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THE FOUR WAYS
SOUND AFFECTS US

CLICK to watch Julian Treasure talk about “The Four Ways Sound Affects Us” presented by TED.

Playing sound effects both pleasant and awful, Julian Treasure shows how sound affects us in four significant ways. Listen carefully for a shocking fact about noisy open-plan offices.

Julian Treasure is the chair of the Sound Agency, a firm that advises worldwide businesses -- offices, retailers, hotels -- on how to use sound. He asks us to pay attention to the sounds that surround us. Treasure is the author of the book Sound Business and keeps a blog by the same name that ruminates on aural matters. In the early 1980s, Treasure was the drummer for the Fall-influenced band Transmitters.

Outside the Box will be a standing column designed to introduce new ideas and concepts from other resources and professions that may help stimulate a new way of thinking about total cost management. We invite Source readers to send suggestions on other sources to AACE International Executive Director Dennis Stork at dstork@aacei.org.
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MEMBER ONLY CONTENT
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As a candidate for President-Elect, I stated that one of the “big” goals that I wanted to achieve during my role as President of AACE International was to expand our membership base to 10,000 members by 2015. At the winter Board of Directors meeting in January, Headquarters reported that the membership as of December 31, 2013 was 8,859, representing an increase of 221 members, or 2.6%, from the end of 2012. This is the 5th consecutive year of membership growth, however, at this rate, reaching 10,000 by 2015 appears to be a long-shot. I remain committed to the lofty goal of reaching 10,000 members in the next couple of years, with the hope that AACE will continue to experience sustained, steady and smart growth into the future without sacrificing the quality products and services that we deliver.

Take note! As stated in my acceptance speech at the Annual Meeting, this big goal for membership growth cannot be achieved without your help. A group of AACE leaders at the strategic planning session held at the fall Board meeting unanimously identified AACE’s volunteer members and their collective skills, knowledge and experiences as the top strength of our organization. So it is logical that I turn to that strength and encourage existing members to recruit new members. To help you help me, AACE has enacted several programs to encourage fellow professional colleagues to join and become part of our association.

Hopefully, you noticed and took advantage of the recent flurry of announcements and programs promoting membership and aimed at attracting new members. Our 2013 Member Get-A-Member program drew to a close on January 31, 2014. For the last three months of 2013, and extended until the end of January 2014, any member who sponsored a new AACE member will be placed in a drawing to win the grand prize of an all-expenses paid trip to the 2014 Annual Meeting in New Orleans, Louisiana. This will include round trip airfare, hotel accommodations, an allowance for incidentals, and registration fees for the Annual Meeting. Now is as good a time as any to Get-A-Member. The Member Get-A-Member program will continue again in 2014, with quarterly drawings to win $250 of credit toward any AACE service or product.

The other major promotional tool is a membership recruitment video that provides a comprehensive overview of membership benefits. The video is available on the AACE website and is also available in Spanish and Portuguese. The availability of this professionally prepared video takes some of the pressure off of individuals and Section leaders who might otherwise have hesitated to promote membership or recruit colleagues, because there was no readily available resource and they had to develop and present their own material. I encourage you to share the video with colleagues at a Section meeting, forward the link to the video at www.aacei.org/mbt/recruitment to individuals, and/or share with co-workers who have not yet realized the benefits of AACE International membership. As an added “selling point,” you can refer to the results of the most recent AACE International Salary Study which reported that through 20113, AACE members earned 6.1%
we have an excellent opportunity to grow the membership in tools and programs available to members, it would appear that in North America. Considering this data, and the promotional side of North America is almost three times that of growth during the Board meeting in January indicated that growth out of North America and two are from Canada. In addition, reports of the Top 10 Sections with member growth are from outside national outreach is clearly demonstrated by data showing six were:

<table>
<thead>
<tr>
<th>Rank</th>
<th>Number of Member Growth</th>
<th>Number of Members</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Chinook-Calgary</td>
<td>Chinook-Calgary (884)</td>
</tr>
<tr>
<td>2</td>
<td>Russia</td>
<td>Houston-Gulf Coast (545)</td>
</tr>
<tr>
<td>3</td>
<td>Houston-Gulf Coast</td>
<td>National Capital (341)</td>
</tr>
<tr>
<td>4</td>
<td>Brazil</td>
<td>United Arab Emirates (317)</td>
</tr>
<tr>
<td>5</td>
<td>Malaysia</td>
<td>Southern California (309)</td>
</tr>
<tr>
<td>6</td>
<td>Southern California</td>
<td>Australia (294)</td>
</tr>
<tr>
<td>7</td>
<td>Peru</td>
<td>Toronto (274)</td>
</tr>
<tr>
<td>8</td>
<td>United Kingdom</td>
<td>Rocky Mountain (235)</td>
</tr>
<tr>
<td>9</td>
<td>Nigeria</td>
<td>San Francisco (201)</td>
</tr>
<tr>
<td>10</td>
<td>Montreal</td>
<td>Arabian Gulf (193)</td>
</tr>
</tbody>
</table>

Congratulations to these sections! The result of our international outreach is clearly demonstrated by data showing six of the Top 10 Sections with member growth are from outside of North America and two are from Canada. In addition, reports during the Board meeting in January indicated that growth outside of North America is almost three times that of the growth in North America. Considering this data, and the promotional tools and programs available to members, it would appear that we have an excellent opportunity to grow the membership in certain regions of North America, while continuing the upward growth trends in international markets. This “low-hanging fruit” for membership would best be harvested by existing members.

Over the coming year, I will work with Headquarters, President Elect Martin Darley, the incoming VP Regions – North America, and incoming VP Regions – International to develop some friendly competition among certain sections with a President’s Challenge - Section Membership Competition. The premise will be to invite some of the larger sections, and at least one from each region, to participate in the President’s Challenge to measure the net membership increase as a percentage of membership during the challenge period. The section with the largest net membership increase will win the challenge and receive a variety of awards which could possibly include a “tribute” from each participating section, a breakfast in honor of the winning section, and/or a Presidential visit to the winning section. This proposed President’s Challenge reminds me of an Annual Meeting several years ago at which a competition between two sections was decided at the Business Meeting and where the bet involved the exchange and wearing of hockey sweaters. We hope that this President’s Challenge will rekindle friendly completion among sections, while also generating membership growth through the strength of our existing members.

As Dr. Carson wrote: “By Thinking Big, we can transform the world.” Those of us who are members of AACE already enjoy the benefits of membership. I am asking that you share your experience with colleagues, recruit and encourage them to join, and help us think big and reach the 10,000 member milestone. Our goal is not to be the biggest organization we can be, but rather the best organization we are capable of becoming, and expanding our membership base with measured and sustainable growth helps achieve that goal. Thus, our goal is not simply to get bigger, but is to grow AACE to further enables growth of the technical, education and certification services and products AACE International can deliver to our members and professionals in the Total Cost Management industry.

When we reach 10,000 members with your help, AACE will be almost double the size it was when I first joined the Board. We have already experience growing pains as membership expands globally and we are now updating AACE’s strategic plan to consider ways to more efficiently lead and manage the association and enable members to work less stressfully, more profitably and more productively. Don’t get me wrong; growing pains are welcome. So please answer my challenge to existing members to recruit new members (even one) in 2014; it’s absolutely and more productively. Don’t get me wrong; growing pains are welcome. So please answer my challenge to existing members to recruit new members (even one) in 2014; it’s always a good time to Get-A-Member.

Thank you for all of the hard work that you do to contribute to AACE International. ♦

If you would like to contact our current president with questions or comments about The President’s Message please address your email to president@aacei.org. To engage in other discussions, check out AACE International’s Online Forums at www.aacei.org/forums.
In today’s complex, litigation-prone business environment, individuals with the proven capability to assess risk and guide organizations to the best decision possible are in high demand. AACE International’s new Decision and Risk Management Professional™ (DRMP™) certification program establishes credentials that recognize professional expertise, skills and knowledge in the decision and risk management area of practice within cost engineering.

If you desire to be recognized for strong skills and knowledge in decision and risk management as it relates to project management, the DRMP certification was made for you.

Candidates may include but are not limited to risk managers, decision and risk management consultants, capital program managers or planners, project managers, value engineers and any cost engineering professionals focusing on asset and project decision and risk management.

Skills and knowledge range from analytical (e.g., statistics and modeling) to socio/psychological (e.g., risk elicitation and communication) to management (e.g. risk response planning and management).

For more information about the new AACE International DRMP certification, go to [www.aacei.org/cert/DRMP/](http://www.aacei.org/cert/DRMP/)
AACE members can vote now through 4 p.m. on Saturday, March 15, for candidates for the 2014-2015 AACE International Board of Directors. Members whose dues were paid through Dec. 31, 2013, are eligible to vote.

AACE uses an electronic voting election process. Ballots, candidate photos, biographies, and goals for the office they seek are posted at https://eballot4.votenet.com/aacei. Your vote counts, so please take a few minutes, log onto the AACE website, www.aacei.org, review the slate of candidates. Log on between Feb. 1 and March 15 and vote for your choice of candidates. Members will be able to vote from a computer, Smartphone, or other electronic device.

The 2014-2015 slate of candidates includes the following: Vying for President-Elect are John C. Livengood, Esq., AIA, CFCC PSP, and Julie Owen, CCP PSP. For VP-Finance, the candidates are Logan Anjaneyulu, CCP CEP PSP, and Ann Marie Cox, EVP and Joseph W. Wallwork, PE CCP CFCC PSP FAACE. For VP-North American Regions, Cristina Baltazar, PE PSP, is running unopposed as is Madhu P. Pillai, CCP, for VP-International Regions.

Regions 1, 2, 4, 7 and 9 will elect a Director-Region to the AACE Board of Directors. Candidates in Region 1 are: David Colangelo, CCP, and Cindy Hands, P.Eng. CCP. Candidates in Region 2 are: Jonathan McNatty, PSP and Calvin Speight, CCP. Candidates in Region 4 are: Jacqueline Doyle, PE PSP and Ken Krill, PSP. Candidates in Region 7 are: Mohammed Rafiuddin, CCP PSP and Ghulam Mujtaba Shaikh, PE. Garvin McCann is running unopposed in Region 9. To view each candidate’s biography and goals for office, if elected, please visit: https://eballot4.votenet.com/aacei

CANADIAN MEMBERS TO VOTE ON BYLAWS ReVISIONS

Members of sections and at-large members in Region 1 (Canada) will vote on whether to approve new bylaws, as required by the new Canada Not-for-Profit Corporations Act, according to Region 1 Director Mathew Nicholas, PSP. The revisions were unanimously recommended for approval by the AACE International Board of Director during their Oct. 27, 2013, meeting in Morgantown, WV. The primary purpose of the AACE Canada Inc. is to allow Canadian residents to make tax advantaged contributions to the AACE education and scholarship funds. The bylaws will be included on the February 1-March 15 AACE International annual election ballot. To review the proposed Bylaws, go to the following link: www.aacei.org/aboutUs/structure/elections/CanadianBylaws.shtml

Members who join in 2014, or members whose dues were unpaid in 2013 and who renew in 2014 will not be eligible to vote. Members in regions not electing a director-region candidate, will receive access only to the primary ballot. Members in regions electing director-region candidates will receive access to a ballot that includes the candidate or candidates for their particular region. Members in Region 1 (i.e., Canada) will receive a ballot that also includes a for or against vote for the revisions to the AACE Canada Inc bylaws amendment, as required by the new Canada Not-for-Profit Corporations Act.

Once you log into vote, please check to make sure that the ballot that comes up on your computer or other electronic device includes all of the candidates you believe you should be voting for, and for Canadian members that your ballot includes the bylaws amendment vote. The ballot you receive is determined by your section as listed on your electronic membership record in the AACE database. If you believe you have not received access to the correct ballot, log out without voting and contact AACE.
VOTING TIPS

- Log on to www.aacei.org/aboutUs/structure/elections/ and enter your username and password.
- Review the photos, candidate biographies and goals for office.
- Double check that you have received the correct ballot. Members in Regions 3, 5, 6, 8 will receive a general ballot and vote on candidates for President-Elect; Vice President-Finance; Vice President North American Regions and Vice President International Regions.
- Members in Regions 1, 2, 4, 7, and 9 will receive a ballot that also includes the candidate(s) for Director-Region for their individual region. The region designation is determined by what each member lists as their primary region in their profile at the AACE database.
- Region 1 Canadian members will receive a ballot that also includes a for or against vote on updated and revised bylaws for AACE Canada Inc.
- Members can only vote once. Ensure that you have the correct ballot, that you cast a vote for each candidate of your choice. Stop and exit the voting process if you encounter any problems or have questions that you need answered before finishing voting. Once a member submits an online ballot, you cannot go back and make any changes.
- If you encounter any voting problems or need answers to any questions, please e-mail: cheller@aacei.org or mgelhausen@aacei.org or call AACE headquarters at 304-296-8444 no later than the 5 p.m. eastern time on Friday, March 14. Questions can be answered during regular office hours of 9 a.m. to 5 p.m. Monday-Friday. AACE offices will be closed on Saturday, March 15, the last day of voting. Remember you can vote electronically through 4 p.m. on Saturday, March 15. The electronic system will automatically cut off voting at 4 p.m. on March 15. You must have completed and filed your ballot prior to the cutoff or the system will not count your vote.
- AACE uses Votenet Solutions, an independent third party electronic election services provider. The Votenet Solutions system has various safeguards programmed in to ensure that only eligible members can access the ballots, that each member can only vote once, and that all valid votes are secure and properly counted.
- The official list of winning candidates is provided to the Vice President-Administration. All candidates are notified as to whether or not they are the winning candidate. The AACE Board of Directors approves the list of winning candidates and certifies acceptance and close of the election for 2014-2015. A list of winning candidates is posted at the AACE website and listed in the AACE Source magazine.
Goals and Objectives:

As a great admirer of AACE, I was pleased to see the organization persist—ever thrive—during the worldwide economic troubles. With recovery afoot, I believe it is time for AACE to invest in those efforts that will maintain and expand membership. AACE’s underlying strengths are its vibrant and successful certification programs, detailed and progressive education activities, and industry-leading technical offerings. To provide greater service to our current and future members, we need to use these strengths to expand AACE’s leadership role as the PREMIER organization in the world for Total Cost Management. I am dedicated to continuing my service to AACE. As President, I will:

- Implement the new Goals and Objectives identified by the Board of Directors in the Fall 2013 planning meetings.
- Expand AACE’s membership diversity.
- Reinforce efforts that have made AACE certifications the essential credential for cost management professionals.
- Work with the Board, Associate Boards, and volunteers to expand our educational, training, and certification programs to serve members and expand services to corporate supporters.
- Work with AACE’s Vice President of International Regions, AACE staff, and volunteers to expand AACE’s international presence through regional growth initiatives.
- Expand AACE’s worldwide name recognition through the International TCM Conferences.
- Improve our market penetration into specific sectors through Government Roundtable symposiums and other targeted initiatives.

John C. Livengood, Esq., AIA, CFCC PSP
AACE International Activities:

John Livengood is a long-standing member of AACE, who since 2002, has worked diligently to increase AACE’s body of knowledge and its international stature, and to champion the organization to outside organizations and to the industry. John has authored and presented a dozen technical papers at Annual Meetings over the past 11 years, several of which have appeared in Cost Engineering. He was the co-author of RP 29R-03 “Forensic Schedule Analysis,” a well-regarded publication which has brought much attention to AACE. He has brought further attention to AACE by writing and speaking on Total Cost Management topics at other organization’s conferences, including CMAA, ASCE, Construction SuperConference, and ABA. Furthermore, John is an author and co-editor of a forthcoming ABA book on forensic schedule delay analysis. Within AACE, John is the Vice President Finance, and previously was Region 2 Director. While on the Board, he was instrumental in amending the By-Laws in 2013, revising the Canons of Ethics in 2012, and identifying new revenue-generating opportunities. Prior to joining the Board, he served four terms as Chairman of the Claims and Disputes Committee, and was awarded Outstanding Committee Chairman in 2008 and 2010. John also assists the Certification Board by grading CFCC exams. John is an Associate Vice President with ARCADIS in the Construction Claims Services Group in Washington, D.C, with nearly 40 years of experience in design and construction. John received his B.Arch. from Syracuse University (1975) and his J.D. from Catholic University (1982).

Julie Owen, CCP PSP
AACE International Activities:

Julie Owen is a passionate volunteer and has been involved with AACE since 1994. She has served five years on the AACE Board as Vice President-Regions and past Director of Region 6. She serves on multiple committee and task forces related to international membership expansion initiatives for AACE. She successfully authored motions to create Regions 9 and 10; task forces for Latin America, Eastern Europe, and India expansion; and facilitated to establish an annual International Total Cost Management Conference. Julie has successfully worked with the Associate boards on representing both domestic and international perspectives for technology, certification, and education. Julie is an active supporter of the AACE mentoring program since 2010, and has been involved in mentoring several young professionals around the globe. Julie is a contributing member to the Young Professionals and Women in Project Controls committees. Julie is a frequent presenter at Annual Meetings and has presented at conferences in Shanghai, Dubai, Moscow, Peru, and Chile. Julie currently works as Senior Project Control Manager at Los Angeles Metro managing the $36 billion transportation expansion initiative. She holds certifications for Planning and Scheduling Professional (PSP) and Certified Cost Professional (CCP). Julie instructed the PSP certification prep course for five years. She is past president of the Southern California Section. She has master’s degree in business administration from University of Redlands and her bachelor’s degree in Construction Science from Texas A&M.

Goals and Objectives:

I am well known as an action oriented and proactive policy maker that leads by example to move the Association in a new direction with better results and outcomes. Our Association is at a pivotal point and must continue making positive changes in policies to expand and grow the association into a diverse global organization. As President I will:

- Provide accountability and visible measurement of the Board for membership by meeting strategic/operational objectives.
- Continue to implement global expansion strategic initiatives to increase the name brand recognition of AACE International throughout the world as provider of world-class quality Technical, Educational, and Certification products.
- Continue the retention programs and work to develop programs to increase the membership, using the most current best international practices.
- Position the International TCM Conference for continued success and ensure that it is offered annually around the world.
- Offer sections around the world best practice guide information to expand regional symposium events.
- Develop a young professional outreach to attract younger members and new recruits from colleges/universities.
- Advance the AACE Mentoring Program to benefit membership and position the program for continued growth.
- Foster diversity in the association by instilling the culture of exclusive, yet inclusive.
- Promote an agile association capable to maneuver to changing global markets and competition from other organizations.
- Leverage relationships in global member communities and nurture industry partnerships.
Christina Baltazar, PE PSP

**AACE International Activities:**

Ms. Baltazar has been active in AACE since 2009. She served as Vice President, National Capital Section, 2009-2011; Vice President, Baltimore Metro Section, 2011-2012; and Regional Director, Region 2, 2012-2014. As VP of the National Capital Section, she successfully recruited members from the Baltimore area to re-establish the Baltimore Metro Section in 2010. As VP of the Baltimore Section, she was instrumental in establishing the section in terms of regular meetings, a section website, and corporate sponsorship. As Region 2 Director, she re-established two dormant sections, established one new section, fostered communication with section leadership, and is in the process of planning the 1st Annual Northeast TCM Symposium, scheduled for March 20-22, 2014 in Philadelphia. She was named the AACE Outstanding Regional Director of the Year, 2012-2013.

She is a Professional Engineer in Maryland, earned her Planning and Scheduling Professional (PSP) certification in 2009, and is a Certified Construction Manager (CCM) through the Construction Management Association of America. She holds a MBA (2006) from Loyola University Maryland, Baltimore, MD, and a BS in Civil Engineering (1994) from the Johns Hopkins University, Baltimore, MD. In 2008, she started her own firm, MCS Consulting, Inc., which provided CPM scheduling, claims review, and cost estimating services. In 2013, the firm was acquired by PRIME AE Group, Inc., and she is currently with the company as the Director of Project Controls.

**Goals and Objectives:**

I am a goal-oriented person who strives to get results as efficiently as possible. To make our great organization even better, my goals are to modify our processes so that we can get more things done in a shorter amount of time, reach out to the large percentage of members who are not enjoying the full advantage of their AACE membership, and assist in our organization’s goal of a strong international presence. To do this, I plan to:

- Establish better communication between the regional directors. This means making the best use of our limited time together.
- Establish regular virtual meetings for those who are unable to participate in section meetings.
- Support regional directors and section leadership in planning and implementing meetings and workshops at the regional level.
- Assist regional directors with managing their regions efficiently. This includes addressing inactive sections, nurturing struggling sections, and challenging historically strong sections with new goals.
- Assist the new VP of International Regions with international expansion efforts.

Madhu P. Pillai, CCP

**AACE International Activities:**

Madhu P Pillai has served on the AACE Board as Region-7 Director (Europe, Middle East, Asia and Africa) and has chaired the International Marketing Advisory Committee. He was the Co-chair for the first AACE International TCM Conference held in Dubai, and is currently chairing the upcoming ITCM Conference in Bangkok. He served as President of Arabian Gulf Section and India Regional Section. Madhu was awarded the O T Zimmerman Founder’s award in 2008, and is a recipient of the Millennium Achiever Award of International Institute of Success Awareness. He currently serves on the board of International Cost Engineering Council (ICEC). Madhu is Projects Director with Kentz Engineering International Limited; part of Kentz Group operating across 30 countries in Oil & Gas, Power, Petrochemical and Infrastructure sectors. He has 28 years of broad-based industry experience in India, Nigeria, USA, and most of the Middle East Countries. He is an Electrical Engineering graduate - B Tech (India) with double post-graduate in Human Resources Management – MHRM (India) and Business Management – MBA (UK). He is pursuing a PhD in the area of “Strategic Project Management Leadership” (India) and holds triple professional certifications of Certified Cost Professional (CCP), Project Management Professional (PMP), and an Associate Value Specialist (AVS). He is a frequent speaker at international/global conferences organized by OMAINTEC, PMI, IPMA, AACE, QAI, and the European Cost Congress, etc. Madhu was keynote speaker in the Global Symposium on Project Management for Economic Development and the International Conference on Infrastructure Project Management. He is also a frequent speaker for various professional associations for motivating and inspiring their membership in different areas of professional development. Madhu has chaired international conferences in the areas of EPC, and Cost Management; He is also a “competent Toastmaster”.

**Goals and Objectives:**

With my international exposure working with MNCs in wide geographic locations, volunteering for non-profit organizations and speaking engagements with international conferences, blended with great passion for AACE; my key goal will be to make AACE globally recognized as the de facto advocate for Cost Management and Project Controls and thereby promoting a fast growing global AACE family. I plan to achieve this by working with the Board, Regional Directors, Section Presidents and the HQ team to:

- Execute a strategy for increasing AACE visibility within professional communities and across corporate circles.
- Facilitating more events at the region and section levels and publicize AACE’s knowledge sharing programs and systems.
- Working closely with Regional Directors for reactivating dormant sections and launching new sections.
- Initiating a special drive to encourage industry and business to specify AACE certifications as “Desirable” (at the least) in their employment advertisements.
- Make AACE more agile to the changing international markets.
- Create greater collaboration among global member communities/components, and nurturing more global partnerships among industry, academia, governments and society.
Logan Anjaneyulu, CCP CEP PSP
AACE International Activities:
Logan Anjaneyulu is an executive in the oil and gas industry and has over 12 years of engineering and management experience. Logan currently is a Director of Turnaround and Project Controls at Valero Energy Corporation. He currently lives and works in San Antonio, Texas. Logan has been an active AACE member since 2005, and obtained numerous certifications with AACE including CCP, CEP, and PSP. He served on the Southern California section board multiple years. In 2009, Logan was nominated to serve AACE as the Chair of Diversity Task Force (DTF) to promote diversity within our Association. He also served as the Chair of the AACE Mentoring Program (2010-11) that was instituted to foster mentoring among AACE members’ worldwide. He has been a co-instructor of the Planning and Scheduling certification review course at AACE Annual Meetings on behalf of the AACE Education board. Logan is also the recipient of the “Outstanding Educator of the Year Award” for 2009 and “Distinguished Service Award” for 2010, both awarded by AACE Southern California Section. He was awarded the “2012 Outstanding Young Professional Award” by AACE International. He was elected to serve on the AACE Board as a Director-Region 4 during 2012-13 board year. Logan is currently serving as the Chair of the AACE India Task Force, to explore growth opportunities in the Indian Subcontinent.

Educational Qualifications:
Logan holds a bachelor’s degree in Civil Engineering from the College of Engineering Guindy, Anna University, Chennai, India; a master’s degree in Construction Management from Michigan State University, East Lansing, Michigan; and an MBA from the Kellogg School of Management at Northwestern University, Evanston, Illinois.

Goals and Objectives:
As Vice President of Finance, I am committed to accomplish:

- Work with the Board to plan, develop, and enforce financial policies that ensure and maintain the core values of our association and help meet our association’s established goals.
- Oversee and maintain the annual budget. Help the Board steward a balanced and meaningful budget.
- Work with the Board and staff to maintain the current financial health of our association and implement sustainable financial growth strategies that can fuel long term growth globally. Align financial operations with our strategic plan.
- Ensure that our organization is compliant with state and federal guidelines as a nonprofit organization.
- Perform monthly review of budgets, P&L, balance sheets, and income statements. Prepare and present quarterly and annual budget reports to the Board of Directors and the Membership. Ensure the financial stability of AACE.
- Maintain detailed fiscal records and serve as a custodian of association funds and investments. Offer strategic direction to Board on budgets, expenditures, and investments.
- With tremendous growth in the International Markets, ensure that our international regions and sections are in compliance with financial regulations of the respective region and the country.

Ann Marie Cox, EVP
AACE International Activities:
Ann Marie Cox is an active member of AACE International. Ms. Cox is currently serving on the Education Board. In the past, Ann Marie was part of the team to create the Earned Value Professional Certification (EVP). Ms. Cox currently serves as an advisor to the San Francisco Bay Area Section. In the past, Ann Marie was the Western Winter Workshops Planning Chair. Ann Marie retired from that position after the 50th Western Winter Workshop in 2011.

Ms. Cox has over 20 years experience in multiple industries including, manufacturing, environmental, software, engineering, and construction. Ann Marie has experience in both field and home office positions in project management and project controls consulting; project auditing, project troubleshooting, software implementation, and project management, project controls and Earned Value Management Training. Since 2000, Ann Marie has worked for a private software company and has helped grow the company into an international leader in Project Management Software.

Ms. Cox obtained a B.A. in Geology from Whitman College and an M.B.A. from Willamette University. Ms. Cox also was the recipient of a National Association of Geology Teacher’s Fellowship and performed research on the active volcano in Hawaii.

Goals and Objectives:
My goal is to improve the communication of the financial goals and performance of the organization to the Board of Directors and AACE members. Specific objectives include:

- To work closely with Headquarters and the VP Regions to ensure timely submission and disbursement of dues to the Sections.
- To work efficiently with Headquarters and the Executive Director to maintain timely and accurate financial records.
- To arrange for the annual audit as required of a charitable tax exempt organization.
- To prepare the annual budget and prepare quarterly reports to the Board of Directors and Association members for performance against the budget.
- To oversee the Association’s fiscal plans and investment portfolio.
- Ensure that Sections understand the Associations’ 501 c 3 status and the potential implication of activities on that status.
- To work with the Associate Boards to develop and implement new opportunities to increase revenue with the Association’s products and services.
- To actively encourage members suggestions, ideas, and solutions to improve the fiscal growth of the organization.
Joseph W. Wallwork,
PE CCP CFCC PSP FAACE
AACE International Activities:
Joe has been a member of AACE since 1995, and has been honored with the status of Fellow by the AACE Board. He has served as the President of the Metro New York Section (1997-1998, 2005-2007), as well as serving as Section Secretary and as a Director. Joe is a past AACE Board member, serving as Director Region 2 and as Vice President Regions. He also served as the Chair of the Tech Board and has contributed a number of articles to Cost Engineering journal and has presented papers at Annual Meetings.

Professional Experience: Joe is currently the Operations Manager for New York City office of ARCADIS Construction Claims Services Group where he performs and manages not only claims and related disputes, but also project controls and risk assessment for the development of numerous types of projects. His past experience includes managing the estimating, cost engineering, risk, and scheduling services for the redevelopment of the World Trade Center site in Lower Manhattan and working for Construction Management and Consulting firms where he managed and participated in estimating (Chief Estimator), scheduling, project management, and claims assignments, including expert testimony in trial and arbitration. Joe participates in various professional development seminars and presentations. He has presented at AACE, IRMI, and ACEC annual meetings and taught classes and seminars at the NYU School of Continuing and Professional Studies.

Goals and Objectives:
The Bylaws provide that the VP Finance shall, “have charge of the funds of the Association.” This creates a duty and a responsibility to all of the members and to those who look to AACE to be the leader in industry education. As VP Finance my goals and objectives are:

• Oversee the disbursement of the Associations funds with the authorization of the Board.
• Arrange for and insure the adequacy of the audits required by our Constitution and Bylaws and report those results to the Board and the membership.
• Communication to Members – insure that the financial status of AACE is both healthy and transparent with members having full knowledge about the status of the Association.
• Support the initiatives of the Board of Directors through prudent management of the Associations finances.
• Insure that as the Board considers new policies and programs that the Board is made aware of and considers the financial benefits or negative implications before proceeding.
• Work to insure that the membership dues are at the minimum appropriate level to support the work of the Association and that dues are collected in fair proportions from among all the various countries represented by our membership.
• Insure that the Sections receive their maximum section dues and advice and help for all financial matters.
• Work with the Certification Board to insure that funds are in place to continue ongoing, successful, certifications program.
• Work with the VP Regions and all the Regional Directors to understand and respond to the needs, requests, and wishes of the membership.
• Work to provide best value to the membership.

Garvan McCann
AACE International Activities:
Garvan McCann, originally from Ireland, trained as an electrical engineer and quantity surveyor. Garvan has spent more than 25 years specializing in the contract and cost management of electrical instrumentation industrial projects in the petrochemical, oil and gas, mining, pulp and paper, building, brewery, float glass and power industries. Since 1988, Garvan has spent the majority of his career working internationally in countries such as Australia, Luxembourg, Belgium, Holland and to a greater extent in South Africa.

Garvan started his career in 1986 with M.F.Kent, a specialist electrical and instrumentation company, and after transferring to South Africa in 1988, continued with companies such as Turner and Townsend Quantity Surveyors, B.E.Morgan & Associates, Macanna Construction Cost Management and Alstom. Garvan is employed in the contract management and legal department for Alstom, a company which has been present in South Africa for more than a century with a history of technological excellence and commitment to local economic and social progress, with responsibility for the implementation of the Alstom core set of mandatory principles and processes for contracts entered into with the end customers from contract award up to final acceptance and final account.

Garvan first became a member of the Southern African Project Controls Institute (SAPCI), previously known as the Cost Engineering Association of Southern African (CEASA), in 1992, and has been the President of SAPCI for the past four years. SAPCI which is the Southern African Section of AACE, provides professional support to people and organizations whose work and interests include, among other things, cost estimating, cost control, planning and scheduling and risk management.

Goals and Objectives:
Garvan has been involved in cost engineering for over 20 years with 6 of those years as an active participant, as a board member, of the AACE Southern African Section. Garvan has seen a tremendous increase in interest from colleagues in receiving training in order to achieve AACE accreditation, as it has become the accepted benchmark for the regions project controls professionals. Garvan’s goals are to continue to promote awareness of AACE accreditation, to increase communications between the AACE and Sections and to promote growth and continued professional development.

Garvan sees the role of Director of Region 9 as ensuring that your association continues to serve you the valued members and supporting the Region’s Section Presidents to:

• Improve communications between Region Sections and AACE by encouraging use of teleconference meetings and to have at least one meeting per year with each Section and AACE.
• Encourage and facilitate communication between Sections to share ideas on continued professional development and to expand their project controls community.
• Promote awareness of the AACE accreditation by identifying the acceptable training service providers, local to their Section, and encouraging them to advertise in the Section newsletter.
Mohammed Rafiuddin, CCP PSP

AACE International Activities:
Mohammed is an active member of AACE International with over 26 years of experience in project management, contracts management, project controls, currently serving as President of Arabian Gulf Section (AGS).

While serving for the AGS he was instrumental in expanding the section activities to Jeddah, Riyadh and Qatar which are now active regions under AGS. During his first term as President in 2011-12, he initiated certification training courses in all the regions of the section, which now conduct two cycles of certification courses every year. He was unanimously elected to serve a second term in 2013-14. He is now striving to conduct in-house training courses with major companies in the Middle East to enable their employee’s to pursue AACE certificates and embrace AACE standards.

Mohammed holds a Bachelor’s degree in Civil Engineering from Osmania University, India, and a Master’s degree in Engineering Management from KFUPM, Saudi Arabia. He has CCP and PSP certifications; is a lead instructor teaching for CCP, PSP and Risk Management certification for AGS. He is a regular speaker on project management, cost management and risk management in various technical seminars and is passionate about knowledge sharing and mentoring.

In his career span more than twenty years in the Middle East, he has worked on mega programs in Saudi Arabia, Egypt and Kuwait as Project Controls Manager and Project Manager and was well appreciated for managing the projects through the economic boom and subsequent downturn. His people management skills have made him a popular figure in his workplace. He is currently manager of project controls of WorleyParsons Ltd. for a major program in Saudi Arabia.

Goals and Objectives:
My leadership experience with AACE-AGS has given me the insight that AACE International’s body of knowledge and its certifications are not getting the due recognition. My strategic plans and actions include:

• Collaborate with various corporate giants that are not conscious about Total Cost Management, AACE International stands for, make them recognize the importance of cost management and establish AACE certifications and technical product as global standards.

• Approach various universities and present AACE International and its certifications to the students so they enter into the professional careers as ambassadors of AACE International, with full knowledge of project and cost management.

• Work with various professional organizations that are contemporaries of AACE International and change the competitive environment to a collaborative and knowledge sharing environment.

• Work with the VP Regions and the sections leadership in expanding the membership base of AACE International.

• Strive to make the AACE certifications a must for job seekers and get the AACE best practices and technical standards as industry norms. Thank you for considering me for election.

Ghulam Mujtaba Shaikh, PE

AACE International Activities:
Ghulam Mujtaba Shaikh, PE, is an active member of AACE for more than 10 years. In past, he has primarily served in US where he started his career also. He was involved with Southern California Section at several positions, including President. He led numerous outreach events at universities and taught CCP certification classes. Southern California’s successful event - Annual Spring Symposium was initiated during his tenure. At the Association level, he regularly attends and has presented at Annual Meetings. He also attended the first leadership and ITCM conferences, and worked closely with Diversity and Young Professionals Task Forces. He moved to Pakistan for good in 2011, and has been active in introducing AACE locally. He was selected by the Board to serve remaining term of RD7 vacated in August 2013, and is currently serving that role. Ghulam has been working in engineering/construction industry for over 13 years and has extensive experience in managing infrastructure, buildings, transit, and transportation projects. His experience spans all project phases - concept, planning, construction, commissioning, and close-out. He has developed expertise in project controls and claims, and has made several publications and presentations at different forums. His key projects include San Francisco Rapid Transit Extension, Los Angeles Bus Rapid and Light Rail Projects, LAX Improvements and I-405 Freeway, BT Icon Tower-Karachi, Pakistan Deep Sea Container Port, and Karachi Circular Railway. He holds a BS in Civil Engineering from NED University, Karachi and an MS in Project Management from UC, Berkeley. He is a Professional Engineer and holds PMP certification.

Goals and Objectives:
Region 7 is one of the largest sections in the world and is key to AACE growth. Region 7 includes UAE and Arabian Gulf Sections, among the most active sections. I plan to use my past experience and raise awareness about AACE activities, certifications, technical resources, and networking opportunities. My main goals are:

• Promote the vision and mission of AACE International.

• Work closely with all sections to focus on regional membership growth. Strengthen sections to build up on their success and increase their deliverables, noticeably sections in Qatar, Oman, Egypt, Kuwait and Pakistan.

• Focus on India sections to increase their visibility; close liaison with India Task force.

• Help establish new sections in the region – my target is two by end of the term next summer.

• Continue to use web, VOIP, and social websites for better collaboration. Make best use of the section newsletters to reach out to potential members.

• Focus on certifications; offer more workshops using AACE seminar in a box. Work with industry peers and recruiting firms to make AACE Certifications a requirement.

• Institute a plan with colleges and universities for scholarship and certification awareness.

• Support the second International TCM Conference to be held in Bangkok in November 2014 – Already made a presentation on AACE in Bangkok.

• Tap into AACE network for guidance to regional sections.
Jacqueline Doyle, PE PSP  
**AACE International Activities:**  
Jacqueline Doyle, PE PSP, is the immediate Past President of the Chicago-Midwest Section. Jacqueline previously served as the Program Committee Chairperson, Vice President, and President for the Section. Jacqueline has been a project controls professional for over 18 years and has led project controls teams on a multibillion dollar school construction programs and new hospital projects with construction values of over $800M. She has major strengths in cost and schedule management and owner representative services.

Jacqueline founded her own consulting firm, Coordinated Construction Project Control Services, LLC, in 2010, and currently has over a dozen clients and is managing more than 30 projects in seven states and internationally.

Jackie’s educational background includes a B.S. in Civil Engineering from the University of Illinois at Chicago, and a M.S. in Construction Engineering and Management from the Illinois Institute of Technology. She is also a Registered Professional Engineer in the State of Illinois, a Planning & Scheduling Professional, a LEED Accredited Professional, and an Associate Value Specialist. Ms. Doyle is a published author in the American Society of Civil Engineering Journal and has presented papers at the two AACE International Annual Meetings. The professional goal she is currently pursuing is the CMAA Certified Construction Manager credential.

**Goals and Objectives:**
As Regional Director, I will leverage my hands-on experience at the local Section level to work enthusiastically and energetically to increase membership and strengthen the local Sections through actively accomplishing the following:

- Act as a liaison between members, sections, and the Board of Directors by being accessible and responsive to every request from all members of Region 4.
- Work with each section to understand their needs and concerns and provide assistance where necessary.
- Work with active sections to expand their membership and to breathe new life into otherwise inactive sections. I would encourage participation by informing members and non-members of the benefits and potential for learning and networking through the organization.
- Facilitate regularly scheduled teleconferences with section leaders to provide the means for sections to collaborate through sharing successful programs and improve inter-section communication.
- Provide and coordinate a pool of speakers available to present interesting professional programs for section meetings.
- Identify potential Corporate Sponsors and facilitate presentations to them.

Ken Krill, PSP  
**AACE International Activities:**  
Ken has over 25 years of field experience in the construction industry, 14 with two Engineering News Record (ENR) top 150 National Firms. Ken has worked on projects in excess of $500 million with some of the largest owners in the country. He has served over 5 years as a faculty member at Michigan State University in the Construction Management Program teaching both graduate and undergraduate Scheduling courses (along with other Construction Management related courses). He is presently serving his first term on the Michigan State University Construction Management Alumni and Industry Advisory Board (2013-2015).

Ken has attended numerous national conferences and training seminars. He has presented and taught in many different venues. Ken holds a Bachelor of Science degree from Michigan State University in Construction Management (1988) and a Master of Science degree from Eastern Michigan University (1995). Ken has been involved with the AACE for the past +15 years. In 2013, Ken was recently re-elected President of the AACE Great Lakes Section (served 2012/2013 and 2013/2014). Prior to his being elected President, Ken served two years on the AACE – Great Lakes Section Board (2010/2011 and 2011/2012). Ken is an AACE certified Planning and Scheduling Professional (certified 2005).

**Goals and Objectives:**
- Increase Regional AACE membership.
- Increase awareness of AACE certifications.
- Increase overall awareness of the benefits of AACE.
- Insure all large owners and large contractors/large companies regionally are represented.
- Encourage one section crossover meeting each year among the Section’s in my region.
- Share Section successes with my region in a newsletter.
- Reach out to Section President’ s and support them in their individual Section goals.
Jonathan McNatty, PSP

AACE International Activities:

Jonathan McNatty is a certified Planning and Scheduling Professional (PSP) 2011, and is currently a Senior Consultant with DRMcNatty & Associates, Inc. in New York. Mr. McNatty has 22 years of Project Management and Cost Control experience in field operations, construction management, project management, CPM scheduling, project document administration, project implementation, claims preparation, and Primavera software training. Experience in creating, preparing, organizing, training, and maintaining complex schedules; project related documents using Primavera and related project management software. Professional experience with implementing, training, and working for Subcontractors, General Contractors, Construction Managers, and Project Owners such as NYSDOT-New York State Department of Transportation, and MnDOT Minnesota Department of Transportation.

Jonathan has been a speaker presenting technical papers on implementing Primavera Software at the AACE Southern California Spring Symposium, and AACE Western Winter Workshops since 2005, and is now an instructor for the two day PSP Certification Review Course.

Goals and Objectives:

As Director of Region 2, I will work to ensure a smooth transition from my predecessor, and maintain the communication between our Sections and the Association within AACE International. I plan on being a “hands on” director actively communicating and meeting with the sections to gather their input on how we can make all the resources that AACE offers available to it’s members. One of my goals will be to make sure that the current members and new members are taking advantage of pursuing AACE Certifications and provide support for that endeavor.

I have seen firsthand how effective meetings like the Western Winter Workshop can be for members and that is why I have been helping to create the 1st Annual Northeast Total Cost Management Symposium scheduled for 2014 in Philadelphia, PA, with the current Director of Region 2. These symposiums give our members a chance to gather face to face and share our triumphs and failures in managing projects and work to see that this will be a yearly symposium on the East Coast for members in Region 2.

AACE in my opinion provides what I call “core essentials” on how to correctly manage projects in today’s planning/scheduling and cost control environment. The tools, support, mentorship, and certifications that AACE provides to members and new members are in my opinion essential for any Project Manager /Cost Control Manager to effectively manage and navigate today’s complex projects.

Goals Summary

- Transition and continue the work from my predecessor.
- Communicate, support and meet onsite with each section in Region 2.
- Promote resources available to current and new members.
- Increase AACE Certifications.
- New member requirement.
- Continue Symposia in Region 2.

Calvin Speight, CCP

AACE International Activities:

Since joining AACE in 2008, Calvin has had an active role in the National Capital Section as an exam proctor, Treasurer, Vice-President, and is currently President. He has also been published in Cost Engineering. He has a B.A. in Business Administration from Rutgers University, 1985 and an M.B.A. from the University of Pittsburgh, 1990. He holds certificates in Project Management from UC Irvine, 2006, and Advanced Project Management from Stanford University, 2012. He is a CCP, PMP, and MRICS.

Calvin is an Associate at Booz Allen Hamilton. His professional background includes more than two decades of experience that integrates finance with project management and Lean Six Sigma. He has applies cost engineering to public policy decisions concerning military health, renewable energy, cost restructuring of civil agencies, as well as programmatic assessment of space vehicles. Prior to consulting, Calvin developed expertise in the Power and Utilities sector. Leadership roles included Business Planning Manager at Pacific Gas & Electric and Senior Cost Engineer for Southern California Edison Nuclear Organization. Calvin also has experience as the CFO of a start-up construction firm that focused on public school capital improvement programs.

Goals and Objectives:

As Region 2 Director, I envision accomplishing the following:

- Build upon the momentum created by predecessor Region 2 Director.
- Partner with each Section to establish goals that are specific, measurable, achievable, realistic, and timely (S.M.A.R.T.) to enhance Section health. Examples include:
  - Assist struggling or inactive sections to become reinvigorated.
  - Enhance regional membership retention statistics.
  - Promote section growth by increased section activities.
  - Emphasize the value proposition of the Corporate and Organizational Membership Partnership (C.O.M.P.) program to leading AEC/EPC firms and owner’s firms, citing the correlation between AACE certification and improved employee development and performance. Make special effort to include electric and gas utilities.
  - Guide increased Section membership, as well as increased percentage of certified members.
  - Assist planning with each Section to develop existing leaders, as well as a leadership pipeline.
  - Plan a cycle of visitations to all Sections during my tenure.
  - Promote that membership, certification and involvement can be an engine of employability.
  - Promote that AACE can be a driver of sustainability in one of the most densely populated regions of the U.S. This concept should resonate with younger members and potential members.
  - Incorporate social media to integrate communication and cooperation between Sections.
David Colangelo, CCP

AACE International Activities:
David has been an active member of AACE since 2004, and served on the Region 1 - AACE Canada Board of Directors as Vice President for 2012-2013. He is also a Past President of the AACE Toronto Section and continues to serve as one of the board of directors. David presented a technical paper “Presenting an Estimate to Your Client” at the recent Association’s Annual Meeting held in San Antonio, Texas.

Mr. Colangelo is a Toronto native. Until recent, he was capital cost estimating manager, and project controls manager, with mining client Kinross Gold working in the Toronto corporate headquarters. Prior to Kinross, David also worked in similar capacities with Vale Inco on large scale mining projects abroad. Prior to working on the client side, David spent most of his career in progressive leadership roles with large EPCM firms like Hatch and SNC Lavalin in the estimating and project controls realm on a wide variety of projects. David is a Certified Cost Professional, Member of Royal Institution of Chartered Surveyors, Project Management Professional, Professional Quantity Surveyor, Certified Construction Auditor, Construction Control Professional and Construction Estimator Certified. Graduated dean’s list at Ryerson University in Toronto, holding a Bachelor of Technology specializing in Project Management.

Goals and Objectives:
Being an active member in various professional associations helps me to appreciate the role AACE plays throughout our profession. The association has increased its membership, certifications, and offerings over the years to better serve members and continues to be a leader in the cost engineering field.

As Region 1 Director, I plan to:

• Expand awareness of AACE International membership and benefits to students at various colleges and universities in the region. Promoting AACE as a formidable career choice to students is very important.
• Support and promote membership growth across the region by engaging with employers, corporations and the local colleges and universities. In the Calgary and Toronto sections for example, we have had excellent success with certain employers in supporting and accepting AACE certifications within the project controls departments and groups.
• Develop a growth plan with each section on strategies going forward aligned with corporate AACE corporate growth plans.
• Work with sections toward identifying and creating new incentives for junior members to choose AACE International as their association of choice.
• Support mentoring initiatives at the section level.

Cindy Hands, P.Eng., MCL, CCP

AACE International Activities:
Cindy is a Project Controls Manager with more than 20 years experience in the oil and gas and construction industries. Currently employed by Hatch Ltd. in Calgary as the Project Controls Manager for Western North America. Cindy has worked on various multi-billion dollar mega projects and has worked with world-class international engineering and construction contractors. Cindy is a professional civil engineer and has incorporated her technical background into her extensive knowledge of project execution, estimate development, cost management, planning/scheduling and progress measurement. Cindy has a passion for project controls and is very active in the local section of AACE where she has been a board member since 2001 and was president from 2007-2008.

Over the years Cindy has provided project controls expertise to oilsands projects in Alberta as well as offshore oil and gas projects in eastern Canada. Major projects that Cindy has contributed to include the Hibernia Offshore Oil Project, Sable Offshore Gas Project, Shell Muskeg River Oilsands Project, Syncrude UE-1 Oilsands Project, ConocoPhilips Sarmont 1 SAGD Project, Petro-Canada Fort Hills Oilsands Project, and the Total Joslyn North Mine Project. Cindy has also applied her project controls knowledge to wind power projects in Canada including the Suncor Wintering Hills Wind Power Project and the NextEra Ghost Pine Wind Power Project (both in the South Eastern Alberta). Most recently, Cindy has worked with Canexus Corporation to help manage the design and construction of their Unit Train Loading Facility Expansion in Bruderheim, Alberta. Cindy received her Certified Cost Professional (CCP) accreditation in August 2012 and has more recently completed a Masters degree in leadership. Cindy is known for her enthusiasm, quality work, and ability to lead and motivate a team.

Goals and Objectives:
Short-term (1-3 years)
• Continue working with AACE in a larger capacity to grow the visibility and membership of AACE in Canada.
• Increase the awareness of AACE Certification in Canada, as well as grow the number of certified members in Canada,
• Work with other AACE sections in Canada to share ideas, training materials and presenters.
• Help grow AACE student sections in Canada.
• Increase Canadian participation at the AACE AGM.
• Increase awareness of the AACE Recommended Practices to Cost Professionals and Industries.
• Assist with long-range planning for AACE Canada and AACE in general.
• Coordinate cooperation activities with other professional associations in Canada.
• Promote corporate membership across various industries in Canada.
• Promote project controls as a career choice and raise its importance in successful project delivery.

Long-term (3-5 years)
• Develop project controls curriculum that can be thought in a university or a corporate setting based on AACE Recommended Practices and Industry Examples.
• Teach Project Controls Best Practices.

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It’s a new year, and 2014 is going to be a year of change for AACE International. One area where members will see some major changes is at AACE Headquarters as three familiar staff members will be retiring.

Longtime Finance Manager, Carol Sue Rogers, a 24-year staff member, will be retiring in late March. Charla Miller, Staff Director Education and Administration and the senior AACE staff member with 34-years of service, is retiring in late May. Finally, AACE Executive Director Dennis Stork, will step down at the end of July.

With this issue of Source, we will review the AACE career of Carol Sue Rogers and her contributions in managing AACE finances for more than two decades.

Rogers is a native of Grafton, WV, a small railroad community some 20 miles south of the AACE headquarters offices in Morgantown. Grafton is known as where Mother’s Day began. Incidentally, the house where the founder of Mother’s Day, Anna Jarvis, was born, is the same house where Rogers grew up. The house is now a museum honoring the founder of Mother’s Day.

Rogers started with AACE on Jan. 2, 1990. She came to AACE with 20-plus years of accounting experience that included working in the accounting departments of Georgia Pacific Corporation, Ozite Corporation, and Gavitt & Schatz, a Grafton real estate and appraisal services entity.

When Rogers’ started with AACE, the association had a membership of roughly half of what it is now, and most of the financial operation was a paper records based management for AACE’s roughly $560,000 annual budget. Over the past 24 years, AACE membership has grown to its current 8,800 plus number and accounting has transitioned to a largely electronic-based management that oversees an annual budget of roughly $3.2 million. Those increases have meant lots more financial transactions, including a major increase in working with international vendors and clients that increased the workload in the finance department.

Overseeing all these changes, embracing the change, and providing leadership and skills in smoothly transitioning these changes are perhaps some of Carol’s greatest personal accomplishments during her tenure as AACE finance manager.

“AACE has been a great employer to me and I will miss it. I’ve thoroughly enjoyed my years with AACE, especially the AACE members and staff.”

Marvin Gelhausen
AACE Managing Editor
Probably the biggest change during her years of employment has been the changes in technology, not just within AACE, but within all of society during the move toward an increasingly electronic, digital, and automated world. While in prior years, payments to AACE were made by cash and checks, a very high percentage of these transactions are now electronic credit card transactions and direct deposit payments into AACE bank accounts.

Carol can count five different software accounting systems that she had to learn over the years. She has worked to keep AACE finances accounted for and managed through a number of technology upgrades and changes in association management software. She sees accomplishments over the years that she can be proud of as far as her personal efforts to do her job and do the best she could for AACE and for the membership.

Carol has worked with six different executive directors, and some 12 vice president’s of finance. She says she learned from each of these and she firmly believes she gained experience and was provided with opportunities that she would not have had anywhere else. She will be leaving a financial accounting operation that is now almost completely paperless. She recalls that after she was hired, the late Frank Postula during his tenure as VP-Finance, created AACE’s first finance manual. This document outlined proper functioning and procedures for the AACE finance department. This manual has guided her department’s operation and it continues to be updated to keep pace with change.

The average member probably does not realize the number of financial transactions the department handles in a year. Five years ago, the department was handling some 60,000 transactions a year. With the growth in membership and with electronic transactions being the norm now, Carol says her department handles an unbelievable number of financial transactions in a year.

In addition to the day to day transactions, the finance manager oversees almost half a dozen bank accounts that AACE maintains, works with the executive director and VP-Finance to respond to investment recommendations from the association’s professional investment firm; oversees not only AACE’s many budget line items, but also the AACE Canada, Inc. accounts, prepares for and oversees an annual audit of all AACE accounts, and multiple other items. Carol says anything involving revenue crosses her desk and the desks of her two finance assistants.

In addition to overseeing all financial operations, for many years Carol has also served as the human resource manager, maintaining employee personnel records, assisting with all job placement notices and other functions in bringing on new staff and conducting exit interviews with employees who were moving on to other employment, etc. Much of the human resource functions have since been outsourced to Insperity. But paperwork for new and/or exiting employees remains a duty of the AACE Finance Manager.

Another aspect of her duties involved overseeing registration at Annual Meetings and assisting in collecting payments and paying all the bills at each host hotel as each Annual Meeting wrapped up and closed out. Many AACE members will remember meeting Carol at these meetings. Her late husband, Raymond Rogers, attended a number of Annual Meetings with her. Rogers says she values the professional relationships she has with current and past AACE board of director members, with AACE volunteers and AACE staff. Many of these professional acquaintances were initially made at AACE Annual Meetings.

As Rogers became more and more experienced with AACE financial operations, her job duties also expanded and she was assigned additional areas of oversight and responsibility. As human resource duties were outsourced to Insperity, Carol continues to be the HQ liaison. She continues to input bi-weekly payroll for each of the staff and oversees the creation and distribution of W-2 forms at the end of each calendar year.

Prior to AACE using the services of Insperity, Carol would contact and review insurance proposals for staff medical coverage. She continues to be the HQ liaison with the insurance provider and assists employees in resolving any coverage issues and questions.

Both Carol and Charla Miller were honored at the opening session of the 2013 AACE Annual Meeting in Washington, DC, for their years of service. Each received an engraved silver lamp that highlighted some of their main contributions and accomplishments over the years.

Carol believes she is leaving AACE finances in good hands as Janice Johnson, a CPA, has been hired to take over as finance manager upon Carol’s retirement. By having Johnson on board for several months, Executive Director Dennis Stork believes this will allow for a much smoother transition in one of the association’s key management posts. Still, it is impossible to replace 24 years of on the job experience in which Carol has dealt with and resolved about any challenge that could happen within finances. Her leadership and friendly personality will be missed by the staff, executive director, Board of Directors and AACE membership. She is wished a long and happy retirement, free of the stress that is part of the day to day responsibilities in managing AACE’s varied and wide ranging finances as an international entity.

In coming issues of the Source, we will present an overview of Charla Miller’s tenure at AACE, as well as announcing who the new executive director will be, and take a look at the changes and accomplishments that were a part of Dennis Stork’s tenure as executive director. As noted at the start of this article, 2014 will be a year of major changes for AACE and for the management team at AACE headquarters. But efforts are being initiated to make these personnel changes as smooth a transition for the membership as possible. Change is part of the dynamic of a growing and vibrant AACE International, the Authority for Total Cost Management.

“I’ll miss it, I’m sure I will cry when I leave,” concludes Carol.
BANGKOK, THAILAND TO HOST THE 2014 ITCM CONFERENCE

Bangkok, Thailand and Istanbul, Turkey will be the locations of the next two AACE International Total Cost Management conferences in 2014 and 2015 respectively.

The 2014 ITCM Conference will be Nov. 12-13, at the Millennium Hilton Bangkok, Thailand. Current plans call for the conference to be a two-day meeting. It will commence with an opening plenary session on Nov. 12 and will feature a keynote speaker and then will divide into two tracks of peer-reviewed technical presentations over the balance of the two days.

As with the first ITCM Conference, AACE is also planning to host continuing education seminars on the two days prior to the ITCM Conference, Nov. 10-11, 2014.

Continental breakfasts and lunches will also be offered each day of the conference along with energy breaks in the planned exhibit area. Early registration for the conference will be $695 for members, $795 for non-members until Sept. 30, 2014. After Oct. 1, registration fees will be increased by $100. AACE International organizers anticipate between 200-250 registrants for the Bangkok conference. Registration for the Bangkok conference is available by visiting: www.aacei.org/mtgs/ITCMC/.

AACE will release a call for papers by Sept. 1, 2013. The ITCMC will use the same peer-reviewed process used for selecting papers for the Association’s highly acclaimed Annual Meeting.

The Millennium Hilton Bangkok is a stunning new ultra-contemporary hotel perched high over the sweeping majesty of the Chao Phraya River. With picture-perfect river views from every room, innovative restaurants and a refreshingly bright and modern spa, it is no surprise that Millennium Hilton Bangkok has been recognized as one of Asia Pacific’s best new business hotels by readers of Business Traveler. Registrants will receive a $150 (US) per night room rate. Optional educational seminars will be offered Nov. 10-11 at the Millennium Hilton. Details about the optional seminars will be released by early 2014.
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*Previously known as the Certified Cost Consultant/Certified Cost Engineer*
Débora Braga, a native of Rio de Janeiro, Brazil, believes in the importance of higher education. She earned her bachelor’s degree in mechanical engineering from Santa Ursula University in 1989. That same year, she was hired as a mechanical engineer by Ishikawajima do Brasil Estaleiros S.A – Ishibras in Rio de Janeiro, where she gained experience in project controls.

She continued with her education and obtained a master’s degree in materials science from the Military Institute of Engineering (IME) and a doctorate in metallurgy and materials engineering from the Federal University of Rio de Janeiro (UFRJ). In addition, in 2010 Débora obtained her “MBA in cost engineering” from the Federal University Fluminense (UFF).

She currently works as a consultant for Petrobras in metrics and productivity and is responsible to develop international best practices in cost engineering to deliver predictable and competitive cost and schedule outcomes for the company’s major capital projects. Recently, she represented Petrobras in a special study commission for the Brazilian Association of Technical Standards (ABNT). The CEE-162 study focused on development of a standard for budgeting and pricing for infrastructure projects and buildings.

Last year, Débora became a member of AACE International and is affiliated with the AACE Brazil Section. She looks forward to future participation in AACE events, including the Annual Meeting and also the International Total Cost Management Conference. She looks forward to the opportunities of networking with other total cost management professionals members and believes the interaction is important for her professional development.

She says that, “AACE International is the leading-edge professional society for project managers, schedulers, cost estimators and project control specialists.” She enjoys access to the on-line library of technical articles and webinars. She encourages members to become active in their local section, so they may take advantage of the technical training and networking opportunities. Her advice for women following in her footsteps is, “do not focus on changing the past, take hold of your future and create your own new ending.”

AACE International is the leading-edge professional society for project managers, schedulers, cost estimators and project control specialists. Débora encourages members to become active in their local section, so they may take advantage of the technical training and networking opportunities.
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Mark von Leffern was born in Seoul, Korea, and raised in Southern California. He holds an undergraduate degree in environmental analysis and design and Master's in Business Administration (MBA), both from the University of California, Irvine.

Most of Mark’s tenure was within the aerospace and defense industry in American National Standards Institute (ANSI) compliant earned value environments. At Boeing, Mark was a scheduler supporting several research and development projects and product enhancement projects for the United States Air Force (“USAF”) C-17 Globemaster III Cargo Transport. To help broaden his exposure to project controls and understanding of earned value, he accepted a promotion as a cost lead to the USAF and Swedish Air Force C-130 Aircraft Modernization programs overseeing Avionics, Software and Communications and Displays Teams.

After finishing his MBA, Mark joined Science Applications International Corporation (“SAIC”) as schedule lead to manage a team of schedulers to support the GPS Systems Engineering and Integration contract for the USAF. Mark’s diverse experience in project controls (planning/scheduling and cost analysis) and understanding of communication within the matrix teaming environments allowed for a relatively easy transition into the construction industry. He is currently a project control engineer for Hill International supporting several large scale renewable energy projects for Southern California Edison. His primary project is the Ivanpah Solar Electric Generation

MARK VON LEFFERN OF HILL INTERNATIONAL NAMED TO ENR CALIFORNIA’S “TOP 20 UNDER 40” LIST

Hill International, a global leader in managing construction risk, announced Jan. 7 that Mark von Leffern, MBA, EVP, PSP, PMP, a project controls engineer working out of Hill’s Irvine, California office, has been named to the "Top 20 Under 40" list by Engineering News-Record (ENR) California magazine.

The individuals named to the list are visionaries, trailblazers and workhorses who have built extraordinary portfolios in just a few short years. All 20 recipients will be profiled in the February 2014 issue of ENR California.

"Mark is one of our strongest young professionals," said Michael B. Smith, Senior Vice President and Western Regional Manager for Hill’s Project Management Group. "We are very proud of his accomplishment in being named to this prestigious list," added Smith.

Hill International, with 4,000 employees in 100 offices worldwide, provides program management, project management, construction management, construction claims and other consulting services primarily to the buildings, transportation, environmental, energy and industrial markets. Engineering News-Record magazine recently ranked Hill as the 9th largest construction management firm in the US. For more information on Hill, please visit: www.hillintl.com.

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System which is currently the largest solar thermal power generation system in the world.

For Mark, the attraction to project controls was pretty straightforward. It provided him the ability to work on a wide variety of exciting and challenging projects, experience all phases of a project and to interface with several different functions of a company. Mark noted, “By stepping up and becoming intimate with the project scope early in the lifecycle and being proactive to managing changes as they occur, you are able to quickly become a respected member of the team and an invaluable asset to the project manager.” Mark currently holds the Planning and Scheduling Professional (PSP) and Earned Value Professional (EVP) designations with AACE International. He credits several informal mentors and family support for his drive to continue learning. An important part of this is striving for balance in your life. Mark stays active in long distance running as a means of fitness, camaraderie and for the psychological benefits of endorphins. He also enjoys illustration and stays active in the local arts community in Southern California.

This past year, Mark served the Southern California Section Board as the website chair and is currently the section VP. He also attended the Southern California Fall Symposium, as well as San Francisco/Southern California Western Winter Symposiums. “The caliber of the technical presentations and panel discussions at the Symposiums was top notch and for the cost, well worth attending. Having access to the technical resources at AACE is important not only for staying on top of emerging industry trends and increasing your competitiveness as an individual, but also for bringing value back to the client or company you are supporting.” Mark co-presented a white paper at the 2013 Annual Meeting in Washington, DC, on “Developing a Project Control System for the Transmission Grid.”

Mark’s advice for those looking to grow within the industry is to, “Immerse yourself in a work environment and among people that will truly challenge and motivate you. As companies may have varying levels of training support and career guidance, organizations like AACE International meet a key need.” Notably, Mark first learned of the AACE International organization when in the defense industry, as colleagues started to obtain the EVP certification. “There are some solid opportunities at the local AACE International section level including local meetings, yearly symposiums, and even serving on the board. The board members at the local sections are very supportive of those wishing to contribute to the profession and further their career development.”

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Planning and Facilitating A Schedule Risk Workshop

Christopher W. Carson, PSP

Abstract: Schedules, no matter how carefully designed and developed, rarely incorporate any assessment of risks that occur on most projects. The lack of process to gather and use the lessons learned from the collective experience of project management professionals in the development of schedules lowers the likelihood of success, and leads to greater risk of claims. Invoking risk management for all projects leads to more successful projects. Developing a process to facilitate a schedule risk workshop improves the results of the risk assessment. This session will provide a practical and efficient approach to planning and conducting a schedule risk workshop, based on real project workshops. Inclusion of the right stakeholders, facilitating participation by experienced professionals, and simple steps provide for guidance to make the risk workshop a valuable experience with meaningful results. This article was first presented as PS.1386 at the 2013 AACE International Annual Meeting in Washington, DC.

Key Words: Claims, planning, project management, risk, and schedule

Schedule Risk Concepts Overview

Assessing cost risk in project bids has been recognized for years by the use of contingencies, but time risk in project schedules is typically not assessed. Not many owners allow time contingencies unless those are held in management reserves outside of project management control. Risks, as defined by AACE Recommended Practice No. 10S-90, Cost Engineering Terminology, under “Risk – Project-Specific,” are “uncertainties (threats or opportunities) related to events, actions, and other conditions that are specific to the scope of a project.”

Risks can fall into several broad categories, such as uncertain duration risks, specific event risk, or risks embedded in the development of the CPM network. Each of those types of risk might be analyzed differently using different tools, depending on the availability of software to support the analysis.

Risk analysis, as defined by AACE International, is “A risk management process step, which includes the quantification of the effect of all uncertainty (risks) on a project. Usually done by identifying risks and quantifying each risk’s probability of occurrence, and potential severity of impact.” The general risk management process includes planning, identification of risks, qualitative risk analysis, quantitative risk analysis, and risk response. Then there is a repeated effort where the identified risks that remain in the schedule are evaluated at each update and a new risk management process implemented at some periodic stage in the project. As described in AACE Recommended Practice 71R-12, Required Skills and Knowledge of Decision and Risk Management. This is covered by the TCM Framework, which defines risk management as, “a systematic and iterative process comprising four steps:

1. Plan – establish risk management objectives;
2. Assess – identify and analyze risk;
3. Treat – plan and implement risk responses; and
4. Control – monitor, communicate and enhance risk management effectiveness.”

One of the most important benefits produced from providing risk analysis is in the collaborative effort in identifying risks and brainstorming the options for risk planning and response. This is similar to one of the primary benefits of planning, which is to involve the project management team in thinking through and brainstorming how the project will...
be built. So the risk workshop follows in the footsteps of the planning session, involving many of the same stakeholders and improving the collaborative effort that is desired in partnering on a project, no matter the exact term for the collaborative effort.

Pre-Workshop Preparation

The risk workshop planning starts with early decisions and preparation before the workshop is facilitated. This is the time to determine what is expected from the workshop, develop strategies to handle interviewing and discussions, ensure that the baseline schedule is adequate for risk analysis, and develop the risk register, whether from scratch or from a master risk register.

Develop Risk Workshop Goals

The first step in the preparation for a risk workshop is to establish the workshop goals. Goals will improve the chances for a successful risk workshop; meaning a risk workshop that the participants agree was useful, produced meaningful discussions of potential risks, engaged all the stakeholders, and improved the likelihood of a successful project. Those goals could involve defining success for the workshop, so results can be evaluated and improvements implemented for future efforts.

Generally, the goals for a risk workshop include the production of a reasonable and thorough risk management plan with few surprises that might be found in a typical project allowed to fester without analysis. Within the risk management plan would be a risk response plan, addressing all the threshold risks identified during the workshop. Then a process should be developed to ensure iterative review of remaining risks, as well as implementation of a repeat process at a strategic time during the project.

It is important to note that one of the goals should be to develop opportunities, as well as threats, so as to take advantage of potential windfalls resulting from lessons-learned. The author was the estimator, project manager, and scheduler on a large retail store to be built against the exterior wall of an enclosed mall. During the risk workshop one of the opportunities identified was a construction detail change. The plans called for the existing three story tall exterior masonry wall, of 12” filled block, to be torn down in order to install a system of beams and columns, and then laid back on top of the new beams. The openings created by these beams and columns were to be used as main entrances into the mall on two levels. The design for the replacement block wall was identical to the existing, except for the openings. The risk workshop identified the opportunity to simply pin-beam the existing structure and to remove just enough masonry to install the new footings, columns, and beams. This would leave the rest of the three story structure intact. The pin-beam suggestion was a secondary one, allowing the elimination of the full shoring system on all three levels. The opportunity saved over two months and close to $100,000 on the project, and it came out of a risk workshop.

Develop Interview and Discussion Strategies

One of the first steps in planning for a risk workshop is to develop interview strategies that will promote and solicit involvement from the relevant stakeholders. Interviews can be held separately before the workshop or integrally with the workshop. Interviewing includes frank discussions about past experience, as well as recordation of lessons-learned if that process was not already formalized. This process can be implemented informally as the facilitator is discussing and inviting the stakeholders to the workshop.

As noted in AACE Recommended Practice 57R-09, Integrated Cost and Schedule Risk Analysis Using Monte Carlo Simulation of CPM Model: “It is important during risk data collection to be alert to the possible biases of the workshop or interview participants. Some people want to influence the results, while others genuinely do not understand the concepts or have some cognitive bias that has to be overcome.”

Bias in risk assessment can alter and reduce the value of a risk workshop, so this is one discussion topic that should be raised in the interviews in order to reduce any existing bias. As noted in AACE Recommended Practice 71R-12, there are a number of biases and it is important to minimize the effects of bias on the risk assessment:

Be aware of the following types of bias:

- **Confirmation Bias**: Gather facts that support certain conclusions; disregard other facts.
- **Premature Termination**: Accept the first alternative that looks like it might work.
- **Inertia**: Keep thought patterns that we have used in the past despite new circumstances.
- **Selective Perception**: Screen-out information that we do not think is important.
- **Optimism Bias**: See things in an unjustifiably positive light.
- **Recency**: Place more attention on more recent information.
- **Repetition Bias**: Believe what we are told most often and by the most different sources.
- **Anchoring**: Unduly influenced by initial information; shapes our view of later information.
- **Group Think**: Peer pressure to conform to the opinions held by the group.
- **Escalating Commitment**: Increase support of a decision over time (over-value sunk costs).
- **Attribution Asymmetry**: Attribute success to our abilities; attribute failures to bad luck.
- **Illusion of Control**: Underestimate future uncertainty because we believe we have control.
- **Ascription of Causality**: Ascribe causation although evidence only suggests correlation.

Even one person in the group can increase the risks of bias just by the way they respond to questions and issues, so it important to address this issue. Once bias has been discussed, each of the stakeholders will be cognizant of these biases and more willing to discuss and help minimize their impacts.

Determine Types of Schedule Risks to Address in Workshop

Time will be limited in the workshop as it is difficult to get commitment from the group of desired stakeholders to spend more than half, or a full day in the workshop. This makes it vital for the
workshop to be efficiently run and minimize any unproductive time. One way to improve efficiency is to identify the types of schedule risks to be addressed and eliminate any discussion outside of those types. This can be reasonable as long as the types are adequately chosen.

Traditionally, the risk type that takes the most time to handle in a risk workshop is that of duration uncertainties. This requires discussion of the spread of durations, from pessimistic to most likely to optimistic, and can be very time consuming. If the duration uncertainty risk discussion is contained within broader categories, that will help with range establishment, and even of probability distributions. An example of this discussion would be to identify specific trade contractors that carry higher risks in estimating durations, and then treat all activities within those trades the same. So, perhaps the site development trades on a facility project could all be treated with the same risk assessment; maybe using a 40% negative spread and a 30% positive spread. This limits the time involved with the discussion, and then the distribution can be applied across all activities that are related to site development. This is much faster than going through activities one-at-a-time to establish the range of durations.

With the industry-oriented reduced emphasis on duration uncertainties because of better estimating and more reliance on the analysis of the impact of specific events on project activities, there is less need to spend the time in the risk workshop discussing durations. If duration uncertainties are not analyzed, or are replaced in analysis by event risk drivers, the focus of the workshop can be more narrowly defined, allowing the group to discuss specific event risks. In addition, agreement can be garnered to limit certain types of risks in discussion so as to reduce long argumentative-type of discussions for things like political risks that may not be easily resolved.

If the project risks are limited to the project-specific exposure of risks, that will help reduce the master risk register and help the timing. For example, if the project design is primarily complete, there is no reason to focus discussion on design risks, except as they apply to errors and omissions.

Another way to focus the group is to present the results of studies about industry-wide lessons learned. For example, a study performed in 2004 by Steve Pinnell found the major causes of changes, as surveyed by contractors and owners, respectively, were: scope changes, 39% and 32%, design errors, 25% and 18%, differing site conditions, 13% and 19%, owner delays and impacts, 9% and 7%, weather and other, 5% and 6%, contractor estimate mistakes, 4% and 12%, and contractor other errors, 5% and 6%. This list helps focus the discussion on the major reasons for change, primarily scope changes, design errors, differing site conditions, other owner-caused issues, and perhaps contractor mistakes.

When the workshop is explained and ground rules are established, the group can be informed of the focus of the workshop. Keep in mind that potentially confrontational risks, such as owner-caused delays, or contractor-production issues, should not be eliminated since those help dramatically in developing a partnering atmosphere. As long as both parties are facilitated in the discussion, so that they don’t feel threatened by the discussion, often it is enlightening to entertain these specific discussions, and allow each party to
discuss their internal challenges.

**Review and Validate Baseline Schedule**
Any risk management program starts with a complete and accurate CPM schedule, developed with the use of industry best practices and checked for quality, reasonableness, and appropriateness of the network model. Without a well-designed and -developed CPM baseline schedule, a risk management process will not be effective. The risk analysis depends upon accurate and thorough calculations of the network logic, modeling of the full scope of work, the appropriateness of the sequencing, and a reasonable approach to estimating activity durations.

The goals in development of a baseline schedule should be the same for project use as for risk assessment. If the schedule is well-built, it will be a good basis for risk modeling and analysis. Sometimes if the schedule contains a lot of intricate detail, there might be a need to reduce the detail by rolling the schedule up into more summary activities, but a good schedule makes for a good risk assessment.

**Develop Draft Schedule Risk Register**
After verifying the quality of the CPM schedule, the team is assembled; these are the planners and schedulers along with the project management personnel and other subject matter experts, as well as the stakeholders for the specific project. This team’s role will be to brainstorm threats to timely completion and opportunities for early completion, the two main parts of risk management. Good risk management depends on the experience and expertise of the stakeholders, and using stakeholders that provide good risk assessment because of the depth of field experience, relevant education, project controls training, and involvement in industry associations and certifications, will improve the final master risk register. In this phase, the team brainstorms about any typical risk events, developing a risk register which contains historical risk categories and issues which have been assembled from historical data. All risk factors identified from historical data and lessons learned are listed on the register, categorized with types of risks, and formally established typical consequences of realizing the risks are captured. These risks primarily include discrete risks (specific event risks).

**Workshop Organization**
Organizing the workshop will ensure greater value, better results, and prevent wasting the participants’ time. Inviting the appropriate participants, identifying ahead of time what information is to be requested, and what specific tools will be used during the workshop, all will contribute to a successful event.

**Participants – Who Should Be Invited?**
It is important that all project stakeholders are invited to participate in the risk workshop. Stakeholders such as local utility company engineers, designers, long-lead or primary equipment suppliers, the project management team, construction management team, and contractors all have deep experience in the types of risks that the project is likely to
encounter. In addition, the brainstorming and collaborative effort involved in a good workshop will build a partnering atmosphere that improves cooperation during the project.

While often the contractor, construction manager, and owner enter projects with suspicions about the motivations of the other players, when the risks of internal project performance and coordination are discussed openly, it breaks down some of the barriers to cooperative construction management. The contractor is well versed in dealing with production and delay issues, and will have good insight into potential stumbling blocks to success.

Studies show that more than 80% of the events that cause change orders are outside the control of the contractor, so it is imperative that the contractor’s input is sought. While these issues might be distasteful to the owner, it is important that the lessons learned from historical data are discussed openly and without agendas. Knowing how much owner-controlled aspects, such as the quality of the drawings, can affect delay and change helps put the project on an open and transparent basis, and allows the contractor to voice his concerns and help design a plan to mitigate common project delays instead of just putting the owner on notice.

When issues such as weak subcontractors and lack of technical competence in planning and scheduling practices are raised in a non-confrontational manner, the owner can provide his lessons learned from historical data. Helping the contractor to plan for weak subcontractors is an important step because it allows frank discussion about internal contractor issues. The author has found that both owners and contractors are receptive to these discussions as long as they are handled carefully. The goal is to enable the schedule to accommodate risk planning around the challenges and weaknesses that are found in every project.

If projects break down and the parties are in conflict, they often forget the very good reasons why the contractor was chosen, or how the contractor chose this particular project with this particular owner. This is an opportunity to put those reasons on the table, and asking the contractor to participate in the risk workshop reinforces the owner’s belief in the competence, experience, and professionalism of the contractor.

Type of Information Sought or Disseminated

Since the value of the workshop lies in involvement with experienced personnel to brainstorm about challenges faced in the past for the type of project, the best information relates to challenges, including failures. Ask the team to assemble lessons learned from similar projects, requesting candid discussions of past failures, or less than successful challenges, so those can be used to implement the risk management that will prevent or minimize similar results. Other good topics include processes, materials especially new, means and methods, and management tool use.

Other useful information includes industry studies that demonstrate the effects of problems on project time and cost. These studies can be eye-opening, particularly when it comes to addressing specific types of risk.

The information to be discussed in the workshop includes all historical challenges to the success of this type of project. With an organized master risk register, it will become apparent that risks tend to fall into categories that are fairly common. Working top down from the standard categories is very helpful in focusing the participants’ attention on areas of risk.

Some suggested categories for facilities projects are:

• plans and specifications;
• quality control;
• owner influences;
• owner interference;
• unforeseen conditions;
• weather;
• cost;
• change Management;
• claims and Disputes;
• equipment and long lead times;
• labor;
• schedule;
• project management;
• field conditions;
• safety; and,
• political issues.

In looking at a particular category such as schedule, some of the risk items might include:

• adjacent utilities;
• caliber of scheduler;
• complexity of project;
• contract duration;
• interaction with other projects;
• competition with other projects;
• reputation of contractor / construction manager / owner;
• reputation of subcontractors;
• risk shifting contract language;
• strength of schedule specification;
• and,
• use of earned value monitoring.

Another important issue that needs to be addressed prior to the workshop is knowledge of the project. The stakeholders should come to the workshop with a reasonable knowledge of the project, including the specifics of construction and phasing. Without this knowledge, stakeholders will spend their time reviewing the drawings, rather than actively and fully participating in the workshop.

As part of the workshop invitation, a request for the stakeholders to gain familiarity with the drawings is essential and will improve the workshop.

Tools for the Workshop

The workshop should be set up with several sets of the plans and specifications, the contract, and copies of the summary schedule. Hanging on the wall should be a plot of the phasing plan, any area designation plan, and several main sheets of the drawings. The main sheets could include site plan, floor plans for facilities, and grading and utilities plans for transportation. The goal with the wall hung resources is to ensure that everyone can understand exactly the details of any discussions.

Note that efficiency is paramount in the workshop tool set-up. The less time spent in finding documents or explaining to individual stakeholders where the discussion is or how the phasing works, the more time can be spent in discussing risks.

Since this is a schedule risk workshop, it is vital to have the
scheduling software with the preliminary project loaded on a computer to be projected on the wall or screen. The scheduler should be present and the one to present the schedule at a high level to the group. If 4D modeling was performed, then the video for the as-planned schedule should be prepared and loaded, ready to run as a quick way to bring the participants up to speed.

**Workshop Facilitation**

With the right amount of preparation, the workshop is ready to begin effectively. During the workshop, it is vital that the facilitator is organized, providing a good briefing to explain the goals, introduces the participants so everyone will recognize the wide range of experience and expertise involved, review the contractual limitations for the project, provide a succinct review of the project and the documents, and introduce and review the high level schedule. This approach will keep the workshop moving along without loss of valuable time, and ensure the best value is obtained.

**Opening Briefing**

Workshop stakeholders sometimes do not believe they can include or analyze some risks because they have no idea if that risk will happen or have any control over the risk if it should occur. An example is repeated submit and approve cycles for shop drawings, where a complicated design can cause something like millwork shop drawings to be rejected, revised, and resubmitted. Sometimes stakeholders think it is not within their ability or control to plan for those types of risk, so the schedule should ignore the risk. Allowing this process will minimize the benefits of the risk identification and analysis process. These risks should be added to the register, where they will be addressed as a low priority or incorporated as a high priority. However, if the risk fails to be included in the risk register, there will be no analysis of that risk at all.

The most useful workshops are those where the stakeholders freely discuss all impact events that they have experienced on similar project, no matter whose fault they were. Some of the power of the risk workshop is in discussing risks that help a stakeholder examine their internal processes for improvement as part of the risk cycle. This can be as simple as contractor concerns about the response time to submittals, or owner concerns about the number of submittals they should expect at any given time.

The author was involved with a $243,000,000 people mover project from an airport to the multi-model facility. In the risk workshop, it was determined that the light rail station at the multi-model facility was to be constructed by the local Department of Transportation and because of their workload and staff, there was a significant risk of delayed completion. If the station was delayed, the people mover project would be delayed. In the preliminary schedule that was presented at the workshop, that station of concern was on the critical path. After discussion, the contractor’s scheduler agreed to take the discussion ideas and re-sequence the work, so as to build up some float in that path. When the baseline schedule was submitted, there was adequate float so that when the station really was delivered late, the project still finished early.

Discussing a lesson such as this in the introduction can be very useful and open the door to later discussions of other risks that were mitigated in other projects similar to this. It is important to note that while risks can come from lessons learned about failure, they can just as often arise from successful mitigation actions, so this is a useful discussion.

**Introduce Participants**

The facilitator should introduce each stakeholder and participant, and ask them to describe their role in the project, as well as what parts of the project would be under their control. This gives the audience some perspective on the stakeholders, and examining who has control helps raise the importance of the controlling stakeholders. The feedback from a stakeholder that has control of something, such as the railway stakeholder who controls flagmen or rail schedule outages, makes for important discussions.

**Discuss Contractual Issues**

Immediately after introducing the stakeholders, it is important to note the contractual constraints on the project. This includes the award date, notice to proceed date, project duration, interim milestones, important events during the project, and particularly any schedule constraints. Schedule constraints might be major fixed celebrations, such as historically significant anniversaries or tourist travel season. It might be adjacent limitations such as bird nesting areas restricting pile driving.

A summary of other contract issues that might occur in the special conditions is also useful. These could include risk shifting language or incentives. All of these issues need to be transparent during the workshop so the effects of that language can be assessed in conjunction with the risks.

**Review Project and Plans**

Review of the project and contract documents is an important part of the workshop; often there will be stakeholders who have not studied the plans. These participants can cause disruption to the group and will reduce the effectiveness of the workshop.

**Review Level 2 or 3 Schedule/Program**

A summary of the schedule is a great tool to start the discussion. It gives everyone a perspective of the project, discusses the phasing and rationale, and improves the quality of the workshop.

It is important to display the longest path (LP) and zero critical path (ZCP) for the schedule, so everyone can view the activities that make up those paths. It is also important to have a Near-Critical Path report view ready to discuss those activities as well. The near-critical path (NCP) definition should be explained and discussed. Generally, a near-critical path range of up to about one update period is appropriate and will not result in too many activities.

The importance of having these paths ready to display and discuss is that the CP or ZLP are the activities that are likely to cause immediate delay upon slippage, and the NCP activities are the ones that could cause mid-period critical path delay. The approach using event drivers is a very good one, and provides
efficiency in the workshop. For more on event drivers, Dr. David Hulett’s very good book, “Integrated Cost-Schedule Risk Analysis,” gets into the details with comments like, “The risk driver method focuses on the risks themselves, so it is a more fundamental analysis than the more traditional 3-point estimate placed directly on activity durations or costs.”

Risk Management

Risk management has been well defined and explained by a number of documents and books over the years, including publications from AACE International. However, a schedule risk workshop will need to be focused using the appropriate level of risk assessment without any sidetrack into academic discussions about risk. The workshop should focus on practical use of risk theory, and make the determination as to the full extent of risk management. For example, often the workshop cannot effectively include evaluation of the duration uncertainty risks, so it might be more useful to run a separate analysis of these risks and simply provide the results at the workshop to help everyone focus on specific issues. The specific event risks, including risk drivers, should be the primary focus of the workshop, using the risk register. Then the facilitator can lead into the traditional risk management cycle of qualitative analysis, quantitative analysis, assigning the priorities for the risk response plane, and finally the report summarizing and documenting the results, allowing for an action plan to implement the workshop results.

Duration Uncertainty Risks

Most CPM schedules are not adjusted for risk, but rather are developed as if there were one right answer for the schedule’s numerical data. Generally, activity durations are established by calculation of the quantity of work represented by an activity divided by the production rate, or by sheer “gut feeling" of the project manager or crew leader. This production rate is normally established by the contractor’s historical records or an estimating system, such as Means,’ that provides an accurate database of average production rates. Once those durations are calculated, they are often used as deterministic values, which assume that the durations are accurate and unlikely to change. This assumption ignores the fact that the schedule is attempting to predict how long it will take to complete an activity at some unknown time in the future, using an unknown crew composition, with variable experience, and working in unknown conditions. Risk management recognizes the uncertainty in duration estimating and provides a system to brainstorm other risks that may occur during the project. Probability distributions are the best way to model planned activity durations, as noted by Hulett. “The best way to understand the activity durations that are included in the schedule is as probabilistic statements of possible durations, rather than a deterministic statement about how long the future activity will take.”

When possible, we incorporate Monte Carlo risk simulation methodology using risk management software called PertMaster. This methodology requires some knowledge of probability and statistics, but provides a software-based probabilistic approach to risk, including some very useful features. This software provides a wide range of duration distributions for various impact ranges, with more flexibility and power than more simple probabilistic methods that typically use three point probability assessments.

Once the impact ranges are established, the software runs repeated calculation iterations using each of the duration estimates, until the range of completion dates narrows and additional iterations do not show additional spread and the normal distribution of dates is reasonably well established. Discrete and discontinuous risk events can be incorporated and used in the simulation, as well as running statistical modeling of uncertainty in durations. In addition, merge path bias, the risk of multiple paths terminating at one activity, can be assessed and mitigated. The use of PertMaster is particularly useful in conceptual and feasibility scheduling when durations are even less certain.

Results from the use of PertMaster include the probability of achieving various completion dates, which can be used to help the client choose the right confidence level for the selected project duration. Often, we find that the contractor scheduled planned completion date falls within a very low range of probability, usually due at least in part to the lack of risk management planning. The use of PertMaster and other Monte Carlo software requires good schedules that provide a good model of the project, encompassing all the scope of work, and often contractors’ schedules do not rise to that level. This means that for risk management using a simulation approach, good results require a very good technical schedule, with appropriate logic and estimated durations.

Some of the other features that we can acquire from the use of PertMaster are complex metrics that cannot easily be extracted from a schedule by other means, like the criticality index, which identifies the times that an individual activity shows up on different critical paths (strictly the percentage of iterations that the activity appears on the critical path). This provides for better monitoring ability since these are the activities that are going to be more likely to delay the project. Sensitivity analyses, correlating activity duration and project duration, produce “Tornado” charts, listing the major obstacles to completing the project. When a subcontractor or trade contractor is known not to be a strong performer, PertMaster allows specific trades to be isolated and risk analysis can be run at a different rate or profile on just those trades, allowing customized risk analysis. This is very useful in design-bid-build work, where there is a tendency to accept low bids which include historically weak trade contractor performance.

Dr. Hulett, in his writings and presentations, notes that he is moving away from the Monte Carlo analysis of duration uncertainties toward, something he calls risk event drivers. Analysis using risk drivers reduces the population of items to model and for which to develop ranges by using the identified risks rather than all durations. The theory is that the activity duration uncertainty is driven by individual risk event drivers, so the risks are discussed within the connotation of the causes of risks rather than the activity symptoms. Once the risks are established, those risks can be analyzed with a Monte Carlo
analysis of the risk events. This also aligns the risk analysis process with the risk register and uses the information gleaned from that register and the analysis process to choose high priority risks to model for the risk event drivers.

A benefit of this approach is that once risks are assigned to specific activities, the risk assessment automatically provides the correlation of activities that share risks, rather than having to individually identify correlation without a basis in specific event risks. It also reduces the criticism of the three point estimate of durations as analyzed in a typical Monte Carlo simulation; those simulations can ignore the effects of project controls feedback to the project management team and the resultant recovery efforts that rarely allow worst case durations to stack up and create very low probabilities of success.

Specific Event Risks
There are several other risk management techniques, such as the use of modeled approaches such as providing what-if scenarios, which model different means and methods of construction. This can be very powerful and we use it when we can identify discrete and discontinuous alternates or risks from the risk workshop. An example of what-if scenario modeling was done recently to analyze various methods of structural fill materials procurement and delivery for the underwater dyke construction in the construction of a new multi-model facility for the Virginia Port Authority at Craney Island in Portsmouth, Virginia. With this modeled technique, a resource driven schedule to supply the fill materials was developed, and used to model various types of production and the resultant rates. This allowed for recommendations for the procurement process, while still early in the pre-construction stage of the project.

The discrete risks are fairly straightforward, based on the experience and lessons learned of the stakeholders and well understood by the team. Risk correlation is a bit more complicated and needs explanation to the group. When there are multiple activities that are affected by either one or more of the activities or by common risks, those activities show correlation. It is important to identify those correlations because analysis software does not do a good job of providing good correlation, unless done in the event risk driver approach where the risks are assigned to multiple activities providing the correlation.

With the use of event risk drivers, the correlation is performed automatically once risks are assigned to individual activities, allowing common risks to “correlate” the different affected activities.

Identify Risks Using the Risk Register
The first step in identifying risks includes development of a project-specific risk register. This can be done from scratch, or better, from synthesizing a master risk register down to the project-specific types of risks. Either way, the result is a list or template of risks that might be commonly expected on the project. Discussion of that refined master risk register sparks additional risks in each of the areas of discussion.

Addressing the risk brainstorming session through use of the categories helps focus attention on specific areas of risk. Each category should be systematically reviewed, and the list of risks compiled. Once a category seems to be completed, the next category can be described and the process started over. At the end of the risk identification portion of the session, there should be a well-established list of risks.

Once the risk register appears to be fleshed out, ask if there are any other issues that typically crop up on this type of project. This should include sources for schedule overruns, cost overruns, change orders, disputes, and for claims and warrantee issues. All of those are breakdowns in project success that are risks to future project success. A simple question like, “What were the impediments to finishing on time or budget in the last wastewater treatment plant?” will spark discussion and it’s the discussion that really opens eyes and generates good workshop results.

Perform Qualitative Risk Analysis
Once the risk register is populated, event drivers are established, and a qualitative risk analysis is performed, assigning a subjective value to each risk. The event driver discussion should be centered on which activities are most affected by each of the risk event drivers.

Probability or Likelihood Rating
These subjective values are taken from standard qualitative assessment ratings, and provide insight into the determination as to the likelihood that the risk will happen. The reason that it is important to start with qualitative determinations is that people generally do not think in terms of percentage evaluations of probability, whereas they do think in terms of likelihood of occurrence.

The general categories of likelihood of occurrence should be explained and might be something with a spread similar to this list:

Those qualitative judgments generally run from the remote likelihood where it would be safe that it will not
happen to the frequent occurrence where it is likely to happen more than once or certain to happen.

**Consequence or Impact Rating**

It is also necessary to determine the consequences of the impact should the risk materialize. Those severities can be qualitatively assessed by selecting from a list of consequences with a range such as those shown in figure 4. Choose terms that seem to reasonably match the severity of the impact. Then each risk should have assigned the likelihood of occurrence and the consequence of the impact should it occur.

**Perform Quantitative Risk Analysis**

Qualitative risks are then mapped to a quantitative probability factor in order to provide some objectivity and an assignment, which provides a leveling effect in analyzing the separate delays. It also allows for calculations to establish priorities. These factors should be discussed with the participants so they have a feeling for the ranges for each assessment.

The mapping of ranges for the likelihood of occurrence might be something like what is shown in figure 5. A similar process is handled for the consequences should the risks happen. The range mapping could also be simple integers which increase in value as the probability or consequence increases. This mapping is used to help provide a combined value that will be used to sort the risks in priority order, so that higher priority risks are quickly identified.

**Overall Risk Rating or Priority**

With the risk identification and assessment complete, using the Probability of occurrence and the Consequences of the risks, the product of those ratings provides the priorities. The product is calculated by the equation below, sometimes called a risk rating or an impact coefficient (Ic):

\[ I_c = P \times C, \]  

with a minimum value of 0 and a maximum of 1

\[ P = \text{Probability of occurrence and} \]  

\[ C = \text{Consequence of risk} \]

For example, a risk of a regulatory delay with a likelihood of “likely” assigned a 50% probability and a consequence of “critical” assigned a .75 consequence rating would yield an impact coefficient of .375, while a risk of lowered contractor productivity in concrete work with a “likely” likelihood assigned a probability of 75% and a consequence of “critical” assigned a consequence rating of .75 would yield an impact coefficient of .56, and the contractor productivity risk would have a higher priority.

If the probability mapping is done using integers from 1 to 5, 1 as the lowest probability or consequence and 5 as the highest probability or consequence, the same example above for the regulatory delay might have a probability of 3 and a consequence of 4, while the lowered contractor productivity risk might have a probability of 4 and a consequence of 4, yielding an impact coefficient of 12 for the regulatory risk and 16 for the contractor productivity, so the contractor
productivity risk still has the higher priority.

This generates a matrix of importance which prioritizes the risks from most important to least important, where the higher the coefficient, the higher priority that the risk warrants. This set of priorities is the set of overall risk ratings for the identified risks.

The next step is to determine a cut-off point in the list of priorities which limits the need for risk response. The choice of this cut-off point is based on the threshold of appetite for risk and requires a discussion with the workshop team. There will be some point in the risk ratings where combination of either the low probability of occurrence or the insignificance of the consequence does not require any response, beyond perhaps simply monitoring the risks.

Once this cut-off point is established, it is time to address the disposition of risks from the overall risk ratings. With the highest priorities, each risk will need to undergo scrutiny to determine how to handle the risk.

**Plan for Risks — Develop Risk Response Plan**

This leads into a very important part of the risk management workshop, the risk response plan. Based on the analysis, risks are avoided, transferred, mitigated, or just accepted. These options should be discussed so the stakeholders understand how risks need to be addressed.

Risks are avoided by contractual issues, re-sequencing, or float management, transferred through procurement, change management, or insurance, mitigated by resource analysis and compression, or accepted for monitoring by project controls techniques during the project. Working from highest priority to lowest priority through the final overall risk ratings, each risk is addressed by one of the four type of response.

**Incorporate Risk Workshop Results Into Schedule**

If the output from the workshop is not implemented, then the time spent will be purely academic, so it is important that the risk response plan is devised to ensure the responses are incorporated into the schedule, and to enable the process to continue during routine updates.

**Monitor and Control Risks**

The risk response plan is provided to document the risk management efforts, including all open risks that must be monitored and updated during the routine updates. With Enterprise Primavera scheduling software, the risk module can be used to record and track risks and risk drivers on an ongoing basis during the project until the risk is resolved. A determination is made as to what progress stage will be necessary to run a new simplified risk workshop during the project, and that time period is monitored so that a new risk identification cycle can be started with each progress stage. Risk management reporting is provided with each schedule update.

**CPM Network Risks**

The last type of risk that occurs in any project is the risk from the construction of the CPM network. The network is the basis for all calculations of scheduling components, such as total float, free float, early and late dates, and provides a benchmark against which
performance measurement is made. And in the event of an impact event, the network is the basis for analysis of anticipated extension of time requirements. In any CPM network, there are a number of techniques that are used, both intentionally and unintentionally, to position the contractor to exploit owner delays or decisions. These fall into a number of categories, but good schedule review with claims avoidance techniques should provide an adequate level of protection.

An example of a network risk is that of the “hub” activities which result in “merge bias.” Dr. Hulett defines merge bias as “Merge bias is the extra risk that occurs at points where parallel paths merge in the schedule. The risk at merge points may be greater than the risk of any of the merging paths.”

Output from Risk Workshop

The output product from the risk workshop is the risk response plan, which should then be disseminated to the major stakeholders for the project. This plan should become part of the plan, under either the risk section or the project controls section. The changes determined from the plan will have been made to the schedule, so this risk-adjusted schedule should be published after final quality control check.

Often it is important to summarize this plan for the top priority risks and provide a matrix detailing these risks and the resultant responses. It can be useful as well to provide a summarized report describing the risks that were left in the schedule for maintenance review so that the monthly update process can be modified or accommodated to include this maintenance.

Conclusion

A risk workshop that is well planned and facilitated effectively and efficiently will more than pay for the time spent and greatly improve the chances for a successful project. The workshop starts with careful and thorough preparation, ensures that the appropriate stakeholders and subject matter experts participate, provides all the steps in risk management, including risk drivers and other specific event risk identification and recording in the risk register, qualitative and quantitative risk analysis, and ending in formal output in the form of the risk response plan identifying immediate actions, monitoring actions, and future cycles of risk assessment during updates. Included in the risk response plan is an executive summary to provide an overview of the entire process and plans.

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5. AACE International Recommended Practice No. 71R-12, Required Skills and Knowledge of Decision and Risk Management (Public Review Draft), pg. 14.

For other resources on this subject, go to: www.aacei.org/resources/vl/ You can do an “advanced search” and search by “author name” for an abstract listing of all other technical articles this author has published with AACE. Or, you can search by any total cost management subject area of interest to you and retrieve a listing of all available AACE articles on your area of interest.

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The December 2013 Atlanta Area Section meeting featured section member Charles Budd, EVP, of Budd Management Systems in Jackson, GA, presenting: The Basics of Earned Value Management. The focus of Chuck’s presentation centered on the use of earned value management to accomplish the basic project management parameters of scope, schedule, and budget, and accomplishing the functions of planning, measuring progress, and projecting future outcomes.

He described the 32 guidelines of the ANSI/EIA 748 standard and how they fall into the five categories of organization, planning and budgeting, accounting considerations, analysis and management reporting, and revisions and data maintenance to work to foster the accomplishment of the project objectives.

Atlanta Area Section President, Jay Carson, CCP CEP, is shown above chatting with November program presenter, Beth Corbley from Reed Construction Data.
The section board of directors met before the section meeting during which David Jett was named co-liaison to the SPSU Student Section and publicizing the section’s winter CCP Certification Workshop was discussed.

The Atlanta Area Section’s November 2013 meeting, on Tuesday, Nov. 19, featured a presentation by Beth Corbley of Reed Construction Data on RS Means: Construction Cost Data Trending. Beth spoke about aspects of the RS Means construction cost database that lend it transparency, granularity, and allow the data to be dynamic, changes coming in the 2014 construction cost database, and talked about the changes over the years that have brought it from a single database in printed format to its various formats of today which include print, online, CD, and eBook formats. Not only has the number of line items steadily increased to more than 85,000, but RS Means now publishes more than 20 annually updated construction cost data titles, including the Historical Cost Index which allows adjustment of costs over time and the City Cost Index which localizes costs to specific locations in the US or Canada.

Beth predicted that the industry will see price fluctuations ranging from a 40+% increase to as much as a 20% decrease for individual items from 2013 to 2014, and pointed out how sustainable design and Energy Star requirements and LEED certification are affecting construction costs. She pointed out that construction labor rates continue to increase, although having moderated since the onslaught of the recession.

**East Tennessee Section**

The Nov. 11, 2013 section meeting of the East Tennessee Section was at the Gondolier Restaurant in Oak Ridge, TN. A sizable turnout of 20 members and guests were in attendance.

The guest speaker was Dean Ford, a B&W Y-12 LLC Senior Project Controls Analyst, with 35 years of field construction experience in project management and control. His past experience includes 30 years in the nuclear construction, maintenance and cleanup fields.

Mr. Ford’s presentation was titled, Application of Monte Carlo Simulation to Cost Estimating. He started out reviewing the basic input items needed to start an estimate, and then briefly touched on the final steps to reach a total estimated cost, before addressing the aspect of risk. He then gave a very simple, but effective, detailed/illustrated explanation of using Monte Carlo Simulation to analyze risk factors applied to various cost items throughout the estimate. At the end of his talk, several questions from the meeting’s attendees showed there is a lot of project controls interest in this topic.

The October 2013 section meeting of the East Tennessee Section was Monday, Oct. 28, 2013, at the Outback Steakhouse on N. Peters Rd. in West Knoxville. A good turnout of 15 members and guests were in attendance.

The guest speaker was Bill Marrison, current President of the Metropolitan Knoxville Airport Authority (MKAA). Mr. Marrison has served the MKAA, continuously since 1970, in various capacities. His topic at the meeting was a review of the newly proposed general aviation airport for Oak Ridge, TN.

Mr. Marrison began by stating that the US Dept. of Energy approached the MKAA less than two years ago with an unexpected offer to give them the land for a proposed airport facility on the former World War II Manhattan Project K-25 Site on the west end of Oak Ridge. This site is currently being transformed and decontaminated by DOE contractors into reusable commercial/industrial development property. The DOE land offer was welcomed by both Oak Ridge government officials and the MKAA, as there is currently no general or commercial aviation airport in the Oak Ridge area. Knoxville’s commercial airport, McGhee Tyson, is approximately 20 miles south of Oak Ridge.

Progress to-date on the planning stages shows the location of a 5,000 feet long runway (with room to expand to 6,000 feet) and ample acreage for aircraft hangars. Bill explained that a runway of this length will easily accommodate small business jets—just the type of aircraft size needed by local businesses to serve their growing needs. Mr. Marrison spent ample time in his presentation on the construction cost and schedule aspects of the project, currently scheduled for completion sometime in 2018, if all goes smoothly. He concluded by answering several questions from meeting attendees.

**Houston Gulf Coast Section**

Each year the Houston Gulf Coast Section, at its December meeting, collects donations for the Houston Food Bank. Shown above, Emery Heuermann made the drop off of the Section’s $200 check and 104 pounds of food items. Section officers thanked the section members for their generosity and hard work.
Montreal Section

On Nov. 19, 2013, the Montreal Section enjoyed a presentation entitled, *Revisiting Design and Schedule at the Romaine-3 Powerhouse for Sequencing Optimization*. The Romaine-3 hydroelectric project is located north of Havre-Saint-Pierre in Quebec, and is scheduled to provide 414 MW to be commissioned in 2017.

The trio of speakers from Hydro-Quebec included: André Bergeron, a civil design engineer; and Chantale Germain and Michel Guévremont, both involved with planning, scheduling and cost estimating. In the course of their work, they investigated and used the latest technologies and construction methods to optimize construction of the Romaine-3 project.

The presentation discussed the time-savings with enhanced...
Presenters at the Montreal Section’s November 2013 meeting included a trio of speakers from Hydro-Quebec: Chantale Germain and Michel Guévremont, both involved with planning, scheduling and cost estimating; and André Bergeron, a civil design engineer.

Chantale Germain, from Hydro-Quebec, was one of three speakers at the Montreal Section’s November 2013 meeting. The topic was: Revisiting Design and Schedule at the Romaine-3 Powerhouse for Sequencing Optimization.

Presenters at the Montreal Section’s November 2013 meeting included a trio of speakers from Hydro-Quebec: Chantale Germain and Michel Guévremont, both involved with planning, scheduling and cost estimating; and André Bergeron, a civil design engineer.

designer-scheduler coordination, uses of constructability reviews, prefabrication considerations and design adjustments, as well as the analysis of Romaine 2 historical data. Techniques also employed included the use of 3D Catia mock-up views, 2D planning and sequencing, Primavera schedule development and Pertmaster analysis. A resulting 4D Delmia video was also shared and discussed.

On Oct. 3, 2013 over 65 members of the Montreal Section enjoyed a special Montreal Section tradition with an evening based on Highlights of the 2013 AACE International’s 57th Annual Meeting. A special presentation was arranged to provide highlights, or “sound bites,” by colleagues who attended the Annual Meeting in Washington, DC, this past Summer. Sound bites were presented by Chantale Germain of Hydro-Quebec, Khaled Elfekhafk of SNC-Lavalin and Les McMullan of Rio Tinto.

To start the evening, the local Montreal Section student scholarships were awarded for the 2012/2013 session to Ali Montaser, Alexandre Chang and Laya Parvizsedghy. Professor Moselhi of Concordia University assisted the Montreal Section president, Marie-Helene Biffi in issuing the awards. Each of the
recipients gave a brief speech, expressing appreciation to the Montreal Section and their goals for the future.

The “highlights” evening included a summary of key points from the following papers:

- PM-1319—How to Maximize the Value of Virtual Teams, by Mr. Joseph A. Lukas, which provided tips on working in virtual teams and how to maximize the synergy and benefits of virtual teams;
- EST-1394, Recommended Practice on the Principals of Estimate Accuracy—by Larry Dysert, discussing the updated recommended practice on the principles of estimating accuracy;
- INT-1335, Understanding and estimating skilled labor shortages, by Ms. Laura Hodges & Emily Crowley, that discussed key determinants of wage escalation on an international basis to help estimators be better prepared to navigate global labour costs;
- OWN-1286 Owner Gaps in Project Control – An industry Overview by Steven Cueno & Stephen Cabano provided insights into common themes identified in the findings and how the Owner can remedy deficiencies and proactively upgrade project controls.

Attendees were encouraged to attend future AACE Annual Meeting technical programs and to visit the aace.org website for access to the detailed material from the Annual Meeting.

**North Florida Section**

On October 17, 2013, the North Florida Section’s meeting featured a Certification Roundtable. This event also included the first ever live certification Webinar with presenters AACE Certification Board Chair Valerie G. Venters, CCP, and Penny Whoolery, AACE Certification Manager.

This meeting was attended by those who were interested in becoming certified and by those already certified members who wished to learn about the renewal process or how to earn another certification.

Other topics covered included the new regulations and procedures, the benefits of certification, how to prepare for and take the exam, how to re-certify, the current portfolio of AACE certifications, and the Kryterion online examination process.

After the 30-minute live Webinar segment, questions were asked by the meeting attendees and answered by Venters and Whoolery. Handouts relevant to the webinar information are posted on the “resources” page at www.nflaace.org, and may be downloaded by anyone interested.

Following the Webinar segment, the in-person roundtable portion began. Moderator and Section President John P. Orr, PSP, started the discussion. Mr. Orr, along with the other two participants North Florida Section board member Dallas R. Lee, CCP, and Miami Section member Maria B. Bosch, CCP CFCC PSP, each addressed the major topics from their own experience. A lively discussion with audience participation followed.

A highlight of the meeting was the special award presented to long-time North Florida member Joseph A. Brown, CCP. Mr. Brown is not only a pioneer in the United States space program with NASA, but he also helped found the North Florida AACE Section many years ago. He has since served as Section president, is still an active member of our board, and serves as our unofficial Section historian. Mr. Brown has been honored with many local, state and national awards including our North Florida AACE “You’re a Star” Award, the Canaveral Council of Technical Societies (CCTS) Technical Achievement Award, and the AACE Fellow and TCM Excellence Award.

In addition to making significant contributions to the profession of cost engineering, Mr. Brown is the first AACE member to become certified in the State of Florida, and is one of the first few members to earn an AACE certification.

A special Certificate of Appreciation was presented to Mr. Brown in grateful recognition of his significant contributions to cost engineering as a pioneer in AACE professional certification in the state and nationwide.

“I’m so honored by this award,” said Mr. Brown, “and sincerely appreciate this special recognition by our Section. I’ve al-
ways believed that professional certification is among the most valuable programs offered by AACE, and I’m gratified to see it grow and develop to become an industry benchmark over the years.”

According to Section President John Orr, “Joe’s shared story from the early days of AACE certification development provided the meeting with a sense of the history behind AACE certification from someone who was there at the beginning. Everyone benefited from this meeting in increased knowledge about the certification process, in the free exchange of ideas, and in greater appreciation for those who helped begin and shape this important professional program.”

Seattle Section

The Seattle Section continued its strong monthly meeting program on Nov. 14, 2013, with a well-attended presentation by Joseph Poskie. The topic was about, “Managing Risk and Contingency from the Earliest Stages of Capital Planning.” Joe discussed how capital facility owners and developers are faced with an environment of stringent funding requirements, demand for visibility and expected efficiency in the use of capital funds. Owners are expected to have reliable estimates and budgets early in the development continuum, prior to any design. Parametric estimating techniques leveraging values from historical projects and experience can be effective. Organizations that have established a collection of reliable and historic costs and estimates, using consistent cost and work breakdown structures, can leverage the statistical sample to derive expected costs for similar future scope. Doing this has inherent statistical risk which can be calculated and planned for as contingency. Furthermore, the calculated contingency can be effectively applied to allow for contingency drawdown and release as risk is mitigated over the course of the project or program. This presentation discussed calculation of contingency for estimates derived from a historic sample along with the management of the contingency in connection with a risk mitigation plan for a project or program.

Mr. Poskie has more than 18 years of experience applying construction technology to help tackle and solve complex industry challenges. He has designed and implemented technology solutions for a range of leading organizations, such as Fluor, the US General Services Administration, AT&T, Ontario Power Generation, Westfield Corporation, Simon Properties, and many more. Mr. Poskie began his career with Pittsburgh-based construction firm PJ Dick, followed by American Bridge Company in Pittsburgh and Orlando, before joining Meridan Systems in 2000, to provide training and consulting expertise on Prolog Manager, one of the industry’s most widely used software applications for construction project management. Since Meridian’s acquisition by Trimble Navigation Ltd. in 2006, Mr. Poskie has designed and implemented numerous solutions. He now works with project management and estimating software including Proliance, WinEst, Modelogix and SketchUp Pro, along with the entire Trimble Buildings portfolio of design-build-operate solutions, to help organizations solve their business problems and maximize the value of their technology investments. He holds a bachelor’s degree in Civil and Environmental Engineering from the University of Pittsburgh and a master’s degree in Business Administration from the University of Phoenix.


Southern California Section

The Southern California Section met Dec. 10 for its annual holiday gathering from 5:30 p.m. – 8 p.m. at the Long Beach Petroleum Club.

The section conducted its 2013 Fall Symposium Nov. 1-3, 2013, at the Hyatt Regency in sunny Indian Wells, CA. The event was a huge success with over 65 attendees and five sponsoring companies. Sponsors included DRMcNatty & Associates, Trimble, O’Connor Construction Management, Tecolote Research and Jacobs Engineering. Several members from Southern, Central and Northern California attended, as well as Nevada, Texas, Colorado, New York and North Carolina.

On Friday, three concurrent training/certification overview workshops were conducted for the CCP, PSP and EVP certifications, followed by a welcoming reception in the evening. A “best ball” golf contest was also sponsored with John Matsumoto and John Haynes receiving best score, while tiger team Jerry Quintero and Mark von Leffern receiving the “most honest golfer award.”

Section President Marc Glasser kicked off the event on Saturday morning with a welcome and orientation of the event. The Fall Symposium features industry leaders in the advancement of cost engineering, project controls and technological innovation and application. In this ever evolving construction climate, we seized opportunity and assembled an expert panel to kick off the event with a discussion of current and future trends in project controls.

Included in the opening panel discussion was John Haynes from Hill International, Jim Zack from Navigant Consulting, from Dan McNair Southern California Gas Company, Julie Owen from LA Metro and Josh Rowan from the Young Professionals Committee and moderated by Alexia Nalewaik from QS Requin.

After the morning break, Don McNatty provided an inform-
ative overview of Oracle Primavera Unifier and Primavera Con-
tract Management followed by three concurrent tracks of tech-
nical sessions lasting through Sunday. Saturday evening was
highlighted by a Sponsors’ Reception featuring refreshments and light hors
d’oeuvres, offering a good opportunity for networking and social-
ing.

Kicking off Sunday, John Ciccerelli, President of AACE Inter-
national, provided a keynote address consisting of a State of the
Association presentation followed by group Q&A and discussion of
Association initiatives and upcoming plans. Sunday was
capped by closing remarks and a raffle with prizes including study
guides, reference manuals, and gift cards.

The Southern California Section would like to thank the
sponsors and speakers who made the 2013 Fall Symposium a
world-class event, as well as all the attendees who participated and
took time out of their busy schedules. Planning has already
begun for the 2014 Fall Symposium with details forthcoming in
the next months – stay tuned!

In the interim, the AACE International Western Winter
Workshop is coming up around the corner and will be March 13-
16, 2014 at the Hyatt Regency in North Lake Tahoe.

The Southern California Section’s annual joint meeting with the
Los Angeles Chapter of the American Society of Professional
Estimators was on Oct. 23, 2013. The meeting proved to be once
again a very rewarding alliance. Carlo Paciulli, ESQ., with Hunt
Ortmann attorneys gave a great presentation of the legal issues in
construction. Ten AACE members attended the meeting in-
cluding Bill McMillian who noted that only from work experience
and such presentations as Carlo’s that we learn how to work
through the problems of the industry.

South India Section

A two day workshop on Scheduling Best Practices and ANSI
748 Compliant Planning and Control Systems was conducted Oct.
29-30, 2013, at Bangalore, India, by the South India Section for
Puravankara Projects Limited (PPL), which is a real-estate com-
pany based in Bangalore, India.

The workshop was led by S. Sankar, EVP, a member of South
India Section. About 20 professionals from Puravankara Projects
Limited and Starworth Infrastructure and Construction Limited
(SICL)-a subsidiary of PPL, participated in the workshop. The
workshop was attended by senior management, project man-
agers, planners and schedulers from both the companies.

The workshop briefly covered 10 scheduling best practices
and ANSI 748 compliant Earned Value Management Systems
elaborately. The eight overarching tenets of “Generally Ac-
ccepted Scheduling Principles” (i.e., complete, traceable, trans-
parent, statused, predictive, usable, resourced and controlled),
were discussed during the workshop.

The workshop covered EVM fundamentals, ANSI 748 guide-
lines, and AACE International’s Earned Value Professional (EVP™)
Certification Study Guide. The workshop’s course content was
tailored to the requirements of PPL and SICL. The participants
were also given sample problems as part of the workshop.

The workshop covered major sections of ANSI/EIA 748. Top-
ics such as WBS, Integrated Master Schedule, cost loading of ac-

tivities, management analysis and reporting were discussed in
detail. Examples from the construction industry were discussed

PRESENTATION LOCATION CLARIFIED

In the 2013 Source article about the National Capital
Section noted that the section was able to have its first
international meeting, where speakers from AECOM’s of-
fices in Edinburg, Scotland, gave a live presentation about
their work on construction of the Roseisle Distillery in
Edinburgh, Scotland. The article continued, “In addition to providing
a very interesting presentation about building information
modeling, it was exciting to participate in a virtual
meeting with colleagues from the other side of the
world, while sitting in an office in Washington, DC.” The
US participants were actually sitting in an office in Arlington,
VA, adjacent to Washington, DC.
When Will Your Section News Submission Be Published?

The digital Source magazine includes all “Section News” submissions. Source has a submission deadline of two months in advance of the issue date. Please review the following production schedule. It lists the submission periods for the six bimonthly issues of Source magazine in 2014.

2014 Source Section News Submission Schedule

February
- Items submitted from Oct. 16 - Dec. 15, 2013

April
- Items submitted from Dec. 16 - Feb. 15, 2014

June
- Items submitted from Feb. 16 - April 15, 2014

August
- Items submitted April 16 - June 15, 2014

October
- Items submitted June 16 - Aug. 15, 2014

December
- Items submitted Aug. 16 - Oct. 15, 2014

This production schedule is based upon production schedules at AACE headquarters, as well as our printer having two to three weeks production time to take our in-house files and convert them to the Nxtbook software for posting. Enhanced features like audio, video, website links, and more will be a part of each issue of the Source. Some technology features will require additional production time and earlier deadlines. The magazine is to be ready for posting by the first of the month.

Within 2 to 3 business days of submitting a “Section News” item, you should receive a return confirmation e-mail that your submission was received at AACE headquarters.

How to Submit Text and Photos

Please submit any and all text as a part of the e-mail or as a Microsoft Word file attachment. Please submit any photo or photos as individual attachments in tiff or jpg formats. Do not embed photos in Microsoft Word files.

For photos to be used, we require either large original files or print size photos at 300 dpi (dots per inch). We can convert large 72 dpi submissions into the required 300 dpi. This process shrinks the size of the original submission. We cannot use photos taken on cell phones. For photos to be published, they must be in focus, of print quality, and wide enough to fill the width of the column layout.

Please include the names and titles of each person shown in any photos. Please list names from left to right or refer to those shown as being above left or right. For group photos please list names from left to right, beginning with the front row and working to the back. Do not list the Section officer first unless he or she is photographed on the left with guest speakers on the right.

All submissions should be e-mailed to editor@aacei.org. Please use the official name of the Section as approved by the AACE Board when the Section’s charter was approved. Never refer to the Section as a chapter.

Contact AACE Concerning Missing Submissions

Generally, all submissions received in the above scheduled times will be published in the listed issue. Items are not held because of space restrictions. There is no waiting list and no preference is given to one Section over another. Questions about incomplete submissions or failure to follow these submission guidelines could delay publication. Text will be published without submitted photos if the photo does not meet the listed quality requirements.

If a submission is not included in the designated issue, please e-mail or call the Managing Editor to ensure that it has not been lost or misplaced. Call or e-mail if you do not receive a confirmation e-mail within 3 business days of submission.

AACE reserves the right to edit all submissions and/or to refuse to publish any submissions determined by the Managing Editor or the Art Director to not meet the standards of the journal. Any appeals of these decisions will have a final decision determined by the Executive Director.

Any Section representative with questions is advised to e-mail editor@aacei.org or call the Managing Editor during regular business hours (9 a.m. to 5 p.m. Eastern Standard Time, Monday-Friday, except holidays and special closings.)
On the weekend of Nov. 9, 2013, the AACE Houston Gulf Coast Section welcomed some 40 plus delegates to the Emerging Leaders Conference, at the Magnolia Hotel in downtown Houston. It was the fourth year for this event, and the third year that it has been sponsored in Houston and the elegant 1920s era boutique hotel proved to be the perfect venue once again.

Leadership conference attendees arrived from across the country and represented a broad range of industry groups: Software Solution Providers, Technical Service Agencies, EPC Contractors and Oil Majors.

Facilitated by Sally Starbuck Stamp and Jeff Thoren of Gifted Leaders LLC, delegates engaged in discussion and exercises concerning the Foundations of Leadership. During the workshop, participants not only considered the art and science of leadership in today's world but also used evidence-based leadership models and competencies to help develop self-awareness along with long-term development goals.

A special thank you to our Leadership Conference sponsors: Faithful + Gould, Brunel Energy, Marsh Risk Consulting, Orion Group and Blue Marble Risk Solutions. Without you, this popular event would not have been possible. So again, thank you to these companies for their leadership and foresight by investing in the cost engineers, schedulers and risk practitioners who we will call upon to be our responsible leaders of tomorrow.

### EMERGING LEADERS CONFERENCE A SUCCESS

The San Francisco Bay Area Section and Southern California Section announce that the 2014 Western Winter Workshop is scheduled for March 13-16.

This will be the 53rd annual workshop and it will include two and a half days of capital management and technical presentations, showcasing the very latest in project controls tools and techniques. The workshop provides a unique opportunity to network with key decision makers for major capital project delivery organizations, as well as owners, executives, managers, engineers and many other industry professionals.

The 2014 Western Winter Workshop will feature:

- **Two for One Registration** – Registered attendees may bring a second attendee at no cost. However, complementary registration can only be applied to attendees who did not attend the 2013 WWW.
- **Capital Program Management** – Presentations by decision makers representing owners with major capital management programs.
- **Technical Program** – Presentations by industry experts on cost engineering, project management, project controls, scheduling, claims and other relevant topics.
- **Innovation Collaboration Forum** – Panel discussion by industry experts on cutting edge issues.
- **Certification Credit Hours** – Attendees will receive credit course towards their certifications.
- **Enhanced Hotel Accommodations** – This year’s workshop will be at the Hyatt Regency Resort on the north shore of Lake Tahoe, with nightly rates as low as $152.
- **Software Showcase** – Software vendors will demonstrate the latest in construction industry software.
- **Ski Competition** – 3rd Annual WWW ski competition is an opportunity to network with your peers in a fun environment.

For more information about the workshop, agenda, registration fee, hotel registration and location, please check the website: [www.aaceisf.org/www_2014.html](http://www.aaceisf.org/www_2014.html)

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James Arrow, DRMP, of the Houston Gulf Coast Section is shown with Sally Starbuck Stamp and Jeff Thoren of Gifted Leaders LLC, the two facilitators for the 2013 Emerging Leaders Conference that was hosted in Houston on Nov. 9, 2013.
Kenneth Baker
1943-2013

Kenneth Baker, 70, of Rockwall, Texas, passed away December 2, 2013. Ken was born in Brownwood, Texas, the son of Arthur Burl Baker and Virginia Edington Baker. He grew up in Albany, Texas, where he graduated from Albany High School.

Ken was proud to be a member of the legendary football team that won state championships for Albany, in both 1960 and 1961. He received the prestigious Eagle Scout award at the age of 16 and enjoyed many years of scouting, both as a teenager and adult. Ken headed for Texas Tech University where he graduated with a degree in chemical engineering. Upon graduating, he began his career at Celanese Chemical Company, where he worked on technical and economic problems for the petrochemical industry. A short time later, he and several colleagues discovered a mutual interest in a graduate degree program that could be completed off campus. They approached the management of several operating companies and a few colleges to explore options for such a program. In response, Texas Tech University and a group of petrochemical companies jointly established an off-campus graduate degree program. Ken obtained the first Master of Engineering degree through this new program. Ken continued his commitment to education, as a member of the "Dean's Council" for the "Edward E. Whitacre, Jr. College of Engineering" at Texas Tech University. He was a member of AACE International, The Authority for Total Cost Management.

Ken went on to join the US Environmental Protection Agency where he managed research and development projects on the reduction of air pollution from petrochemical refineries, chemical processes and power plants. Three years later, he made a major career change and became an independent consultant as President of Greene & Associates, Inc. He combined his practical engineering expertise with an economic and business background to achieve his goals. He believed that the enormous variety of professions and jobs in which one can apply an engineering education allowed one to work almost anywhere and contribute to society. Because of his accomplishments, he was recognized as the Dallas Area Outstanding Chemical Engineer in 1982.

In February 1993, Ken, along with his business partner John O’Brien, founded Baker & O’Brien, Inc. Their vision was to build a firm that would be known for holding the highest professional standards for their clients. For the past 20 years, the fundamental principles of the firm have been applied to every assignment. Baker & O’Brien, Inc. currently has offices in Dallas, Houston and London, with clients around the globe. In February 2013, the company received congressional recognition from the United States Congress for 20 years of outstanding service.

Over the last 30 years, Ken has provided damage assessment and business interruption evaluations for almost every major petroleum and petrochemical accident in North America. He has testified in State, Federal, District and US Bankruptcy courts, as well as local and international arbitrations. Ken was a Professional Engineer registered in the State of Texas with over 40 years experience in chemical, gas and energy-related operations. His responsibilities included process design and evaluation, in addition to project analysis, development and management.

Ken was passionate about history and became an avid and sophisticated collector of antique maps. He was fortunate to have traveled all over the world but was always the happiest when he was home at, "Baker Ranch." Ken was a remarkable man with tremendous integrity, ethics, compassion and humility. He left a lasting impression on all that knew him and loved him. He was a vibrant person with an unwavering spirit. He was the "rock" and there will never be another Ken Baker.


A memorial service celebrating Ken’s life was conducted at 1 p.m. on Saturday, Dec. 7, 2013, at First United Methodist Church of Rockwall, 1200 E. Yellowjacket Lane, Rockwall, Texas. In lieu of flowers the family requests that donations be made to the Edward E. Whitacre, Jr. College of Engineering, Texas Tech University, in memory of Mr. Kenneth Baker, P. O. Box 43103, Lubbock, Texas 79409-3103.

This obituary was first published by the Dallas Morning News.
**Can you spare a minute?**

**Sixty seconds:** The minute you spend waiting for the coffee to brew in the morning or to walk to the water cooler and back. And yet that minute per day represents how long it takes the average total cost management practitioner to earn the annual dues to join AACE International!*

- **One minute** to earn unlimited access to 4,500 technical papers online in our Virtual Library that can help you solve that problem that will make you a hero in your company.
- **One minute** to earn an annual subscription to the Cost Engineering journal to discover that next cutting edge idea that will advance your career.
- **One minute** to earn the use of the Visual Total Cost Management framework to provide you with the conceptual road map for TCM success.
- **One minute** to earn viewing rights to monthly technical presentations in AACE Presents.
- **One minute** to join a vibrant network of more than 7,700 other professionals in our discussion forums, section meetings and other networking opportunities.
- **One minute** to earn discounts on education, training, meetings and certification programs that will make you more valuable to your employer and clients.

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To learn more about AACE International, go to [www.aacei.org](http://www.aacei.org).

*Based upon annual total compensation of $70,000 and annual dues of $143.00 (US).
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VICE PRESIDENT-TEC
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864.281.8086 / vptec@aacei.org

VICE PRESIDENT-REGIONS
Julie Owen, CCP PSP
213.922.7313 / vprecis@aacei.org

DIRECTOR-REGION 1
Matthew Nicholas, PSP
416.498.1303 / dirregion1@aacei.org

DIRECTOR-REGION 2
Maria Cristina Baltazar, PSP
410.276.0076 / dirregion2@aacei.org

DIRECTOR-REGION 3
Mark G. Cundiff, PSP
770.922.3210 / dirregion3@aacei.org

DIRECTOR-REGION 4
Jaqueline T. Doyle, PE PSP
dirregion4@aacei.org

DIRECTOR-REGION 5
David A. Norfleet, CCP CFCC
dirregion5@aacei.org

DIRECTOR-REGION 6
John L. Haynes, PSP
415.757.2390 / dirregion6@aacei.org

DIRECTOR-REGION 7
Gulam Farooq Quadir, CCP
+966.50.380575 / dirregion7@aacei.org

DIRECTOR-REGION 8
Asoka K. Pillai, CCP EVP FAACE
dirregion8@aacei.org

DIRECTOR-REGION 9
Jim Perry
+33.14.7664729 / dirregion9@aacei.org

DIRECTOR-REGION 10
Nelson E. Bonilla, CCP FAACE
/ dirregion10@aacei.org

EXECUTIVE DIRECTOR
Dennis G. Stork
304.296.8444 / dstork@aacei.org

AACE INTERNATIONAL HEADQUARTERS STAFF

EXECUTIVE DIRECTOR
Dennis G. Stork
+1.304.2968444 x114
dstork@aacei.org

MANAGER, CERTIFICATION
Penny Whoolery
+1.304.2968444 x104
pwhoolery@aacei.org

ADMINISTRATOR, CERTIFICATION
JoAnn Metzler
+1.304.2968444 x110
jmetzler@aacei.org

CREDENTIALING ANALYST
Valerie Smith
+1.304.2968444 x112
vsmith@aacei.org

STAFF DIRECTOR, EDUCATION & ADMINISTRATION
Charla Miller
+1.304.2968444 x113
cmiller@aacei.org

MANAGER, PROFESSIONAL EDUCATION DEVELOPMENT AND LEARNING TECHNOLOGIES
Andrew Guman
1.304.2968444
aguman@aacei.org

MANAGER, FINANCE
Carol Sue Rogers
+1.304.2968444 x102
crogers@aacei.org

MANAGER, FINANCE DESIGNATE
Janice L. Johnson
+1.304.2968444 x107
jjohnson@aacei.org

ACCOUNTING ASSISTANT, ACCOUNTS PAYABLE
Olivia Jenkins
+1.304.2968444 x118
ojenkins@aacei.org

STAFF DIRECTOR, TECHNICAL OPERATIONS
Christian Heller
+1.304.2968444 x117
cheller@aacei.org

MANAGING EDITOR
Marvin Gelhausen
+1.304.2968444 x111
mgelhausen@aacei.org

www.aacei.org
1265 Suncrest Towne Centre Dr
Morgantown, WV 26505-1876
800.858.COST
fax - 304.291.5728
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13 Owners’ Night: Capital Program Updates,
The Construction Management Association of America (CMAA) Southern California Chapter
The Grand Conference Center Long Beach, CA
Contact: www.cmaasc.org

21 Changed or Differing Site Conditions,
The Construction Management Association of America (CMAA) Southern California Chapter
The Grand Conference Center Long Beach, CA
Contact: www.cmaasc.org

**MARCH 2014**

13 The Construction Manager’s Role in Sustainable Projects,
The Construction Management Association of America (CMAA) Southern California Chapter
The Grand Conference Center Long Beach, CA
Contact: www.cmaasc.org

13-16 2014 Western Winter Workshop,
The Southern California Section of AACE International
Hyatt Regency Lake Tahoe Incline Village, NV
Contact: www.aaceisf.org/www_2014.com

**JUNE 2014**

15-18 AACE International’s 2014 Annual Meeting,
AACE International Sheraton New Orleans Hotel
New Orleans, LA
Contact: phone 1-800-858-COST fax (304) 291-5728
info@aacei.org www.aacei.org

**OCTOBER 2014**

20-22 2014 ICEC World Congress,
The International Cost Engineering Council (ICEC) and The Italian Association for Total Cost Management (AICE)
Atahotel Executive Milano Italy
Contact: www.icec2014.it/

**NOVEMBER 2014**

3-7 The Second Australasia and South East Asia Structural Engineering and Construction Conference (ASEA-SEC-2),
The International Structural Engineering and Construction Society (ISEC)
Rama Gardens Hotel Bangkok, Thailand
Contact: www.isec-society.org/ASEA_SEC_02

11-13 AACE International Total Cost Management Conference,
AACE International Millennium Hilton Bangkok
Bangkok, Thailand
Contact: phone 1-800-858-COST fax (304) 291-5728
info@aacei.org www.aacei.org

Please submit items for future calendar listings at least 60 days in advance of desired publication.

AACE International, 1265 Suncrest Towne Centre Dr, Morgantown, WV 26505-1876
USA
phone: 304-296-8444 fax: 304-291-5728
e-mail: editor@aacei.org
website: www.aacei.org
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