out of the woodwork since there is a significant shortage of expertise in all the disciplines. The negative effect of failed commissioning projects by unqualified providers will need to be offset by a tremendous marketing and training effort by BCA.

And do you think it is different for the US vs. Canada?
The current differences that I see are the emphasis on the lawyers and drive for the “professional only” commissioning providers. My experience in Canada (maybe because of the cooler climate and the four seasons) is that the objective of the commissioning process is to achieve the stated results that ASHRAE/BCA strives for. In most cases, the qualified contractors are recognized and eventually rewarded with the work. I get the sense that a lot of effort in the US is about risk avoidance for lawsuits.

What’s your take on having enough providers available to do the work in Canada?
We have to grow our own within the Cx industry. Taking existing or new employees and evaluating their skill sets allows you to know what additional effort and time is
required. I have sought out skilled people from other industries that have been involved with their quality assurance process and added the necessary training to have them apply those experiences to the commissioning process. A one week course only introduces the participant to the process and should highlight for them all the areas that additional training and experience is required.

You recently were elected to the International Board of Directors. And you were a founding member of the Eastern Canadian Chapter. What do you find to be the most rewarding part of being involved with a Board of Directors?
I was also part of a group of commissioning providers in Toronto that tried to form an association (prior to BCA) back at the turn of the century. I have been through the chairs of three industry associations prior to BCA and enjoy the privilege of learning the industry requirements and leading it forward.

Board member work is voluntary. You’re obviously busy with work and life. Why do you volunteer your time to the BCA?
It’s payback for a rewarding career and pay forward for the industry.

Do you think other BCA members can benefit from volunteering?
It gets you out of your own short view of the industry and introduces you to the bigger picture.

And if so, how would you recommend they get involved?
I would recommend getting on a committee first, and then, if you recognize the value of involvement, strive for the local chapter board.

Thanks for talking with The Checklist. One last question before we’re done. What’s the weirdest thing you’ve ever found in a building?
I found some really old documents (newspapers, etc.) in old buildings but I can’t think of anything weird (not counting dead animal carcasses).

“Is the Speed of Light Taking Commissioning Places?”
continued from p. 11

9. What is the one most significant business issue that you are facing currently?

- Rising energy costs ........................................ 3%
- Growth (growing too slowly) ............................ 6%
- Rate of building technology changes .............. 1%
- Political uncertainty ....................................... 6%
- Legislation ..................................................... 1%
- Staffing (hiring, retaining, and training) ........... 16%
- Economic uncertainty (concern for local and national economy budget deficit) .......... 26%
- Financial issues (finance, cash flow, profitability) . 6%
- Increasing competition from multiple sources ... 21%
- Understanding of services .............................. 8%
- Other, please specify .................................... 5%
Total ............................................................. 100%

The BCA believes these survey results provide optimistic news and insight for our members and for our association. Despite the continued struggles in many industries and nations, commissioning continues to grow and increase in scope. That is a testament to the ways that each of you advocate for commissioning, procure commissioning, deliver commissioning, and ultimately support in upholding the BCA Essential Attributes. What our challenges demonstrate is the vital issues of process, education, training, and qualifications that the BCA is currently spearheading are not only viable, but essential elements to the continued success of our members. What we can affirm is the pace of busyness is indeed taking us and our members places. This is an exciting time to be part of a dynamic industry and thriving association.

Candice B. Rogers, CCP, CCxA, LEED AP BD+C, is the President of Paladin, Inc. She also serves on the BCA International Board of Directors and is BCA Marketing and Outreach Chair.

Oh yes, one last thing… the winner of our $50 American Express Gift Card
Nick Marcyan
with Interface Engineering
CCP™ & ACP Updates

The BCA congratulates the following individuals on achieving the Certified Commissioning Professional (CCP) and Associate Commissioning Professional (ACP) designation:

**CCP**
- **Rick L. Dale, CCP**
  - Abbott Labs
  - Abbott Park, IL
- **Richard Dennis, PE, LEED AP, CCP**
  - DLB Associates
  - Eatontown, NJ
- **Douglas L. Ewers, CCP**
  - MBP
  - Chesapeake, VA
- **Eric Fitzgerald, CCP**
  - Sebesta Blomberg
  - Durham, NC
- **Jeanine Grochowski, CCP**
  - Consulting Engineering Services, Inc.
  - Middletown, CT
- **Luis R. Hernandez, CCP**
  - Environmental Building Commissioning Group
  - Alhambra, CA
- **Jack M. Kirk, PE, CCP**
  - CH2M Hill
  - Portland, OR
- **Patrick Lange, PE, LEED AP, CCP**
  - Siegel, Rutherford, Bradstock & Ridgway, Inc.
  - Baltimore, MD
- **Molly Meyer, PE, CEM, LEED AP BD+C, CCP**
  - Questions & Solutions Engineering, Inc.
  - Mendota Heights, MN
- **Colin Joseph Moar, CCP**
  - Heery International, Inc
  - Portland, OR
- **Svein Morner, CCP, LEED AP, PE, CPMP**
  - Sustainable Engineering Group
  - Madison, WI
- **Orry Nottingham, PE, CCP**
  - Orry Nottingham, P.E. CAP Inc.
  - Rocklin, CA
- **John Phillips, PE, CCP**
  - Facility Improvement Corporation
  - Great Falls, MT
- **Chad Tassin, CCP**
  - Horizon Engineering Associates
  - Dublin, OH

**ACP**
- **Marc Chiasson, PEng, ACP**
  - Isotherm Engineering (Ottawa) Ltd.
  - Nepean, ON, CAN
- **Andrew Cooper, ACP**
  - Commissioning Solutions
  - Fargo, ND
- **Scott Drake, QCxP, ACP**
  - ARSEE Engineers, Inc.
  - Fishers, IN
- **Byron Holmstead, ACP**
  - Engineering Economics, Inc.
  - Seattle, WA
- **Braydon B. Ireland, ACP**
  - C&S Engineers, Inc.
  - Syracuse, NY
- **Michael E. Luffred, ACP**
  - Eaton Energy Solutions, Inc.
  - Lorton, VA
- **Roger Noonan, ACP**
  - Engineering Economics, Inc.
  - Littleton, CO
- **Karl Rueca, ACP**
  - Primary Integration
  - Charlotte, NC
- **Damon Rutherford, ACP**
  - McKinstry
  - Portland, OR
- **Rusty Wilde, ACP, PE, LEED AP, QCxP**
  - PDC Engineers Inc.
  - Anchorage, AK

These individuals join the ranks of some of the most qualified commissioning providers in the industry. Way to go!

The CCP and ACP exam are available electronically at more than 200 testing sites. To apply, review the Candidate Bulletin and download the application at [www.bit.ly/bcxacertification](http://www.bit.ly/bcxacertification).

Not sure if you are qualified? Send us your questions at certification@bcxa.org or call the BCA Hotline at (877) 666-2292.
Chapter Updates

CALIFORNIA CHAPTER
The California Chapter held their first member meeting since receiving their charter on May 2, 2012. Twenty-eight members attended the presentation of Datacenter Commissioning at DPR Construction in Sacramento, California. The event included a continental breakfast and lunch sponsored by L&H Airco, R & A Engineering Solutions, Precision Environmental & Power, Inc. and PECI.

NORTHWEST CHAPTER
The Northwest Chapter has been busy building the community and providing outreach. We hosted an education session in Spokane, WA on June 22 featuring the topic “Commissioning Lighting and Lighting Controls”. Our co-presenters were Tom Leinhard from Avista (local utility) who spoke about various incentive programs and some basic principles of lighting (i.e. lumens, spectrum, and different kinds of lighting), and Todd Beyreuther, PE, Director of Washington State University’s Integrated Design Lab who spoke about what to look for when commissioning lighting controls and some different types of controls systems currently on the market.

We’re also developing a “Commissioning as a Career Path” program that will go on the road to colleges and universities with Engineering/MET programs this fall. The presentations will focus on some commissioning basics and how commissioning can be a career path for prospective engineers/technicians after they graduate. If you are interested in participating in this program or have contacts at higher education facilities in your state, please reach out to anyone on the Northwest Chapter Board of Directors.

Members on the Move

Michael Eardley, PE, LEED AP, CCP, CBCP was recently announced as a recipient of the 2012 Consulting-Specifying Engineer’s prestigious 40 Under 40 Award. The award is given to engineering professionals under the age of 40 who stand out in all aspects of their lives. Eardley serves as Chair of the BCA Northeast Chapter Scholarship Committee to support young engineers. Eardley is Associate Vice President at Cannon Design in Boston.

BCA member individuals and firms are welcome to showcase rising stars in the Members on the Move section for upcoming issues of The Checklist. Send your updates to checklist@bcxa.org.

Building Better Commissioning Providers
Raising the bar in professional standards, the CCP designation is the mark of a dedicated and goal-oriented professional. It offers employers and building owners tangible evidence of an individual’s desire to excel in the building commissioning industry.

Competitive Advantage
Staying abreast of the ever-changing commissioning industry is a responsibility that cannot be ignored.

Professional Recognition
The CCP designation will set you apart as someone with the commitment, dedication and knowledge to succeed.

Visit the BCA website to check your eligibility.
New photo capture feature!

Remember what issues and equipment look like with photos.

Capture photos in the field with your iPad or Android device and synchronize the photos back to your main project log.

We support Apple iPad™ and netbooks, laptops or tablets running Windows. **Android Support now available!**