2013 AICNCC Committee Chair Report

BY HERMANN AMAYA

In a review of 2013, I can say the Alliance of IEEE Consultants Networks Coordinating Committee (AICNCC) had a very successful year — all due to international and U.S. IEEE members' great interest in engineering consulting.

We launched the IEEE Consultants Network; open to all IEEE members, so they can stay on top of consulting trainings, news and information. In addition, we offered our first in-person workshop, in October 2013, in Chicago, in conjunction with the IEEE Consultants Network of Chicago/Rockford. This day-long workshop brought in numerous attendees from the Chicago consultants community. All attendees were eager to hear presentations by Dr. Gary Blank on *How to Start and Expand a Successful Consulting Practice*; Benjamin Miller, on *Licensure for Consultants*; Larry Nelson, on *The Life of a Consultant*; Bob Krause, who gave a very informational and proactive presentation on *Networking*; and last but not least, William Kassebaum, who taught the group based on his own experience: *How To Build A Start-Up Company*.

We can also look back to our meetings in May 2013, in St. Petersburg Fla. — where we hammered out the details required to consolidate the Consultants' Database requirements — with excellent results, since this Database is now operational and available to all IEEE members.

The Committee has a warm feeling of accomplishment at our successes in 2013. I want to thank each AICNCC member for their efforts and cooperation in 2013. We couldn't have done it without you… And we believe 2014 has more great things in store for the IEEE consulting community.

For 2014, the AICNCC is currently planning to hold a similar workshop to the one we held in Chicago in 2013. This 2014 workshop will be held in Southern California on 12 April, in conjunctions with the Los Angeles Area Consultants' Network/Orange County Consultants' Network. In addition, the AICNCC will hold a Sunday committee meeting to finalize its 2014 agenda. We also hope to hold another such workshop, this fall, at a location yet to be determined. We anticipate this series of workshops will enlighten and facilitate IEEE members to form even more consulting businesses. By educating our members about how to become a consultant and run their own business, it will eliminate the fear of taking that leap into the consulting world.

In 2014, I would recommend that IEEE members interested in consulting look into the availability of a Consultant Network Affinity Group in your local area. Get involved with that organization — participate and contribute to the success of that group — because you'll discover invaluable resources that will benefit and contribute to your long-term success as an independent consultant.

Hermann Amaya is chair of the Alliance of IEEE Consultants Networks Coordinating Committee (AICNCC). He is director of engineering at AMHER Corp. in Tampa, Fla. He is also the chair and founder of the the IEEE Florida West Coast Consultants Network Affinity Group.

From *IEEE-USA SmartBrief*

IEEE-USA SmartBrief provides summaries and links to relevant and important news items of interest to U.S. IEEE members. Published every Thursday, IEEE-USA Smart Brief replaces *IEEE-USA's Eye on Washington*, which focused on political activities affecting engineers. The Alliance of IEEE Consultants Networks Coordinating Committee (AICNCC) has asked the editors of *Smart Brief* to include news items that may be of interest to engineering consultants. Following are some highlights from recent issues of *SmartBrief*:

Sign up today for *IEEE-USA Smart Brief* to finish reading these and other exciting stories.

From 26 December 2013 *IEEE-USA SmartBrief*
MORE TECH WORKERS GOING SOLO AS INDUSTRY SHIES FROM HIRING
More tech workers are expected to work for themselves in the coming years as an industrywide reluctance to add full-time staff leads to an increased use of contract and temporary employees. Data show that independent workers make up 18% of the tech workforce — with the technology industry outpacing the labor sector as a whole in the rate of independent worker growth. *Computerworld* (12/23/2013)

From 2 January 2014 *IEEE-USA SmartBrief*
IT JOBS MARKET LOOKING UP, BUT BE SURE TO BRING YOUR SOCIAL SKILLS
Nearly three-quarters of tech hiring managers say they plan to fill new full-time positions this year, with Big Data and databasing skills topping the list of the specializations most in demand, according to a poll from Dice.com. The survey of 860 recruiters and hiring professionals also found that HR is increasingly turning to social media to identify and vet candidates and assess their performance once they are hired. *InformationWeek* (12/26/2013)

From 9 January 2014 *IEEE-USA SmartBrief*
WHY ENGINEERS CAN MAKE GREAT LEADERS
Bonnie Rose started as an electrical engineer, then went to business school as part of a path culminating as president of Standards for CSA Group, a Canadian nonprofit. She says engineers are "rigorous, logical, smart strategic thinkers" who can turn into leaders by seeking business opportunities and mentorship. "The key is to find an individual who embodies the characteristics you would like to develop in yourself, who can offer relevant business or career insights and is someone you enjoy being with," Rose writes. *The Globe and Mail* (Toronto) (tiered subscription model) (1/3/2014)

...from the institute

From 8 January 2014 issue of *The Institute*
CHANGES MADE TO IEEE MEMBER DISCOUNT PROGRAM

Updates include new vendors for shipping services and computers, a name change for the IEEE insurance provider, and the end of the IEEE credit card from US Bank.

>> Read the full article

Larry Nelson's War Stories — Part III: Deferred Payments

BY LARRY G. NELSON, SR.

Never…Never...NEVER…**EVER**!

My established policy is to get a retainer, progress payments, and have fixed time limits on terms. I have, on occasion, "worked with" my clients on terms. We all need to learn to walk away when someone pulls out Wimpy's famous line (Wimpy of *Popeye*): "I will gladly pay you Tuesday for a hamburger today." Unless you are a bank, do not act like one for your clients. Never extend more credit than you are willing to lose. Not everyone is as honest as you, and no one will look out for you the way you should. If they have a choice between feeding their family or yours — who do you think they will choose?

Oh all right ... but just this once.

The two times I have accepted deferred payments, I got burned. The first client was an individual with an idea for a new product. He had some funding, and started paying my invoices on time. As we got deeper into the project, he was having problems getting funds, and the payments started slipping. I did some work for free, and he promised me payment for the rest, "real soon." Eventually, he was due to come into some money — so he contacted me with a deal to pay about 50 cents on the dollar, which I accepted for immediate payment. Sometimes, you need to take a gamble. But learn to limit your liability and set a points where you will walk away. Never let deferred fulfillments take priority over paying customers. And be sure to let these types of clients know up front that you expect to be paid for your work.

The second client was a start-up company. The contract was for payment when funds were available, but no longer than one year from signing the contract. Business was slow, so I accepted. This client had promised stock options, and some other incentives. The product looked to be a real winner. The reality was that almost two years went by, with no payment. The stock options evaporated. An offer to allow me to buy stock in the company instead was tendered, but since he had no funds, I didn't find that very appealing. I called him every couple of weeks for a status update, and to remind him I was not going away. I pulled the plug when business picked up for me. Two other consultants behind me on this same project never got paid. The big difference is, I walked away when it was still just labor, and my exposure was limited. Get everything in writing and never expose yourself to more than you can afford to lose. My contract had a clause that a client's failure to pay reverts all intellectual property developed by the consultant back to the consultant. I sent him an invoice by email every month, with interest added. Over a year later, this client found funding from a venture capitalist. During the Due Diligence phase, the venture capitalist asked what part I owned. This client immediately called me and set up payment in full — less the interest that had accrued.

I have been luckier than many of my colleagues in getting paid for my work. At any point in time, you can face a client that declares bankruptcy, or simply refuses to pay. Often, these clients are not worth the time and expense of going to court. But, they are why you need to have a safety net.

Don't let a client become greatly indebted. Keep your leverage and minimize your exposure.

Larry G. Nelson, Sr. can be contacted at L.Nelson@ieee.org; or at Nelson Research at http://www.mchipguru.com/.

AICN Newsletter

Consultants Workshop

National Consultants Committee Partners with Local Network for Consultants Workshop

On 12 April 2014, the Alliance of IEEE Consultants' Networks Coordinating Committee (AICNCC) will partner with the Los Angeles Area Consultants Network (LAACN), and the Orange County Consultants Network, (OCCN) to hold a second, all-day workshop. The workshop will train aspiring consultants, as well as help practicing consultants to manage their practices better.

AICNCC aims to partner regularly with other local consultants networks, to hold day-long workshops in other local areas. It partnered with the IEEE Chicago/Rockford Consultant's Network to hold the first all-day workshop in October 2013.

If you're in the Southern California area, the workshop will be held at DeVry University in Pomona, Calif., from 8:30 a.m.-4:00 p.m. Presentations will include *How to Stimulate and Hone your Networking Skills*; *Being an Engineering Consultant: What Does it Take?*; *How to Find Clients Using Networking and the Internet;* and a closing panel discussion on any matters still concerning the attendees.

Register today for this full-day workshop! It will motivate you to network with new and experienced consultants and allow you to brush up on your skills or learn new ones.

Insurance

The Obama Administration Delays Health Care Mandate for Medium-Sized Companies

The Treasury Department announced on 10 February 2014 that companies with 50–99 employees will have until 2016 to provide health care coverage to its employees under the *Affordable Care Act*. This delay is one year from its original 2015 deadline.

Larger companies, with 100 workers or more, are also getting a reprieve from the original mandate included in the *Affordable Care Act*. They must offer health coverage to only 70 percent of their workers in 2015. In 2016, must offer coverage to 95 percent of their full-time workers.

Remember: Beginning in 2014, the *Affordable Care Act* includes a mandate for most individuals to have health insurance, or potentially pay a penalty, if they are uninsured.

Special Offer

Sign Up for the IEEE-USA Consultants Database at a Reduced Rate for a Limited Time

Independent consultants who are IEEE members now have a chance to place their resume/profile in the IEEE-USA Consultants Database for half of the normal $99.00 cost. Until 15 August 2014, IEEE members can subscribe to the IEEE Consultants Network Membership Premium, which includes allowing members to place their profile in the IEEE-USA Consultants Database for half the cost.

The IEEE-USA Consultants Database allows national companies to find consultants wherever they are. With an annual listing fee of only US$99 now half priced ($49.50), a single referral will pay for the listing. Along with your database listing, the IEEE Consultants Network Membership Premium subscription includes a free subscription to the IEEE-USA Consultants Newsletter, a free IEEE-USA eBook on consulting and access to a free exclusive training webinar.

Subscribe today and take advantage of this half-price offer!

AICN Newsletter

AICNCC Committee Chair Report:

2014 IEEE-USA Annual Meeting & InnoTek Conference Review

BY HERMANN AMAYA

IEEE-USA's Annual Meeting & Innovations in Technology (InnoTek 2014) Conference in Warwick, R.I. was a time for all members to come together, review 2014 IEEE-USA activities, and plan for the upcoming 2015 session. Everyone had an opportunity to acquire new information, share new activities and developments in their chapters, reconnect with old friends, meet new ones, and contribute to our organization's success— by supporting all IEEE Section activities. For my part, I was elated to run into Dr. Charles P. Rubenstein, an old professor of mine when I was IEEE Chapter Chair at Polytechnic Institute of Brooklyn. I had not seen him seen since the last century— what a treat!

Held at the Crowne Royal Hotel in Warwick (near the airport), where a large, beautiful, fair-like tent was installed as the Garden Pavilion. Participants had a chance to gather here, and to see and talk to IEEE-USA volunteer leaders. Dr. Gary Blank, the 2014 IEEE-USA President, spoke passionately during his opening remarks, about what it means to be part of IEEE-USA, how this organization has contributed in shaping the professional lives of its members, and about the importance of membership growth. We also listened to speeches by the 2015 IEEE and IEEE-USA presidential candidates: IEEE-USA President-Elect candidates Pete Eckstein and Keith Grzelak; and IEEE President-Elect candidates F. Mintzer and B. Shoop—all with very impressive credentials. Each candidate told us why their position will be the best for IEEE, and I am sure that our members will know the right person for the

job. So, when the time comes, I urge you to vote for the candidate of your choosing.

Organizers set the conference up into three tracks. Ed Perkins chaired Track 1; Will Kassebaum, Track 2; and Keith Grzelak, Track 3. Each track had many interesting topics and themes. I participated in a Panel with some of the Alliance of IEEE Consultants Networks Coordinating Committee (AICNCC) members. The panel topics was Using *Consultant Networks, Employment Networks and Entrepreneurs to Engage Members in Your Section*. Will Kassebaum moderated the panel, and it was well attended and well received. Annual Meeting participants were very interested in this topic, because opportunities for competent engineers, in diverse areas of expertise are out there!

Larry Nelson, an AICNCC member, gave a great presentation on Consulting: Networks and Services Available to Support the Professional Consultant. He educated attendees about the value of networking, and how joining a local consultants' network can help keep your consulting practice growing. For those without a local network, the AICN can help get one started in your area. For national exposure, subscribing to the IEEE Consultants Network Membership Premium gets you a listing in the IEEE-USA Consultants Database. If you are not ready for that level, as an IEEE member, you can subscribe to the IEEE Consultants Network for free—just as you would subscriber to any other IEEE publication.

Because this Annual Meeting held a very deep message about membership and its growth, I would like to leave you with a thought from Dr. Blank: *What if we all went out, and got one member now?* When you do, make sure to give this new prospect the membership card with your member number, so you can receive credit for your efforts. Recruiting would certainly increase our new membership, and bring back members who have let their membership's lapse. Let's help promote membership in our organization—the largest professional society in the world—the IEEE.

Hermann Amaya is chair of the Alliance of IEEE Consultants Networks Coordinating Committee (AICNCC). He is director of engineering at AMHER Corp. in Tampa, Fla. He is also the chair and founder of the the IEEE Florida West Coast Consultants Network Affinity Group.

Larry Nelson's War Stories — Part IV: Sometimes a Success Can Be a Failure

BY LARRY G. NELSON, SR.

Some clients will want to hire you for a project they feel has no chance for success. They expect you to fail, and they will often become irate, if you actually have the audacity to succeed.

A customer asked me to develop a miniature electronic temperature controller in a strange form factor, to replace a mechanical device this client was building in high volumes. It needed to be form, fit and function compatible. Later, I found out the history of this project was such that, every year for the previous five or six years, the client gave a new engineer this task. And every engineer had failed, due to the constraints of the design, and the level of current technology.

But I combined some innovative techniques, and had the client's model shop fabricate four prototypes. These prototypes fit the stated goals, and functioned comparable to the existing product. The initial cost was slightly higher, but in volume would have become cost effective. The component cost would have declined, as more vendors had them available, so I had solved this tough problem. Seemingly, I gave the client exactly what they wanted. **WRONG!**

It seems this exercise was meant to fail. The client wanted to show their customer that they were constantly attempting to bring better technology to solve the problems, but the high-volume use of the existing part was lowering the costs for the entire product line, and increasing profits from other sales. My new design would have caused major problems to the rest of their line—and they couldn't have that. My success had to be hidden from the end customer, or it could have shaken the entire company. Sometimes even when you win ... you lose.

Be sure you understand the parameters of your project as fully as possible. At the beginning, ask your clients what they need as an end goal. If the project is like the example, your client may not be forthcoming with you. Get as much history as possible. Who did the client assign to do this project before you?   What are the priorities—lower cost, more reliability, or improved features? Are they trying to solve an obsolescence problem? Sometimes you need to be a bit of a detective to know their real needs and wants, as opposed to what they are saying. I could have given them exactly what they really wanted for a lot less cost—as well as a lot less effort on my part.

Larry G. Nelson, Sr. can be contacted at L.Nelson@ieee.org; or at Nelson Research at http://www.mchipguru.com/.

Great Success in Los Angeles: AICNCC and Los Angeles Area Consultants Networks Hold Another Joint Workshop

BY FRANK FREYNE, FOOTHILL SECTION CHAIR, AND BILL GRIST, AICNCC & FOOTHILL SECTION CS CHAIR

IEEE consultants: Did you know that you could bring an official Alliance of IEEE Consultant's Network Coordinating Committee (AICNCC) workshop on building up your consulting business and improving your consulting skills to your own local area? When AICNCC put the word out last winter that they wanted to partner with local consultants networks to hold joint workshops, the Orange County Consultants Network (OCCN) Chair, Wes Masenten, jumped at this opportunity. He pulled his team together to project manage the event, so it would be successful. OCCN connected with the Los Angeles Area Consultants Network (LAACN) to pull the workshop off—without a hitch.

DeVry University, Pomona, CA campus, offered IEEE its excellent facilities for the day, and helped with logistics, IT and onsite coordination. On 12 April, more than 60 southern California consultants and prospective consultants, some coming from as far away as San Diego, converged at DeVry University for this full-day workshop. Thanks goes out to our IEEE Los Angeles, Foothill, and Orange County Section members, who spent several months arranging this workshop.

LAACN used IEEE vTools to promote and register members for the workshop. Two local speakers came from the LAACN and Foothill sections, and IEEE-USA's AICNCC provided the other speakers. The Committee flew in to hold their regularly scheduled meeting, and also assist with the workshop.

Local OCCN Chair, Wes Masenten, and AICNCC Chair, Hermann Amaya delivered the welcome speeches —with both encouraging the large group to learn, but also to network with, and get to know one another.

Speaker and AICNCC member Bob Krause addressed the networking aspect right away. He got everyone out of their seats and moving, with a series of exercises focused on meeting other engineers; and establishing a common ground for networking with each other, as the day progressed. The group participated fully in this exercise, and many people commented that they hadn't seen that much IEEE interaction at any other engineering event. We don't want to give away any trade secrets, so you'll just have to attend one of these workshops, and see first-hand how Bob performs his magic.

Gary Blank, Ph.D., the current IEEE-USA President, gave a talk on *How to Start and Expand a Successful Consulting Practice*. According to Dr. Blank, every IEEE engineer's consulting practice is a successful one —the right tone for the day's activities. Success was on everyone's mind. Dr. Blank also spoke about all of the benefits that an IEEE member can gain through the IEEE website, and various insurance programs offered to IEEE members. He cited specific examples from individual members who saved far more in insurance premium fees than they paid for their IEEE membership. Visit the IEEE.org website for more details on membership benefits, insurance and discounts from partners.

Don't think that the day's talks were a straightforward motivational pitch for the uninitiated. The amount of technical and professional experience in the DeVry University building was impressive. All attendees wanted to hear about real situations in consulting. All the speakers had a wealth of information, learned from experiences they wanted to share.

Dr. Kip Haggerty gave a thorough review of the situations he has faced, in his 15+ years as an independent consultant. Some participants thought that Dr. Haggerty gave a negative prognosis about the future of consulting during his remarks. However, others thought it was good he brought up potential stumbling blocks to a robust consulting practice.

Dr. Haggerty made note of two business areas that are looming stumbling blocks in consulting. One is the rising cost of health insurance, and the other related to the IRS definitions for an *independent contractor*. *The Affordable Care Act* has either eliminated, or greatly restructured, most prior health insurance coverage; and driven up a consultant's costs to unaffordable and unsustainable levels. In addition, since 2009, the IRS has developed new criteria, as listed on IRS Form SS-8, that seek detailed explanations of the work situation, in terms of behavioral control, financial control, and type of relationship, etc.

Further, Dr. Haggerty prompted an excellent discussion about fee setting (estimating 25 working hours per week, 48 weeks of activity per year). He discussed the tradeoff between general liability insurance versus professional liability insurance (and how to get this insurance expeditiously in California). Dr. Haggerty also pointed out that in many aerospace consulting efforts, consultants need security clearances, and he described how they can keep their clearances active.

Ray Roberts shared some of his patent lawyer experience, made more relevant by his past industrial machinery engineering experience as an electrical engineer (EE). Some of his thoughts on intellectual property were provocative. In the United States, we expect that the law is the law; but in much of the international community, that expectation is not so common. In our current, post-*Leahy–Smith America Invents Act* enactment era, the question of *First to Invent* versus *First to File* is an important new issue. And we may have too much faith in Non-Disclosure Agreements (NDA), when you talk to potential investors. These NDAs may not be worthwhile, so engineers looking at their intellectual property may need to be cautious with someone not yet deemed trustworthy. For example, you have developed some valuable and innovative software. How could you obtain a record of its existence, while protecting it from disclosure? Should you consider filing a patent? Or should you keep your intellectual property private—as a trade secret? Should you use a copyright for your documents? Or just use as a trademark? Perhaps the best summary for Ray Robert's talk is his suggestion that you locate and consult with a good intellectual property lawyer in your IEEE Section, when intellectual property issues arise in your consulting practice.

As the day moved on, workshop speaker Will Kassebaum educated attendees on how to set up a start-up company. Formerly a consultant, now an entrepreneur, Kassebaum discussed his experiences in the growth cycle of his Indiana company, Algaeon. His start-up grows algae for human and animal uses.

One significant concept Kassebaum recommended is to find three advisors. One would be an older, seasoned executive-type, with an entrepreneurial mindset and skills. A second would be someone of your age—no more than five years older. This person could relate to your personal trials as a consultant; one who could see 100 yards down the road. A third would be one with a different business skill set, say CPA or JD, or whatever. Meet with them, and buy them lunch from time to time—so that you can graciously ask them to be sounding boards for your questions. Every aspiring or practicing IEEE consultant should consider that no one is a lone wolf, especially when looking for work clients. A sounding board for your consultancy work is a good idea.

Kassebaum also shared with attendees the difference between an S-Business (or service business) and a B-Business (a money-making business); a concept every IEEE consultant needs to understand. Grasping this insight in depth is probably the most significant factor in how successful your consultancy will be over time.

He covered several other important points directly applicable to all consulting engineering situations. One is to maintain integrity in your financial reporting— billable hours, work expenses incurred, etc. If you are fortunate enough to hear Will Kassebaum speak at another AICN forum, you should definitely ask him one question. Ask him how he finds his "Generals." Kassebaum described building a team at the beginning of a start-up that has some "Generals" willing to lead the new venture. For example, a few IEEE consultants wish to work together on a larger technical project, bringing different sets of technical expertise together. Who would the generals be on your team?

Finally, Gary Blank returned to center stage, plunging into the topic of how to find clients, in detail. Not surprisingly, 65 percent of the time, you can find clients by networking with other engineers—through IEEE meetings, IEEE volunteer activities, or other engineering meeting and trade shows that you attend. Dr. Blank also covered the online IEEE-USA Consultants Database, and demonstrated
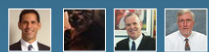
how to navigate through it. He said many consulting jobs are found through this service.

This workshop covered much more than what was outlined in the meeting prospectus, and based on feedback from IEEE members, it delivered real value to consultants. At the end of the day, attendees had a better understanding of the avenues to pursue for consulting success.
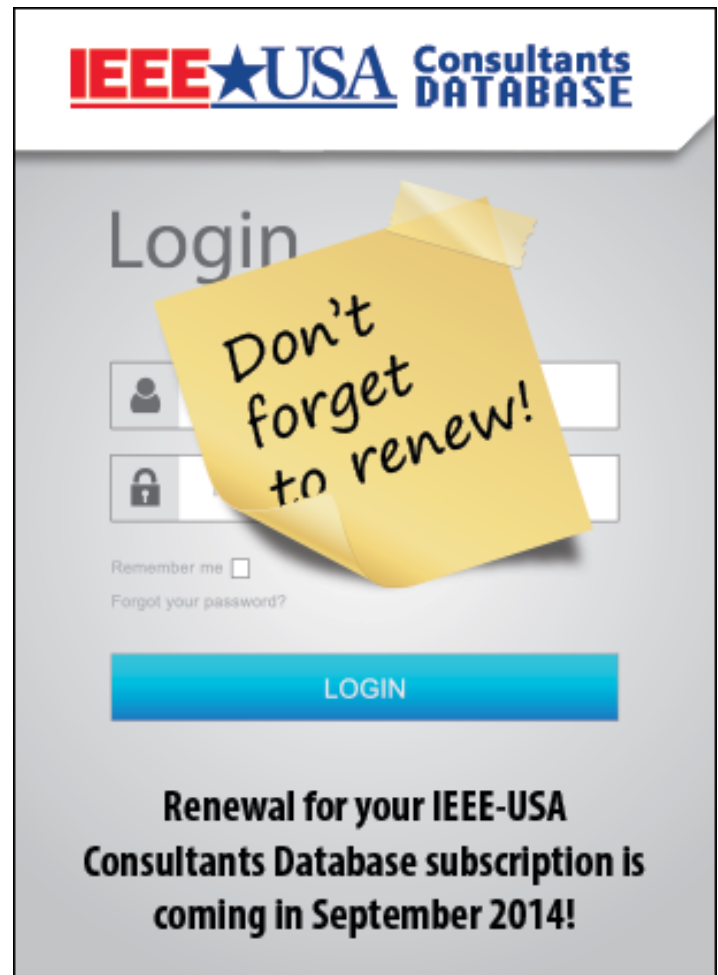
Renewal for your IEEE-USA Consultants Database subscription is coming in September 2014!

Checkout IEEE-USA's New *Flipboard Magazine*!

IEEE-USA is using another entry point into the world of social media—our new *IEEE-USA Career and Employment Issues Flipboard Magazine*. What is Flipboard? Some have described it as one of those annoying apps that comes with your new smart phone that you never use. If you had this thought—think again…The Flipboard is a very useful piece of social media that IEEE-USA is now using to keep its members up-to-date on the latest articles on employment and career issues.

Wikipedia describes "Flipboard" as magazine format application software that collects content from social media and other websites, and presents it in a magazine format. The software app allows users to "flip" through their social-networking feeds, and feeds from other websites, to find articles of interest to them.

Within the past six months, IEEE members and staff have been populating this magazine with articles on career management, employment issues, leadership and consulting. Some of the more recent articles are *How To Become a Home-Based Freelance Consultant*, and *How the Internet of Things Will Affect Consulting Engineers*. IEEE-USA staff will continue perusing the Internet to find you the latest "flips" for this new social media app.

from **today's engineer**

Career Focus: How to Get Started as a Consultant

BY JOHN R. PLATT

I'll never forget the first time my company hired a consultant. Our division needed to fill in certain gaps in our operations but we had a lot of anxiety about what would happen when he arrived. We spoke of him in whispers for days before the dreaded day. When he finally came to our offices, we noticed the graying hair at his temples, the wisdom in his eyes and the calm smile on his lips. "Let's make things better," he said.

And things did, indeed, get better.

Consultants fill a unique role in the business landscape. They come in when they are needed, put their unique skills to use solving problems for a day or a week or a year, and then disappear back into the night (or the local airport). Sometimes we never see them again. Other times they return a few months or a couple of years later when the situation calls for the use of their unique skills.

But where do these consultants come from? Can anyone become one? Is it easy to work as a consultant? Why do some people fail as consultants? To get these answers, we turned to the experts themselves.

Read the full article at: http://www.todaysengineer. org/2014/May/career-focus.asp

IEEE★USA
www.ieeeusa.org/business

Ignite Your Interest in Consultants Networks at the 2014 Sections Congress

The IEEE Member and Geographic Activities (MGA) Board will partner with Region 8 in hosting IEEE Sections Congress 2014 (SC2014) in Amsterdam, Netherlands, at the Rai Convention Center, from 22 to 24 August. Since 1984, the IEEE Sections Congress has been held every three years, and provides IEEE Section leaders with a priceless opportunity to impact IEEE's future.

This venue provides an ideal place to network, and share knowledge with other IEEE leaders. It also an excellent place to express opinions and concerns through recommendations for action the IEEE Board of Directors will use your formally presented thoughts to guide IEEE into the future.

A highlight of this year's Sections Congress will be the **Ignite** talks, educating attendees about IEEE Affinity Groups— including consultants networks. IEEE is introducing these talks at the Congress to give attendees an opportunity to get information on specific topics, such as consultants' networks, not covered in breakout sessions. These talks are intended to raise awareness and *ignite* interest for attendees, and promote IEEE volunteer and staff follow-up.

IEEE-USA President Gary Blank will be giving the *Ignite* talk on Consultants Networks. This rapid-fire presentation will take place on stage in the Conference Exhibit Hall. If you're attending the IEEE Sections Congress, and interested in starting a local Consultants Network, be sure to attend this talk.

Last Chance to Sign Up for the IEEE-USA Consultants Database at a Reduced Rate

Independent consultants who are IEEE members now have a chance to place their resume/profile in the **IEEE-USA Consultants Database**—for **half** of the normal $99 cost. Until 15 August, IEEE members can subscribe for $49.50 to the **IEEE Consultants Network Membership Premium**, which includes allowing members to place their profile in the IEEE-USA Consultants Database.

The IEEE-USA Consultants Database allows national companies to find consultants wherever they are. With an annual listing fee of only $99, now half price at $49.50, a single referral will pay for the listing.

Along with your database listing, the IEEE Consultants Network Membership Premium subscription includes a free subscription to the IEEE-USA Consultants Newsletter; a free IEEE-USA E-Book on consulting; and access to a free, exclusive training webinar.

Subscribe today and take advantage of this half-price offer! (*Please note that if you take advantage of the half-price offer, the subscription runs only until the end of 2014. Additionally, the IEEE member renewal period starts in September. At that time, you will receive reminder notices to renew your Premium subscription—at the full price of $99.00 for 2015.*)

Workshop Review: Austin, Texas

BY HERMANN AMAYA, CHAIR, IEEE-USA'S ALLIANCE OF IEEE CONSULTANTS NETWORKS COORDINATING COMMITTEE (AICNCC)

The Alliance of IEEE Consultants' Networks Coordinating Committee has provided excellent quality consultants workshops to local consultants networks over the past year. Bill Martino, IEEE Central Texas Section Consultants Network (CTCN) Chair, recently invited the AICNCC to partner with CTCN in Austin, Texas, the weekend of 13 September 2014, to hold another consultants workshop.

The Central Texas Consultants Network did an excellent job of organizing this workshop. Organizers obtained these additional sponsors for the workshop:

- IEEE Central Texas Circuits & Systems/Solid State Circuits Chapter
- IEEE Central Texas Council on Electronic Design Automation
- IEEE Central Texas Communications Society/Signal Processing Society
- IEEE Central Texas Education Society (EDSOC)
- *IEEE Central Texas* Women in Engineering (WIE)

The speakers presenting at this full-day workshop have extensive experience in their subject areas. Both organizations thank Dr. Gary Blank, IEEE-USA President, who was able to break away from the multiple duties of his office, to present a very thorough and instructive topic: *From Employee to Consultant, How Can I Do It?*

The morning's first presenter, Bob Krause, an AICNCC member, broke the ice with: *How to Stimulate and Hone Your Networking Skills.* This presentation was a very comprehensive and hands-on activity that illustrates, in a very practical way, the concept of networking. The end result demonstrated to attendees how they can effectively network.

The next presenter, former engineer turned entrepreneur William R. Kassebaum, P.E., and vice president, IEEE-USA Career and Member Services, has extensive experience with start-ups.

In his presentation, *Start-up Tactics,* he shared his views about the growing pains of a start-up, along with sound advice to all consultants on the do's and don'ts of starting a business.

Strategic Pathways CEO David Smith, also president of Social Care, offered attendees *A Sea of Changing Waters--HealthCare Technology--The Perfect Storm*, a presentation discussing the current state of healthcare, and how it could become more efficient to improve Americans' quality of life.

Sharon Drew Morgen, author of *Dirty Little Secrets: Why Buyer Can't Buy and Sellers Can't Sell, and What You Can Do about It!,* spoke on *Selling Doesn't Cause Buying,* introducing her concept of the Buying Facilitation Model to workshop participants.

And Leslie Martinich, founder and principal consultant at Competitive Focus, gave a presentation titled: *Focus Your Career.* Martinich offered several ways for consultants to be more aware of their surroundings, and concentrated on the actual requirements needed to have a career as an independent consultant.

The Alliance of IEEE-USA Consultants Networks Coordinating Committee members extend their appreciation to the Central Texas Section Consultants Network members for their invitation, and for their kindness while we were in Austin.

Hermann Amaya is chair of the Alliance of IEEE Consultants Networks Coordinating Committee (AICNCC). He is director of engineering at AMHER Corp. in Tampa, Fla. He is also the chair and founder of the IEEE Florida West Coast Consultants Network Affinity Group.

Larry Nelson's War Stories — Part V: Become a Hero by Solving Your Clients' Problems Quickly

BY LARRY G. NELSON, SR.

When a client is under the gun to solve a problem, ship a product, or simply clean up the paperwork, time is of the essence. They need results--and they need them now. This time crunch could have been caused by numerous factors, but regardless of how the client got into the situation, they are running out of time.

A very powerful skill a consultant has is the ability to hit the ground running and get the job done. This speed to completion is facilitated because the consultant can often work outside the company system. You can talk to people in different departments, and put facts together swiftly, without all the red tape. Companies have a life of their own, with built in personalities. Solve their problems faster than they think possible, and you are a hero.

I did work for one company where the manufacturing engineers, not design engineers, were supposed to go onto the production floor minimally to reduce interruptions to the line workers. Management felt the engineers could communicate to the production floor by meetings with the production supervisors. This strategy was supposed to make the line workers more productive by limiting interruptions. I went onto the production floor, and spent 15 minutes speaking to one of the line workers. I was able to create a simple design modification making the assembly easier to put together and reducing cycle time. Cost savings came from time savings and reduced material scrap. Remember that someone in production that has spent years creating a product may have learned something about the product that will assist you. Be open to, and aware of, all of your potential resources.

Here's another tidbit of advice. Clients have failings. That is one of the reasons they want to give consultants money.

There are many failings, and any given client may have only one, but more likely they have a combination. You want to identify these failings--but if you want a successful career as a consultant, never ever bluntly tell them what their failings are. You want to **solve** their problems--not rub their noses in them.

You may be superior in the areas where they are asking for your help. This experience is good because you can provide needed assistance quickly. Pass on some of the credit to them, and be a little modest. This humbleness makes the contact person that hired you into a hero; with a strong likelihood that person will call you in the future with more work. Their peers will want some glory too, so they will contact you when the need comes their way. This situation is a win/win.

Larry G. Nelson, Sr. can be contacted at L.Nelson@ieee.org; or at Nelson Research at http://www.mchipguru.com/.

AICN Welcomes a New Consultants Network in Kerala, India

The Alliance of IEEE Consultants Networks Coordinating Committee (AICNCC) congratulates Amarnath Raja and the IEEE Kerala Section Consultants Network on forming their Affinity Group.

This newest Consultants Network became official on 18 August 2014. If you want to wish them well, check the IEEE-USA website for contact information for the Kerala Section Consultants Network. If other IEEE Sections want to form a consultants network, the IEEE-USA website contains step-by-step instructions about how to become a formal consultants network.

We encourage new consultants networks to register as "Affinity Groups." After groups form a network, they can take advantage of IEEE's branding and resources, and also qualify for funding through IEEE Section rebates.

If an IEEE member belongs to a Consultants Network, but you don't see the network listed on IEEE-USA's website, contact Daryll Griffin at d.r.griffin@ieee.org.

Upcoming IEEE-USA Webinars

WEBINARS

Difficult Conversations — Strategies that can help make you a better listener, a better speaker, and a better person!

On 30 October 2014, at 2:00pm EDT, Dr. Julia Williams, educator and communications expert, will present an IEEE-USA/IEEE Professional Communication Society webinar on handling difficult conversations. The term "difficult conversations," was developed by Douglas Stone, Bruce Patton, and Sheila Heen in their book *Difficult Conversations: How to Discuss What Matters Most*. In this presentation, Dr. Julia Williams will introduce attendees to the principles that can help engineers negotiate through difficult conversations, resulting in better listening and communication. She also will give examples of how the principles can be applied to real world situations that engineers may face in the workplace. Register Today!

Legislative Update Webinar

Stay up to date on recent events in Washington that affect IEEE members. Interested learning about IEEE-USA's position on immigration reform, education policy and the federal budget? Come listen to IEEE-USA's Director of Government Relations brief you on what Congress is doing for, and to, our profession. This webinar will take place 13 November 2014, from 1:00pm – 1:30pm EST. Register for this Webinar Today!

There's Gold in that Database!

Being on the Alliance of IEEE Consultants Network Coordinating Committee (AICNCC), I have monitored the development and progress of the Directory of IEEE-USA Independent Consultants--from the hard copy versions published in the late 1990s--to the present day, searchable, web-based database version, located on the IEEE-USA Website.

The present version of the IEEE-USA Consultants Database allows companies seeking consultants to easily search through the database by industry, location, consultants' backgrounds, special skills needed, and numerous other search criterion to find someone that can match their needs. However, we have received complaints from some consultants that they are not receiving any contacts from their listing in the IEEE-USA Consultants Database.

Many of these complaints are from engineers recently entering the field of consulting, who are not familiar with the necessary soft skills needed to actually drive clients to the database. A listing in a database is like a yellow page ad. Customers only search through a yellow page ad once they know what they want to buy. Customers use many sources to determine their needs, and to find needed talent. One of the first things they do is tap into their personal and professional networks of people they know to discuss their needs.

Successful consultants will tap into their own networks to search for opportunities that will meet their potential clients, in a way that their paths can cross. Getting involved with industry activities to increase exposure will also help. Successful consultants will advertise their IEEE-USA Consultants Database listings on their business cards. And they will advertise their IEEE-USA Consultants Database listing on their websites. Even the Yellow Pages needs advertisement to drive customers to its pages--and successful consultants must do the same.

However, don't expect instant results. I listed in the IEEE-USA Consultants Database for a year before I received my first hit. And what a hit it was. It was an international company that used many, many different sources to find me. The source that paid off for them, and for me, was that listing in the Database. That one response to my listing started me off on a long chain of future contracts in the international arena. For 12 years, I have consulted internationally on lucrative USAID and U.S. State Department contracts--and I owe it all to my listing in the IEEE-USA Consultants Database.

There's gold in the IEEE-USA Consultants Database--for those consultants that go digging for it…

Renew your IEEE-USA Consultants Database subscription today!

IEEE GLOBECOM 2014 Opens Registration

IEEE GLOBECOM 2014 (www.ieee-globecom.org/2014), the premiere global conference dedicated to driving advancement in nearly every communications field, has opened registration for its 57th annual event, to be held from 8-12 December in Austin, Texas, a thriving national center for entrepreneurialism and innovation. Commonly known as "the Silicon Hills" for its high concentration of technology startups and corporations, Austin will serve as the ideal backdrop for international experts attending more than 1,500 presentations--detailing the latest breakthroughs in such key areas as: e-nanotechnology, green communications, cloud computing, eHealth, the Internet of Things (IoT), SDN/emerging applications, game theory, power-line, satellite, space, green and 5G cellular networking communications.

The conference will provide worldwide attendees from industry, academia and innovation centers, with opportunities to learn from top-level industry executives, and interact with industry leaders and key subject experts. See industrial demonstrations showcasing prototypes and innovative ideas from researchers and practitioners in the industry, academia and government research institutions. Network with the most influential communication engineers, industry leaders, government officials and academics, from more than 60 countries.

Officially commencing on Monday, 8 December, IEEE GLOBECOM 2014 will begin with two full days of tutorials and workshops, exploring such topics as Green Broadband Access: Energy Efficient Wireless, Evolution Toward 5G Cellular Networks, Emerging Technologies for 5G Wireless Cellular Networks (Wi5G, Formerly B4G), Mobile Communications in Higher Frequency Bands (MCHFB), Optical Wireless Communications (OWC) and Cloud Computing Systems, Networks, and Applications.

Over the next three days, Tuesday through Thursday, the conference will then proceed with a comprehensive schedule of keynotes, business panels, forum discussions, peer networking events--and more than 1,000 technical presentations. This conference will be highlighted from 9-11 December by 12 individual symposia sections, and an Industry Forum & Exhibition Program (IF&E) focused on the innovations and research representing virtually every

area of broadband, wireless, multimedia, data, image and voice communications.

Themed The Great State of Communications, IEEE GLOBECOM 2014 will feature an industry all-star, keynote line-up:

- Edward G. Amoroso, CSO, AT&T Inc., Recent Advances in Cloud Security
- Wen Tong, Huawei & IEEE Fellow, 5G Wireless beyond Smartphones
- Alicia Abella, AVP, AT&T Labs, Cloud Computing: A New Strategic Infrastructure
- James Truchard, President, CEO & Cofounder, National Instruments, Next-Generation Tools for Next-Generation Wireless Research

- Pankaj Patel, EVP & CDO, Cisco, Are You Ready for the Internet of Everything
- Rajesh Pankaj, SVP, Engineering, Qualcomm Research, Future of Wireless

IEEE GLOBECOM 2014 offers a full slate of events for everybody--engineers, scientists, students, technologists, entrepreneurs, business leaders, and policy makers. For detailed program information, visit www.ieee-globecom.org/2014/program.html.

Register by Saturday, 1 November to receive the reduced registration rate.

Reserve your accommodations at the Hilton Austin Hotel by Tuesday, 4 November to receive the conference rate.

IEEE-USA Releases 2014 Consultants Fee Survey Report

In the spring of 2014, IEEE-USA conducted its annual consultants fee survey, focusing on the compensation of independent engineering consultants. IEEE-USA has now published the results from the annual survey as an IEEE-USA E-Book in the highly anticipated *2014 IEEE-USA Consultants Fee Survey Report.*

The findings in this new 2014 edition show if the median hourly rate has changed for consultants in the past year. The report also provides insight into what business sectors are hiring independent engineering consultants. To get the full story, please purchase this excellent publication from the IEEE-USA E-Books.

The report represents only those IEEE members identified as self-employed consultants--defined as the 619 individuals who indicated that 50% or more of their consulting hours came from working independently, with partners, or who we incorporated.
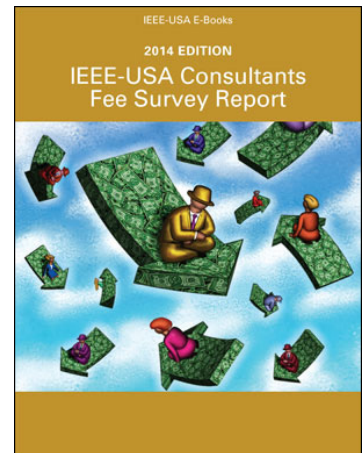
Best of the AICN Newsletter

BY HERMANN AMAYA, CHAIR, IEEE-USA'S ALLIANCE OF IEEE CONSULTANTS NETWORKS COORDINATING COMMITTEE (AICNCC)

The Alliance of IEEE Consultants' Networks Coordinating Committee (AICNCC) started publishing the electronic version of the AICN Newsletter at the start of 2009. In the 6 years of publishing this great newsletter the committee believes we've shared many great articles that have been a benefit to IEEE consultants. The AICNCC has decided to go back and collect a few of those great articles to share with you again. We believe these articles are very informative, relevant and useful. IEEE Consultants and would be consultants will enjoy this great issue of the AICN Newsletter.

Hermann Amaya is chair of the Alliance of IEEE Consultants Networks Coordinating Committee (AICNCC). He is director of engineering at AMHER Corp. in Tampa, Fla. He is also the chair and founder of the IEEE Florida West Coast Consultants Network Affinity Group.
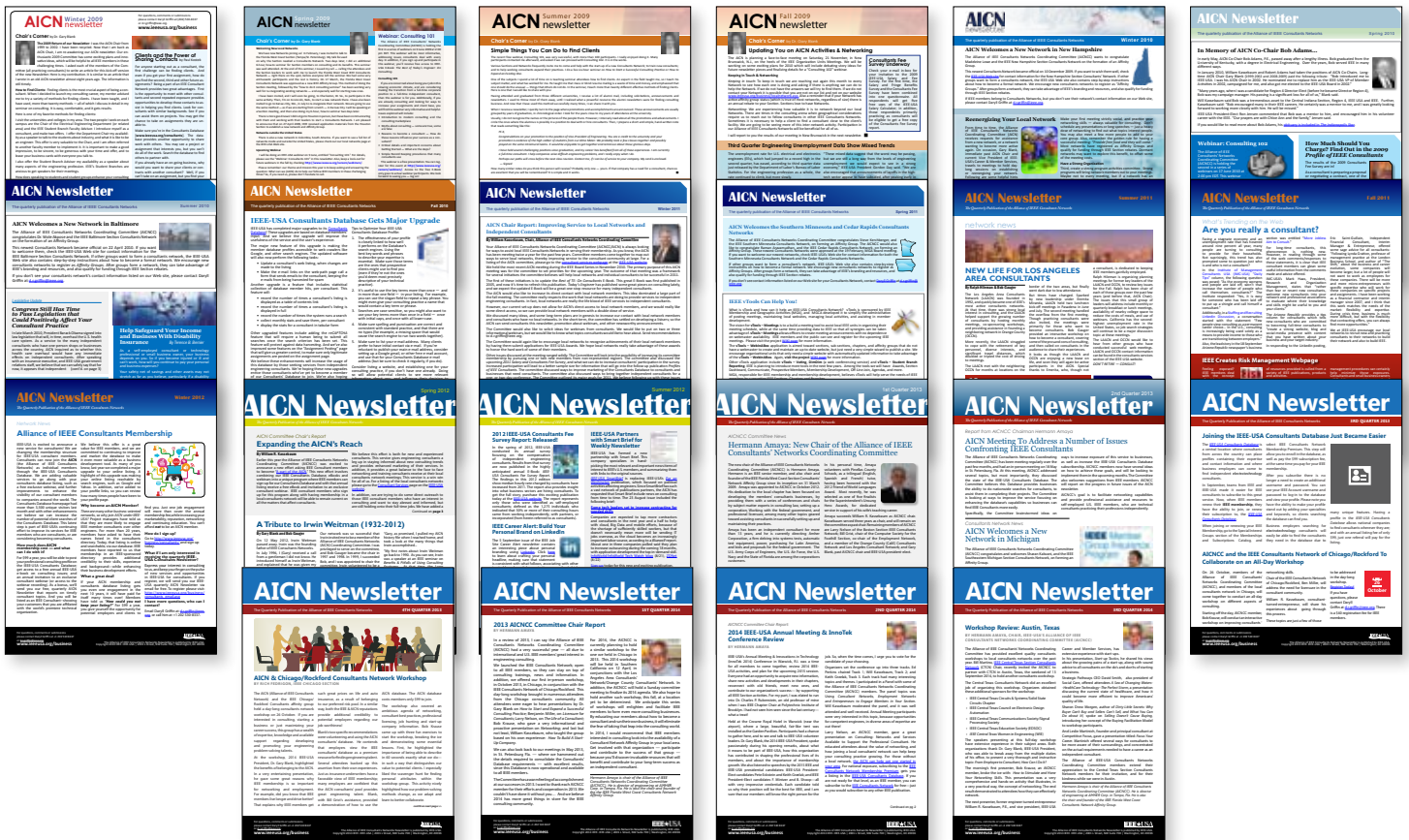
How to Get Started as an Engineering Consultant

BY WILLIAM R. KASSEBAUM, P.E.

I started my small consulting business more than 10 years ago with a small group of skilled engineers. At the time, we had only limited experience with how to run a company or market ourselves to potential customers. Over time, I have learned a number of secrets key to starting or growing a consulting practice. Succinctly put: you must identify your strengths; improve your credentials; and farm your professional network. These strategies are powerful, yet simple concepts that should guide you and foster your practice as you grow.

First of all, you need to know yourself, and identify your strengths and weaknesses. What skills do you have that set you apart from other consultants? In what areas do you perform the best? Make sure you highlight these skills and communicate these abilities to your potential clients.

Second, do you have good credentials? You can always improve your credentials, even if you have a Master's or Ph.D. You can get your Professional Engineering License (PE). And you can get other credentials in your field that may help you identify yourself as an expert in your chosen industry. Also, consider writing articles or publishing white papers on topics of interest to you. Such publications become credentials you can refer to.

Third, grow your professional network! It just doesn't matter how awesome you are if no one knows you. In consulting, people work with those they know and like. Consider volunteering with the IEEE to meet others in your field. Find and attend meetings associated with your industry and with executives and directors who may be potential customers. Introduce yourself confidently and repeatedly. Take time to grow a relationship over months and years. A carefully cultivated relationship can lead to other contracts and referrals! Also, the old adage holds that you get more work while you are working than when you are not working. That is because you are meeting people in the industry that you are working in. Those meetings and referrals are powerful. So, get out there and socialize!

In summary, you need to learn many aspects of business to help you succeed. But, the keys to getting started as an engineering consultant by getting and growing your workload is simple:

- Identify your strengths and key service offerings; highlight them when you introduce yourself
- Improve your credentials by getting your P.E. or other certifications; write articles on topics of interest to you
- Get out and meet people to grow your network; volunteer in the IEEE; become acquainted with those in your target industry
- Take time to farm — plant seeds of relationships with your professional network; water those seeds; ask for referrals

Renew your IEEE-USA Consultants Database subscription today!
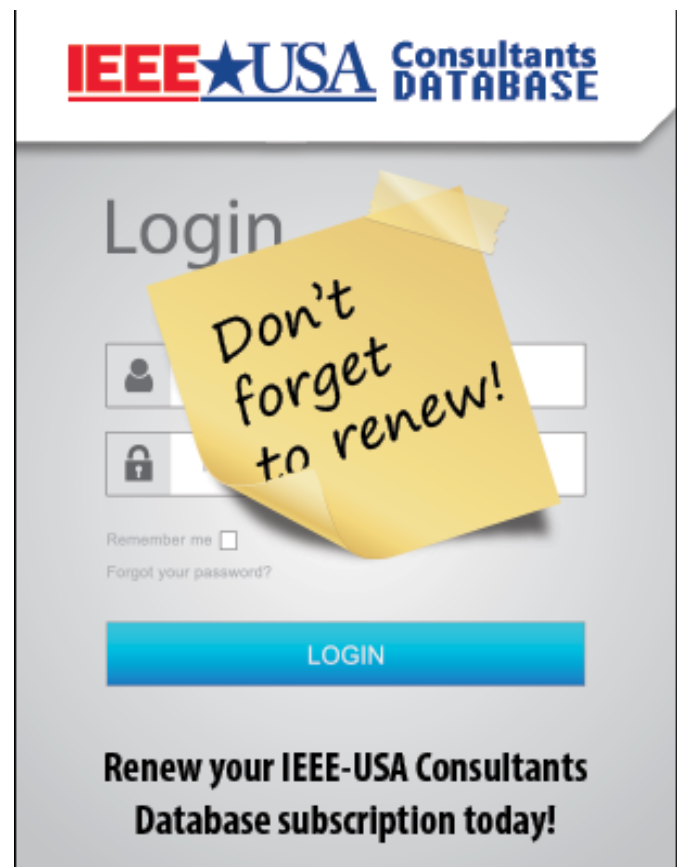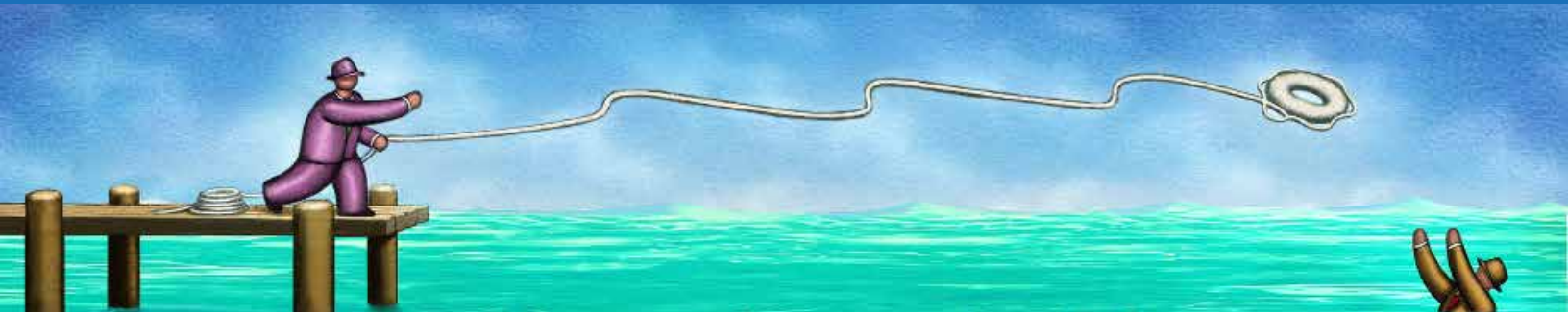
Land Your First Client

BY MICHAEL W. MCLAUGHLIN

Consulting is a big — and growing — business.

The market for consulting services is estimated to be between $130 billion and $150 billion annually. Professional consultants are among the highest paid workers, earning more than many doctors, lawyers, and other professionals.

It's not surprising that consulting is attractive to many people who want to launch a business. After all, if you have a saleable skill, it's an easy business to enter.On the flip side of the coin, consulting is fiercely competitive. Just ten firms own almost 40% of the consulting market share in North America alone, and they fight for every opportunity to grow.

Today, clients have instant access to legions of experts at the click of a mouse, and they have found low-cost, offshore alternatives for many consulting projects.

But the beauty is that many of the large, lumbering consulting firms focus on thin slices of the market. That creates an opportunity for smaller firms and individual consultants familiar with guerrilla methods to snag their share of profitable business.

So, how do you break into consulting?

Think about Your Fourth Client First

As a new consultant, you should be able to generate a project — or maybe several — through your networks of friends, past employers and colleagues. After all, research shows that clients use their networks to select consultants more than any other method, and no doubt, they know someone who knows you.

Unfortunately, your address book alone won't sustain your consulting business long-term. If your goal is to build a sustainable consulting practice, the real question isn't how to get your first client, but how to create a business that will attract the second, third and fourth clients to your practice.

Before you ask your contacts — or anyone else — to hire you as a consultant for that first project, ensure your success by taking a longer view of your business. Work hard to land that first client, but also put the marketing and consulting fundamentals in place that will secure your future as a consultant.

Start with these four simple tips:

- Know exactly what to say — in one minute or less — to prove you are the best consultant a client can find.
- Create a marketing strategy that emphasizes action over planning.
- Become a master of the consulting process, not just a subject-matter expert.
- Win with value and results, not price.

Have Something to Say…

Prospective clients rarely look for consultants until they have a pressing need. In other words, "we just can't do it ourselves; let's get outside help fast." A recent client admitted that his team had been spinning its wheels trying to resolve a complex transportation problem for three years before they hired consultants and gave them four weeks to come up with a solution. They did. The point is, that when most clients are in the market for help, they want it yesterday. And they want the best consultants they can find, at an affordable price. So, take the time to define what makes you the best consultant a client can find.

Many consultants mistakenly believe that by defining their expertise broadly, they'll appeal to a wider audience and land more clients. The less specific you are, the less likely it is clients will think of you when they need help.

Why would clients turn to you for their most important projects? Be prepared to answer these questions during your first conversation with them:

- What, exactly, are you offering? Is it strategy development, financial management, operations improvement, sales and marketing advice, technology development, change management assistance, or something else?
- Why is it needed? What specific business problem or opportunity will your services address?
- How will the client be better off after having worked with you?
- What's really different about your firm, its services, results, or approach?
- What quantifiable benefits and results can your client expect?

If you can't articulate the answers in a minute or less, keep working. You may only have that one minute to make a first impression on a client, so make it count.

And Someone to Say It To

The market has no shortage of prospective clients, but truly profitable projects can be few and far between. If you want to work for the most profitable clients, you'll have to compete for and grab their attention. And for that you must have a plan — a real one.

Many veteran consultants haven't looked at their marketing plans since first creating them. As a result, they drift from project to project, getting by on meager profit margins. Guerrilla consultants, however, leave the low-profit projects for others. They focus on attracting and keeping the clients that give them the opportunity for financial and professional growth. Guerrillas begin that process by creating a one-page marketing plan that lays out how to get and hold onto profitable clients.

Forget the reams of fancy charts, detailed analyses and bullet-proof competitive intelligence. You can draft your first marketing plan in seven sentences:

- Sentence one explains the purpose of your marketing.
- Sentence two explains how you achieve that purpose by describing the substantive benefits you provide to clients.
- Sentence three describes your target market(s).
- Sentence four describes your niche.
- Sentence five outlines the marketing weapons you will use.
- Sentence six reveals the identity of your business.
- Sentence seven provides your marketing budget.

As you create your marketing plan, remember: you are building a platform from which to consistently communicate your ideas to prospective clients. That's the fastest way to launch a new practice, because prospective clients equate the success of a firm with consistent visibility. So, create a marketing plan that maximizes your visibility in the market. Over time, keep your business networks healthy with constant attention; establish a credible Web presence; speak for industry and trade groups; participate in studies and surveys; publish articles; and make contributions to your targeted industry association and local business community.

And, most importantly, once you begin your marketing program, never stop. You'll reap the benefits for the long haul, if you stick to your marketing guns.

When a Client Asks What Time It Is, Don't Take His Watch

Perhaps the most serious challenge facing consultants is client skepticism. In a study by business analysis firm Ross McManus, only 35% of clients are satisfied with their consultants.

Part of the problem is that many consultants are deep subject-matter experts, but less familiar with the consulting process. Before you get too far into the business, get a firm grasp of the fundamentals of consulting, including how to:

- Qualify each project to determine your ability to win the work and earn a profit. These two factors don't always go hand-in-hand.
- Scope projects, so you and the client know what work will be done and the anticipated results. Your profit can evaporate, if you have an ambiguous statement of the project scope.
- Find the pricing strategy that's fair to clients and protects your bottom line. Pricing services is as much an art as a science, and there are at least fifteen different pricing strategies you can use.
- Prepare proposals that make the most of this time-consuming activity. Make sure you're talking to the decision-maker, and that the project has funding.
- Deliver flawless work and communicate effectively with your client.

Do those five things well, and you'll have more client work than you can handle. If you're new to the business, interview consultants about how they handle different aspects of the business. Read books, articles and reports by leading thinkers in the field. Consider joining one of the many professional associations for consultants. You can save years of learning things the hard way.

The End is the Beginning

Your clearest path to a new client is your network of former employers, and others who can make introductions to get that first project kicked off. Keep in mind, though, that consulting begins and ends with results.

To succeed, you must offer and deliver undisputed value to your clients and everyone else in your network. Value is also the foundation on which you must build your marketing. Your network of colleagues won't support you or your business, if your value is questioned anywhere along the way.

So, before you launch your practice, give these ideas some thought. They'll help put you on the road to long-term success.

This article is reprinted here with permission from the author. Michael W. McLaughlin is the co-author, with Jay Conrad Levinson, of Guerrilla Marketing for Consultants. Michael is a principal with Deloitte Consulting LLP, and has over twenty years of consulting experience with clients in businesses of every size, from small start-ups to some of the world's highest-profile companies. He is also the publisher of Management Consulting News. For more information, visit GuerrillaConsulting.com.

From *The Institute*: Building a Better Consulting Practice

BY JOHN R. PLATT

Bruce Katcher [above] is passionate about consulting. "I don't think anybody should have to work for an employer," says Katcher, founder and executive director of the Center for Independent Consulting and author of *An Insider's Guide to Building a Better Consulting Practice* [American Management Association, 2010]. "If you have skills, you don't need any boss other than yourself. You can own your life."

Katcher took his message to a recent meeting of the IEEE Boston Section's Consultants' Network, whose engineers and computer scientists had gathered to learn about the best business models and marketing methods for a consulting practice. The Consultants' Network helps IEEE members establish themselves as independent contractors.

Katcher opened his presentation with an anecdote from the movie *Gone With the Wind* after first describing his feelings following his last days two decades ago as a full-time employee. It was 1993 and Katcher had been laid off, ironically enough, by a consulting firm. The experience left him scared and feeling powerless, and he quickly decided that he would no longer let someone else control his family's financial destiny. "As God is my witness, I'll never be hungry again," Katcher said, quoting Scarlett O'Hara at the end of the movie. He wanted to direct his own destiny, and he decided he could do it by becoming a full-time consultant.

WHAT'S YOUR MODEL?

The first chore for Katcher was to come up with a business model for his new consulting business. "Every company needs a strategic business model," he says, "even an individual consultant."

At the Boston meeting, Katcher described 22 business models, each with its advantages and disadvantages. Unfortunately, most consultants first choose a model that won't work, he says: "This model has them charging for their time. It's a bad business model because if you charge by the hour, you have no leverage." Clients are always looking at their watches to see how much you've worked, he says. An hourly rate also leads to a terrible work-life balance, he adds, noting, "You're always a slave to the clock."

A better model, he says, is to work for a retainer. "You're charging a certain amount of money each month for a client to have access to you," he explains. For example, a software consultant might charge a client a set fee every month to be available to answer calls when certain predefined situations come up. "You don't say how many hours you will work up front, because then you're charging for your time," Katcher explains. The retainer model offers a higher income potential, as well as a greater work-life balance, he says, "because the client might not call you for three months, but you're still collecting the money."

Other business models include working on a per-project basis, which offers moderate income potential but forces consultants to remain on the lookout for the next assignment; working for a contracting firm, which offers a constant flow of work but only a fraction of the pay you'd get on your own; and the "freemium" model which, like Skype and many smartphone apps, gives away the basic work for free but adds fees for additional functions.

MARKETING TIME

Whichever business model you choose, make sure to leave enough time to market yourself so you can find new clients, Katcher advises. "If you don't carve out the time in your schedule," he says, "you're not going to be able to do any marketing."

Katcher discussed 18 marketing methods including cold-calling and direct-mailing potential clients, speaking at conferences in your area of expertise, advertising your services, and writing articles for trade magazines. Consultants should be careful to choose the approaches that work best with their individual writing, presentation, and interpersonal communication skills. "For example, I love public speaking and writing," Katcher says, "so they are great ways for me to meet potential clients. But if you don't enjoy doing those things, you'll always put that type of marketing on the back burner."

One tried-and-true marketing method turns out to be the best option for all consultants: keeping up with personal networking. "The people you're going to get business from are the ones who know you, respect you, and trust you," Katcher says. For consultants just starting out, that personal network will become the best and easiest source for getting in touch with potential clients.

CHANGE THE RULES

Katcher closes his presentations with what he calls "a lesson from the future." At the end of the movie *Star Trek II: The Wrath of Khan*, viewers learn the secret of how Admiral Kirk became the only person to pass the Starfleet Academy's Kobayashi Maru simulation: He changed the rules to get the outcome he desired.

"Here's the moral: If you keep doing the same things the same way all the time, you're not going to get different results," Katcher says. "If you want independence, if you want control of your own time, if you want control of where you work and what you do, then change the rules for yourself. Consulting is the way to do it."

This article is reprinted here with permission from the [6 May 2013 issue](#) *of* The Institute.

Considering Engineering Consulting as an Option!

BY R.H. GAUGER, P.E.

If you are an IEEE member facing a cutback due to tight budgets, downsizing, or off-shoring, perhaps you should consider consulting as one of one your options. To make an immediate savings, companies frequently lay off specialized, experienced (and more highly-paid) employees that have skills a company continues to need, but only on a part-time basis. As an independent consultant, engineers can then offer their special skills to industry for a fee. This type of self-employment can be particularly attractive. From the company's viewpoint, it has realized an immediate dollar-savings. From the consultant's viewpoint, this arrangement allows an opportunity to serve more than one client.

To make the most of such opportunities, consultants need to have up-to-date, salable skills; a high-risk tolerance; and a special mix of personal characteristics needed for self-employment. Often, experienced engineers are more likely to have acquired such abilities.

On the other hand, the demand for competitive computer skills means younger engineers can also do well in consulting.

For the consultant-to-be, the first evaluation should be whether consulting is the right option. Ask yourself:

- Are you a risk-taker?
- Can you work at home, with its many distractions?
- Can you solve new problems on your own?
- Are you organized? Can you handle multiple clients and multiple deadlines?
- Do you work well with people?
- Can you continually market your services? Some engineers find this one difficult.
- Can your finances support you during a start-up period of six months, or more?

The best time to consider consulting is while you are still employed, but you can see the handwriting on the wall. Join a local consultants network, and talk to the members about their experiences. Read all you can about consulting and the fields that you plan to enter. Network and meet potential clients. Use your vacation or free time to do some moonlighting for a short consulting assignment. If you like what you are doing, you are on track.

Consider your financial resources. Consulting requires a much smaller cash outlay than other areas of self-employment, but you will need several thousand dollars to equip your office — more if you also need a lab, or special equipment.

Much more important: planning your living and marketing expenses for the first six months, or until your first contract is completed and paid. Today, many companies are not paying invoices as promptly as they were in the past. Realize that you are entering a new field. Be aware that it may take several years before your new consulting practice is providing an income comparable to your previous salary.

Build the Network You Think You Don't Need

BY MARK HAAS, CMC FIMC

The following story is taken from the Institute of Management Consultants' USA Daily Tips (IMC USA) column. For six years, the IMC USA provided a daily tips guide to its members. This daily tip is from 23 December 2012:

I've never found networking events to be particularly productive in the consulting business. I'd rather be getting to know potential clients, rather than other consultants, or professional service providers. If the goal is to build our consulting firm, shouldn't we focus on clients?

Networking is taken as an article of faith among consultants—as well as other professional service providers, and business people of all stripes. You may be asking the important questions in reverse order. The third question is: How valuable is networking? The second question is: What do you mean by networking? The first question is: What is the objective of networking?

Robert Kiyosaki, author of *Rich Dad, Poor Dad*, says: *"The richest people in the world look for and build networks, everyone else looks for work."* His point is that, regardless of the size or breadth of your consulting practice, the pace, complexity and uncertainty of the business environment means that you will increasingly need fresh relationships, resources and information sources to thrive. A few colleagues or data sources are no longer sufficient to give you what you need. This is what networks are all about.

The next question about what networking is should not focus on "networking events." Regardless of how well such events are designed, they are largely semi-structured aggregations of people who, if you are lucky, can connect with each other. Networking events may be what most people mean when they say "networking," but it is not the same as building a network.

Building a network requires defining the people, information, skills, resources and access necessary to keep you current with trends in your industry and discipline. A network is defined, explicit and intentional. It is also continuously redefined. The final question about how valuable a network is, can be answered in terms of how critical network(s) are to your professional (and personal) growth. How damaging to your business is a loss of prospects, partners, or revenues when the market changes, key staff leave, or technologies or competitors devastate your market? Your networks are your safety valves. We can never have too many networks, and few consultants have enough.

TIP ————————————

Start by defining what you need to be agile in your business, to anticipate and respond to emerging trends. Like making a packing list for a trip, write down what you need to have, and be, over the next five years. What people or skills do you need to achieve these goals?

What different networks do you need to develop or strengthen? You may need 5-10 different networks. What is your plan to build, support and evaluate the effectiveness of those networks? How do you intend to not just connect others into your network, but to connect to other networks? The LinkedIn model of a "network of networks" is a good way to look at your own networking approach.

Finally, since you don't know what you will need a few years from now, how will you build your networks—so you have access to information and people you may think you don't need?

Source: Institute of Management Consultants USA, 725 Daily Tips, 12/23/2011.

Larry Nelson's War Stories: Part II

BY LARRY G. NELSON, SR.

Fixed Price Contract vs. Hourly

Many consultants refuse fixed price contracts. I thrive on them. Consultants, for your clients that want fixed price contracts, do you know that change orders from original specs can net five times the original hourly quote? The key to success is a solid spec that all parties agree to. I have one client that continuously wants a fixed price contract, and then can't settle on a spec. The client locked-in and paid the retainer, but continued to change things monthly. I give them the cost to implement the change, and they pay. The last two projects cost them about five times what a straight hourly rate would have been, but they are very happy with my perceived flexibility.

With the economic climate as it is today, companies need tight budgets. Clients are afraid of anything open-ended. When you quote only an hourly rate, they see it as a never-ending expense. The problem for the consultant comes when the specifications are not fully developed. Creeping features add costs and cause delays.

If you do not have clear specifications, the client will automatically assume you will flex to what they need for the original price. This assumption is especially true on a contract to deliver a "Widget" that "does XYZ," but they change the "how it will be done" daily. When you have a solid specification every time, and clients change something—you can simply let them know the impact on cost and delivery time, then let them decide if the change is worth it. If their spec is totally inadequate, you can often divide the project, and quote separately for the specification development.

One thing to be very careful of is not allowing your customer to pay less than the fixed price you quote. You are taking the risk, you deserve the rewards. You are not giving them the fixed price quote as an hourly rate, with a not-to-exceed price. If you have done the quote correctly, you will not lose money. If you come in under your budgeted time to the defined specifications, making the client happy, and yourself more profit, then *congratulations*! On the other hand, if you take more hours than you budgeted, you are stuck with the fixed price. You have hopefully still made the client happy by an on-time delivery (there are 24 hours in a day available to work out problems), and you learn from your mistakes!

When a Client Demands a per person fee; consultant can make double or triple their hourly rate, after expenses

I had a client I offered to do some training for back when my rate was $60.00 per hour. They purposed that I train small groups of employees, and they were going to print the handouts for distribution to their employees. I told them it would take a few days to create the handouts and the training program, and depending on how many people were to be instructed, it would take two to four hours per group for training. The client then asked for a per person fee, which included all the handouts. I provided another quote (high — to discourage them), yet they went with it. I had to cover myself with a high quote, assuming the client would throw small groups at me, as they implied. When the dust settled, all the employees came in on a Saturday morning. We did a single, 2.5-hour seminar. The client never asked for a revised quote to the new terms (one single session), and gladly paid me the per person rate.

If you are lucky enough to land contracts like these, be grateful and save the money for when things do not go as well. Consulting can be very cyclical, so you need to budget — and keep an even keel.

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