

FOG DISPENSER

Golden Gate Chapter



ASHRAE

VOLUME XLIV - NUMBER 2

NOV 2005

November Meeting Details

Date: Thursday, November 3, 2005

Place: Pacific Energy Center, San Francisco
(www.pge.com/pec)
851 Howard Street between 4th and 5th Streets

Schedule:

5:30 – 6:30 PM: Registration and social hour
6:30 – 7:45 PM: Dinner with announcements
and introductions
7:45 – 8:00 PM: Break
8:00 – 9:00 PM: Speaker presentation

Cost: \$40 for members and guests reserved by
Thursday, October 27 at noon.

Students – No charge, but please reserve a
spot.

Voucher holders – No additional charge, but
please reserve a spot. Purchase 7 meetings
and get the remaining 8 for \$280.

\$47 for non-members and late
reservations/at the door for members.

\$50 for late reservations/at the door for
non-members

Please make your reservation via our website. Visit
the Event Calendar at
<http://www.ggashrae.org/calendr.htm>, click
November 3, and fill out and submit the form. Or
fax the form on page 10 to Jeff Blaevoet at 415-625-
0735.

Remember – if you make a reservation and cannot
attend, you need to cancel in advance, or you will be
billed.

November Program

DDC Control Retrofits: Why are DDC controls more energy efficient than Pneumatics?

Thomas Hartman, P.E.



Direct digital control (DDC) upgrades offer new and exciting energy efficiency enhancing opportunities with what are called “relational control” techniques. Relational control employs the network capacity of modern DDC systems to operate each HVAC component in accordance with system requirements and in an optimal relationship to the current operation of other system components. Relational control techniques offer dramatic improvements in both energy efficiency and system performance. This new family of control strategies also represents a significant change from the stand alone nature of PID control. As with any newer technology, success is contingent on effective support of the technology throughout the design / construction / operation project phases.

There are currently two primary categories of relational control as applied to HVAC systems. Demand based control, which is derived from the Equal Marginal Performance Principle, is employed to optimize the

Continued page 3

Golden Gate Chapter President's Message, November 2005

In the Bay Area, where it seems we are always hearing about new technologies in exciting areas like software, hardware, the internet, and biotechnology, sometimes our industry can seem relatively static. When people think of rapidly-changing industries, air-conditioning probably does not come to mind. While the world's first modern air conditioner was patented in 1902, much of the high-technology innovation that surrounds us has happened in the last 25 years. Fortunately, I have developed a completely unscientific and utterly qualitative method of gauging the pace of change in our industry. I call it my "Gut Feeling Barometer of Change." And right now there is a lot to be excited about!

There are external factors that are forcing major change in our industry. These can be innovations and developments to which we must adapt, and are largely out of our control. Consider the rapidly-increasing heat density of servers in data centers. We are developing new systems to remove this heat without taking up more space with our equipment. Another example of an external factor driving change is the significant increase in the cost of energy. Our air conditioning systems and equipment continue to improve in efficiency because building owners are willing to invest in more efficient technologies. Finally, consider globalization and its effects on the HVAC industry. I've recently learned of products manufactured in India, South Africa, and Italy being marketed for the first time in the United States. Should we ask ourselves if our jobs could be done for much lower costs in developing countries? For various reasons, outsourcing probably isn't an immediate threat to this industry like it is to some others.

In terms of product and system innovation in HVAC, there are several exciting new developments that I believe will have major effects on our industry. Microprocessor controls are now standard features on small, inexpensive equipment and allow for remote monitoring and better control of the indoor environment. New compressor technology uses magnetic bearings and does not require oil in the refrigerant circuit. Cooling tower and condenser water can be treated without chemicals using pulsed power technology. New fan technology lowers power consumption and noise relative to standard belt-driven centrifugal fans while reducing the space required for the fan system. Health care facilities are being designed in new ways that will save huge amounts of energy. These are a few examples of recent innovation that I find very exciting.

Our industry has just witnessed some important trends and events. A major domestic HVAC manufacturer was just acquired by another firm, and we hear of the likelihood of further consolidation. Sustainable design is a very popular topic among architects, engineers, and manufacturers right now. Title 24 continues to change the way our buildings are designed and constructed. Do these developments worry us or do they just keep us on our toes? How do we keep up in such a dynamic environment?

Clearly we can't stop learning as things change around us. Then again, who would want to work in an industry that doesn't evolve and refine itself? ASHRAE is your primary resource in the face of change, so please take advantage of all its resources at the national and chapter level.

*Respectfully submitted,
Cory Palmer, Chapter President*

October program continued

operation of systems that are composed of multiple power consuming components such as central systems. Intelligent iterative control is employed to improve the efficiency and performance of systems that distribute a resource such as heating, cooling or airflow to multiple zones.

This discussion will provide an introduction to these new relational control technologies and outline their advantages over the control normally associated with pneumatic control. It will also discuss the types of changes in the design / construction / startup processes necessary to ensure applications of these newer technologies achieve the projected results.

Thomas Harman, P.E. biography

Thomas Hartman is Principal and the founder of The Hartman Company, a technology development and applications firm that currently works with manufacturers, end users, and design teams in applying emerging HVAC and lighting technologies to achieve enhanced building environments and improved energy efficiency. Mr. Hartman's most notable technology developments have been the "Equal Marginal Performance Principle" and relational control concepts. These provide new approaches to integrating variable speed with network controls for simpler, lower cost, and better performing building comfort systems. Tom Hartman's professional focus is on the development and application of new systems and technologies based on these developments.

Mr. Hartman holds a number of patents for advanced technologies and works world-wide on high profile projects to develop sound, cost-effective products and designs that utilize these technologies for a wide variety of applications. In addition to the development of the Equal Marginal Performance Principle and relational control, Hartman has developed and works to apply a number of other indoor comfort enhancing technologies. Mr. Hartman currently serves as an editorial advisor to *Heating, Piping and Air Conditioning Magazine*, the *ASHRAE Journal*, and the on-line trade publication, automatedbuildings.com. Mr. Hartman has lectured and written about comfort and energy issues for major symposiums and periodicals all over the world.

Change of Address?

All members who wish to make changes in their membership data (change of email address, change of address or change of employer are the most common) must make those changes through the national ASHRAE site <http://www.ashrae.org>.

THE GOLDEN GATE CHAPTER CANNOT MAKE THESE CHANGES FOR YOU.

In order to change your membership data, you will need your ASHRAE member number and confidential PIN number, both of which are on the ASHRAE card issued to you each year. Go to the Change of Address link of the ASHRAE website, log in, and then go to Membership Records. If you don't have your PIN or membership card, please call Customer Service: 1-800-5-ASHRAE (US and Canada).



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Dennis Merideth	Keith Martin	Mark Lin
Bob Ralph		Brandt Pedota
Ed Saincome		Mario Trujillo
Gene West		

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ASHRAE Research Report

Johanna Gustafsson, Resource Promotion Chair, GG ASHRAE

The 2005-06 ASHRAE Research year is off to a great start! Many of you have already given, either through me, or directly to ASHRAE Research when renewing your national membership. Thank you for your contribution. To those that have not donated, I look forward to talking with you. Remember, all donations are tax deductible, and you may use a check or credit card. Now you can make your donation online at www.ashrae.org.

The following corporations and individuals have donated on the honor level or above for this year:

Corporate Honor Roll (\$300+)

Norman S. Wright

Individual Honor Roll (\$100+)

Max Sherman	John Cross
Mark Hydeman	Shlomo Rosenfeld
Dick Friedman	Dennis Thompson
Carl Jordan	Edward Arens
Alonzo Laws	Edgar DeGuzman

If you contributed at the "Honor Roll" level last year, you are entitled to a gift. A medallion, picturing a prominent HVACR engineer is available as ASHRAE's way of saying thank you. If you would like your medallion or if you are interested in making a donation, please contact me via phone or e-mail.

See you at the next meeting!

Johanna Gustafsson, johanna@norman-wright.com, 415-715-7259

Chapter Technology Transfer Committee (CTTC)

Scott Wayland, ASHRAE Golden Gate CTT Committee Chair

Please check out the committee website at <http://ggashrae.org/cttc> and the past fog columns for more information. Society's Technology Transfer page is just one of many outstanding improvements recently to the national website. Check it out!!! <http://www.ashrae.org/template/AssetDetail/assetid/25424>

Why should I attend the Golden Gate ASHRAE monthly meetings?

I would like to encourage you to attend our chapter meetings when you can. There are many great reasons to come. The upcoming programs are outstanding and provide a wealth of technical information for professional growth. Meetings give you the opportunity to you can catch up with colleagues, network and meet new people in our industry. Send your junior engineers to get exposure to the industry and advance their knowledge. I promise enjoyment when you attend!

Sustainability Topic of ASHRAE Satellite Broadcast

This year's Satellite Broadcast is on sustainability, go here for more information:

<http://www.ashrae.org/template/AssetDetail/assetid/47523;jsessionid=aaahKn3VcXUInh>

Technology Awards

It's not too early to start working on an application to participate in this prestigious competition. *If you are thinking about submitting a project, start working on getting the owner or client's approval now!*

Every year ASHRAE conducts the Technology Awards program to:

- Recognize ASHRAE members who design and/or conceive innovative technological concepts that are proven through actual operating data;
- Communicate innovative systems designs to other ASHRAE members;
- Highlight technological achievements of ASHRAE to others, including associated professionals and societies worldwide, as well as building and facility owners.

The 2005 Chapter Awards will be due in February. Please see our CTTC website or the following links for more info.

<http://www.ashrae.org/template/AssetDetail/assetid/25447>

<http://xp20.ashrae.org/STANDCOM/ShortForm.pdf>

2005 Title 24

On October 1st, the new **2005 Title 24 Part 6 Energy Standards** went into effect. See the Energy Commissions website <http://www.energy.ca.gov/title24/2005standards/index.html> for more info. Also, if you use EnergyPro, you must contact www.energysoft.com to get your update.

Join the CTT Committee

If you like to assist the chapter and get involved with ASHRAE, the CTT committee is one of the best places and could use your help. Talk to a board member or contact Scott Wayland at sewayland@comcast.net

From the Chapter Historian

Carl H. Jordan, Life Member/Fellow and GGASHRAE Historian

R. Darwin (Dar) Knowles

This article is a little more personal than previous ones. But, sometimes, history can be personal.

I met Dar in the late 1940s because his daughter, Beth Ann, was a Fresno High School classmate of mine. Beth Ann was the girlfriend of Don, another high school classmate who later, at Fresno State (you know, the football college) would become an SAE fraternity brother and my best man. Beth Ann and Don married and remain our good friends today.

But now, back to Dar. He was born in L.A. in 1906 and now is age 99 and in good health and spirits. He was married for 71 years.

He went to L.A. Polytechnic High School and, at age 17, began his HVAC career at a sheet metal shop as in installer's helper where he worked on Grumman's Chinese Theater. On his next job for a sheet metal shop, he earned \$4 per day while mechanics were getting \$8 per day.

During the depression, he parked cars for \$53 per month. (During my recent interview of Dar, I was impressed by his memory of such details!) While still in L.A., he worked for at least one more sheet metal contractor and administered a sheet metal contractors' association.

Dar and his family moved to Fresno in about 1936 and, after a period of installing furnaces for a contractor, he borrowed \$350 from his father and started his own furnace installation business. Among other things, he worked on several hospitals in central California.

He and his wife later moved to Burlingame where he became a board member of the Warm Air Heating Institute of Northern California, an entity that published the *Indoor Comfort News*. He also worked as an estimator and designer at Sunset Heating & Air-Conditioning in Menlo Park. Although he retired in 1975 (age 69), he continued to work for an additional 15 years (age 84). Dar now lives in Sonoma, near Beth Ann and Don.

Dar, an ASHRAE Life Member, had joined ASHVE in 1948 and became a friend of Joe Murray (Buonaccorsi & Murray, Consulting Engineers.) The sign on Joe's office door read "Jos. E. Murray". Someone – Dar thinks it might have been Tom White – did a little creative editing so that the sign then read "Jos É Murray". Joe then acquired the nickname "José". Dar was our chapter delegate to a Society meeting in St. Louis when Joe was our chapter president (1953-54).

Wilma and I moved from Fresno, via Germany, to the Bay Area in 1957 to seek my first post-graduate employment. While reading employment ads and the yellow pages, I remembered that Dar now lived in the Bay Area. I phoned him and he arranged for the two of us to have lunch with Joe at Marconi's Restaurant in S.F. Dar also gave me his copy of the 1956 ASHVE Guide (the predecessor of our current Handbooks.) Joe hired me and that was the beginning of another chapter. Thanks, Dar!

(Information from interview with Dar and from personal knowledge)

2005 - 2006 Event Calendar

<i>Date</i>	<i>Venue</i>	<i>Presentation Topic</i>	<i>Speaker</i>
Thursday, Nov 3 Student Night	Pacific Energy Center, S.F.	DDC Retrofits	Tom Hartman, The Hartman Company
Thursday, Dec 8 Joint Meeting with San Jose Chapter	San Mateo Marriott	Pre-Meeting Talk: Virtual Chiller Plant Meeting Talk: Indoor Environment	Pre-Meeting by Verle Williams, ASHRAE Director Regional Council and Distinguished Lecturer Meeting by Jan Sundell, Distinguished Lecturer, Technical University of Denmark
Thursday, Jan 12 Lunch	Carnelian Room, S.F.	Title 24 – 2005 (Tentative)	Charles Eley, Architectural Energy Corporation
Thursday, Feb 2, 2006 Student Night	Scott's Seafood, Oakland	Controls / Retro-Commissioning(Tentative)	
Thursday, Mar 2 Joint Meeting with Redwood Empire Chapter	Embassy Suites, San Rafael	HVAC Design Tools	John Kennedy, Green Building Studio, Inc.
Thursday, Apr 6, 2006 Product Show and Student Awards	Pacific Energy Center, SF	Product Show and Student Night and Science Fair award winners	Various
Thursday, May 11, 2006 Lunch/Field Trip	San Francisco Culinary Academy	Tour of the new naturally ventilated high-rise San Francisco Federal Building	
Thursday, Jun 1 Spouses Night	Carnelian Room, S.F.	Spouse and Significant Other Night	General Interest Speaker: TBD

Marble Draw

Becky Carta, Marble Game Chair

Nathan Fleischer of Guttman and Blaevoet won the Marble Draw at the October meeting! Congratulations Nathan! The Marble draw sponsor for the November Marble Draw is Flack & Kurtz. The prizes will be Bliss Spa gift certificates.

Minutes of GG Chapter Meeting October 6, 2005

Pacific Energy Center, San Francisco

- The meeting started at 12 noon with lunch.
- Following lunch were self-introductions by members and guests of the Golden Gate Chapter.
- Newly installed President Cory Palmer started the announcements at 12:20 PM.
- Cory announced the resignation of Debbie Marshall, and explained that Jeff Blaevoet would be secretary two years in a row, and that the board would continue with one less member until next year.
- Cory announced the passing of Jack Kniveton, and Richard Charles read a memorial followed by a minute of silence in remembrance of Jack.
- Cory Palmer announced Society awards for new 50-year and Life Members.
 - New life member status as of July 1, 2005
 - Dan S. Wong
 - James A. Murray
 - Kevin F. Dowling
 - New life associate member status as of July 1, 2005
 - Madhav M. Chikhale
 - Hasan F. Burney
 - New 50-year member status as of July 1, 2005
 - William R. Kastelic
 - Cameron S. Malcolm
- Cory announced that on April 19, 2006, there will be a satellite broadcast / webcast sponsored and produced by ASHRAE on “Sustainability and the Building Environment.” A link will be posted to the information on ASHRAE’s web site from our local Chapter’s web site.
- Johanna Gustafsson gave an update on Research donations.
- Bob Braun announced that UC Berkeley Extension course X-472 is scheduled to be relocated from San Francisco to Redwood City, and requested input on this decision.
- Moderator Glenn Friedman introduced the featured panel of Scott Shell, Henry Siegel and Jeff Blaevoet.
- Becky Carta did the Marble Draw.
- The meeting adjourned at 1:30 PM.
- Next meeting: Thursday, November 3. Evening meeting at the PEC. Topic: DDC Retrofits. Speaker: Tom Hartman.

Minutes by Jeff Blaevoet

Student Activities

Gary Harbison

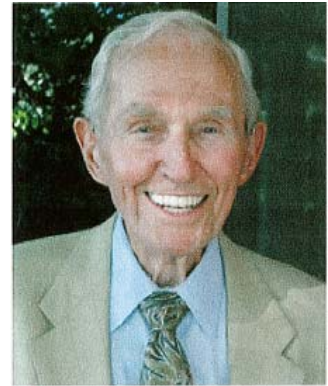
We are proactively inviting students to join ASHRAE and to attend the November Meeting; and in this regard, invitations were sent to faculty members to encourage student membership and attendance next month.

The student travel-grant-award application, to pay for trips to either the winter or summer society annual meeting are on the Website and available for downloading: <http://ggashrae.org/awards/index.htm> The ASHRAE winter meeting is in Chicago this year and the summer meeting is in Quebec City. The successful student(s) can opt for either meeting. The deadline for submitting applications is December 2, 2005.

Obituaries

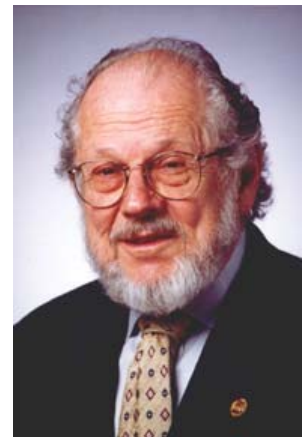
Jack Kniveton, *May 21, 1922 – August 12, 2005*

John D. “Jack” Kniveton passed away peacefully in Napa after a short illness. He was preceded in death by his parents Roy and Madilon Kniveton and his beloved sister Alyce Wood. He is survived by his loving wife, Marlene; brother-in-law and sister-in-law, Morrie and Sharon Bobrow; sister and brother-in-law, Kathleen and Gordon Cartwright; daughter and son-in-law, Lin and David Glen; son and daughter-in-law, Roy and Lynn Kniveton; son and daughter-in-law, Doug and Connie Kniveton; daughter and partner, Janet Kniveton and Marta Insogna; grandchildren, Seth, Jesse and Jonathan Glen, T.J. and Daniel Kniveton, Nicholas and Christopher Kniveton, and Sofia Kniveton-Insogna. Jack wanted everyone to know that he was a very fortunate man who led a fulfilling life. He was blessed with loving parents who instilled the qualities of integrity, independence, self-reliance and family values, and to make the best of a situation, even in the depths of the Great Depression. Jack’s beloved sisters were always there for him, and he was very proud of his four children and his grandchildren. Jack served his country during World War II with the 1476th Army Corps of Engineers. In 1948, he graduated from UC Berkeley with an engineering degree, and that same year, joined Norman S. Wright Co. as a sales engineer. He became an owner and presided over Norman Wright Mechanical Equipment Company from 1977 to 1996. He was past president and life member of ASHRAE. Jack also loved meeting monthly with his friends at his Calamari Club. Jack enjoyed his retirement years in Napa. He and Marlene enjoyed traveling, and playing golf and tennis at the Silverado Country Club. He described their marriage as the best years of his life. Jack was a true gentleman. Donations in Jack’s memory may be made to the Queen of the Valley Hospital Foundation, P.O. Box 2069, Napa, CA 94558 or to the donor’s favorite charity.



Karl Guttman, Company Founder, *May 11, 1919 - October 7, 2005*

On October 7, 2005, Karl Guttman died at the age of 86 at Trinity Hospice in London, England, of pancreatic cancer. Karl Guttman leaves a legacy of engineering leadership in the firm he started in 1956. This continued a family history of engineers originating from his grandfather, Leopold Guttman, who carried the title, "Imperial Plumber." He installed some of the first plumbing fixtures of the Imperial Palace in Vienna. The firm operated under the name Guttman & MacRitchie from 1977 to 1997, and continues today under the name Guttman & Blaevoet, managed by his youngest son, Steven Guttman and his partners. Karl was honored with a Distinguished 50-Year Member Award from the American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) in 2000. Karl remained active in his profession until his death, providing expert witness testimony after retiring from the firm in 2002.



Born in Vienna, Austria in 1919, Karl escaped Vienna shortly after its annexation by Hitler's Germany (the “Anschluss”) in 1938. Karl was one of the last surviving “Dunera Boys,” some 2000 Jews who fled to England from Germany and Austria in the face of the Nazi onslaught just before World War II, only to find themselves brusquely loaded aboard transport ships once war broke out. The Dunera – the name of the ship that took them to Australia – was the subject of a 1985 movie, *The Dunera Boys*, starring Bob Hoskins. Upon arrival in Australia, the Jews were put in camps. He arrived in San Francisco in 1950, and founded his mechanical engineering firm, Kasin Guttman & Associates, in 1956. He is survived by his third wife, Frances Binnington of London, England, his son Steven Guttman of San Francisco, the family of his late step-daughter Marlin Plaut, and his stepson Rossi Snipper of Minneapolis, Minnesota; six grandchildren; and three great-grandchildren.

Memorial services are being planned. Call the recorded message at (415) 273-1133 for further information. The family suggests donations in his name to the American Civil Liberties Union (ACLU) Foundation of Northern California, 1663 Mission St., San Francisco, CA 94103 (<http://www.aclunc.org/donate.html>) or Trinity Hospice 30 Clapham Common North Side, London, SW4 ORN, England (<http://www.justgiving.com/karlg>).

ASHRAE Golden Gate Chapter – Dinner Reservation Fax

For Thursday, November 3rd

Please reserve prior to Thursday, October 27th at noon.

Please reserve on-line by visiting <http://www.ggashrae.org/calendr.htm>, click on November 3, fill out the form and submit. Or FAX this page to Jeff Blaevoet at 415-625-0735.

Members with vouchers – you too must send in your reservation. We need to know how many meals to request. Please cancel your reservation if you cannot attend.

FROM: _____

COMPANY: _____ Phone: _____

Please make _____ reservation(s) for the following people (fill in names below):

Pay for meetings using your credit card

The Chapter has set up a PayPal account. You may now pay for your meetings using your credit card if you have a PayPal account. It's a very simple process, and the instructions are on the website.

- There will NOT be any service charges to you from PayPal nor the Chapter.
- The Chapter does NOT see your private card nor bank information.
- The Chapter does NOT even see the last four digits of your credit card number.
- You can cancel your personal PayPal account whenever you want.

NOTE: At the meeting, we will have a list of those that have paid through PayPal, but we will not be accepting credit card payments at the meeting. All credit card payments MUST go through PayPal. If you want to pay at the meeting, it's business as usual...cash or checks only.

Photos from Golden Gate chapter October meeting



Left: A good crowd



Right: Speakers Jeff Blaevoet, Henry Siegel, and Scott Shell.



Left: Bob Levi "wines" a raffle prize!



Right: Jeff Blaevoet discusses successful collaborative design.



Left: Johanna Gustafsson compliments the Chapter on last year's research donations.



Right: More of the crowd.



Left: Scott Shell challenges engineers to act Green.



Right: Becky Carta and Cory Palmer congratulate the Marble Draw winner Nathan Fleischer.