Interview by David Packard

This year, the annual Society of American Military Engineers Small Business Conference (SBC) will be co-located with the National Veterans Small Business Engagement (NVSBE) at the New Orleans Morial Convention Center, October 31 – November 2, 2018. In anticipation of this historic event, I sat down with Cal Hinz, an architect whose small business firm has worked with the Department of Veterans Affairs and other Federal, State, and local agencies for five decades and asked him to share some thoughts on the relationships he has developed with public agencies.

Please share your firm profile...name, location, number of employees, market, services, when established, unique aspects of your firm, firm classification (i.e. SB, WOSB, SDVOSB, others).

Calvin L. Hinz Architects, P.C. (CLH), is a full-service architecture, planning, and interior design firm with 50 years of experience in the design of health care, elder care, educational, commercial, and financial sector projects. The 17-member staff works from an office in Elkhorn, Nebraska. We are a Service-Disabled, Veteran-Owned Small Business (SDVOSB) certified by the Center for Veteran Enterprise (CVE). There are 8 full-time architects, 5 CAD technicians (who also work with Revit), and 4 administrative staff members.

One of the unique aspects of CLH is that we have two veterans leading the firm — Cal Hinz and Rich Onken — who are veterans of the Vietnam War era and the Iraq wars, respectively. Together, they comprise an executive team with 73 years of experience in architecture and project management.

Another unique aspect of CLH is that our architects get to work on a project from beginning to end. (In larger firms, you might have 2 or 3 architects working on different aspects of the same project.) We also have a productive team environment that allows everyone to share information and skills. CAD techs can help out on any project where needed, as can the architects. The CAD software is always evolving, especially with the move to 3-D modeling, so we maintain a collegial atmosphere.

Calvin L. Hinz, AIA
Richard Onken, AIA, EDAC
The Architectural Practice Committee (APC) of SAME is proud to present this quarterly journal to our membership. The APC committee is comprised of volunteer members from SAME, most of which are architects. All of the articles and sketches found in this quarterly journal were produced by members of our committee. We all have the common goal of sharing excellent technical articles, sharing projects that exhibit innovation and design excellence, and sharing other stories that are relevant to the career of an architect, whether you are the owner of a small architectural practice, an employee of a large architectural firm, or have made your career as an architect by working for the owner, such as the Army Corp of Engineers.

With the upcoming Small Business Conference in New Orleans just a couple of weeks away, the focus of this quarterly journal publication is the business of architecture, and getting the perspective of running a small architectural business. One thing is clear, running a small architectural firm has its own unique challenges, different from a large business. And, while it’s easy to get pulled down “into the weeds” of the operations of your small business practice, we all know that the path to business growth is networking and obtaining new business.

At SAME, we have one of the best Small Business Conferences in the entire United States for architects, engineers and contractors. At the SAME SBC Conference, you will have the opportunity to meet with a wide variety of DOD agencies through semi-private round table meetings. For architectural firms interested in doing business with the federal government, at the SAME SBC Conference there’s opportunities for networking with large and small architectural and engineering firms and construction companies. Last year, over 2,500 individuals registered and participated in the conference.

In addition to the networking with primarily DOD agencies, large & small architectural firms and construction companies there’s a wide variety of extremely helpful seminars and lectures relating to architecture, engineering, sustainability, procurement, business development strategies, leveraging your small business certifications, and much more.

Come join the Architectural Practice Committee (APC) at the SAME SBC conference in New Orleans this coming October 31st through November 2nd. Meet other architects from around the world who come to learn through the lectures and seminars, network for business, and just have fun with other architects. The APC committee schedules unique tours of buildings or places in the city where the conference is being held. As you can imagine, it’s a little different experience when you tour a building with a crowd of architects, instead of with non-architects. It’s a lot of fun!

If you’re ready to reconnect with your passion of architecture, join us in the APC, and we hope you enjoy this quarterly journal.

Yours truly,

Daphne I. Gurri, AIA, LEED AP
Additive construction is the process by which structures are built in three dimensions (3D) using a digital 3D construction model. Structures from 3D models in theater from locally available resources to eliminate the cost of transporting materials from Earth, the ability to resist aging (degradation over time) in extreme environments, and the ability to provide the necessary structural integrity for a given building. The ACME project is funded by the Space Technology Mission Directorate with Mobile Emplacement (ACME) project within NASA's Game Changing Development Program and the Unit of the United States Army Corps of Engineers (USACE). NASA is interested in additive construction because it provides the necessary structural integrity for a given building. The ACME team has identified numerous constraints that apply to each candidate material and have begun evaluating materials based on their potential for use. Each material must have facets that meet minimum performance requirements in each category to be considered; a multifaceted, multifunctional construction material is critical to employ additive construction on planetary surfaces.

Kurt provides 14 years of integrated design technology and building information management (BIM) services experience. As a Lead for Advanced Design and Platform Technologies, Kurt actively develops and implements technology-based strategies to continuously add value to clients and within our practice. His Platform Technology Team provides a comprehensive virtual design and construction toolset.

He serves on the Construction Industry Institute's D.C. Metro Community of Practice Core Group and is on the Board of the Society of American Military Engineers (SAME) Washington, D.C. Post.
Impacting Communities and Empowering Change through Architectural Volunteering

Many of you may remember when three years ago, I blogged in Chicago Architect’s online magazine about a story of providing a pro-bono design of a 2,000-square-foot dining facility in Camp Zulu, a rural community in the Congo, and its fund-raising effort through World Vision and World Mission. I shared how our architectural community responded by donating thousands of dollars to this project. At the end of fund-raising stage, AIA Chicago program director Joan Pamaranc asked me to do a report for AIA Chicago, once the project was constructed. Fast forward two and one a half years: The project was finally constructed in the fall of 2017. To my pleasant surprise, this building has become much more than simply a dining facility; it has now been functioning for six months as a multi-purpose community center for the entire Camp Zulu. Their new facility has become a center of the community where residents dine, worship, socialize and hold meetings on a weekly basis.

When I designed the building in 2015, I knew the design had to be simple and straightforward to ensure the facility could be built with local materials by local residents. With that in mind, the building is made of off-the-shelf, readily available corrugated metal sheets that are directly fastened to the wood trusses built on-site. Supported by pour-in-place concrete columns and beams, the building is enclosed by handmade mud bricks, and wood doors and windows (Figure 1). What I didn’t realize at the time, was this project had also been used as a means to teach construction trade skills to local residents.

The construction was directed and supervised by the former U.S. construction executive and Covenant World Mission Congo missionaries, Tim Smith. Tim and his wife Helen have spent years in the Congo providing for and building communities, lifting residents out of poverty through projects such as this. Under their leadership and supervision, local residents learned how to make mud bricks; how to build wood trusses out of raw lumber; how to mix and pour concrete; and how to put together various building sections (Figure 2).

When we talk about architects’ social responsibility, we often refer to our designs as having the ability to create better built environments for the communities we serve (Figure 3). Through this experience, I now realize that architectural volunteerism can impact people’s lives in other, deeper ways. One of the most significant impacts is that it can empower people in those communities to become self-sustaining. For that, I am deeply touched and awed to know that the small part I played in this effort meant so much to so many people halfway around the world.

For the complete story, please read my original post.

JJ Tang, FAIA, FSAME, LEED AP

This past summer, my wife (Cathy) and I joined Daphne Gurri and Jose Matute on our first transatlantic cruise to the Portugal and Spain. After sailing six days without sight of land, something unusual in this Midwesterner’s experience, we arrived at the Azores, an archipelago of Portugal, one day’s journey from the European continent. The capital town of Ponta Delgada is home to about 70,000 residents, nestled in lush green and rugged, rocky hills, the product of a volcanic past. The island is rich in cultural history culture, having been settled in the early 15th century, with white stone and stucco structures and red clay tile roofs. As in many cities of the time, landmarks in this very walkable city included civic structures and Roman Catholic churches. Our port visit included a day of whale and dolphin watching as large populations of these migrating sea mammals inhabit the waters of the Atlantic nearby. We thoroughly enjoyed our short visit to this beautiful “Hawaii of the Atlantic”.

Sketch by: Dave Packard
I have been an SAME member since 1982 when I was still a 2ndLt. This year, I was honored to receive SAME’s Urbahn Medal for contributions in architecture. I was nominated in part for my volunteer work with Engineering Ministries International (EMI).

Engineering Ministries International is a Christian ministry that designs facilities that serve the poor in developing countries. These facilities (including hospitals, orphanages, schools, clean water projects and more) directly impact communities by meeting physical needs and communicating God’s love in a practical way. To produce their designs, EMI blends their team of in-house project managers with talented volunteer architects, engineers, land surveyors and construction managers recruited from around the world. These volunteers donate their time and travel costs to join EMI teams, adding their expertise and insight to give clients the best designs possible. EMI’s vision is “to see people restored by God and the world restored through design” (www.emiworld.org).

I got to use my architecture and construction experience as a short-term volunteer for EMI on four different trips. I joined other EMI volunteers to form teams of architects and engineers to serve in Tanzania (2010), the Dominican Republic (2013), Burundi (2014), and Honduras (2015). Since I am usually in an academic setting, it was exciting to apply my architecture and construction knowledge to real projects that served people.

After serving on short-term design teams for about 2 weeks each time, I decided to make a deeper commitment to this kind of work. I used my sabbatical to spend the 2016-2017 academic year volunteering for EMI’s Uganda office. That office includes architects, civil & structural engineers, surveyors and construction Managers. Like EMI’s other offices around the world, they design and build the types of projects mentioned above throughout East Africa. Their clients are charities that care for children, the poor, HIV-positive, and refugees. Another part of their mission is to train and educate their Ugandan employees so that the office will gradually rely less on western expats.

EMI didn’t ask me to serve as an architect or construction manager, but as a researcher. I helped them establish a small research and development group in their Uganda office. I started out getting to know and working with their architects, engineers and construction managers. I also connected with a small network of local architects, builders and college faculty that were interested in the same issues I was working on. I researched many topics from passive cooling to project assessment to choosing the best locally available construction materials.

One of my first projects was helping EMI’s structural engineers have a better idea about the properties of the types of wood used in their projects. Lacking specific information, they had been basing their designs on conservative approximations using the closest species they were familiar with in the west. I sent wood samples back to the U.S. for testing and analysis by one of my Air Force Academy colleagues and a cadet. The results not only validated the engineers’ assumptions, but proved in several cases that the African wood was significantly stronger than expected.

I had the pleasure of getting to know some of the architecture faculty and students at Uganda Martyr’s University. They had similar interests in topics such as sustainable and affordable construction materials. I was invited to take part in providing feedback to students on their final projects for two semesters and enjoyed interacting with them. We also hosted them at the EMI Uganda office to show them some of the designs our architects were working on. Another academic opportunity was helping to facilitate a research project between EMI, students at the Colorado School of Mines and faculty at Uganda Christian University on a UV-LED powered water disinfection system. The students produced a working prototype that will go on to further phases of improvements and testing.

I was eventually joined by two other research colleagues, with one a mechanical engineer and the other a water/wastewater engineer.

We worked together on some projects but I emphasized researching construction materials in Uganda.
For example, when considering choices for walls, here are some of my conclusions:

**Compressed Earth Blocks (often plastered)**
- Least expensive
- Self-produced
- Minimal equipment & training required
- Inconsistent quality
- No strength
- Tend to degrade with exposure to weather

**Local (hand-made) Brick (usually plastered)**
- Cheap
- Widely available
- What masons are used to
- Use lots of mortar & plaster
- Weak, inconsistent quality
- Unsustainable firing process contributes to deforestation

**Factory Brick (no plaster needed)**
- Medium cost
- Available in cities
- Masons need extra training
- Uses less mortar, no plaster
- Some structural strength, consistent quality
- Faster, more sustainable firing process

**Concrete Block (usually plastered)**
- Highest cost
- Available in cities
- Masons need extra training
- Uses less mortar
- Highest structural strength, consistent quality
- Cured, not fired

The work of EMI Uganda’s research and development group has contributed to the excellent design and construction work done there as exemplified by some of these projects.

Passive cooling of classrooms and indoor/outdoor spaces at the Amazima Secondary School (image 1)

A new training center for the African Children’s Choir (Image 2)

The R&D group recommended a special reflective coating on the roof of this community center to minimize heat gain. (image 3)

I have been able to bring many of these experiences back to the classroom here at the Air Force Academy. Some of the cadets were so interested in this work that they asked me to lead a cultural immersion trip to Uganda last spring.

Now, one of my structural engineering colleagues, Dr. Stan Rader, is preparing to spend his sabbatical with EMI’s South Africa office. I hope that my positive experience doing something out of my comfort zone might inspire you to look for ways that you can serve others with your expertise beyond what you are already doing in your everyday work life. Thanks for the opportunity.
THE BIG SMALL BUSINESS OF ARCHITECTURE AND THE VA, CONTINUED

It is my understanding that the Veteran’s Administration is a current and past client. What has that experience taught you?

The VA has awarded more than 100 contracts to CLH since our first project in 1997 at the Omaha VA Medical Center (VAMC), and more than half of those contracts have been awarded to us in the past 5 years. We’ve designed projects for VA facilities in 14 states (FL, IL, IA, KS, KY, MA, MN, MO, NE, ND, OK, SD, TX, WY).

Working with the VA is rewarding and fulfilling because it’s our opportunity to care for the men and women who have served our country. In addition to designing for a variety of hospital and outpatient services, we’ve been able to apply evidence-based design that helps to reduce stress. Through our association with organizations such as Planetree, our team can learn some of the latest research that helps us to design truly healing environments. The VA has just recently codified some of these ideas in their “Whole Health” initiative; we’ve been ahead of that curve, designing for things like positive distractions, noise reduction, and connections to the natural world which have a proven, positive effect on patients’ outcomes.

One thing we know from our experience in working with the VA is that no one understands how to design for veterans better than another veteran. The men and women who served in the military have experiences that civilians just cannot grasp. Cal Hinz, on a recent visit to see his doctor, engaged in conversation with another veteran on the pros and cons of various firearms used in combat. Had they been in a civilian waiting room, they probably would have made many people nervous! However, as veterans they were able to have a discussion that few other people could engage in. That experience alone highlights the need to create spaces where our VA is that they sometimes set a mileage restriction and anyone outside of the circle isn’t considered, even if they have superior experience. In a time when file sharing and review meetings can be accomplished over the internet, it is penny-wise and pound-foolish to let distance from the project site be a decision factor.

Have you partnered with large businesses? We have partnered with several large and small businesses; it’s a necessity because our firm does not have the SDVOSB status. It allows us to remain close to our VA is that they sometimes set a mileage restriction and anyone outside of the circle isn’t considered, even if they have superior experience. In a time when file sharing and review meetings can be accomplished over the internet, it is penny-wise and pound-foolish to let distance from the project site be a decision factor.

Have you partnered with large businesses? We have partnered with several large and small businesses; it’s a necessity because our firm does not have engineers on staff. Most of the time we have remained the prime contractor, though.

Can you share any of your marketing strategies? Read the RFO carefully; select appropriate projects and team members (subconsultants); make sure you have solid data; then write as if your life depends on it. We also try to build relationships before the RFQs are issued. As an example, when we were awarded one of the VA’s VISN 15 IDIQs we hit the road for VA locations in that region (Kansas, Missouri, and Illinois) in order to let these potential clients get to know us.

Do you plan to grow beyond your current size or do you prefer to remain a small business? At present, the plan is to remain small and the maintain the SDVOSB status. It allows us to remain close to our clients. When they select CLH for a project, they know they will get personal attention.

What do you enjoy most about your work? Helping veterans and meeting the needs of a changing environment.
health care market (both private and government-funded) are rewarding. It’s also exciting to see how architecture can aid the healing process.

Can you share examples of your successes?

Our philosophy is that awards are nice, but the real reward is in a job well done. No matter the size or funding source for our clients, we find success in creating designs that allow our clients to serve their customers. A few examples are

- Carolyn Scott Rainbow House (Omaha, NE), a convalescent services facility for parents whose children are receiving treatment at nearby Children’s Hospital & Medical Center. (2015)
- Good Neighbor Community Health Center (Columbus, NE) and the Good Neighbor Center (Fremont) are nonprofit outpatient clinics that provide primary care, dental, mental health, and OB/GYN services on a sliding scale. (2015, 2016)
- Boys Town Center for Behavioral Health (Boys Town, NE) offers a range of outpatient services to children and their parents. We’ve heard students share stories of recovery and changed lives at Boys Town events, and these are always inspiring. (2014)
- Fontenelle Forest (Bellevue, NE) asked us for a 25-year master plan because they are stewards of 2,000+ acres of woods, floodplains, loess hills, and marshes, and they aim to protect and restore it for future generations. (2017)
- VAMC Omaha Renovation for Ambient MRI was a first for the VA because it allows patients to select favorite music, favorite color, and even a travel destination image, all of which are for the purpose of giving the patient a sense of control over the environment as well as positive distractions while lying still in an MRI scanner. (2009)

Any failures, frustrations, or disappointments?

These are part of life. It’s always disappointing to not be selected for a project, so we request a debriefing to see what we can learn. A few times we’ve found a big disconnect between what the SOW contained and what the evaluators were looking for. Another frustration is when someone thinks that a small business isn’t capable designing and managing a large project or even a large team of subconsultants.

What does the future hold? What’s your succession plan?

Rich Onken, AIA, EDAC, will take the reins of the business when Cal Hinz retires at some point in the future. Rich is a service-disabled veteran who retired from the U.S. Air Force in 2009 with the rank of Lt. Colonel. The last 5 years of his service was in the capacity of Chief, Healthcare Design, for the Air Force Surgeon General. During his 20 years of military service, Rich directed teams of architects and engineers in the design and construction of hospitals and clinics in the USA, Europe, and the Middle East totaling more than $3 Billion. He received the Bronze Star (2005) and 4 Meritorious Service medals.

In civilian life (2009 – present), Rich led teams of health-care facility planners, architects, and engineers for projects totaling $1.5 Billion for the military in the USA, the Middle East, Japan, and Djibouti.

Rich joined CLH as Vice President in September 2018. His partnership with Cal Hinz enhances the firm’s capabilities, demonstrates their commitment to architectural design leadership, and signifies a continuation of excellence to CLH’s clients. As for kids today, what’s the problem? We have 2 “millennials” on staff and they’re amazing professionals. One of them, Kyle Kenkel, is a veteran of the Nebraska National Guard. As of this writing, he’s putting his Revit skills to work for a research lab renovation at the Harry S Truman VAMC (Columbia, MO) and an inpatient mental health renovation for the Minneapolis VAMC.

What benefits does the firm derive from participation in SAME?

CLH is a sustaining member of SAME, and we’re proud to have been awarded the Omaha Post Urban Medal in 2009 and 2010. It’s important that we can recognize our peers for their achievements. In addition to the camaraderie we enjoy with our colleagues in the industry, we take advantage of educational opportunities such as the webinar that was offered on the SF330 form. We attend Omaha Industry Day, and CLH will again be in the exhibit hall at the SAME Small Business Conference (see us at booth #515) in New Orleans in a few weeks.

What does the firm do for fun?

We have an annual Christmas dinner, but we come up with other things throughout the year. In 2017 we had a night out to see the Omaha Storm Chasers. We also had an “eclipse party” that year. Every Friday we wear our team shirts and enjoy some trash talk between rivals (one of our staff members is an Iowa Hawkeyes fan, and the Hawkeyes have been out-performing the Huskers this year). One of our architects, Gary Gebhard (formerly of the Corps of Engineers) shares pictures of his latest woodworking projects and family historic research.

Let’s face it: Every day is fun when you enjoy what you do and the people you work with!
With every new project, there is the hope to deliver a visionary design with eye-catching aesthetics. There is no shortage of problems to overcome. Most spaces present the challenge of balancing aesthetic preferences, acoustical requirements and budget. At the heart of design is inspiration, and sometimes requirements and restrictions can get in the way of fulfilling the design.

Noise and the desire to have a hard ceiling is one of these challenges. You can’t see, taste or smell noise but you can experience the impacts. The government first acknowledged that noise was a problem when it passed the Noise Pollution and Abatement Act of 1972. Excessive noise can have detrimental health effects and we are finally realizing how those effects add up, and more importantly how we can curb the noise pollution. Until now, there hasn’t been an acoustical drywall solution for ceilings that blends form and function at an economical price. As a result, architects and designers have been forced to compromise on ceiling system decisions, limiting the overall experience and impact a ceiling can have design. After 100 years of manufacturing sheetrock, USG has launched a monolithic acoustical drywall ceiling system called Ensemble™. Innovation that combines aesthetics, sustainability and high performance.

Key features include:

- NRC .80 and CAC 44
- LR .85, from the spray-applied fine finish
- Class A-rated
- Low VOC-emitting material
- Custom colors
- Meets or exceeds minimum ceiling performance requirements for traditional acoustical ceilings
- Ideal for areas where a hard ceiling is desired, including lobbies, atriums, executive/board rooms, healthcare, museums — or other spaces with multiple hard surfaces

Form offices, including medical to conference rooms to lobbies, Ensemble™ provides a solution for spaces that architects may find acoustical challenges. For instance, in the healthcare segment, research has shown that hospital noises contribute to employee and patient dissatisfaction, high blood pressure spikes, disrupting sleep and increasing anxiety. One researcher, Eve Edelstein — architect and neuroscientist — found that noises during a shift change at a hospital can reach 100 decibels, the same rating of a jet engine. USG’s Ensemble™ Acoustical Drywall Ceiling system delivers the look of a hard ceiling with the performance of a conventional grid and acoustical lay-in panel ceiling.

Ensemble™ addresses high-design and high-traffic areas, such as hospitals, lobbies, libraries and museums. Additionally, the system combines noise absorption and ceiling attenuation. Alternative monolithic acoustical systems can be costly and complex. The clean aesthetic of Ensemble’s™ drywall ceiling system cuts the cost in half with faster installation. The entire system installs, finishes and repairs similarly to drywall.

How it Works:

USG Sheetrock® Brand Ensemble™ panels are highly engineered gypsum panels specially modified to allow the ceiling to both absorb and block sound energy. The joints are finished using USG Sheetrock® Brand finishing products.

USG Ensemble™ Spray-Applied Finish is installed as the final surface and is acoustically transparent, allowing sound energy to pass through the perforations into the plenum where it is absorbed by the USG Ensemble™ High-NRC Backer Panels. The components of this patented system are designed to work together so that NRC and CAC performance is optimized.

Acoustics matter. USG Ensemble™ system aesthetics and acoustical performance needed in any space — office, hospital, secure room or building lobby.
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SAME Architectural Practice Committee Webpage: www.same.org/apc