PRESIDENT’S MESSAGE
By: Enrique de los Reyes

Well, it is time to hand over the gavel to Darcy Carbone, so I will take this opportunity to thank all of you for your hard work and support. It has been an honor to serve as the Chapter President. I was impressed by the number of people who get involved in so many different ways and with the diverse background of our members.

I again want to thank everybody for doing their part in a successful Product Show! First of all, I want to thank the sponsors and attendees, as they are the key to making this show interesting and well attended. I want to particularly thank Jeff Schultz for leading the effort to organize the Show; Pat Duffy for reaching out with the emails and taking care of the Attendance desk; Bill Garvey for leading the legion of Student Volunteers in setting up the Show; and last, but not least, all of the (many) people that contributed behind the scenes in so many ways.

I would like to thank all the officers, committee chairs and the Board of Governors for their help with the Chapter. I would like to thank Past President Steve Tafone for all his support and encouragement as he stayed involved with the day-to-day issues of the Chapter and helped guide us. We would like to congratulate Jeff Schultz on winning Outstanding Member of the Year Award. While there are many deserving members, Jeff spearheaded the Product Show, set up our accounting system on a new (electronic) system that will make the tasks of future Treasurers more effective, and hired a (much needed) new accountant for the Chapter.

I would also like to thank Bill Garvey for all his work organizing the Golf Outing which turned out to be a big success (see Golf Outing report in newsletter).

Another notable achievement this year was the smooth transition of NorthEastAire Editor to Teri Shannon who jumped right in and effectively transformed our newsletter into a fully electronic form. We want to thank Nicole Robitaille for her many years as Editor and a job well done.

The Chapter would like to thank the following for their support of the ASHRAE Golf Outing:

**CONTEST HOLE SPONSORS**
- SEi Companies
- J.S. Fleming Associates
- Daikin AC, Inc.

**HOLE SPONSORS**
- Emerson-Swan, Inc.
- Leonhardt Company
- Stebbins-Duffy, Inc.
- DAC Sales
- RDK Engineers
- Nelson Scribner Associates
- Northeast Air Solutions
- Alfieri Proctor Associates
- NSTAR Electric Energy
- Siemens Building Technologies
- Kirschner Associates
- Victaulic
- S.J. Ginns Associates
- Air Distribution Corporation

**DONATIONS FOR PRIZES**
- Buckley Associates
- Burnham Northeast
- DAC Sales
- Green Technologies Associates

See page 3 for golf results!!

Continued on Page 2
The Chapter is in great hands with the following officers for 2006-2007:

President: Darcy Carbone
President-Elect: Steven Rosen
Vice President: Jeffrey Schultz
Secretary: Bryan Hermanny
Treasurer: Bill Garvey
New Board of Governors Members: Steve Bosland and Jeff Scogland

As a group, we as officers and committee chairs will be attending the Chapter Regional Conference this August in Portland, Maine. At this event, new committee members will receive training and instruction on how to perform their duties as committee chairs and ‘old’ committee chairs will receive recognition and awards for their service.

In closing I would like to thank you for the privilege to lead the Chapter. I have had the pleasure of working with an amazingly committed group of people who serve as the Board of Governors, Officers, and Committee Chairs for the Chapter. I wish to encourage all members to renew their commitment to ASHRAE and to support Darcy Carbone as President for 2006-2007 in every way that you can.

Thanks
Enrique

NORTH EAST AIRE

DEADLINE

Effective with the September 2006 issue, there will be new rates for ads. Want ads only will be accepted and should be in Word format. The deadline for the September newsletter is August 25th. Company logos can be included with your ad; these need to be provided in either a .jpg or .gif file format. The cost is $200 per month for 1/4 page; $400 per month for 1/2 page. A check should be submitted with your ad, made payable to “ASHRAE - Boston Chapter”, and should be sent to:

ASHRAE
Attn: Teri Shannon
c/o DAC Sales
P.O. Box 576
W. Kennebunk, ME 04094
E-mail: tshannon@dac-hvac.com

If you have any questions, please feel free to contact me at 207-985-0873.
## Best Golfers
### Halifax Country Club

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<th>LOW GROSS</th>
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<td>J. Mahorid</td>
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<td>Peter S.</td>
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<td></td>
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<td>D. Myers</td>
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<tr>
<td></td>
<td></td>
<td>A. Arruda</td>
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Closest to the Pin Hole #3 - Al Arruda  Distance: 53”
Closest to the Pin Hole #8 - Mike Carr  Distance: 47”
Closest to the Pin Hole #12 - Mark Ehrenzeller  Distance:
Closest to the Pin Hole #16 - Rob Bremlitt  Distance: 134.5”

Longest Drive Hole #15 - Chip Simek

Straightest Drive Hole #1 - Bill Wright

## Best Golfers
### Poquoy Brook

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<td>K. Anderson</td>
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<td>Don Marshall</td>
<td>83</td>
<td>J. Swift</td>
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<td>Bob McCallium</td>
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<td>T. Marshall</td>
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<td></td>
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<td>T. McCormick</td>
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Closest to the Pin Hole #3 - C.J. Smith  Distance: 18”
Closest to the Pin Hole #8 - Rich Adams  Distance:
Closest to the Pin Hole #12 - Jim Liston  Distance:
Closest to the Pin Hole #15 - Dave Doyle  Distance:

Longest Drive Hole #10 - Tony Tarara

Straightest Drive Hole #1 - Vince Maccarone
First Ever **Future Engineers Scholarship** Recipients Announced

The Student Activities Committee announces that each of the following students have been selected to receive the **2006 Future Engineers Scholarship** of $2000:

- Zubin Hasmukh Patel, Hudson High School, hometown: Hudson, MA
- Monica Thomas, Somerville High School, hometown: Somerville, MA
- Amy Beth Laycob, Cardinal Spellman High School, hometown: Brockton, MA
- Robert Patrick Wettach, Wakefield High School, hometown: Wakefield, MA
- Justin Z. LeClair, Lexington High School, hometown: Lexington, MA
- Kenny F. Lin, Boston University, hometown: Sammamish, WA
- Ryan Benjamin Rainville, Wentworth Institute of Technology, hometown: North Clarendon, VT
- James F. O'Keefe, Northeastern University, hometown: Guilford, CT
- Jason Michael Paris, Massachusetts Maritime Academy, hometown: Preston, CT
- Craig Martin Alfis, Massachusetts Maritime Academy, hometown: Hanover, MA

A twelve member selection committee chose the winners from a pool of over 60 very impressive applicants from all over New England. Chai Srisirikul of Partners Health Care, our generous donor, appointed six of the members of the selection committee and the rest were dedicated and active members of the Boston Chapter, including 2 past presidents. Thank you to all of our members who helped distribute the applications to the candidates. It is the goal of the committee to grow and foster the Future Engineers Scholarship so that it can be a lasting legacy benefiting the engineers of tomorrow.

Later in the year we will be embarking on fundraising efforts to support the scholarship.

Sincerely,

Student Activities Committee
   Jim Shiminski, Chair
   Cheryl Rossini
A Message from the Webmaster  By George Hardisty

I would like to remind everyone that they can obtain the updated meeting schedule as well as the *NorthEastAire* on the website. Also, you may post your employment ads on the site at a cost of only $50.00 per month. This is an excellent source to recruit highly qualified people, at a very reasonable cost. Please feel free to contact me at gmh@brplusa.com if you have any questions.

On another note, next year will be my last year as the Chapter Webmaster, and we need someone who is interested in assuming this position. If you are interested and would like to assist me next year to “learn the ropes”, please let me know.

---

Sustainable Olympic Games

Now that the 2006 Olympics at Torino are concluded, we can look forward to the 2010 Vancouver Olympics in my native country of Canada. Promoting sustainable development has become one of the fundamental objectives of the Olympic Movement.

The International Olympic Committee (IOC) added environmental protection to the Olympic Charter in 1994 and made it the third pillar of the Olympic Movement, equal to Sport and Culture. The Charter says that the IOC will see “that the Olympic Games are held in conditions which demonstrate a responsible concern for environmental issues.” In 1999, the IOC went further when it adopted Agenda 21: Sport for Sustainable Development. I’m sure Vancouver will continue to practice sustainability design.

Here are some of the great designs that have already been seen:

**Lillehammer 1994**
- In Hamar Olympic Hall, excess heat coming off the ice-making machines and from the air conditioning was recycled to heat the rest of the building.
- A large new arena was “sunk” into the ground to capitalize on the cooling effect of the earth and reduce the visual impact of a large facility in a small community.

**Nagano 1998**
- The refrigeration system for the bobsleigh and luge track used 60 times less ammonia than a regular refrigeration system.

**Sydney 2000**
- Photovoltaic roof panels provided electricity for hundreds of houses in the Olympic Village
- An on-site water treatment system recycled waste water for use in washrooms and irrigation systems
- An abandoned industrial area was reclaimed and rebuilt as the Olympic Park. It was one of Australia’s largest urban renewal projects

**Salt Lake City 2002**
- The 2002 Games were certified “Climate Cool” by the Climate Neutral Network for reducing and offsetting greenhouse gases, largely through a tree-planting program
- Energy recycled from the curling hall’s air conditioning unit heated the hall’s showers and bathrooms. Excess heat energy from the speed skating facility ice plants heated the adjoining swimming pool

**Athens 2004**
- Workers planted over a million large bushes, 290,000 large trees and 11 million small trees throughout the Greek capital

**Torino 2006**
- The HECTOR Project (HEritage Climate TORino) aims to balance the additional carbon dioxide produced during the Games (primarily from vehicle fuel consumption, heating and electricity) with projects that reduce energy use to ensure zero emissions of greenhouse gases during the 2006 Winter Games
What’s New in our Chapter

By Bryan Hermanny

Each and every month the Board of Governors have a meeting before the technical meeting to discuss the inner-workings of our Chapter. Many members wonder what’s new, what’s being discussed, and what’s being done to make our chapter better.

Below is a quick summary of what was discussed:

Research & Promotion
Steve Tafone announced that the Boston Chapter is currently nearly half-way to our annual goal, but we need to keep up the generosity! Our goal is to be in 1st place in the Region, but we can’t do it without you. Any additional information in regards to Research & Promotion, please contact Steve.

Chapter Website
The Chapter is looking into possibly expanding the information available via the Chapter’s website. Examples of this expansion such as a “Past President’s” page and “Student Activities” page as well. We will keep you informed as things progress.

George Hardisty will need help on the website next year and it will be his final year as Chapter Webmaster. Anyone interested in assisting George and eventually taking over as Chapter Webmaster please feel free to contact George.

Next Year’s Meetings
It’s hard to believe that another season is almost completed, but it’s about that time to discuss the 2006-2007 season. The Chapter Officers and Board of Governor’s are calling for a Planning meeting to discuss the topics for next year. The meeting will be on June 2nd at W.A. Berry.

Membership
Our Membership Chair wanted to remind all members to make sure their dues are paid up in full. Unsure as to whether you are up-to-date or not? Please be sure to check Society’s website www.ashrae.org or contact our Membership Chairperson Dan Cooke for more membership information.

See you at the next meeting!

ATTENTION MEMBERS!!

The Boston Chapter is looking to fill the following positions:

Chapter Webmaster
Chapter Historian

If you are interested, please contact Darcy Carbone at 781-721-3949 or dcarbone@sebesta.com

Presidential Award of Excellence
Boston Chapter - 2005 - 2006

<table>
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<th>Chapter Members</th>
<th>Membership Promotion Points</th>
<th>Student Activities Points</th>
<th>Research Promotion Points</th>
<th>History Points</th>
<th>Chapter Organization Points</th>
<th>Chapter Technology Transfer Points</th>
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Statements made in this publication are not expressions of the Society or of the Chapter and may not be reproduced without special permission of the Chapter.
Historian’s Column  By Robert J. Barstow

Time for a turn for hot water systems. There were hot water systems installed before World War II, but not a lot. Early ones were gravity type. M.I.T. had some buildings with gravity hot water systems. They fed up to the top of the building and had one-pipe, down-feed risers with the radiators connected top and bottom on the same side. As the water cooled in the radiators, it dropped down and out the bottom connections, and down the risers by gravity to be replaced with hotter water into the top connection.

The residential gravity hot water system was, in my opinion, the apex of hot water heating systems. As the “boiler” heated water, it traveled by gravity in large pipes pitched upward from the “boiler” to two-pipe radiators. The return line pitched back to the bottom of the “boiler”. In coal-fired systems, it all worked without electricity or any moving parts. With the introduction of oil burners, it became automatic, but dependent on electricity. The system had one big advantage; the system water temperature automatically increased in reverse proportion to the outside temperature because the greater the heat loss, the longer the burner ran and the hotter the water became. The disadvantage of this system was that it required basements to install the large, pitched pipes.

My parents’ home had a gravity hot water system installed in the 30s, which worked just fine for 30 years. When I was on Commonwealth Avenue, my 14,000 sq. ft. building was heated with gravity hot water circulating to cast iron coils in metal boxes at the basement ceiling. These boxes, in turn, provided gravity warm air to the rooms. This building was built in 1900 and originally was coal-fired, so, again, no electricity or moving parts, except the servant who shoveled the coal.

With the advent of slab-on-grade housing and the basement playroom, the pumped system came to the forefront. It also was much cheaper since it used smaller size and copper piping, rather than larger steel piping, threaded and coupled.

At that time along came baseboard radiation which replaced case iron radiators and convectors because you could circulate the hot water in a continuous loop from room-to-room, and thus save even more piping. Convectors still have the advantage that you can shut off one room without affecting the others.

The primary advocate for forced hot water was Bell & Gossett. The B&G Handbook was the industry standard. It had one major problem; it advocated 20-degree drop systems. Of course you could not get a 20-degree from a radiator, but it was well liked because you could simply divide the m.b.h. by 10 to get the g.p.m. No doubt many of these systems circulated much more water than necessary. The radiation and minimum pipe size was ¾”. Of course, if you circulated the true required g.p.m., you would create an air binding problem. Even to this day, most baseboard radiation is ¾”. There should be more ½” and even 3/8” to accommodate the g.p.m. required for a single room, or a single side of a single unit in a multi-unit building. Practically all wet heated residential work now employs baseboard radiation. Of course this idea is often replaced with warm air systems because of the ability to air condition with the same system.

Historical Note: Back to Bell and Gossett, the representative in the 50s was Johnny Ivester, who distributed the B&G Handbook in the community. He later became partners with a man named Ford and formed Ford & Ivester Associates (F.I.A). ITT Industries bought Bell & Gossett and other famous names such as McDonnell-Miller. The present representative is still F.I.A, but now it means Fluid Industrial Associates and is located in Woburn.

Editor’s Note by Teri Shannon

I would like to thank everyone for their support and encouragement in my first year as the NorthEastAire editor. I look forward to working with you all in the upcoming year!

Have a great summer!

Teri

“Summer afternoon - Summer afternoon… the two most beautiful words in the English language.”

Henry James (1843 - 1916)
A PLACE TO GROW!

Are you ready to work for a different kind of engineering firm? Are you ready to benefit from our equitable pay practices and great benefit programs? Do you want to learn and advance with one of the fastest growing MEP firms in the region? Our firm thrives because of our well structured project management system and our studio-based organizational structure. We recently added a mentoring program because we believe that's the best way to teach our younger staff members this business. Frequent in-house training is offered in both technical and non-technical skills. Sustainable design training programs are on our agenda as well. Our employees learn in comfort in our brand new state of the art training room.

Our 150 or so technical and administrative staff members all say that time flies around here. RDK has many exciting MEP design projects in house. Visit our website and take a look at just a few of the great projects we are working on.

We are looking to the future and we are in need of a few great design engineers.

**HVAC Engineers, Designers and Project Managers are needed immediately**

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Please forward your resume to: [jobs@rdkengineers.com](mailto:jobs@rdkengineers.com) or fax your resume to Ann at 978-296-6296

### MARK THE DATES!!

The schedule for the 2006 - 2007 Boston Chapter meetings is:

<table>
<thead>
<tr>
<th>Date</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thurs., Sept. 14</td>
<td>Hotel Marlow</td>
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<tr>
<td>Tues., Oct. 10</td>
<td>Doubletree, Waltham</td>
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<td>Tues., Nov. 14</td>
<td>Lantana’s, Randolph</td>
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<td>Wed., Dec. 13</td>
<td>Doubletree, Waltham</td>
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<td>Tues., Jan. 9</td>
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<td>Tues., Feb. 13</td>
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<td>Tues., Mar. 13</td>
<td>Doubletree, Waltham</td>
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<tr>
<td>Tues., Apr. 10</td>
<td>Doubletree, Waltham</td>
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<tr>
<td>Tues., May 8</td>
<td>TBD</td>
</tr>
<tr>
<td>Mon, June 4</td>
<td>Golf Outing</td>
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A postcard will be sent to all members later in the summer with the dates, locations and topics.

Please note that locations are subject to change.

### ENGINEERING FUN FACTS

Did you know that…..

* The Ferris Wheel is considered one of the greatest engineering wonders in the world?*

The first Ferris Wheel was created by Pittsburgh, PA engineer, George W. Ferris, in 1893. The wheel is supported by two 140-foot steel towers and connected by a 45-foot axle - the largest single piece of forged steel ever made at that time!

* Engineers design running shoes for protection, performance and comfort?*

Engineers understand how much force travels from the ground through the shoe to the foot. Through the work of engineering, weight is distributed throughout the whole foot - heel to toe.

* The snowboard was invented by an engineer?*

With some engineering twists and turns along the way, the snowboard has become a marvel of geometry, chemistry and biomechanics.

*From the National Society of Professional Engineers website*
During the ASHRAE Product Show, 3 vendors were selected to pick the door prize winners from their fishbowls. Those vendors won a free ad in this issue.

**Want To Reduce Your Commercial Building Energy Costs?**

**Install Honeywell Commercial Products**

Honeywell offers a wide array of energy-saving products that are the ideal choice for your building.

**T7350 Commercial Programmable Thermostat**
- Simplified user interface, dehumidification, occupancy detection, modulating outputs, Palm OS compatibility

**Commercial VisionPRO™ 8000**
- Up to 33% energy savings*, 10” backlit touchscreen display, effortless 7-day menu-driven programming, 4 programmable periods per day, 5-year warranty

**CommercialPRO™ 7000**
- Up to 33% energy savings*, large backlit digital display, menu-driven programming, 4 programmable periods per day, 5-year warranty

**Light Commercial Building Solution™ (LCBS)**
- Integrates heating, ventilation, and air conditioning control for efficient and convenient building management

**Variable Frequency Drives**
- For HVAC applications large and small, Honeywell NX Series Drives are the answer for optimized control and reduced energy consumption

Visit customer.honeywell.com, or contact Scott Degler, Honeywell Building Control Spe-

* If used as directed. Savings may vary depending on geographic region and usage.

---

**N. R. Metcalf Associates, Inc.**

Dear Engineer:

NRMAI was started in August of 1970. Since then, we have had a mission to bring problem-solving products and best technologies to the marketplace of the HVAC contracting and building industry. We have assisted architects, engineers, contractors, owners and National accounts in installing more efficient systems.

We try to “GREEN” the systems wherever possible with heat recovery/energy-friendly products when applicable.

We offer solutions to ventilation and odor problems in mixed-use projects with retail, restaurants, etc., on the first floor, offices on the second floor, and apartments or condo’s on the third and higher. We have many solutions to suit the different situations mentioned above:

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- Grease duct balancing dampers - UL & NFPA-96
- UAS “SMOG HOG” for grease, smoke & odor control
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Visit our website at [www.nrmetcalfassociates.com](http://www.nrmetcalfassociates.com)

Contact us by Phone: 978-851-6217

Fax: (978) 851-4192

E-mail: nrmetcalf@comcast.net
## OFFICERS

<table>
<thead>
<tr>
<th>OFFICE / OFFICER</th>
<th>PHONE</th>
<th>E-MAIL</th>
</tr>
</thead>
<tbody>
<tr>
<td>President</td>
<td>781-721-3949</td>
<td><a href="mailto:dcarbone@sebesta.com">dcarbone@sebesta.com</a></td>
</tr>
<tr>
<td>President-Elect</td>
<td>603-621-3259</td>
<td><a href="mailto:steven.rosten@autodesk.com">steven.rosten@autodesk.com</a></td>
</tr>
<tr>
<td>Vice President</td>
<td>617-925-8242</td>
<td><a href="mailto:jhs@brplusa.com">jhs@brplusa.com</a></td>
</tr>
<tr>
<td>Secretary</td>
<td>617-254-0016</td>
<td>x295</td>
</tr>
<tr>
<td>Treasurer</td>
<td>617-210-1711</td>
<td><a href="mailto:bgarvey@seicompanies.com">bgarvey@seicompanies.com</a></td>
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## BOARD OF GOVERNORS

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<th>YEARS</th>
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<tr>
<td>Enrique de los Reyes, P.E., Energy Systems Design</td>
<td>2006 - 2009</td>
<td>508-276-1102</td>
<td><a href="mailto:er@energysystemsdesign.com">er@energysystemsdesign.com</a></td>
</tr>
<tr>
<td>William Garvey, SEI Companies</td>
<td>2006 - 2009</td>
<td>617-210-1711</td>
<td><a href="mailto:bgarvey@seicompanies.com">bgarvey@seicompanies.com</a></td>
</tr>
<tr>
<td>Steve Bosland, PE, Collaborative Engineers</td>
<td>2006 - 2009</td>
<td>617-742-7799 x241</td>
<td><a href="mailto:sbosland@collaborativeengineers.com">sbosland@collaborativeengineers.com</a></td>
</tr>
<tr>
<td>Jeff Scogland, R.T. Forbes</td>
<td>2006 - 2009</td>
<td>978-777-1220</td>
<td><a href="mailto:scogland@comcast.net">scogland@comcast.net</a></td>
</tr>
<tr>
<td>Dan Cooke, RG Vanderweil</td>
<td>2005 - 2008</td>
<td>617-423-7423</td>
<td><a href="mailto:dcooke@vanderweil.com">dcooke@vanderweil.com</a></td>
</tr>
<tr>
<td>Patrick Duffy, BR+A</td>
<td>2005 - 2008</td>
<td>617-925-8255</td>
<td><a href="mailto:pjd@brplusa.com">pjd@brplusa.com</a></td>
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<tr>
<td>Jim Shiminski, DAC Sales</td>
<td>2005 - 2008</td>
<td>207-985-0873</td>
<td><a href="mailto:jshiminski@dac-hvac.com">jshiminski@dac-hvac.com</a></td>
</tr>
<tr>
<td>Bryan Hermanny, BR+A</td>
<td>2004 - 2007</td>
<td>617-254-0016 x295</td>
<td><a href="mailto:bmh@brplusa.com">bmh@brplusa.com</a></td>
</tr>
<tr>
<td>John Swift, Cannon Design</td>
<td>2004 - 2007</td>
<td>617-724-5440</td>
<td><a href="mailto:jswift@cannondesign.com">jswift@cannondesign.com</a></td>
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## COMMITTEES

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<tr>
<td>Attendance</td>
<td>Patrick Duffy, BR+A</td>
<td>617-925-8255</td>
<td><a href="mailto:pjd@brplusa.com">pjd@brplusa.com</a></td>
</tr>
<tr>
<td>Chapter Program</td>
<td>Steve Rosen, Autodesk, Inc.</td>
<td>603-621-3259</td>
<td><a href="mailto:steven.rosten@autodesk.com">steven.rosten@autodesk.com</a></td>
</tr>
<tr>
<td>Chapter Technology Transfer</td>
<td>Steven Rosen, Autodesk, Inc.</td>
<td>603-621-3259</td>
<td><a href="mailto:steven.rosten@autodesk.com">steven.rosten@autodesk.com</a></td>
</tr>
<tr>
<td>CRC Alternate</td>
<td>Darcy Carbone, Sebesta Blomberg &amp; Associates</td>
<td>781-721-3949</td>
<td><a href="mailto:dcarbone@sebesta.com">dcarbone@sebesta.com</a></td>
</tr>
<tr>
<td>CRC Delegate</td>
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