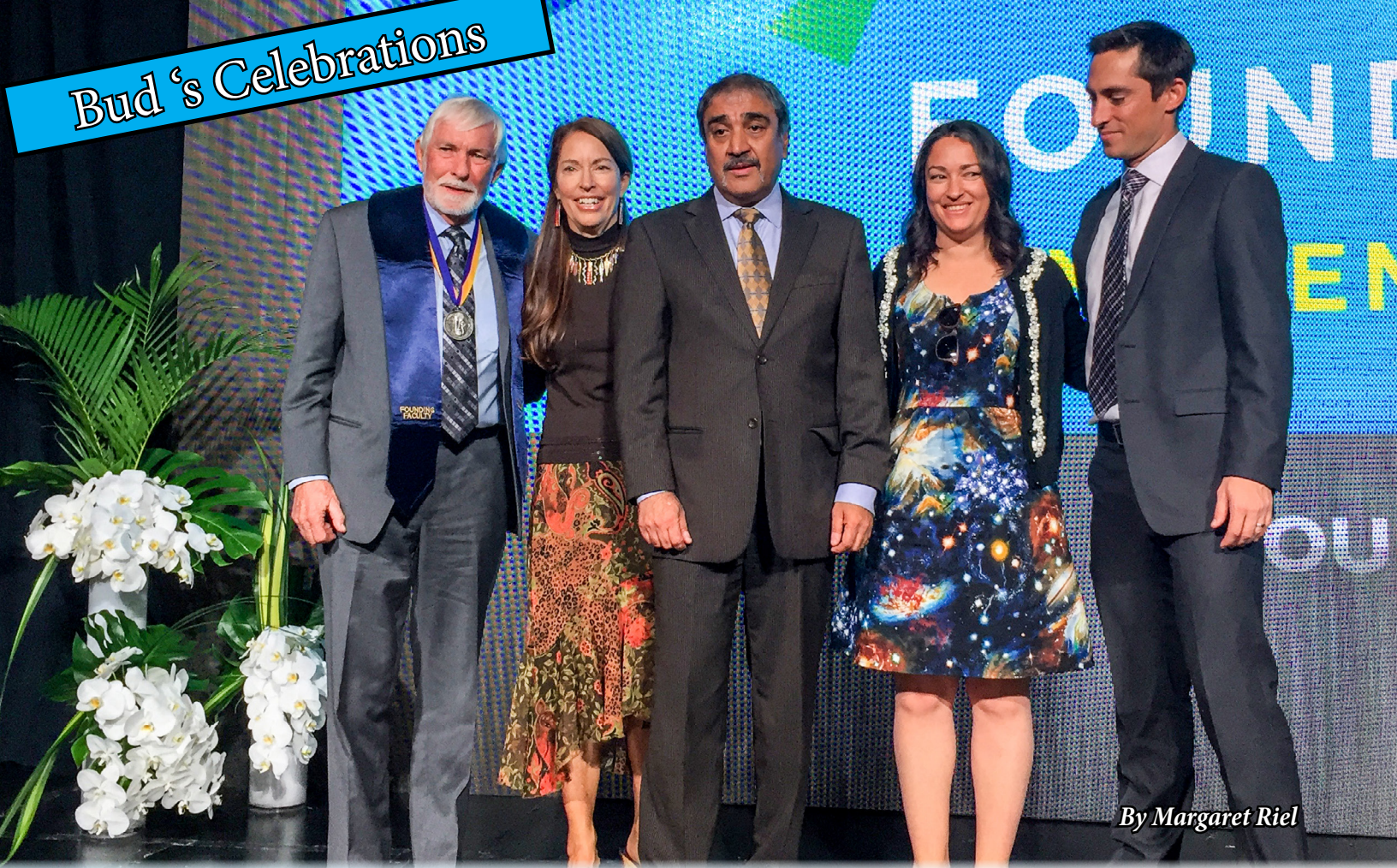


Bud Receives UCSD's Revelle Medal



By Margaret Riel

This was a good week for Bud Mehan. He received the Revelle Medal of Faculty Distinction and was in the spotlight at three celebrations: - a breakfast, a brunch and dinner as well as featured in the Southwest Air's November Magazine.

Preuss Founders Circle Breakfast Honoring Cecil Lytle and Bud Mehan

The Founders Circle honored Bud Mehan and Cecil Lytle for their contributions to the formation and development of the Preuss School on the UCSD campus at a breakfast on November 5. Robert Dynes, who was Chancellor when Bud and Cecil first proposed establishing a college prep school for low-income students, celebrated their vision and persistence in convincing the campus administration, the UC Regents, and the UCSD faculty to establish a school organized to enable low-income students from backgrounds under represented in the university to walk in the front door of any 4-year college or university. Current Preuss students and long-standing Preuss faculty reminded the assembled guests about how important the college-going culture promulgated at the school is for students, their families, and the extended community. Preuss has lived up to—and exceeded--the expectations Bud and Cecil stated at the outset: 98% of Preuss graduates are accepted at a 4-year university and 82% enroll—rates that more than double the national averages for comparable students.



The Founders Circle is composed of philanthropists who have supported the goal of The Preuss School to ensure that under represented minority students have access to a college-preparatory education. They presented Bud and Cecil with ceremonial brass keys to the school.

The Presentation of the Revelle Medal



Although it was Friday the 13th of November, there was no bad luck to be seen. Megan and Michael flew in to join Margaret and Bud, their friends, and UCSD colleagues at a brunch honoring the Revelle medalists. The meal was followed by the formal presentation by the UCSD chancellor of the three 2015 Revelle Medalists, the highest award UCSD gives to faculty. Extended family and the university community attended the presentation where the medalists and audience saw a very moving composite video of the work that resulted in their awards. After receiving the medals, the awardees, were invited to address the audience. These talks, short and from the heart, were very emotional. The ceremony was followed by lots of pictures. Birdy, Listy, Carol, Jeff and Mom were all there to cheer for Bud.

Chancellors' Reception and Dinner Celebrating the Medalists

Bud and Margaret were invited to the Chancellor's office for champagne and the unveiling of the names added to the plaque of Revelle Medal and Chancellor Medal winners on the wall of the Chancellor's office. The reception was followed by a formal dinner honoring Revelle and Chancellor Medalists and the accomplishments of current and past students and faculty. This event culminated a very touching week.

Southwest: You're Now Free To Move About The Country

Cecil Lytle and his wife Betty Mc Manus were flying into San Diego for the week of events. As many bored travelers often do, Betty leafed through the Southwest Airlines magazine stowed in seat pockets. She was surprised to see UCSD featured in a two page spread on the university's success, especially its number one rank for diversity and community outreach. The article featured three distinguished members of the faculty—two of which were Cecil and Bud—accompanied by a paragraph describing each of their contributions. A reprinting of the article is shown on the following pages.



So it was a good week for Bud. He is ready for Thanksgiving where we can all be thankful for those that we love.



Defining the Future of the
Public Research University

UC San Diego

Cultivating Tomorrow's Leaders

Education is the great equalizer, a powerful force for students from all backgrounds. The University of California, San Diego is playing a key role in transforming education through progressive K-12 outreach, innovative models for middle and high school learning, and STEAM education (science, technology, engineering, arts and math). Improving education at all levels supports our next generation of leaders as they prepare to address the planet's most pressing issues, from battling disease to protecting our environment.

UC San Diego's Birch Aquarium at Scripps Institution of Oceanography is the largest provider of ocean and earth-science education in the region. As part of its mission for K-12 outreach, the aquarium uses its resources to provide programs that teach learning skills and understanding of the planet.

#1 for positive impact on the nation, six years in a row

Washington Monthly



Mentoring the Next Generation

Rommie Amaro, Ph.D., is equally devoted to battling infectious viruses and bacteria as she is to guiding the next generation of scientists. While working on models of proteins that will lead to new drugs, she launched BioChemCoRe, a new research camp designed to retain women in science, and mentored Eric Chen, winner of the 2013 Google Science Fair Grand Prize for his influenza research.



Changing Lives

Inspired by a belief that education changed his future, world-renowned pianist **Cecil Lytle** co-founded The Preuss School UCSD, a charter school at UC San Diego for low-income students who strive to become the first in their families to graduate from college. Select graduates from Preuss—ranked as one of the nation's best high schools—also receive financial support to attend UC San Diego through Lytle's endowed scholarship.



Deliberate Practice

For more than 20 years, sociology and education professor **Hugh "Bud" Mehan, Ph.D.**, has linked research to practice. Mehan founded UC San Diego's Center for Research on Educational Equity, Access, and Teaching Excellence (CREATE), which improves academic preparation of underrepresented students by partnering with K-12 schools. He works closely with educators to make informed decisions that ensure excellent educational opportunities are available to all children.

UC San Diego

Learn more at ucsd.edu.



The BIG Adventure!

By Listy Gillingham

Some people believe that when the kids all move out of the house and you're down to two people in a large family home, it's time to think about downsizing and looking for less work to do around the house. Not so for the Gillingham family because Bob seems to like projects and when his Dad presented a crazy idea about buying Lemon Avenue, Bob was instantly hooked on the idea.

So at the end of June, with Listy surviving a second broken arm and surgery to repair it, the two decided to move into a 5,500 + square foot house in La Mesa that would definitely qualify as a fixer- upper in that it has had many occupants over the last 12 years. The kitchen was our first project and Bob didn't waste much time tearing out the appliances and stripping the walls of cabinets. He also wanted to widen the doorways to help bring more light into the room.

Though we aren't finished as we have backsplash, electrical, and ceiling to do before Riel Bowl, it's much nicer now that Bob has put a little time into the project (roughly 4 months minus training for an Ironman Race and working full time).



We've learned a lot about dumpsters and have loaded up two so far, as Bob continues to tear out things to make the house look better. The carpeting was the next to go and hopefully he finds time to put in the new flooring and some paint in the next two months. We have a nice living room but we have yet do much with it because the flooring needs replacement all over the house and so as he finishes the big project (kitchen) we will slowly move around the rest of the house.



I know it's hard to not notice the lovely wall paper in the dining room. The house has lots of wall paper which was very consistent with the décor in the early 80's but not so popular today. That has become my project but I'm learning that removal on some walls is more difficult than others so it might become Bob's project much sooner than later. You can also see that the floors have had many spills over the years which gives you some idea what the carpet looked like as a result of those spills.



We have also acquired a game room, tennis courts, swimming pool, and other features that will add to our family fun very soon. I know everyone will enjoy Christmas this year and you might want to be

ready to play a little basketball or tennis because we might have some family competitions to keep everyone's competitive edge so they'll be ready for the white elephant exchange.

And in case you're wondering what the theme for the white elephant exchange is for this year so you can start collecting your prizes around the town. We have decided the theme has to be a TRADITIONAL White Elephant because this house is filled with things that are too good to throw away but not necessarily good enough to keep either. So join us in cleaning out the closets and sharing your wealth of something that you need to be rid of that you've treasured for far too long. Be creative and fun!



Bruce's New Ride -- Coming Soon!

By Bruce Hartman

You just wouldn't believe the amount of research and shopping it takes to make an informed decision on a handicapped van, or as Larry the Cable Guy calls them, a cripple car. They come in little turd sizes using minivans as well as every make and model of full sized vans on the road. On top of that, it requires learning a lot about the different lifts, seats, door openers, remotes and who is the better up-fitter and the better mobility shop. It's enough to make your head spin even for a gear-head like me!

Our company has recently moved out of our Kearny Mesa facility where we have been for the past 60 years and moved into our property in Rancho Bernardo. This move comes at a really good time for me because mobility is becoming more challenging all the time. Our old facility was extremely unfriendly for someone struggling with walking. In our new digs I am able to use a power chair or scooter inside the offices and get everywhere I need to go (inside and out) except upstairs. This has been a bit of a game changer and will hopefully extend the time I have to be able to keep working.

Remaining independent is critical to my ability to work, and even more importantly, to my mental wellbeing. The last thing I want is to have Miss Birdy driving me everywhere. I need to remain self-sufficient for as long as possible and this van will most certainly help me toward that end. My plan originally was to hold out for one more year on a van but this looming "El Nino" has moved up my timetable and truly thrown a wrench into things. Hauling electronically controlled power chairs or scooters in the back of a pickup, in the rain, is not something you can do without risking burning out the electronics, not to mention standing in the rain while loading and unloading is not too much fun either. I often end up unloading my truck in the evening only to reload it first thing in the morning which leaves me winded and in pain requiring 5 minutes or so of recovery time before I'm good to go. So Birdy and I have made the decision that it is time for a cripple-car!

After looking at all the options available I have determined that, for me, the Mercedes Benz Sprinter Van is the right platform to start with. The 2.1 liter Bluetec diesel engine touts nearly 30 MPG Hwy and its emissions package makes it one of the cleanest burning vehicles on the road (Those Germans really have it figured out). There is no mistaking the fact that it is very European looking and lacks that young man's sporty look, but I'm good with that ...and for its size, it is still a good looking vehicle. And come on... Francie can't be the only Mercedes Benz owner in the family!

I found the deal I wanted on a 2016 model at the Mercedes dealer in Laguna Niguel. They were nice enough to deliver it to an Orange County mobility store for me where I am having a rear entry wheelchair lift, automatic door openers and an electronics package with remote control and interior / exterior switches installed. From there it will go to an up-fitter that specializes in van conversions to be fitted with four captain chair rear seats so the grandkids, co-workers and friends can ride in comfort and style, strategically placed grab handles for me to get up and make it between the wheelchair and the driver's seat, exterior steps to climb in on the driver and passenger doors and an inverter for powering battery chargers for the wheelchairs and scooters. I hope to have it all completed by late November. I am very hopeful that it will make life much easier for me and I am truly looking forward to taking final delivery of it. I look forward to taking a weekend trip to Las Vegas to "break it in"...Perhaps I will be able to update this article with some pictures in the December RFNL.





The Mad Scientist A.K.A. Craig Hartman

By Bruce Hartman



For all of this to make sense I need to give you a little background info first...

As you may know, Hawthorne is essentially two businesses. We are a heavy machinery dealership that sells and services tractors and we are a Power Systems dealership. A Power Systems dealer sells Caterpillar diesel and natural gas engines into everything you can think of except heavy machinery like dozers, scrapers, backhoes etc. The largest segments of our business are land based power generation plants, marine propulsion and marine power generation. We also have a 14 bay truck shop and a fabrication shop but the lion's share of our business remains power generation. We service navy ships, power plants all over the Pacific, tuna fleets in Samoa and Korea, and military installations all over the world. On top of that core Caterpillar business we are also the only North American dealer selling the Crestchic brand of load banks, (giant toasters) built in the UK, to the power gen world for load testing generators.

We have customers in the Midwest that are in the gas compression and pumping business. They play a big role in natural gas getting from wells in places like Oklahoma and Texas to your stove and water heater in San Diego. This is done, in many cases, with huge Caterpillar natural gas fired reciprocating engines and generators powering ginormous electric compressors and pumps. Something you may not know is that these huge engines do not perform well when they are lightly loaded. They tend to miss-fire and burn enormous amounts of motor oil if they are not loaded to around 80% of their nameplate power rating. The loads in a typical gas compression facility fluctuate greatly, thereby creating problems with engine life and performance.

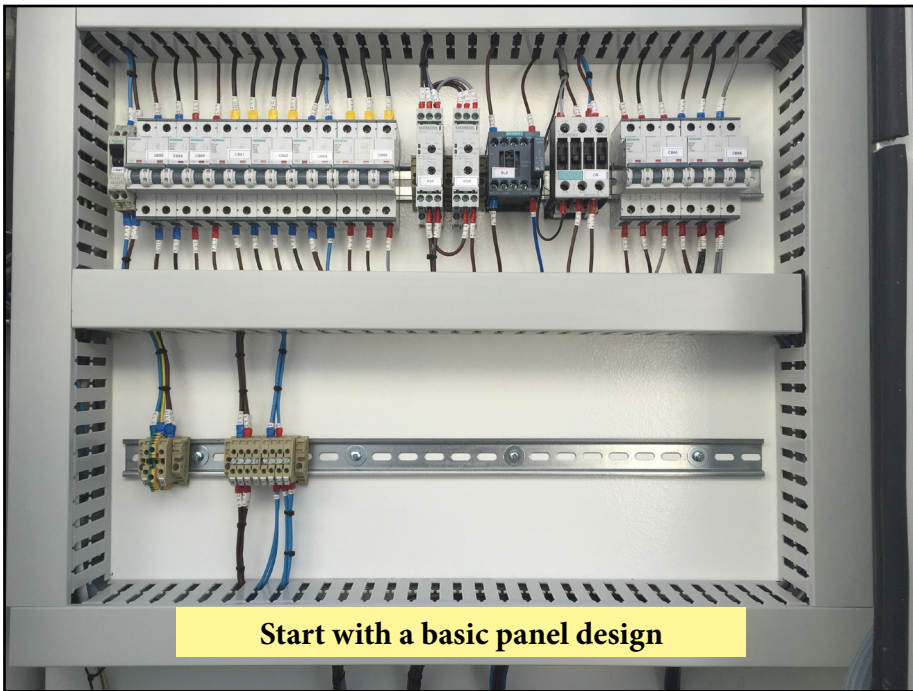
Recently the manager of our Load Bank business came to me and asked If we had anyone on our staff that could design a system that could control a load bank by sensing engine load via several inputs to apply and remove load and keep the engine at a steady state, pre-programmed horsepower output. Since these engines are running on pipeline or wellhead gas the fuel that is siphoned off the mains is essentially free. Wasting the horsepower via a load bank and giving the energy away as heat to the atmosphere has no negative impact in the compression business. But there are huge upside benefits as far as performance and engine life go and can add thousands of hours to the life cycle cost wherein a typical engine overhaul cost is in the \$350K to \$500K price range. It was put to me that if we could come up with a low cost control system it would mean the immediate sale of several load banks to a particular customer. The load banks sizes in mind sell for \$300K to \$500K each.



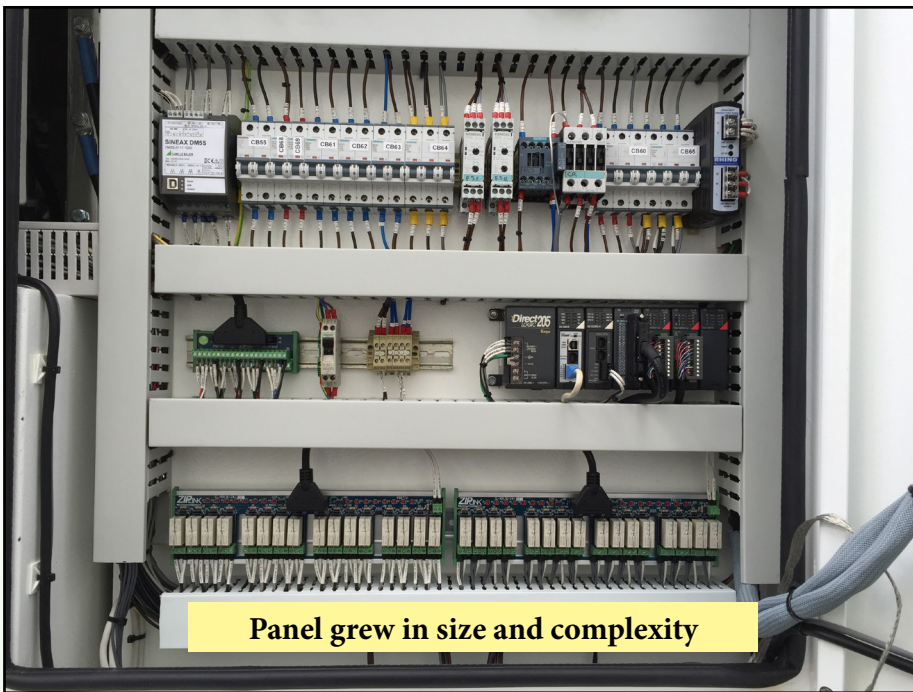
PLC Hardware with I/O Module

I called Craig out in the field where he was working on a customer's generator and ran the idea by him. I was light on specifics but was able to get the general idea conveyed to him. He thought about it some and finally decided that he liked the idea of the challenge and agreed to look at it more in depth. Craig went home that night and spent a lot of time on-line looking at PLC's, HMI's, I/O and panel displays...all that adds up to an industrial computer and open source software to write your own programs.

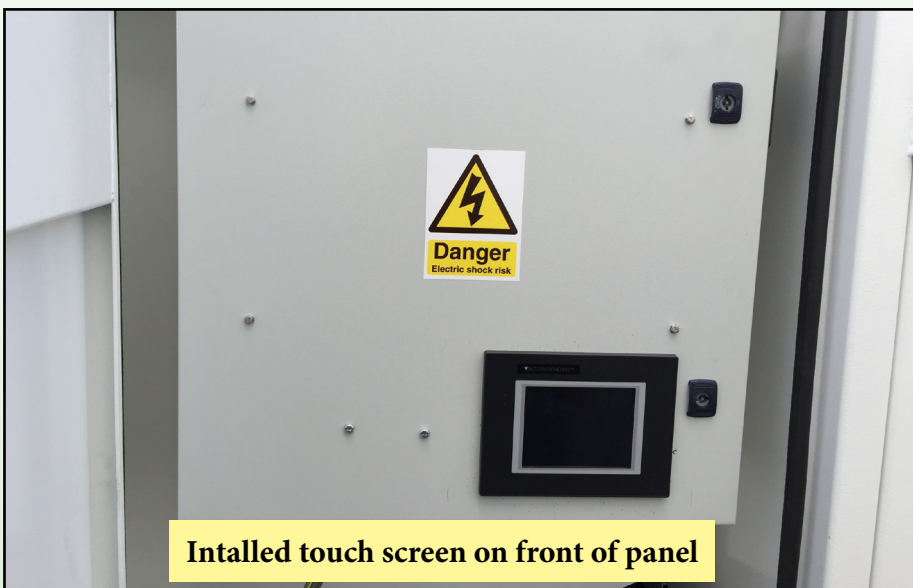
Over the course of the next couple weeks Craig spent a couple



Start with a basic panel design



Panel grew in size and complexity



Installed touch screen on front of panel

grand on his company credit card purchasing equipment and software and taught himself to program. He spent countless hours writing and debugging the program, without any support from Crestchic, to control banks of relays for the resistor and reactor banks. He incorporated all the safety and protective devices; equivalent to the check engine light in your car with red and green lights and fault codes. He incorporated a touch panel display to input set points such as the power setting requested, ramp rates, sensitivity, load step increments, and to display the output values and fault monitoring sensors including resistor temps, fan motor faults and reactor temps.

The mad scientist in Craig drove him to over-achieve and give the user the ability to control even more than originally asked for. He also gave us even more applications that we can utilize this controller for and market it as the total control interface for some of our other customers such as Solar Turbines.

Not only did Craig design and build an incredible control system, he did an awesome job of documenting the entire project with drawings, schematics, photographs and an operator's manual so that any electrician anywhere in the world can confidently go out in the field to facilitate a repair without needing Craig along to walk them through.

The implications of this control are huge for our load bank business. There were days he wondered if he had bit off more than he could chew but in the end Craig conquered all of the challenges and overcame the impossible! ...and under the \$20K budget I gave him... Even his peers are talking about this one!

So... it goes without saying, being the dad of this incredible employee makes me want to burst at the seams with pride. The hard part is that I have to step back and allow others to give him the kudo's he deserves so that there is no appearance of nepotism or favoritism. He makes the Hartman name continue to shine at Hawthorne and I get to sit back and enjoy a front seat view of the man he has become! Pretty cool stuff!

FAMILY SHORTS

HAPPY THANKSGIVING!

November 26th, 11:00 am

Margaret and Bud's Home



Robert and Karla are buying a new investment home in Arizona. The home should close this month and they already have a tenant for the place, Brian and Drew! They are very excited about moving into a place they can call their own (figuratively speaking).

The house is on a golf course, in a very nice community, southeast of Phoenix called Queens Creek. Brian and Drew should be all moved in by Thanksgiving and are looking forward to having a real home for Christmas.



Riel Bowl Official Announcement

Date: January 2, 2016 -- Time: 12:00 p.m.

Place: 9337 Lemon Avenue (more information on parking later)

Bring something to share -- A True White Elephant

We need to talk about gift giving too... that might need more negotiating