

WESTERN Allied

**MECHANICAL, INC** 

# SHOP TALK

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### Chilled Beams

W estern Allied Mechanical currently has two very exciting projects that utilize chilled beam technology. Chilled beams are relatively new technology in our country, but have been used more extensively in Europe.

How They Work In a chilled beam system, cooled water is sent through pipes into beams integrated into the ceiling of the conditioned space. The water chills the beam,

which in turn passes that chill to the air in the room. As the air in contact with the beam cools, it also becomes denser and sinks, thereby making room for warmer air to rise from below and contact the beam. In this way, air is both cooled and circulated throughout the room.

#### Active vs Passive

Chilled beam systems are available in both active and passive implementations. Passive systems rely solely on the natural convection currents to circulate air and bring warmer air into contact with the beam. Active systems, on the other hand, make

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### WAM's IT Update

AM recently upgraded our internet access from T-1 technology to fiber. The difference in speed is over 9 times what we had before, for both upstream and downstream communication. Our thoughts are to the future, when our field technicians will be able to hook up to the Mother Ship and able to post time and communicate job management documents electronically. This connection will also speed up our afterhours off site server backup, which gives us greater redundancy in the case of a natural disaster. WAM is investing in this bandwidth now to accommodate our IT capabilities for the future!

### Letter From a Principal

It is a great time of year at Western Allied, with the holidays approaching, times that allow us to celebrate with our families, and the closing of 2011. Our new fiscal year began November 1, and promises to be a great one for us.

The market remains very competitive, yet because of our great, hardworking, brilliant people, we are sought out to participate in the



most interesting and challenging jobs. I'm really so very proud to be part of this fine company.

The people within our company have also become known for the ways in which they give back to our community and industry. That is noticed and honored. It starts at the top, with leaders like Angie Simon and Rob Monaghan, and stretches all throughout the company.

Angie has served the sheet metal industry for years on the Bay Area Board of Directors of SMACNA, including a term as President. She went on to become the very first woman to serve on SMACNA's National Board of Directors. Once that barrier was broken, another woman followed in her footsteps. Another major contribution is Angie's recent pledge of a very substantial personal financial contribution to New Horizons Foundation to support HVAC research and education. She continues to serve on multiple SMACNA Councils and Committees.

Like Angie's support of the sheet metal aspect of our industry through SMACNA, Rob has for years been a key figure in the Bay Area Chapter of MCAA, supporting the pipefitting and service elements of our industry. It is anticipated that Rob will serve as the Bay Area MCAA President in 2013.

Over the nearly 12 years I've been at Western Allied, I've seen the growth in our team of high impact younger members. I hear respectful, envious comments spoken by other contractors and engineering firms regarding the roles played within the Bay Area Chapter of ASHRAE by our young ones. Key leadership roles in ASHRAE have been served over the last several years by Joe Chin, Krystal Matthews, Nick Johnson, Yindy Felkins, Duncan Green, and Kevin Juri.

At San Jose State University, Manuel Uribe reactivated an ASHRAE Student Branch and served as President. And, oh by the way, Daniel Wong has recently been appointed to an ASHRAE and SMACNA National Joint Task Force charged with setting some system leakage standards for our entire industry across the country.

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#### Chilled Beams Continued from Page 1

use of a central air handler and ducts to bring new air into contact with the beam and circulate air around the space to be cooled.

It is interesting that in the case of passive systems, the heat transfer occurs much like the old radiator or passive convector systems in historic buildings, only in reverse. Radiators and convectors send heat into the building by radiation and natural convection. With chilled beams, those same forms of energy transmission are used to cool the conditioned space. Active

chilled beams induce some air from the room across the cool surface, returning cool air to the room, much like the induction heating units under windows of many older buildings, but again in reverse cooling instead of heating.



**Limitations** 

Of course, chilled beam

systems aren't without their drawbacks. These

systems can cost quite

technology and the cost of the beams themselves. There is also a limit to

a bit more than more conventional systems because of the new

Both of our current projects utilize the active chilled beam technology. For the new conference center at Fenwick & West LLP, the chilled beam strategy

from Europe is combined with Variable Refrigerant Flow systems originating from Asia. Our other chilled beam job is in the new Packard Foundation Headquarters, which is a Net Zero Project. We are extremely proud we were honored with both of these leading edge high performance HVAC projects.

#### System Advantages

Energy efficiency is one of the very attractive features of chilled beam systems, but they have several other solid selling points. Chilled beams operate extremely quietly because of their lack of moving parts. In an active system, there is a very small amount of airflow through each of the chilled beams. And because of the simplicity of their design, chilled beam systems don't require that a large amount of space be devoted to a mechanical room, making them an excellent choice when space is at a premium.



Chilled beam installation at Fenwick & how much cooling can be accomplished because if the temperature of the beam itself drops below a certain level, condensation will begin to form. It also is a bit risky to have all those pipes filled with water above the ceiling.

The San Francisco Bay area is an ideal location for application of the chilled beam systems. Our temperatures are often cool enough to get free cooling as the required water temperature will be similar to the outside air temperature, and our climate is not very humid reducing the risk of condensation.

Chilled beams are not meant for every application but they have a place in the future of our industry. They do not require much space above the ceiling, work well low-ceiling applications, and are more energy efficient compared to conventional designs.

#### Letter from a Principal Continued from Page 1 Letter from a Principal

Members of our field crews have provided training to the apprentice programs for many years. The renowned and highly praised instruction by Peter Vandenberge led to Dave Cook and Mark Edwards teaching at Local #467. I cannot imagine better people to train the master technicians of the future.

Within my team, Jeremy Goodland is about to begin his second term as Treasurer of IFMA (International Facility Management Association) of Silicon Valley, and Caasi Bonura serves on IFMA's Diversity: Mentoring and Scholarship Committee and their Professional Development Committee.

Even I have found opportunities to be of service to the Facility Management industry and the community in various leadership roles in IFMA, AFE, and other associations.

I am proud of all of you who serve. I'm quite certain I missed highlighting some who are working in similar roles. Forgive me for that. But know, we are all proud of what you are doing. It says so much about who we are.

Western Allied has a unique and important place of honor in our world. It is because of all of you; the way you approach your work in the business, and stretch to give back, that make this a fine company.

Sincerely, thank you.

Bob Dills, LEED A.P. Vice President

#### WAM Turns 50!!!

On September 1, 2011, Western Allied Mechanical celebrated 50 years in the business. Starting with our party committee – Jim Muscarella, Rob Monaghan, Barb Eldridge and Dawn Hahn – and the many WAM volunteers, we welcomed about 400 friends, family and colleagues in the industry to our afternoon bash. Blessed with clear skies and fair weather, all enjoyed tasty food and music while catching up with old acquaintances and making new ones. Happy Anniversary, WAM, and to many more!

To see some photos from our bash see the following page!





COVERNS -

#### WESTERN ALLIED mechanical, inc

### Health – Stretching at Work!

Most people think that stretching is something done before and after exercising. Did you know that it is also beneficial to stretch before, after, and even during work? Stretching can help prevent common injuries for both office and field employees.

According to the Mayo Clinic, the top 5 benefits of stretching include:

- 1. Flexibility and Range of Motion: can help with tasks such as lifting packages, bending to pick something up, or reaching above your head.
- 2. Improved Circulation: increasing blood flow to your muscles.
- **3. Better Posture:** frequent stretching helps your muscles from getting tight allowing proper posture. Good posture can keep aches and pains to a minimum.
- 4. Stress Relief: stretching relaxes tight muscles, which can be caused by stress.
- **5. Enhanced Coordination:** maintaining full range-ofmotion helps your coordination and balance, which means you are less likely to be injured from falls.

Basic principles and precautions of all stretching programs:
Warm-up before stretching – 5-10 minute brisk walk

- Hold stretches for about 30 seconds (60 seconds for problem areas)
- Do not bounce
- Focus on pain-free stretching
- Stretch both sides equally
- Shoot for minimum of 3 times a week

SMOHIT (Sheet Metal Occupational Health Institute Trust) and SMACNA have created an excellent Warm-up and Stretching Prework Program which describes an entire stretching program for field employees. If you would like a copy, please contact Dona Neilson in the office.

Field employees should focus on stretching the following areas:

- Shoulders
   Wrists and forearm muscles
- Neck
- Legs hamstrings, thighs, hips, calves, ankles
- Bačk

All of the stretches are too numerous to list, but to give you an idea of the program, the shoulder exercises are listed below.

- Shoulder Rolls: roll shoulders up, back and down repeat 10 times
- ½ Jumping Jacks: perform jumping jacks without moving your legs – palms start facing your hips, then raise arms above your head, palms together - repeat 10 times
- Shoulder Stretches (cross body): arm parallel to floor and pull it across the front of your body gently pushing your elbow with opposite hand Hold for count of 10 repeat 3 times each shoulder
- Shoulder Stretches(overhead): raise arm and over your head and reach behind your back gently pushing your elbow with opposite hand - Hold for count of 10 – repeat 3 times each shoulder
- Shoulder Stretches(retract): place hands on hips with elbows out. Slowly bring elbows back and push chest up and out - Hold for count of 10 – repeat 5 times. Give it a try at your job site!

### Safety

## John Russi: Building a Safety Culture at WAM

L he position of Safety Coordinator was created over a year ago with the intent to hire someone who could assist company supervision and leadership to implement a safe working environment for our workers. That person is John Russi. John

is not only committed and passionate about his work, but he is also adamant about keeping our people safe.

As the Safety Coordinator, John assisted in the development of the IIPP (Injury & Illness Prevention Plan) and Code of Safe Practices at WAM. He is also working to establish a sustainable safety culture, which is essentially "getting people to follow the established rules." John believes that repeated discussion of safe practices is essential to maintaining a safety



John Russi

culture. He knows that the real eyes on the job are our field crew; they feel supported when he visits the jobsites to talk to them and check that the jobsite is operated with good safety practices. When jobsites are not maintained properly, John will talk to the general contractor to get safety measures put into place and he will get the necessary equipment/tools for our crews to be safe. He has worked hand-in-hand with project management to generate awareness and support of jobsite safety. In his time as Safety Coordinator, John has seen many improvements in the field. Crew members have stopped over-extending themselves and are turning to available equipment and tools to complete the work. Over-extending leads to unsafe practices and injuries. He also sees an increase in participation from the field foreman, who are getting John involved early in the projects. The earlier that John can be involved in assessing and engaging in jobsite safety, the less we are exposed to risks. Ultimately, John's greatest goal is to establish a structured safety program and culture at Western Allied that will be sustainable and relevant long after he is gone.

### WAM Hosts Quarterly Safety Meetings

On November 9th and 17th, the quarterly safety meetings were held for the construction and service groups respectively. Starting from company leadership and John Russi (our Safety Coordinator), all employees from the field to the office have taken a more proactive role in being knowledgeable, committed and responsible when it comes to jobsite safety. With everyone's cooperation, we have seen an estimated 72% return of the weekly tailgate sheets; that's an increase from the 33% return rate at the beginning of the year. We also implemented the Jobsite Hazard Analysis (JHA) procedure, which has become a standard part of all construction projects and most large service jobs. It was announced that the new IIPP (Injury and Illness Prevention Plan) will be rolled out at the next safety meeting in February.



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### **Employee Profiles**

#### **Jim Piere**

J im Piere joined Western Allied in August of 2008 to assist in growing the controls division. Jim was born and raised in Paris, France until the age of 13 when he moved to Philadelphia. In 1990, Jim moved to Sausalito, California where he still lives today. Jim's educational background includes Undergraduate studies in Psychology in Europe and Engineering in the US; Graduate studies in Math and Communications



system. Having spent his early years in France, his primary language is French with English as his second language. Jim keeps in touch with his creative side through playing music (guitar and piano) and painting. His other hobbies include sailing and traveling. Jim would love to go see Machu Picchu, the Mayan and Inca 'City in the Sky' in Peru. "I have always had a fascination with ancient cultures; and hopefully a visit to Peru is in the near future." He has already been to the Pyramids in Northern Africa and the Pyramids of the Sun and Moon outside of Mexico City, an ancient Mayan site. Jim is enthusiastic about the growth and technological direction of the controls division at Western Allied. He believes that Western Allied is "a progressive company that understands the dynamic nature of controls and what it means for the future." We look forward to continued growth of our controls group under Jim Piere.

#### Diana Kadash

Diana Kadash was born and raised a 4th generation native to Redwood City, California, where she still resides today with her husband, Steve, and three sons; Stephen, William and Christian. After attending Cal Poly at San Luis Obispo, where she received her degree in Marketing, Diana worked for Silicon Graphics for 15 years. Diana came to Western Allied in 2003 and has worked in the accounting department ever since! Her



favorite part of working for Western Allied is "it's comfortable. It feels like a family. Coming from a larger company, it is nice to feel like you can talk to anyone here, including the principals of the company." Diana has always taken an active part in her church, Our Lady of Mount Carmel, in Redwood City. She enjoys attending the annual mission trip with the youth ministry group as an adult leader for the past three years. She plans to attend the trip to Arizona this summer. Some of her favorite activities include reading, attending her children's sporting events, golf, kayaking and any outdoor activities. Her most memorable vacation was two years ago for her mother's 80th birthday; a group of 14 family members went on an Alaskan Cruise! Diana says one of her aspirations is to travel through Europe again someday and thoroughly explore Italy.

#### **Chris Heinze**

Y ou may remember Chris when he first joined Western Allied in 2009, doing sales for the service department. He realized that his true passion was back in his former career as a service technician, but WAM had no openings and Chris moved on. Chris rejoined WAM as a service technician earlier this year, and it's great to have him back on the team! Chris was born and raised in Redwood City, California and recently decided to relocate to San Mateo with his wife Dena and 18 month old



daughter Stefi. Before coming to Western Allied, Chris worked for Cal Air and Johnson Controls. He says "Western Allied is not like any other company. The company is run by great people from top to bottom. The overall environment is what makes working here such a pleasure." Outside of work, Chris is an active volunteer for the Big Brother Big Sister Organization. He has found joy in mentoring his "little brother", a senior in High School named Morgan, for the past 5 years. Chris says that he strives to be more involved in the community and local city programs "because I believe it is a great way to show my voice in the community". One of his favorite things to do is visit and walk the City on a nice day with his family.

#### **Harvey Laflamme**

Arvey Laflamme was born and raised in Castro Valley, California. He currently lives in Livermore with his fiancée Erin and 18 month old daughter, Leighton. Harvey is also expecting another child due at the end of this year. Harvey went to work right out of high school and has been in the trade since the age of 19. Before coming to Western Allied, Harvey worked for Broadway Mechanical for 3 years as a shop foreman. Harvey joined the



team here in June of 2011 as our shop foreman. Harvey came to Western Allied, "because I could see there were better opportunities for me here." Harvey says "I like the office staff and the crew I work with, and I look forward to working with both every day." Harvey's true passions are dirt and mountain biking, fishing, hunting, his softball league in San Ramon and his monthly family camping trips. Once the baby is born, Harvey plans on taking the whole family on a road trip to Canada. He says he has always wanted to visit his grandfather's hometown near Victoria, Canada and would love to share that experience with his family. Congratulations on the engagement and new addition to the family, Harvey!!



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#### Celebrating Service Awards

The anniversaries listed are for employees celebrating significant milestones with the company. Congratulations and thank you to all!

15 Years Anthony Sotelo-Feb-2012

5 Years Leon Matthews-Jan-2012 Brian Dusine-Feb-2012

### Celebrating Achievement Awards

#### Tommy Chow and Manuel Uribe

• Completed the 2011 SMACNA Sheet Metal & HVAC Project Management Certificate Program with honors!!! Congratulations Guys!

#### **Bob Dills**

• Received the Tom Jones award from IFMA Silicon Valley. The Tom Jones Award is the Chapter's highest honor and recognizes the member who best exemplifies continued support and commitment to the Chapter through action, voice and heart. Congratulations!

#### Jeremy Goodland

• Received the President's Award for IFMA Silicon Valley. An award given by the current president to the person they believe went above and beyond for the chapter that year. Congrats!

#### Joe Chin

• At the annual ASHRAE Chapter Regional Conference, which was held in Scottsdale, Joe was awarded the Region X Director's Cup – a high honor. Congrats Joe!

#### Duncan Green, Manel Uribe, and Nick Johnson

• Are currently taking a 10- week Berkeley Extension Class on Load Calculations and Psychometrics.

### Leaders in Education

#### Matt Rahmani

• Taught the Basic Computer Class under Local #467!

#### Mike Aurelio and Eric Tassio

• Taught the Local #467 Journeyman Shielded Metal Arc Welding Class!

#### **Cyrus Patel**

• Taught the 40 hour Medical Gas Certification Class as well as the NCCCO Signal Certification Class provided by Local #467!



## Commissioning at WAM

W ith the type of high performance and technical projects we see on a regular basis, commissioning is an ever increasing focus within our company, and should be included in the projects of significant scope. Essentially, commissioning consists of verifying that the project and systems provided and installed are in accordance with the design drawings, and that they satisfy the owner's requirements for the project. The actual commissioning process can vary tremendously depending upon a variety of factors, including, but not limited to constraints of budget, schedule, and project complexity.

Requirements, Purpose, and Benefits of Commissioning:

There are a number of reasons for doing commissioning. The primary reason is to find any deficiencies in the systems and correct them immediately, often before the building is fully occupied. Without this process, problems can sometimes remain in systems for years, continuing to waste energy, create comfort problems, and potentially risk damage to equipment or other building systems.

As of January 1, 2011 the 2010 California Green Building Code requires commissioning on all new construction projects 10,000 square feet and larger. Commissioning is also a required part of all LEED projects, with additional commissioning measures earning a voluntary credit in the Energy and Atmosphere section.

Studies have shown that commissioning can save a substantial amount of wasted energy, typically enough to pay for itself within a few years of operation, and often within one year. It will also drastically reduce the number of comfort complaints from tenants and occupants, and improve the reliability and durability of the systems and equipment. Some common bigger issues discovered and corrected during commissioning include operating schedules that are incorrectly implemented or not implemented at all, improper setpoints for pressures and temperatures, non-functioning reset schedules, unstable control loops, nuisance alarms, equipment operating outside optimal conditions, and faulty control parameters .



WAM employees attend an informational session about commissioning.

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#### Commissioning at WAM Continued from Page 6

#### Scope of Commissioning:

The scope of commissioning can vary significantly depending upon the project size, complexity, and the purpose of the commissioning. To meet the requirements of 2010 Cal Green, the following measures or items should be included:

- Owners project requirements
- Basis of design
- Commissioning measures in the construction documents (as needed)
- A commissioning plan
- Functional performance testing
- Documentation and training
- Commissioning report

Some other measures that may be included:

- Design review
- Submittal review
- Review of detailed controls sequence of operations
- Trend Log Review
- Review of control interface graphic pages
- Process performance and efficiency optimization

#### **Commissioning Performance:**

The commissioning process is typically overseen by a single commissioning agent. This agent is often hired by the building owner or tenant. It is not typically someone that was a part of the actual design or construction team, although it could be an employee of one of the team member companies that did not take part in the design or construction project.

The commissioning agent should be contracted and involved in the project from the early design phase. Ideally, they would provide review comments at least a couple of times during design, including items relating to efficiency, reliability, serviceability, and controllability. They should also offer comments relating to the ability to test performance after project startup.

Arguably, the most important aspect of commissioning is functional testing, where the system is run through all the normal operations. Each operation or function in the sequence of operations should be tested with the controls operating in automatic. This will then demonstrate that the controls system is properly programmed and operating as the engineer of record intended. Often there is significant system performance optimization that can occur during the commissioning process to minimize energy waste and maximize operating stability.

The commissioning agent typically works closely with the balancing contractor, controls contractor, mechanical contractor, the engineer of record, and other parties, as required, to fully test all building systems affecting operation and energy use.

We are developing an internal team to supplement the commissioning efforts of our project managers, and to give our clients another commissioning option. We have learned well from some of the finest commissioning agents in the industry:

- Enovity, Jonathan Soper
- GRD Associates, Gustav Deuss
- RUCS, Rick Unvarsky
- Rumsey Engineers / The Integral Group, Peter Rumsey
- Commissioning Agents Inc., Andy Mitchell

### Attaboys

#### **Duncan Green**

 Duncan is a true double threat. He's able to turn assignments around very quickly without compromising on the quality or accuracy of his work. This is a rare combination for an engineer and we recognize our good fortune in having him on our team.

#### Eddie Collondrez, Mike Aurelio, & Eric Tassio

• Thank you for practicing good safety drills when we needed you!

#### Leon Matthews

Congratulations on coming up with a GREAT
 newsletter name that was chosen by employees!

#### Andre Moore

 Morton's of Chicago expressed their gratitude for providing them with "one of [our] best guys!"

#### Fred Swartz

• Completed the Life Tech project with a zero punch list.

#### **Aaron Stender**

• Began his apprenticeship in the start-up department, following in his father's footsteps.

#### Kevin Bryant

• Started his apprenticeship in construction.

#### Greg Heath

Newly wed to Krissy Silva and expecting their first child together. Congratulations!

Remember, we welcome attaboys from all! The nicest compliments are the ones from your teammates. All attaboy contributors will remain anonymous. Drop a note to

attaboy@westernallied.com!!

## Giving Back to the Industry 2011-2012

**Daniel Wong**-appointed to the National Joint Task Force with SMACNA and ASHRAE to set the "system leakage standards".

**Angie Simon**-appointed Chair of HVAC Council for National SMACNA, Chair of the Products and Programs committee, and Member of the National Budget and Finance committee for National SMACNA.

**Krystal Matthews**-Current President and Webmaster, San Jose ASHRAE.

Jeremy Goodland- Treasurer, IFMA Silicon Valley.

**Nick Johnson-** Research Promotion Chair & serves on the Board of Governors for San Jose ASHRAE.

**Joe Chin**- Regional Vice Chair of Student Activites, Region X ASHRAE (California, Nevada, Arizona and Hawaii).

**Duncan Green**- Refrigeration Chair, San Jose ASHRAE.

**Kevin Juri-** Technology Transfer Co-Chair, San Jose ASHRAE.

Yindy Felkins- Guest speaker for ACE Palo Alto.





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### Some Current Large WAM Projects

Verinata Health	Angie Simon	New packaged VAV units, complete rework of interior HVAC system.
Dome Construction	Angie Simon	New Dome headquarters complete buildout, including Duct Sox technology.
Fenwick & West, LLP	Angie Simon	New conference center with chilled beams and VFR (variable refrigerant flow) systems.
Stanford Encina Commons	Pete Kelly	Replacement & retrofit of mulit-zone HVAC system w/ VAV system. New digital energy management controls by WAM.
KPIX Boiler	Pete Kelly	Replacement & retrofit of heating & domestic boiler plant w/ new digital controls.
Stacy & Witbeck	Zach Russi	20,000 sq. ft. LEED Gold de- sign/build project on the waterfront in Alameda.
Celgene	Zach Russi	5th floor lab/office expansion in Mission Bay area.
Codexis	Zach Russi	15,000 sq. foot lab retrofit in Redwood City.

More info. visit www.westernallied.com

#### Contributors

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Terry Juri Jeff Pierce Loek Vaneveld Sharon Carman

### Calendar

DECEMBER 2011									
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday			
	WAM's 28 Annual Giving Tree Starts	29	30	1	2	3			
4	5	6	WAM <b>7</b> Annual Cook OFF!!!! BOMA SF Holiday Party	San Jose ASHRAE Monthly Meeting	Last day to partici- pate in the giving tree	10			
11	12	13 Birthday Celebrations Operations Meeting	14	15	16	12			
18	19	20	21 Tamale Luncheon @ WAM	22	<b>23</b> Local 38, 342*, 393*, 467* & 104 Holiday	<b>24</b> Local 38, 342*, 393*, & 467* Holiday			
<b>25</b> Local 38, 342,393, & 467 Holiday	26 Work Holi- day for <u>ALL</u> employees	27	28	29	<b>30</b> Local 38, 342*, 393*, 467* & Office Holiday	<b>3</b> Local 38, 342*,393*, & 467* Holiday			





\*-Building Trade holidays only