



ASHRAE

Hawaii Chapter

HE EA MAKAMAE

A monthly publication by the American Society of Heating Refrigerating and Air Conditioning Engineers, Inc.

SY 2008-09, Issue #6 HONOLULU, OAHU, HAWAII January 2009

FEBRUARY "RENDEZVOUS" TECHNICAL SEMINAR & PRODUCT SHOW

Friday, February 27, 2009

Technical Seminar: Maintain to Sustain – Delivering ASHRAE's Sustainability Promise

Hawaii Chapter proudly presents a dual-track full-day technical seminar from 8:00 AM to 4:30 PM (coffee breaks and luncheon provided). See attached agenda for more information. Select your track and move along with your own schedule for the day. Parking is available on the street, at the Parking Structure or you may purchase parking pass when you register.

REGISTRATION: Complete your registration form and remit the payment to ASHRAE Hawaii Chapter, P.O. Box 3916, Honolulu HI 96812-3916 by February 20, 2008. Otherwise, for expedient registration, remit payment via "PayPal" by clicking <http://hawaii.ashraechapters.org>.

Pre-registration (Asia/Pacific Room – max 60 each): All pre-registrants will remit payment as indicated. No refunds will be provided (show or no show).

ASHRAE Members: \$125 per person

Non-Member of the above organizations: \$150 per person

On-site Registration (if available):

Regardless of Members or Non-Members: \$200 per person

TECHNICAL SEMINAR:

*Maintain to Sustain –
Delivering ASHRAE's
Sustainability Promise*

This dual track technical seminar will feature the following sub-topics with the respective speakers as provided. The speakers will speak twice, once in Asia Room and once in Pacific Room. If you chose to listen to some of the speakers twice, you may do so as long as there is space available for you to sit.

1. Commissioning & Retro-commissioning: **Bryan Welsh, P.E.** (Welsh Commissioning Group, Inc.) and **Peter Keithly** (Keithly Barber & Associates, Inc.)

2. Owning & Maintaining of Various Facilities: **Dean Borges, P.E.** (Sustainable Energy Development Associates LLC) & **John White** (ABM Industries Inc.)

3. Manufacturing to Design: **Mike Thompson, P.E.** (The Trane Company, a Division of Ingersoll Rand), **Ron Porter** (International Environmental Corporation) & **Frederic Berg** (Honolulu Seawater Air-Conditioning LLC)

DIRECTIONS TO EAST WEST CENTER (Hawaii Imin International)

1777 East West Road, Honolulu (Phone: 944-7159)

FROM DIAMOND HEAD (Westbound) or FROM EWA (Eastbound): Take H-1 and exit at University Avenue cut-off, Exit 24B. Turn RIGHT onto University Avenue and turn another RIGHT onto Dole Street. Go straight and pass the 2nd set of traffic lights, then turn LEFT onto East West Road. The East West Center is located on your right once you pass the guard house.

Hawaii Chapter has invited **Peter Crouch, PhD**, Dean of Engineering at University of Hawaii at Manoa as well as **Bruce Liebert, PhD**, UHM Associate Dean of Engineering to provide the Opening Remarks at the Pacific Room and Asia Room, respectively.

1. Commissioning & Retro-commissioning:

Peter Keithly will speak on "The Integration of Commissioning into Building Operations and Maintenance". Over the past few years the practice of formal building commissioning has increasingly become recognized as an effective tool for verifying that specific building systems function as intended. ASHRAE Guideline 0 defines commissioning as: *"a quality oriented process for achieving, verifying and documenting that the performance of facilities, systems and assemblies meets defined objectives and criteria"*.

Commissioning procedures can be applied to assess the condition and performance of specific building systems both during the initial construction process and over the course of the building's life. This presentation will discuss methods for using commissioning procedures on existing buildings and how commissioning methodology can be integrated into a typical existing building's operation and maintenance program.



Peter is a graduate of the University of Washington with over 35 years experience in the field of facilities engineering. He has completed commissioning procedures on a wide variety of building systems including several projects in Hawaii. Pete also teaches the Building Operators Certification (BOC) class in Building Commissioning and he served as a founding member of the Building Commissioning Association (BCA) for 5 years. During the past 12 years, Pete has been a principal owner of Keithly Barber Associates, a building commissioning services provider firm based in Seattle, Washington.

Bryan Welsh, P.E. will speak on "Commissioning for Sustainability and Maintainability". True sustainability cannot be achieved without proper building maintenance. Building maintenance can be significantly hindered by design decisions, construction practices, maintenance program execution and harsh environments. The presentation will look at how commissioning and retro-commissioning practices help to ensure that facilities are maintainable. We will include Hawaii-based case studies and real world examples of issues that are discovered, results obtained, successes and lessons learned.



Bryan is a licensed professional mechanical engineer in the States of Washington and Idaho and has an MBA. He is a USGBC LEED Accredited Professional and a BCA Certified Commissioning Professional. He has over 20 years experience in facilities and project management. During his six years of industrial facilities work he acquired experience with sophisticated maintenance management programs, computerized data acquisition &

controls and test procedure development. His 10 years as Project Engineer and Director of Maintenance and Operations for K-12 schools gave him experience with the renovation and construction of over 15 school facilities where he learned first hand the importance of properly commissioning buildings.

Bryan has extensive experience in Cx, retro-Cx, computerized bldg mgt systems, utility & energy mgt systems, maintenance mgt systems, test procedure development, controls, data acquisition/analysis and facilities operations. He was involved with bldg Cx since 1989 and a full time provider since 1999. He has presented on Cx and related topics including retro-Cx to a variety of audiences including ASHRAE, CSI, CEFPI and the National Conference on Building Commissioning. He was the chairman for BCA Certification Committee and now serves on the Building Cx Certification Board.

2. Owning & Maintaining of Various Facilities:

Dean S. Borges, P.E. will speak on "Owning & Maintaining Facilities in a State-owned University". There are many methods in a University setting where each unit (Dean's office or any research groups) makes request to change facilities, through a Facilities Office. He will focus on HVAC request and methods to maintain or to upgrade quality equipment and controls over the operation life of the request change. Example request involve: additions of lab hoods, spot cooling for new servers versus using central plant equipment, upgrading older building systems to enhance the professors ability

to present each course and funding mechanisms.

Dean will comment on a developed and refined approach to sustainable design based on experience gained in many innovative projects; and plant operations management-trouble shooting, development and execution of Preventive Maintenance Plans as well as managing infrastructure improvements. He will discuss application of new and retrofitting of new technology and equipment into existing facilities, specialized maintenance and LEED EB methods employed. He will also add to the discussion the broad knowledge from 30 years of experience in energy efficiency and commissioning.

Dean is a licensed professional mechanical engineer in the States of Nevada. He is currently the president of Sustainable Energy Development Associates (SEDA), LLC after spending more than 30 years serving the State of Nevada until his recent retirement in 2008. At the State of Nevada, he first served the Water Resources Department as a Junior Engineer and moved onto the Dept. of Energy to administer standard for new and review energy all related engineering inquiries for the department. From 1981 to 1994, he served as Facilities Engineer in the Dept. of General Services, Buildings and Grounds. As he completed his public services, he served as Deputy Manager in the Administration Board of the Dept. of Public Works.



Since 1978, Dean has diligently served ASHRAE as member of Board of Governors of Northern Nevada Chapter to become its President in Society Year 1986-87. He moved to become Regional Vice Chair of Energy Technical Activities and Chapter Programs from 1987 to 1996. He was installed as Society Director & Regional Chair for Region X in July 1996 and completed his 3-years term in June 1999. He became the Chairman of ASHRAE Standards Committee in SY 2006-07 after serving seven years in various positions at the Standards Committee. He is currently the Society Nominating Committee Member from Region X serving its 4th year. Dean's primary focus is the facilities operation and maintenance, control systems design and indoor air quality issues in facilities for state-owned university.

John White, a LEED AP certified professional, will speak on "Shaving Kill-a-Watts and Maintaining Them". He is a career professional in building engineering and maintenance. He is currently the Chief Engineer at Central Pacific Plaza and a Senior Engineer at ABM Industries, Inc. During his seven year tenure at CPP he has implemented and managed several energy saving projects including the chilled water complete changed out of the on the air plant, the installation of DDC distribution system and an EMS. He introduced the concept of preventive group re-lamping to CPP and has recently retro-fitted to the Super T8 Lamp and SuperMax ballasts. He has pioneered the change out of incandescent corridor down lights to super efficient LEDs. And, importantly, he was one



of the first to initiate the Energy Star Award for office buildings. As a result, CPP has been awarded five consecutive Energy Star certifications. John's efforts are not only exemplary in our community, but he has single-handedly been responsible for hundreds of thousands of dollars in energy savings for CPP.

ABM Industries, Inc. is a national firm traded on the New York Stock Exchange (ABM) offering electrical and lighting, engineering, janitorial, parking and security services. With over 110,000 employees nationwide, it is the largest single service company in the US.

3. Manufacturing to Design:

Ron Porter will speak on "Fan Coil Units – Maintenance & Applications". Chilled water fan coil systems are very popular in hospitality, education, public and commercial buildings of all sizes. Recent developments and innovations have significantly expanded the scope and capability of the once simple fan coil. This section will re-examine old ideas and introduce new concepts which can deliver improved indoor environment quality, reduced construction and maintenance cost, and enhanced energy efficiency.

Ron joined the Navy after high school and served on board Guided Missile Destroyer USS Luce DDG-38 from 1977 to 1980, sailing the Atlantic from the Caribbean to north of the Arctic Circle. As an Electrician's Mate 2nd Class, he performed maintenance and repairs on "anything with a wire attached to it", including shipboard generators, switchgears and HVAC systems

After leaving the military, he found work as a marine electrician in Jacksonville working on supertankers, then in 1981 as maintenance electrician at the International Environmental Corporation (IEC) and California Heat Pump factories in Oklahoma City, manufacturers of room fan coil units and water source heat pumps. He studied electronics and robotics for manufacturing, and learned air conditioning as a career path. He worked his way up the company ladder, working in various hands-on and management roles in the Manufacturing, Field Service and Sales departments. The company gave him various assignments, including Sales Application Engineer for California Heat Pump. Another assignment took him to Juarez, Mexico to set up the Manufacturing, Engineering and Quality departments in a new factory that built water source heat pump units for Climate Master. Another assignment was as Project Manager responsible for relocating the APR factory from Illinois to Oklahoma, then taking on the role of Product Manager and Engineering Designer for their line of swimming pool dehumidifier equipment. During his assignment as Senior Product Manager at IEC, he delivered a technical presentation on "Fan Coil Design With Heat Pipes" at the Heat Pipe Technology seminar in 1998.



Ron is responsible for programming the company's Heat Transfer software and for their Rating and Selection program and SureFlow Loop Simulator, and designs new air conditioning equipment using Pro-Engineer solid-modeling software. He is co-inventor of the "Conditioned Air Fan Coil" for which a patent was awarded in 2000. Currently, he provides training and technical support for the sales organization and sales representatives of IEC, writes and maintains technical manuals, and serves as Product Manager for the SureFlow System, an enhanced version of the company's fan coil product line. This year, he will celebrate his 28th year with IEC.

Mike Thompson, P.E. will speak on "Best Practices for Sustaining High Performance in Chiller Plants. There are many methods in our industry for maximizing the design efficiency of chilled water plants, but how does an owner ensure that the superior design of a system is sustained throughout the entire life of the chiller plant. This section will focus on industry best practices that will ensure continued high performance chiller plants over the operation life of the facility.

Mike Thompson is director of environmental affairs for Trane Commercial Systems (TCS) and has worked for Trane in the HVAC industry for 18 years. In this role, Mike is responsible for developing and communicating Trane's environmental message to the industry and working with Trane's sales distribution organization globally to educate customers on the importance of environmental issues when selecting an HVAC system. He's held numerous positions with Trane including Field Sales and Global Marketing manager for Trane's large tonnage chillers. Mike is an active member in a wide range of HVAC industry organizations including ASHRAE, and the



International District Energy Association. Mike earned a bachelor's degree from Texas A&M University in mechanical engineering.



Frederic Berg will speak on "Honolulu Seawater Cools Downtown". He graduated from Boston University in

1989 with a Master in Business Administration emphasizing on international finance. Prior to completing the Masters program, Frederic received his Bachelor degree in Mechanical Engineering and Bachelor degree in Economics from the University of Hawaii. After receiving his MBA, he moved to Bruxelles in Belgium as a marketing engineer and later returned to Hawaii to focus on real estate development. He has spent most of his career in project management in Hawaii on large construction infrastructure projects. Currently, Frederic is assisting Honolulu Seawater Air Conditioning in coordinating engineering, permitting and sales.

"DO & DON'T Technical Session will be held monthly. To the other product manufacturers or service companies, who are interested to conduct this session, make your reservation with Kevin Saito. Cut \$250 check and make it payable to ASHRAE Hawaii Chapter. Send it to P.O. Box 3916, Honolulu HI 96812-3916.

Read the write-up from ASHRAE Insights' editor, Dec. 2008 issue. Click on this link for information

<http://www.ashrae.org/publications/detail/16985>

President's Message – Joseph K. Ting, P.E.

Happy Chinese New Year! We welcome the Year of the Ox. According to one of the prominent astrologers, “the year 2009 promises peace and harmony as well as an auspicious wave of success, prosperity and growth that is certain to please almost everyone. This is going to be a year of double earth - when the steady hard working Ox rules, thus bringing increased effectiveness and better productivity of efforts all year round. The next twelve months will support people in leadership positions. Those who have recently risen to high office or were promoted last year in the government or in the business world will feel the benefits of 2009 high energy CHI.” It seems that the year 2009 for Hawaii Chapter started off with a couple of high energy speakers and will continue-on to have a slate of great speakers.

TSphere Energy Terri Sasaki presented us a new and “out-of-the-box” sustainable technology on plastic-to-oil conversion. She highlighted (a.k.a. high density bags & containers); LDPE clear bags & toys), PP (a.k.a. appliance & automotive foamed PS, compact disk emphasized what can be such as PET (a.k.a. textiles and carpet) and PVC flooring). Our chapter PP Partner Terri Sasaki for a what “out-of-the-box” sustainable technology is available TODAY.



what type of plastics can be processed such as HDPE polyethylene in milk/water/detergent bottle, grocery (a.k.a. low density polyethylene in wrapping films, polypropylene in clear containers, bottle caps, equipment), PS (a.k.a. polystyrene in foamed/non-cases, medicine bottles and trays). She also processed but not very economical when processed polyethylene terephthalate in soda/drinking bottles, (a.k.a. polyvinylchloride in pipe, window frames and Marites Calad thanked TSphere Energy Managing timely technical presentation to keep us abreast of

Our chapter PP Ken Richardson thanked the technical session's speaker Ruskin Manufacturing Company Chris Schartz for providing us an informative & educational presentation for Specifying Life & Safety Devices. Chris basically left with things about “Fire Smoke/Life Safety”. One of them is “Do smoke protection is not an option”. The other is “Don't be of life, injury and property damage – Smoke kills”.



on the DO & DON'T us two important remember, fire and responsible for loss

In order for ASHRAE to be a leader in the sustainable ASHRAE has commenced to gear-up an AdHoc Committee at Meeting in Chicago in developing the ASHRAE design Zero Energy Buildings. The U.S. Department of Energy's Efficiency and Renewable Energy has defined a *Net-Zero* building that produces as much energy as it uses over the course of a year. Net-zero energy buildings are very energy-efficient, with the remaining low energy needs typically met through the use of on-site renewable energy. Achieving the goal of *Net-Zero Energy* buildings requires more than simply substituting or adopting new technologies and systems. ASHRAE is working with the American Institute of Architects, the Illuminating Engineering Society of North America and the U.S. Green Building Council to develop a series of Advanced Energy Design Guides for the commercial building sector that will hopefully eventually lead to *Net Zero Energy* buildings. ASHRAE is sponsoring a *Net Zero Energy* Building Conference in March in San Francisco (see press announcement elsewhere in this newsletter).

building movement, the 2009 Winter guidelines for Net Office of Energy *Energy* building as a

Just like LEED has raced into prominence in our industry, we expect similar thing would occur with *Net Zero Energy* Buildings. Towards that end, we encourage you all to read up on ASHRAE's efforts to create *Net Zero Energy* Buildings. It's good for all of us to get there as fast as we can. Reaching the *Net Zero Energy* Building goal will require new design approaches and technologies for our industry. As a stepping stone to reach that level, our Chapter will be sponsoring an all day technical seminar on “Maintain To Sustain – Delivering ASHRAE's Sustainability Promise”. This seminar will be held on February 27, 2009 at East West Center located within the UHM Campus. We are excited to have a slate of outstanding speakers with high credentials from their past working experiences. Come and participate at this event. Walk the product show (FREE) and enjoy with us at the Nuts & Bolts Party (By Invitation) at the Paradise Palms Café across the UHM Hamilton Library. All registered Technical Seminar attendees & Product Show exhibitors are invited.

PRODUCT SHOW – Ken Richardson

SHOW TIME ... *It's show time* for our Trade Show – February 27, 2009 at the East West Center, University of Hawaii Manoa.

For you Vendors, this is a “Once-In-Two-Years” opportunity to show-off. The Annual ASHRAE Hawaii Trade Show and Seminar provides us vendors a way to Show-Off what’s new and what we have done in 2008.

Vendors already signed up (25 tables still available):

Air Treatment (PAID for 1 table)

Clothier & Rose (PAID for 1 table)

Heide & Cook (PAID for 2 tables)

Mitsubishi Electric & Electronics (PAID for 2 tables)

Thermacor Process (PAID for 1 table)

Belimo Americas (PAID for 1 table)

DMG Hawaii (PAID for 1 table)

Island Controls Inc. (PAID for 1 table)

Norman S. Wright (NOT PAID)

Trane Pacific (NOT PAID)

NETWORKING ... This may be the best reason to attend in order to catch-up with what you have missed for the past years. For a small community like ours (HVAC in Hawaii is a small community, especially since the “H” is a rare commodity), we do not have many opportunities to network with our customers, friends, competitors and long time acquaintances. Everyone gains, not just the vendors but also ... Design Engineers, Military Base Engineering & Construction, Energy Engineers – private, military base, HECO, Building Owners, Building Managers, and Building Engineers all gain from this experience.

SO *For you as Vendors*, sign-up now for this trade show, you can't afford to miss out. Fill out the registration form available at the website. Click on <http://hawaii.ashraechapters.org/productsHOW.htm>, then, click on “Registration Form”. Select the table(s) for your 1st & 2nd choice (click on “Venue Layout”). Make your payment either on the website or send your money to our Chapter mailbox (P.O. Box 3916 Honolulu HI 96812). Call or email me to finalize the selection of the table of your choice (Ken Richardson – Cell 478-8803, Email ken@islandcontrols.com).

SO *For you as Non-Vendors*, plan on spending the day at the Trade Show and Technical Seminar to catch-up with everyone in our small community, the world is changing and Hawaii is changing, too. If we were in Chicago, I would state “Brave the weather and come out”, but we are in Hawaii, I think even a little rain at 80F should not keep you away. It's up to you to be part of the change to enhance your business. Otherwise, the change could outdate you without you noticing it, as the paradigm has already shifted in our ever-changing Hawaii.

MEMBERSHIP PROMOTION – Min Zhong, P.E.

The Hawaii Chapter Roster 2009 is just about to be launched. We will send you an email to notify you the release of the publication around mid-February. We updated most of the chapter members' information based on the information you entered into ASHRAE membership application. If you would further update your personal information, please email me at mzhong@insynergyeng.com.

We have received a total of nine companies, which continue to support the promotion of membership and publication of our electronic roster. Their line cards will be electronically published for your use at the back section of the Chapter Roster. On behalf of the Membership Promotion Committee, we would like to express our thanks to the companies as listed:

Admor HVAC Products, Inc.

Air Treatment Corporation

Acutorn Co., Inc.

Carrier Hawaii

DMG Hawaii

Engineered System, Inc.

The Gellert Company

Trane Pacific

Waltz Engineering, Inc.

STUDENT ACTIVITIES – Paul Fukunaga, P.E.

UHM Student Branch Advisor Joseph Ting accompanied three ASHRAE-UHM student members to the 2009 ASHRAE Winter Meeting in Chicago. ASHRAE Hawaii will participate at the career day on January 30th at Moanalua High School as the representative for mechanical engineering. A tour to visit one of the local mechanical contractor's shop is being scheduled for the ASHRAE-HCC Student Branch's members. SHRAE Hawaii will participate in judging the Junior Division and Senior Division projects for the 52nd Hawaii State Science and Engineering Fair on April 6 through 8, 2009 at the Neal Blaisdell Exhibition Hall. ASHRAE Hawaii will award \$150 for each Division. If any member is interested in being a judge, please contact Paul Fukunaga.

BOARD OF GOVERNORS' MEETING MINUTES – 01/15/09

1. Meeting called to order by Joseph Ting at 11:45 AM.
2. Attendees: Albert Hahn, Dicson Aggabao, Tyson Toyama, Michael Chang, Harendra Panalal, Min Zhong, Paul Fukunaga, Marites Calad, Kevin Saito, Mofazzal Mir, Ken Richardson, Barry Jim On and Joseph Ting
3. Past Treasurer's Report: Tyson Toyama reported that he plans to file IRS 990 prior to Feb. 15th. Otherwise, extension should be made.
4. Newsletter: All articles from grassroots committee chairs should be submitted in preparation for January 2009 newsletter, which will include the promotion of our Chapter's 2nd Product Show and Technical Seminar to be held on 2/27/09.
5. Student Activities Committee: Paul Fukunaga reported that UHM Student Advisor Joseph Ting will be accompanying the three UHM students to attend the 2009 ASHRAE Winter Meeting in Chicago. He briefed us on the upcoming activities. On behalf of the Hawaii Chapter, Paul will participate at the career day in January at Moanalua High School. He will arrange a tour to visit one of the contractor's factory (Standard Sheet Metal & Mechanical) for HCC students. He will arrange to have judge(s) provided to judge the High School projects for the 52nd Hawaii State Science & Engineering Fair to be held on April 6-8, 2009 at the Neal Blaisdell Exhibition Hall.
6. The Status of 2009 Main Program / Technical Session: There will be no regular monthly meeting in February. The speaker for the March 2009 meeting will be Barry Jim On. He will discuss the "Compliance with ASHRAE 90.1 and LEED". The technical session presenter was earmarked to be a speaker from pre-insulated piping manufacturing company. Nonetheless, he could not make it due to personal reason. A speaker is needed. We need speaker for the April and May main program. Ken Richardson will check with Automatic Logic Corporation if Dr. Tom will be available for April 9th. Michael Chang will check with York to see if someone from York (JCI) could speak on the subject of psychrometrics on May 14th.
7. CTTC (Chapter Technology Transfer Committee): Albert Hahn reported that we could possibly obtain 10 projects for the Energy Award. According to Joseph Ting, there is no limit of how many projects we may submit to the region. Both consultants and contractors can submit their applications. There are five categories in the Energy Award program. Switching to the subject of evaluating last month's speakers, Albert needs last meeting's attendees to complete one of his CTTC tasks.
8. Attendance: Mofazzal Mir & his committee members will start calling members to participate at the technical seminar/product show to boost attendance.
9. Past President Write-ups (Historian): Harendra Panalal stated that he called Boyd Chee, Robert Hann, John Arizumi, Cedric Chong, Richard Rauls. He couldn't find the contact information for Franklin Lum. Joseph Ting assigned Harendra to visit and interview Boyd Chee as soon as possible.
10. Honors and Awards: We need to work with Sam Gillie regarding the selection of candidates for ASHRAE Fellows, Chapter Service Award et al.
11. Refrigerant Activities: Joseph Ting recommended that we should organize a tour of Waihee Water Dyke Tunnel. Eric will coordinate with Alayna, who will be organizing it also for the Young Engineers of ASHRAE.
12. Big Island Section: The application for establishing the Big Island Section has been submitted to Society for consideration at 2009 ASHRAE Winter Meeting in Chicago.
13. Membership Promotion: Min Zhong reported that she has received 10 companies' line cards and will finish the Chapter Roster updates by January 30th. The following companies have remitted their payments: Acutron Hawaii, ADMOR HVAC, Air Treatment, Carrier Hawaii, Engineered Systems, Waltz Engineering, The Gellert Company and Trane Pacific. The remaining two companies need to forward their payments. The goal for MP Committee for the next half of the Society Year is to advance associate members to members.
14. Research Promotion: The goal for Lester Nakata Memorial Foundation is \$60,000. To date, we have completed more than 60% of our goal. We hope that the Product Show will help to complete our goal. The chapter goal for SY 2008-09 is \$15,000. We have achieved 15.8% of our goal as of December 2008.
15. Technical Seminar and Product Show: Ken Richardson reported that 13 tables for the Product Show have been reserved and there are still 27 tables left. The following companies have remitted their payments: Belimo Americas, DMG Hawaii, Island Controls, Mitsubishi Electric and Electronics USA. The remaining companies need to forward their remittance. The invited speakers for the Technical Seminar have committed and the flyer for this event should be released in a couple of days. Ken will start making phone calls to military, army, navy, state and city to send their engineers to attend product show and technical seminar.
16. Golf Tournament: It is recommended that the Chapter should consider an alternate option to have the golfers paid directly to the Golf Club in future Golf Tournament, in order to lessen the burden of receiving a chunk of moneys for which a large portion ended up paying the Golf Club for the game of golf, prizes and meals. The Chapter should simply receive the requested contributions.
17. UHM Hamilton Library Donation: Harendra Panalal reported that full set of ASHRAE Standards including the cost of shipping would be approximately \$1700. All attendees were given the opportunity to express their respective opinions regarding his proposal. After further discussions, it was agreed unanimously that having HVAC&R reference materials in a publicly accessible place would benefit most members as well as students who are interested in the field of HVAC&R. Contrary to what was proposed, a full set of ASHRAE standards may not be the most beneficial reference for our constituency, as most consulting firms purchase their own standards relevant to their line of work and also pay for the subsequent yearly upgrades. Contractors, suppliers and students generally do not use these standards or use them on a limited basis. Moreover, parking at UHM during the day is quite limited and, the usage of these standards would most likely be in the evening or during the weekend. Majority of the attendees would prefer to have textbooks and handbooks. Harendra will report back to the BOGs with a list of referenced books and handbooks.
18. Meeting adjourned at 12:50 PM.

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