

## Treat The Disease!

Sanjeev N. Shah, PE • NCSEA President



During a long business flight, I had last month's issue of STRUCTURE with me. Reading the Editorial, penned by my colleague Ray Messer, I was impressed that the professional liability crisis is upon our profession. A question went through my mind: "Is this the disease that needs to be cured, or is this a symptom of the disease that has infected our profession?"

I looked back at some of the work performed by your NCSEA Committees and found some interesting material on the state of the SE profession –

*"...plagued by non-uniform licensure and compounded by an inadequate and declining SE education curriculum at the university level. At the same time project delivery methods (owner expectations and business environment), and codes and standards have been growing in complexity. As a result, engineers are ill prepared to meet the demands of the complex and ever changing environment in which they must practice."*

*(See the December 2001 issue of STRUCTURE, and other information available at [www.ncsea.com](http://www.ncsea.com).)*

There are multiple building codes that the structural engineer must be aware of, depending on the geographical location and governing entity. More recently, a unified building code approach with the IBC and the NFPA 5000 has emerged. Structural engineers, through the efforts of NCSEA, are able to influence the content of the structural requirements of these codes. NCSEA is also actively participating in administrative aspects of the codes to establish uniformity.

*(See NCSEA News in this issue of STRUCTURE to find out how the Codes process works.)*

Project delivery methods have grown in complexity, and have compressed the time frame from beginning to end of a project. Computer technology has allowed engineers to drastically reduce "number crunching" requirements for performing sophisticated 3-

dimensional analyses to mere minutes instead of weeks. Clients want the project to be completed "Fast, Cheap and Good Quality". Often two of these three characteristics may exist, but not all three. The design process is driven by owners, architects or contractors, but rarely by the structural engineer. Consider the project administration and review time that owners, architects and contractors allot for themselves, compared to the design time that the structural engineer is permitted.

The structural engineer often assumes the responsibility and liability for the decisions made by others. Often, the structural engineer will receive a phone call requesting a solution for a job-site problem because someone else decided to make a variation from the specified structural design. The solution must be given now and without compensation for extra services. The schedule and the budget are the primary driving forces in the Owner's decisions. SE services are often viewed as an overhead expense instead of a value-added cost that improves the return on the investment.

Is it any surprise then that the professional liability crisis is upon us? It would be easy for us to ignore this monster because it is too large for us to handle alone. However, I submit that, as engineers, we are most suited to dismantling the problem into manageable pieces and successfully dealing with it – this is what we do everyday with our projects!

*Continued on next page...*



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## Editorial continued...

*So here is my halfpenny's worth for your consideration!*

**First** - manage the crisis. For this, Ray Messer has provided all the insight we need in his Editorial in last month's *STRUCTURE*.

**Second** - we must, each, look at our own professional practice with brutal honesty. Are we working "faster, harder and smarter" and yet finding ourselves with less time to adequately process the information and exercise our professional judgment, at a level that gives us professional satisfaction? If so, our priorities need to be refocused on the motivation that first drew us to the profession, and not on just getting the job done and making a living.

**Third** - we must, each, evaluate our practice and our goals to develop our personal blueprint upon which we can transition our "faster, harder and smarter" practice into one that will be more enriching (personally and professionally) and give us back the control over our profession.

**Fourth** - we must work, individually and collectively, to evolve our profession so that we are structural engineers again, instead of mere technicians. This will not happen overnight, but it can be done. I am a strong believer in the grass-roots' ability to bring about positive change. When we, individually and then collectively, believe in the same goal, then the goal will be attained.

*(See the Codes and Standards article in this issue of STRUCTURE to find out how practitioners can join Codes and Standards committees, and bring some reality to them.)*

**Last** (and not the least) - we must educate and train the young engineers entering our profession on the true value and worth of our profession. This we must do with action and deeds, and not mere words.

Many of you are already at different levels of the steps noted above. Those who are at the later stages are the individuals you see (and read about) participating in the various NCSEA committees that are addressing some of the hot issues such as codes, advocacy, curriculum, licensing and so forth. For those of you who are beginning the process, or who are along the way but are not sure of how you can work "collectively," consider participating on one of the many NCSEA committees ([www.ncsea.com](http://www.ncsea.com)). Also, participate actively with your state SEA, for it is through these Member Organizations that the grass-roots are represented at the national level by NCSEA.

It is our profession, and it is our duty to fix what ails it. Yes, others must help and they will... when they see that we have recognized the problem, and the problem is no longer us.

Please drop me a line at [SNShah@LeaElliott.com](mailto:SNShah@LeaElliott.com) to tell us how we are doing.

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*STRUCTURE* (Volume 10, Number 4). ISSN 1536-4283. Publications Agreement No. 40675118. Owned by the National Council of Structural Engineers Associations and published in cooperation with CASE and SEI ten times per year by Copper Creek... a consulting group. The publication is distributed free of charge to members of NCSEA, CASE and SEI; the non-member subscription rate is \$45/yr domestic; \$75/yr foreign. For change of address or duplicate copies, contact your member organization(s).



#### Published By:

Copper Creek... a consulting group  
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