



Two Generations: Why Young Member Groups (YMG) are Important

This is the second of a two part series that draws attention to Young Member Groups. The first article "Rainbows Only Come After Rain" by Ellen (Chuan-Hua) Kuo PE, LEED APBD+C was published in the February, 2015 issue of STRUCTURE.

Why are Young Member Groups Important?

A Young Members' Perspective

The extent to which industries train market entrants and have established recruiting procedures varies from industry to industry. It has been my experience that the U.S. structural engineering industry is one of the professional fields that offers the least amount of such a structured guidance for newcomers. Some companies do defy this regular practice by providing excellent training/mentoring programs, but they are the exception rather than the rule.

Paradoxically, structural engineering is a highly technical career where a lot of the learning must take place on the job. This is because the structural behavior of the whole does not occur in a vacuum, rather it is greatly influenced by the unique characteristics of individual components. An engineer in training must learn to apply theoretical concepts and models to describe an observed behavior and estimate future behavior. Such training can only occur while solving real engineering problems. It is this unique feature of our industry that makes the development of standardized training very difficult; the development of an engineer occurs while solving case by case conditions. This is why young professionals benefit greatly through an opportunity to consult more senior and experienced engineers and, when provided, the opportunity to bounce ideas and approaches with their young peers.

This is why YMG's are so important: They provide young engineers with a platform to enhance their professional development while having a support network. In this network, young professionals are not afraid to fail, rather they want to learn from their mistakes and try again.

Young engineers enter an unusual environment where making mistakes carries significant liability. Building codes provide vetted principles to guide engineers in the analysis and design of elements unfamiliar to them. The codes are a compilation of the experiences and studies of professionals and academics intersecting with the needs of the contracting industry, the engineering

community and the public we serve. This makes the standards referenced by the codes (and the code itself) at times difficult to understand. YMGs offer young professionals the opportunity to discuss their interpretations and learn from each other's experiences.

Additionally, YMG's introduce young members to the importance of professional involvement in our field. Structural Engineers must become familiar with the liability of our practice, its interpretation by the law and how our practice can improve through active collaboration with local authorities. The building codes and standards are advanced by volunteer leaders of our industry. As the next generation of leaders, we must recognize that the more involved our industry becomes with general society, the more updated and relevant the codes we must comply with will become. Involved young members can accelerate the incorporation of new technologies and find ways to make processes more agile in order to allow future engineers to participate more actively in the shaping of the plans for a project.

For me, working with Ellen Kuo in starting the SEAMASS YMG and becoming actively involved has been a mind expanding experience. It has been inspiring to understand how the ideas and concepts of a few have become standards and legislation; although to a lesser extent, my involvement has allowed me to impact positively on the local young member community. I see a lot of potential in the ability of other young members to further our profession by coordinating the young member perspectives and transforming them into action items for the improvement of the entire community. I believe general society can benefit from a more active and integrated participation of structural engineers, and I hope the YMG's will become gateways to launch brilliant young structural engineers into active participation.

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Making the Connection

An Experienced Engineers' Perspective

Close to 60 years ago, a small group of structural engineers practicing in the Boston area started having dinner meetings at Joseph's Restaurant on Newbury Street in Boston to discuss business matters. In 1958, the group became the Boston Association of Structural Engineers, a firm based membership made up of business owners. The group started having regular business meetings at MIT, and many of its members became involved with the advisory committees to the Massachusetts State Building Code.

In 1996, BASE became a charter member organization of NCSEA. Two BASE members, Craig Barnes and Emil Troup have served as President of NCSEA in its early years.

Realizing that BASE membership allows for one business owner from each firm, in 2006 they created SEAMASS to be the member organization of NCSEA enabling all structural engineers in Massachusetts to gain access to opportunities to improve the practice of structural engineering and to foster proactive communication among structural engineers. In an effort to kick start SEAMASS, all BASE members agreed that, as part of their membership, they would be committed to also being SEAMASS members. Instantly, SEAMASS had close to 60 senior level structural engineers as its membership. Unlike SEAoNY who started their organization with mostly young engineers, SEAMASS did not have a strong young member base. At a recent NCSEA conference, it became apparent that many MO's were facing the same problem; of course, except for SEAoNY, who claimed that they would probably have to create a OMG (old members group).

As with many MO's, there is the initial struggle with finding themselves and becoming established. In the midst of this, how would SEAMASS attract younger members? Not everything happens overnight. I think the first big step for SEAMASS was when directors started asking younger members from their firms to help volunteer at SEAMASS events. A few years ago at a past SEAMASS annual meeting, the young members showed up in force, many helping to run the event.

The sense I got at that meeting was that these younger members were enthusiastic and really wanted to be part of the organization. This was an opportunity for the young members to network and become recognized.

Shortly after, while at the NCSEA conference in Atlanta, YMG chair Heather Anastasia from Florida won everyone's hearts in her address at the delegate meeting. Heather shared her story as a little girl building tree houses in her yard to her experience of being in the work force as a young engineer. I sense most MO's left Atlanta excited about the prospect of starting their own YMG. The networking really paid off; by the time we landed back in Boston, we had already speculated that Sofia Zamora & Ellen Kuo would be ideal candidates to start our YMG. Within a week of accepting their new roles as YMG co-chairs, Sofia & Ellen reached out to Heather who was very helpful in getting the Young Member Group (YMG) started. In short time, SEAMASS officially had started an energetic YMG. Although they had some guidance from senior members at the start, we encouraged them to be independent, giving them as much responsibility amongst themselves. I believe this enabled them to feel that they had a stake in the success of their MO. Members of the YMG regularly sit in on our monthly board meetings. The young members organize teach-ins, field trips and social networking events. Some of the YMG events are open to the general membership, giving younger and more senior level engineers a chance to network.

The SEAMASS hub is Boston, where there are over 100 universities. Of these, there are a handful of universities that offer structural engineering curricula. The YMG has been connecting with the local universities to be a resource to their students. Having strong ties with Northeastern University, the YMG has established an annual distinguished lecture during Engineers week. At the event, engineering students and staff from the local universities, along with practicing structural engineers, meet to socialize and attend the distinguished lecture. This past year, Ben Schafer lectured on *The Birth of the Skyscraper* preceded by a SEAMASS presentation on snow loads and the performance of buildings in Massachusetts, 2015. The idea was to expose students to what practicing structural engineers encounter in the work place. The YMG is also working on a mentorship program which they hope will continue to grow. Recently, SEAMASS members were able to sit in on students' thesis projects, giving guidance and consultation.

I can remember when I started out as a young engineer and am grateful to the

experienced engineers who became my mentors. Whenever I got stuck on something, I had my favorite mentor to reach out to. From the time I started out as a member of BASE, there were a handful of senior members who took me under their wings, in a way that mimicked the sincerity of one's parent. Their interest gave me the opportunity to become involved and grow within my profession. By having a 'place' for young members to gather, they too will have the opportunity to share in the same experience. Like professional sports teams with farm teams, we should have the same system in our profession where it becomes a natural progression from university student to practicing engineers.

One of the benefits of our YMG and their opportunity to network has been in giving both the employer and potential employee a place to meet. In my experience, I have been able to direct firms looking for new staff to potential YMG candidates and, on the other hand, have been able to recommend young members to the right firms. Going both ways, it helps when people know of each other, making the employment process less risky.

What a great place to share ideas, senior engineers with their experience and rules of thumb and young members fresh from the Universities with the latest technology. For me, I think it is exciting and the newer young members bring a lot of energy to our MO.

Every generation is different. The ability to network, newer and older, gives one the opportunity to better understand each other. Through the process of establishing a YMG, many new relationships have been formed. With our YMG, we have been able to reach out to each other both ways; I recently found myself reaching out to a young member to gain their perspective on an issue. In the end, we both benefitted.

What has been most rewarding for me is to see how our YMG has taken the ball and has run with it. They are a great group and have been a benefit to our MO. They check in with us once and a while, but in the end, it is their group and it is obvious they know how to run it. I recently received an invite for an event the YMG has put together. I was impressed! Another interesting event organized solely by the YMG! Here in Massachusetts, our YMG is an asset and we appreciate them. If you haven't started a young member group, having one would be well worth your while. ■

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