THE ROAD AHEAD
AACE President Bolyard’s Farewell Message

AACE Founding Member Talks Association History, In His Own Words
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Why work doesn't happen at work

Jason Fried has a radical theory of working: that the office isn’t a good place to do it. He calls out the two main offenders (call them the M&Ms) and offers three suggestions to make the workplace actually work.

Jason Fried thinks deeply about collaboration, productivity and the nature of work. He’s the co-founder and president of 37signals, a Chicago-based company that builds web-based productivity tools that, in their words, “do less than the competition — intentionally.” 37signals’ simple but powerful collaboration tools include Basecamp, Highrise, Backpack, Campfire, Ta-da List, and Writeboard. 37signals also developed and open-sourced the Ruby on Rails programming framework.

Fried is the co-author, with David Heinemeier Hansson, of the book “Rework”, about new ways to conceptualize working and creating. Salon’s Scott Rosenberg called it “a minimalist manifesto that’s profoundly practical. In a world where we all keep getting asked to do more with less, the authors show us how to do less and create more.”

Source: www.ted.com
President’s Message
A Look Back While Looking Forward

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Mentoring Profile
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Spotlight on Candice Brown

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AACE International Online Store

For additional industry news and updates, you can always visit us at web.aacei.org.
The Top 10 Reasons To Join AACE International

Ready to advance your career and begin enjoying the advantages that our members enjoy? Whether you are an experienced cost engineer or a student, we have a membership ready for you.

1. **Time**
   Gain access to a wealth of resources that will save you time and money! You’ll stay informed about the complexities of the cost and management profession - plus you’ll have access to discounts on educational programs, publications, and more!

2. **Information**
   Locate thousands of technical papers and publications in the Virtual Library. AACE’s database is keyword searchable for quickly locating appropriate reference articles.

3. **Career**
   Members can post resumes at no additional cost in our Career Center and keep your career on track through information sources such as our annual Salary and Demographic Survey of Project and Cost Professionals.

4. **Learning**
   We offer numerous online learning courses on estimating and project management. The Approved Educational Provider program helps maintain high quality development courses and providers. AACE also holds many seminars throughout the year.

5. **Resources**
   Starting with the TCM Framework and Recommended Practices that are available for free only to members to our bi-monthly publication Cost Engineering featuring articles for cost professionals around the world. Through the AACE International website, the Cost Engineering journal is a great current resource for members and as a member, you gain access to an archive of past issues.

6. **Technical Development**
   Increase your knowledge and expertise by joining one of AACE International’s many technical subcommittees, subcommittees, and Special Interest Groups (SIGs) at no additional cost to members. Discuss industry problems with your peers or help experts develop new and improved techniques and practices for the profession.

7. **Networking**
   By attending a local section or our Annual Conference & Expo for interesting speakers, informational tours, social dinners and much more. The online Membership Directory is an excellent source for a list of contact information on thousands of members. Join one of our many technical subcommittees and participate in the AACE Forums - a great way to tap into the collective wisdom and experience of our world-wide membership.

8. **Excellence**
   Our certification programs are independently accredited by the Council of Engineering & Scientific Specialty Boards. AACE certifications are a recognized credible standard in the cost management field. A recent study shows that individuals with an AACE Certification earn 17.4% more than their counterpart without a certificate.

9. **Discounts**
   On products and services ranging from AACE International Conference & Expo registration fees, archived webinars and presentations, certification examination registrations, and more!

10. **You!**
    We are your professional partner bringing you information and support you can trust. Join and become part of a unique network of individuals who are dedicated to improving the cost and management profession.

JOIN TODAY! web.aacei.org
The Road Ahead

This is my farewell message to you as President of AACE International.

This year seems to have passed in an instant of time, which is an indication that we have been very busy. It is remarkable to look back throughout this past year at AACE International’s progress that has been driven by the efforts of our members, committees, special interest groups, task forces, associate boards, Board of Directors, and headquarters staff. There is much to be excited about and celebrate.

This past year we welcomed four new sections – Bolivia in South America, and, driven by the energetic efforts of Sean Regan who is Regional Director for Region 9, three new sections in Europe and the Mediterranean – Poland/Ukraine, Eastern Europe The Balkans, and Greece. Other exciting events began this year as we unveiled the new/updated AACE logo at the Annual Conference and Expo in Orlando. We also rolled out the new Communities platform that replaced the old forums and provided greater ease of access and broader application across all our activities. We have continued to expand the number of certification testing locations available internationally. We have developed both a new Vision and a new Mission for AACE that emphasize our commitment to AACE International’s membership and continuing our progress.

In keeping with the new Vision and Mission, we developed a new Strategic Plan to focus our efforts on the most beneficial initiatives over the next several years. From the Strategic Plan then flowed the revisions to our Constitution and Bylaws through the creation of the Membership Associate Board and the Marketing Associate Board both of which will begin their work at the 2018 Annual Conference and Expo. Their focus will be on innovating and improving the membership experience and driving membership growth. Along with creating the new Associate Boards, the changes in our Constitution and Bylaws further enhanced the agility of our Board of Directors and included a Vice President - Marketing and two Vice Presidents – Membership, one for North America and one for International.

All of these accomplishments are only possible through the efforts of our volunteers at all levels and the headquarters staff.

I thank AACE International’s membership for entrusting me to guide our Association for the past year. I thank the Board of Directors for their foresight in setting our future path. Thanks to the Technical, Education and Certification Associate Boards for their continuing efforts to keep our programs and certifications as the best and most highly sought globally. I thank our Executive Director/CEO, Charity Quick, and the AACE headquarters staff for their support of me, but more importantly for their un-ending commitment and support of our global membership. I thank Past-President John Livengood for his support and continued leadership on numerous initiatives. I wish President-Elect Alexia Nalewaik the best for her upcoming year in leading this fantastic Association and thank the incoming Board of Directors in advance for their volunteer efforts in leadership of ACCE International.

If you would like to contact our current president with questions or comments about The President’s Message please address your e-mail to president@aacei.org. To engage in other discussions, check out AACE International’s Online Forums at www.aacei.org/forums.
Beginning in the late 1990s and early 2000s, AACE founding member Jay M. Gorey documented his family’s history for his children’s future use and reference. He said the projected ended up taking 685 hand printed pages. He joked, “If I had envisioned such a task, I never would have embarked on it.”

Prior to the 50th anniversary celebrations for AACE in 2006, Mr. Gorey shared six pages from his family history that specifically deal with the history of AACE. Selected portions of Mr. Gorey’s history of AACE are shared as follows:

In April 1956, Mr. Jim Ballenger, my section head (for supervisory level up) invited me to attend a meeting with him of cost engineering personnel from across the country who were interested in founding a new engineering society. Why me you may ask? Because it was to be held at UNH and, of course, he knew I was a recent alumnus.

But why UNH of all locations throughout the United States? It was due to Dr. O.T. Zimmerman, Chair of UNH’s Chemical Engineering Department, who spearheaded the need for such an organization. In November 1949, he had published a book titled, “Chemical Engineering Costs.” Beginning in January 1950, he began publishing a quarterly supplement to this book, titled “Chemical Engineering Costs Quarterly” (purpose was to fulfill the need for regular cost updates to his 1949 book). I was familiar with it since my employer, Esso Research and Engineering Company (ERcE) was a subscriber. The organizational meeting was held on June first and second 1956. Fifty-nine attended this meeting which resulted in the formation of the American Association of Cost Engineers (AACE). As a founding member, I was named chairman of one of its technical committees which I must add was promoted and encouraged by Mr. Ballenger.

The first Annual Meeting was also held at UNH on June 26 thru 29 in 1957. One hundred sixty attended this meeting. As a committee chairman, I had to present a committee report in New Hampshire Hall at this meeting from which an abstract was quoted in one of the regular engineering publications (Engineering News Record as I recall). Most of the sessions for both meetings (founding and first) were held in Kingsbury Hall. The two banquets were held at Simpson’s Pavilion in Dover, NH, which featured a lobster and clam bake. (It still exists today under the name of Cottage by the Bay). Pauline and I drove up with the boys for me to attend both meetings.

On June 26, 1957, Mr. Ballenger brought me along to the founding meeting of an AACE Atlantic Section (today’s Metropolitan New York Section) which was held in New York City. Again, “thanks” to him, I was appointed Chair of the Section’s Founding Nominating Committee. Then to really rub it in, the
In 1960, I was nominated for AACE Vice President without Mr. Ballenger’s prodding due to his having been promoted and transferred to corporate headquarters in New York City. I accepted it as pretty much a lark, feeling I had no chance of being elected. Then I was shocked to learn I had been elected to this national office. Only good thing about it was my being able to resign as chair of the national technical committee. It also gave me the excuse to end my active participation in the Metropolitan New York Section.

As probably to be expected, I was nominated to run for President in 1961 as the incumbent Vice President. This nomination was declined for a couple of reasons. Firstly, I personally didn’t feel it was appropriate for me as probably the youngest founding member at 33, to become its leader as it was moving ahead toward establishing itself as a national as well as a worldwide engineering society. (More simply put, I didn’t want to be President). Secondly, even though ERcE was supportive of AACE involvement and my nomination, they were not exactly overjoyed with one of their junior engineers being that committed to outside work and travel requirements. AACE felt differently. Their position was as current vice president, I was obligated to run for president. After much discussion, we came to an agreement. Instead of accepting nomination for president, I would take on the job of drafting an organizational manual for AACE. In retrospect, I should have accepted the nomination!

Drafting it took several months working on it evenings and weekends. To define the duties and responsibilities for its Board of Directors, Officers and Committee Chairmen. It also included the roles of various committees, planning Annual Meetings, as well as procedures for funding and organizing local sections. The typed draft of 78 pages was approved and adopted by the board in 1961. That’s after I corrected several grammatical errors which were highlighted by Mr. Cecil Chilton who was the senior associate editor of Chemical Engineering magazine and an AACE board member at the time.

I continued to be an active member in the parent AACE organization until the late 1970s. This included serving as an Annual Meeting host and as a member of the national nominating committee.

**AACE International member John Hollmann noted:**

“Jay Gorey was an AACE founder, who as chair of the AACE Estimating Methods committee in 1958 published the first AACE Recommended Practices (RPs) on estimate types (now referred to as Class) and attendant accuracy. For the young engineers out there, he was a founder and chair while in his 20s. It seems to me much of the project world is still learning that cost accuracy and uncertainty are largely a function of the phase of scope definition; a topic Mr. Gorey and his AACE committee tackled 60 years ago!”

**Jay M. Gorey**

Born January 23, 1928 in Manchester, he was the son of Joseph and Ruth (Reed) Gorey. He graduated from Central High School, in Manchester, in 1946, and then enlisted for Army military service and served in Japan as a small arms technician and base PX manager. Following his honorable discharge in the summer of 1948 with the grade of Technician 3rd Grade, he enrolled at the University of New Hampshire, majoring in civil engineering and graduating in 1952.

Jay’s first position after graduation was with the Boston and Maine Railroad as a structural designer. After several years, he left that position to accept one in New Jersey with Esso Research and Engineering Co., later known as Exxon Research and Engineering Co., and then Exxon Chemical Co. He was involved in all phases of cost engineering and, at Exxon Chemical Co., was in charge of the preparation of worldwide capital investment estimates for purposes of project development, appropriation, and cost control.

Jay was a founding member and a National Vice President of the American Association of Cost Engineers (AACE) and drafted the original organizational manual for the AACE. He was also a Course Director of Applied Cost Engineering for the Center for Professional Advancement, Somerville, N.J. On a community level, he served as President of the Chatham, N.J. Little League baseball organization and was a member of a citizen’s recreation study committee.

Following retirement in 1986, Jay and his wife Pauline moved back to New Hampshire, purchasing a home in Lee to be close to the UNH campus. Jay and Pauline attended many productions at the Paul Arts Center and also attended many UNH home football and basketball games and an occasional hockey game.

Jay will be especially remembered for his love of family. Nothing pleased him more than to spend time with family, especially at their summer cottage on Wakonandah Pond.

Besides his wife, Pauline, whom he met on a blind date during their freshman year at UNH, Jay is survived by their three children, Brent Gorey and his wife Karel Hayes of Moultonborough and their son, John Gorey and his wife Lesley, Michael Gorey of Dover, and Joanne Stankos and her husband William “Buzz” of Alton Bay and their children, Trey and Jaden Stankos.
Whether you have been thinking about taking a certification exam for a job requirement or a personal goal, think of it as an investment in yourself.

Exams are stressful for most people. If you add time constraints, studying, and papers, in addition to full-time jobs, families, and real life, not being equipped with the proper information can feel like you are sinking.

To avoid drowning, here are the Top 5 Tips to equip you with the information needed to make your exam experience as smooth as possible.

1. STUDY FIRST
Be prepared to take your exam before you register. For most of our exams, once you register, it only takes a couple business days to receive your clearance. Once you receive clearance, you have only six months to take the exam up to three times (twice at a reduced fee). If you register and then study, six months will fly by and before you know it, you are at the end of your registration period.

Mark a date on the calendar for when you want to take your exam. Be sure to have all eligibility requirements prepared to submit, including your technical paper if registering for the Certified Cost Professional (CCP) exam. You can open an application collection for your exam and upload documents as you get them. Once you are ready to take the exam, just checkout and pay.

2. DON’T WAIT TO SCHEDULE YOUR EXAM
Most exams have a written component (memos or essays) during the exam, which must be sent out to graders for evaluation. Memos/Essays are assigned in cycles every month on (or around) the 15th and it generally takes about 2-3 weeks for the memos to be evaluated by the graders, compiled by the coordinators, and then calculated and entered into your profile by Certification Department staff.

Being mindful of when you take your exam in relation to the grading cycle is vital in planning your exam. We recommend scheduling your exam soon after receiving clearance to take advantage of your full registration period, especially if you need to take the exam again. Here are two examples:

A. If John takes his Planning & Scheduling Professional (PSP) exam on May 13th, his memo will be included in the May 15th grading cycle. He should receive his results around the end of May or the first week of June.

B. If Amy takes her EVP exam on June 17th, her memo will be included in the July 15th grading cycle. She won’t receive her results until the end of June or the first week of July.

3. KNOW AACE POLICIES
It is essential to be knowledgeable of the policies that will affect you before the exam.

First, AACE has a strict no-refund policy. If you suddenly decide you want to back out of your exam, you can, but a refund will not be given.

Second, if you need to reschedule the exam, be sure to do it at least 72 hours prior to your scheduled time. This is a strict Kryterion policy based upon contractual terms with testing centers. If you reschedule with less than 72 hours’ notice, cancel, or no show, AACE is still charged for your exam since the testing center reserved a seat and made the necessary staff and space preparations.

Third, it is important to know what to do in case your exam has a disruption or if something is wrong with the equipment or environment. The first action is to notify the proctor immediately. It is the proctor’s responsibility to try and remedy the issue and resume your exam as quickly as possible. However, sometimes the issue cannot be fixed by the proctor and Kryterion must be contacted.
If you are dissatisfied with the proctor’s actions or inaction, or if there was an outage or proper protocol was not followed, report your experience to AACE Headquarters as soon as possible. You may be asked to file a formal complaint for tracking purposes.

Here are the policies. Read them. Become familiar with them.

- **Cancellations, No Shows & Rescheduling Policies** – what is the difference, and what to do if you need to make a change in your scheduled exam
- **Examination Disruption Policy** – what you need to do in case you experience a disruption during your exam

### 4. KNOW WHAT HAPPENS THE DAY OF YOUR EXAM

When you registered for your exam, you probably glanced over exam information on the website. Maybe you didn’t read all the information in your emails from the Certification Staff. However, before you arrive at your exam, knowing what to expect is critical.

- You must take two (2) IDs (one government-issued picture ID) and your exam confirmation email with you to your exam.
- You will be required to empty your pockets and turn them out as well as have your glasses inspected.
- If you are taking an exam with a memo or essays during the exam, you will not be able to use common keystrokes like CTRL+C or CTRL+V while you are typing your memo/essay for security reasons.
- You may use any type of calculator, even programmable, if it is stand-alone and battery-operated.
- Unless your exam is open-book (CCT, CST, and CFCC exams), the only thing you may take into the exam with you is your calculator. Check the website for specific resources allowed.
- The CCT and CST are each three (3) hours and the rest of the exams are five (5) hours, so make sure you eat a good meal prior to going in to your exam.

### 5. KNOW WHAT HAPPENS AFTER THE EXAM

Besides knowing when to expect your exam results (see #2), you will receive a survey invitation via email to provide valuable information about your exam experience. It is important to complete the survey, so we know what we’re doing well, what we need to improve upon, and how to better serve examination candidates and certificants.

Then, it’s a matter of waiting. Once all examination data is received and compiled at headquarters, your examination results are released via email.

Studying for the exam, scheduling sooner than later, being prepared for potential problems, being informed about policies and procedures, and providing feedback is the perfect recipe to make your exam experience smooth sailing. Keeping these 5 points in mind will help you chart the course for exam success.

Of course, if you have any questions along the way, you can contact us here at AACE Headquarters at certification@aacei.org or 304.296.8444.

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**Sara Peters Completes Credentialing Specialist Certificate Program**

The Certification Board and AACE Headquarters want to congratulate Sara Peters, Certification Administrator, on completing the Credentialing Specialist Certificate Program through the Institute of Credentialing Excellence (ICE).

The Credentialing Specialist program is an assessment-based certificate program that uses instructional design principles to deliver best in class education and was developed by ICE in conjunction with leading industry experts.

The comprehensive 8-course curriculum was designed for the individual who wants to gain insights into the eco-system of certification from a program’s conception, through its development and delivery, to maintenance and improvement. The course topics include: Needs Assessment, Accreditation Standards, Certification Administration, Certification Operations, Key Psychometric Concepts, Exam Development, Governance, and Legal Issues.

Sara joins over 600 industry professionals to complete the course, including AACE’s Credentialing Analyst, Valerie Smith. When asked about her experience, she states, “The Credentialing Specialist Certificate program was extremely valuable for my role in the certification department. The hands-on experience I have gained since working for AACE built the foundation of my certification knowledge. After the completion of the program, I have a broader knowledge of accreditation standards as well as policies and procedures. This learning experience is not only beneficial to my day-to-day tasks, but has also given me the skills and knowledge to assist in the further maintenance, development and growth of the certification department.”

Please join us in congratulating Sara and celebrating this exciting accomplishment.
Ayodeji received Certified Cost Professional (CCP) certification from AACE International in 2007. Ever since then Ayodeji has been volunteering with AACE International as a certification grader and most recently as a mentor. Ayodeji has over five years’ experience mentoring different people from across the globe. He says, “It has been a refreshing experience to share my experience and provide guidance to those in the Industry or wanting to join the AACE International family.”

He continued, “I strongly recommend that other professionals take up mentoring as a means of giving back to the profession. Mentoring is a win-win opportunity. You get to learn from the youth and vibrancy of those just entering the profession and from the diverse experience of those wanting to migrate or change organizations.” For success, his advice is to, “be an active listener and a willing participant to get the best out of every session and be ready to take advantage of technology to eliminate the distances between mentors and mentees.”

Ayodeji is a graduate of Electrical Engineering from Ado-Ekiti University and a master's degree holder from the University of Alberta (MBA in Natural Resources and Energy). Ayodeji holds certification in SAP, cost management, project management and Insurance. He has extensive management experience working for Shell and Suncor.

Ayodeji is a self-starting, high-performing leader with over 20 years of experience in the energy industry, and specializing in project and engineering management, business development, strategy planning and project controls. He is recognized as a creative and effective strategic planner and problem solver. He has strong communication and negotiation skills and is a very resourceful leader who readily adapts to changes. He has managed diverse and high performing teams of professionals and service providers, and he has extensive project execution experience and global exposure.

With a career spanning multiple continents, Ayodeji has developed core skills that include but are not limited to the following: business development, commercial strategy development, project management, business planning, leadership/communication, joint ventures and strategic alliances formation. He is currently a project manager with Suncor Energy Oil and Gas and looks after a variety of scopes that are in development and in execution. Most recently, Ayodeji was the project manager on the completed Ore Preparation Plant project as part of the Fort Hills Mega Project with Suncor.

Editor’s Note: This is the second of a series of Spotlight on Mentoring profiles of AACE members who are currently participating in the AACE International Mentoring program. If reading these profiles inspire you to want to become a mentor, contact Dev Tamboli, CCP PSP, Chair of the AACE Committee for Mentoring Excellence, by sending an e-mail to: dktamboli@gmail.com.
Candice Brown is a quintessential Canadian; born in Northern Ontario, she loves winter and exploring her surroundings. Candice grew up in Deep River, Ontario, a small town created specifically to house the employees of Canadian Nuclear Laboratories (CNL) in nearby Chalk River, Ontario. As Candice’s father was working at CNL, Deep River became the family’s home base.

Growing up in a town made up of highly skilled people, often holding advanced degrees and specialized certifications, meant that Candice’s love for learning was not just encouraged by her parents and teachers, but by the greater community as a whole.

When the time came for Candice to attend post-secondary school, she opted to attend Canadore College of Applied Arts & Technology in North Bay, Ontario, and complete their three-year business administration diploma program. While attending Canadore, Candice enjoyed her management and human resource courses most. So, when she graduated, not only did she finish with her diploma in business administration, but with a certificate in human resources management and two Ontario Management Development Program (OMDP) certifications, as well (business management, and leadership skills).

Candice’s first full-time position took her back to Deep River, and the company that had always had a large impact on her life: Canadian Nuclear Labs. After spending two years in general office related positions, a vacancy in the human resource department’s training and organizational development branch opened up and Candice jumped at it. For the next eight years of her career, Candice felt at home in the training department and completed yet another diploma; this time, in adult education – qualifying her to both develop and facilitate training courses at CNL.

In 2014, feeling ready for a change and the need to move on to new challenges, Candice took on a project assistant role at CNL, moving from a field in which she was an expert, to one in which she was a beginner. This was a big shift for her – causing her to not only re-frame her perspective on company business and to integrate with new teams, but most importantly (and also the most challenging) to adjust the expectations she had for herself. Learning about the role of project controls in a project pulled Candice back to the roots of her post-secondary education: accounting, marketing, management, statistics, and she found herself going through text books, professional articles and journals, and attending training courses to learn as much as she could about the career path she was quickly falling in love with.

Candice has been assigned to a number of projects throughout her career in project controls at CNL, the most recent of which was a multi-million dollar project to improve storm water management infrastructure at CNL’s Chalk River site. This past fall, she made the decision to become more specialized in her field, focusing on the areas of project controls that she enjoys most: change management and earned value management.

Promoting careers in STEM and management to young women and advocating for employee equity provides Candice with a strong sense of comradery with other women in the nuclear industry and helps her to feel that she is contributing to changes that will improve the career opportunities for future generations of women.
Encouraging other women to pursue careers in the Canada’s nuclear industry has also been something Candice is passionate about. It’s for that reason she became a member of Women in Nuclear (WiN) Canada, in 2012. Candice is an active member of the Eastern Ontario chapter of WiN Canada, and has helped to plan and execute two national conferences. Promoting careers in STEM and management to young women and advocating for employee equity provides Candice with a strong sense of comradery with other women in the nuclear industry and helps her to feel that she is contributing to changes that will improve the career opportunities for future generations of women. Also close to Candice’s heart is the importance of advocating for individuals with disabilities and mental illness. As a woman who manages an anxiety condition as part of maintaining her health, she is passionate about combating people’s perceptions of mental illness in the hopes of ending the stigma that limits the opportunities of others to seek treatment, employment, and build relationships with others.

Candice joined AACE International in late 2017, to network herself with other professionals in her field. With CNL being located in somewhat of a rural area, AACE opened up doors to meeting new people that Candice otherwise wouldn’t get to meet. AACE membership has also provided Candice with access to resource material to fuel her interest in EVM, which she is intending to put to use writing the exam for AACE’s Earned Value Professional (EVP) certification, in the fall of 2018.

Considering herself to be a geek at heart, Candice seeks to encourage questioning attitudes in junior employees, embracing Stephen Covey’s habit of ‘seek(ing) first to understand, then to be understood.’ Advice she would give to women wanting to either change career paths, compete for a promotion, or even just develop new skills, is to learn as much as you can, any way you can – and don’t be afraid of making a mistake! See a mistake as just another experience you get to learn from, giving you another chance to learn and develop your skills.

The India Section and IIT Madras are jointly hosting an August 4 conference on “Mega Projects – Managing Risks and Uncertainty” at IIT Madras. The conference will be followed by a one-day workshop on August 5. E-mail chair-itt@aaeindia.org to reserve your seat to attend the conference.

Megaprojects are large-scale, complex ventures that typically cost US$1 billion or more, take many years to develop and build, involve multiple public and private stakeholders. They are transformational and impact millions of people. Megaproject management is an emerging and hugely costly field of study. Megaprojects are measured in the units of mega, giga and tera, and the industry is entering a new “tera era” of trillion-dollar projects. Total global megaproject spending is assessed at US$6 to US$9 trillion annually, or eight percent of the total global Gross Domestic Product (GDP), which is the biggest investment boom in history.

Megaprojects are designed to change the structure of society, as opposed to smaller and more conventional projects. Megaprojects are a completely different breed of projects in terms of their level of aspiration, lead times, complexity, and stakeholder involvement. Consequently, megaprojects require to be managed very differently to the conventional type of projects.

Examples of megaprojects are high-speed rail lines, airports, seaports, motorways, national health or pension, information and communication technology (ICT) systems, national broadband, the Olympics, large-scale signature architecture, dams, wind farms, offshore oil and gas extraction, aluminum smelters, the development of new aircraft, the largest container and cruise ships, high energy particle accelerators, the logistics systems used to run large supply chain–based companies like Amazon and Maersk etc.

For policymakers, investing in infrastructure megaprojects seems particularly coveted because, if done right, such investing creates and sustains employment, promotes improved productivity and competitiveness by lowering production costs; benefits local consumption through better quality services; and improves the environment with more environmentally sound infrastructure.

Performance data of megaprojects around the world have indicated that 9 out of 10 such projects have had cost overruns in the range of 50 percent to 1900 percent of their originally estimated costs. Some examples are Channel-Tunnel rail link between UK and France (80 percent) and Sydney Opera house (1400 percent).

Due to their complex nature, megaprojects are inherently risky due to long planning horizons and complex interfaces. The decision making, planning and management typically involve multiple stakeholders both public and private with conflicting interests. Additionally, with non-standard technology and designs, the planners and managers may develop a false sense of “uniqueness bias” which impedes learning from other projects for implementing solutions with speed and agility to continuous challenges.

The expected outcome of the conference is to explore the strategies that can be put in place to better manage risk and overruns to avoid the pitfalls of ‘break-ﬁx’ method of project management by means of proactive and proper front-end management.

The India Section organized its first conference in 2017 with IIT Madras, a premier engineering institute as its academic partner. The theme of the conference was “Powering capital projects through enhanced cost and schedule performance.” The conference was attended by the invited delegates from industry, commerce, policy making and the academia. With the success of the first conference, the section is organizing the second conference on “Mega Projects – Managing Risks and Uncertainty” at IIT Madras on 4th August 2018. E-mail chair-itt@aaeindia.org to reserve your seat to attend the conference.
An expert in project controls, Dr. Pei Tang, holds a Ph.D. in civil engineering with a focus on construction management from Michigan Technological University (MTU). He has seven years’ research experience in construction management and five years’ professional experience in project controls.

A native of Jingzhou, one of China’s most ancient cities, Dr. Tang earned his bachelor’s degree in construction management at Nanjing Forestry University. While completing his senior design, he began using statistical models to solve research problems, and came up with streamlined and innovative solutions. Graduating at the top of his class in 2007, Dr. Tang was named a national outstanding undergraduate student by the China Civil Engineering Society. He was admitted to Shenzhen University’s graduate program in risk management before relocating to the United States to begin his research on construction modeling and simulation.

At MTU, Dr. Tang worked under associate professors Dr. Amlan Mukherjee and Dr. Nilufer Onder, and developed a methodological approach to help managers develop contingency management strategies. Specifically, the approach offered managers a means to evaluate new strategies and iteratively improve the decision-making process in the midst of disruptive events. It focused on sustainable alternatives and interactive simulation frameworks, and the research was funded by the National Science Foundation (NSF), the Michigan Department of Transportation (MDOT), and the United States Department of Energy (US DOE).

Upon graduating with his doctorate, Dr. Tang joined JCMS Inc. The company provides project/construction management and consulting services in the United States, Canada, India, and Qatar. A project control manager and research team leader, Dr. Tang implements innovative solutions for virtual construction, 3D scanning, and reality capture. He has been deeply involved in projects for Amtrak, the New Jersey Department of Transportation (NJDOT), the New York Department of Transportation (NYDOT), the Metropolitan Transportation Authority (MTA), and the Port Authority of New York and New Jersey, among others, with a total project value of more than $3.5 billion. By implementing his expertise in project controls, Dr. Tang has overseen the planning and scheduling, resource and cost control, delay claims analysis, and risk analysis on engineering, procurement, and construction projects from bidding to design, and from construction to closeout. In addition, he has extensive experience in resource planning and leveling to optimize usage and forecast resource needs.

His research and professional involvement has recently focused on construction modeling and simulation, green building, virtual construction, and integrated lifecycle project controls. Dr. Tang has made scientific contributions in his field by authoring 14 peer-reviewed journal and conference papers, and has been serving as a manuscript reviewer for leading journals such as Automation in Construction, Remote Sensing, and Environmental Planning and Management. In recognition of his outstanding research capabilities and achievements, he was invited to amend the Chinese industry standard “Technical Specification for Engineering, Planning, and Scheduling” in 2012, as a top expert in the field. Dr. Tang is also a core member of central New Jersey’s USGBC chapter, and advocates for sustainable design and construction practices.

Although he has been implementing the AACE International Recommended Practices since 2014, Dr. Tang was introduced to the AACE community three years ago and became an AACE member in 2017. He also attended the Northeast Total Cost Management Symposium in 2017. There he met Sunny Goklani, the Chair of the Rising Professionals Committee (RPC). Dr. Tang instantly became interested in the mission of the RPC, presented his plan for outreach, and now serves the mission of marketing AACE International as the best institution for project control, here and in China. He also views the RPC as a great networking opportunity, where professionals can connect with a new generation of industry experts, and has volunteered to assist the RPC in their effort to connect with new startups and foster strategic partnerships. Ultimately, his hope is to bring knowhow of innovative technologies and research to AACE International. He welcomes all the support toward this and will be glad to be contacted by any young professional who is willing to contribute in this area.

His advice to fellow professionals is to avoid sticking to just one sub-field of project controls. Usually, junior project controls engineers start with a subject, such as cost control or scheduling, and soon discover they can only manage a single aspect of a full-scale project. In addition, it is important to avoid following software information blindly, but instead to learn the theories and behind-the-scenes information that really allow this software to calculate data and make the correct changes. Project controls is a complex, multifaceted discipline, and it is important to study it with a broad perspective. Dr. Tang believes that AACE International offers a strong body of knowledge in project controls, along with recognized professional certificates, making the organization a perfect place to start, and grow with.
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Contemporaneous “As-Is” Period Schedule Delay Methodology - Forensic Delay Methodology MIP 3.3

ABSTRACT
The observational/dynamic/contemporaneous as-is analysis is a retrospective technique that divides the total project duration into smaller periods (also known as windows). Contemporaneous Period Analysis (CPA) has three identified variations with AACE Recommended Practice 29R-03, Forensic Schedule Analysis. Method Implementation Protocols (MIP) 3.3 variation focuses on usage of the periodic schedules submitted during the performance of the project as the basis to identify and quantify delays. In this methodology, the used schedules are relied on in their contemporaneous state of submission (i.e., “as-is”) and avoid analyst-inserted modifications to the submitted schedules, or in some cases, may perform minor adjustments. This article examines the rationale behind using this method, discusses its strengths and weaknesses, and addresses the challenges an analyst may face while performing this type of analysis. Further, this article critically examines the arguments for and against this methodology and provides useful recommendations to assist the analyst in deciding if this method is suitable for the case at hand. This article was first presented as CDR.2691 at the 2017 AACE Annual Meeting.

INTRODUCTION
Contemporary Period Analysis (CPA), also referred to as windows analysis, observational, dynamic, contemporaneous as-is, observational CPA, update analysis, or month-to-month analysis, is a retrospective analysis that involves dividing the total project duration into smaller periods of time (commonly referred to as windows) and quantifying the as-built critical path delays for each period. MIP 3.3 variation focuses on the usage of the periodic schedules submitted during the performance of the project as the basis to identify and quantify delays and gains [1, p. 51]. In
The following sections further detail the project consisted of the expansion and wet process, control, cooler, warehouse, recognition of contract time extensions, identification of the critical path activity to track loss or gain of time, determination of periods to use in the analysis (all periods or grouped periods), identification of changes in overall and interim milestone completion dates, and start/finish variances of critical and near-critical activities. The protocols also provide recommendations regarding the role of the analyst in identifying all changes and/or revisions to logic, durations, and/or progress made during the analysis period and determining the responsibility for delays and gains that occurred during the analysis period.

This article presents the application of MIP 3.3 in a real case in which delays and/or disruptions occurred during the project. The following sections further detail the methodology and findings of the CPA performed. In addition, this article addresses the strengths and weaknesses of MIP 3.3 and provides recommendations to assist the analyst in deciding if this method is suitable for the case at hand.

**CASE STUDY – PLANT EXPANSION PROJECT DELAYS**

**PROJECT OVERVIEW**

The project consisted of the expansion and construction of a meat manufacturing plant’s wet process, control, cooler, warehouse, electrical, unloading dock, packaging, clean-in-place system, dryer, and gowning rooms.

The owner executed a design-build agreement (contract) with a design-build contractor (contractor) to perform design and construction services for the project. The contractor’s scope of work generally included provision of all materials, equipment, tools, and labor necessary to complete the work as outlined and reasonably inferred in the contract. The contract included change orders, supplementary and general conditions, construction documents, the owner’s project criteria, and the contractor’s final scope of work document.

The contractor’s effective contract date occurred on May 4, 2011. The contractor was contractually required to achieve substantial completion by March 1, 2012. However, the contractor incurred numerous delays during the project, did not achieve the substantial completion date, and was terminated on June 15, 2012—106 days after its contractual substantial completion date. (Unless specified otherwise, days refer to calendar days).

**METHODOLOGY**

The following methodology was employed to perform the analysis and reach the conclusions described in this case study.

**Contract Analysis**

The analyst performed a review and analysis of the contract, including specific scheduling, cost and claims requirements, milestones, drawings, and the contractor’s scope of work on the project. In addition, the analyst identified and recognized all approved contract time extensions.

**Baseline Schedule and Schedule Updates: Selection, Validation, and Rectification**

The analyst reviewed multiple as-planned schedules developed by the contractor during the project, including baseline, revision, and update schedules. Table 1 provides a list of the schedules the analyst reviewed and relied on.

<table>
<thead>
<tr>
<th>Schedule Name</th>
<th>Schedule Data Date</th>
<th>Forecasted Substantial Completion Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>S.1</td>
<td>24-Aug-11</td>
<td>1-Mar-12</td>
</tr>
<tr>
<td>S.2</td>
<td>2-Sep-11</td>
<td>1-Nov-12</td>
</tr>
<tr>
<td>S.3</td>
<td>10-Nov-11</td>
<td>1-Jan-12</td>
</tr>
<tr>
<td>S.4</td>
<td>28-Nov-11</td>
<td>1-Apr-12</td>
</tr>
<tr>
<td>S.5</td>
<td>14-Dec-11</td>
<td>1-March-12</td>
</tr>
<tr>
<td>S.6</td>
<td>20-Dec-11</td>
<td>1-June-12</td>
</tr>
<tr>
<td>S.7</td>
<td>19-Jan-11</td>
<td>1-June-12</td>
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<td>S.8</td>
<td>5-Jan-12</td>
<td>1-June-12</td>
</tr>
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<td>S.9</td>
<td>20-Jan-12</td>
<td>1-June-12</td>
</tr>
<tr>
<td>S.10</td>
<td>5-Feb-12</td>
<td>1-June-12</td>
</tr>
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<td>S.11</td>
<td>23-Feb-12</td>
<td>1-June-12</td>
</tr>
<tr>
<td>S.12</td>
<td>6-Mar-12</td>
<td>1-June-12</td>
</tr>
<tr>
<td>S.13</td>
<td>15-Mar-12</td>
<td>1-June-12</td>
</tr>
<tr>
<td>S.14</td>
<td>31-Mar-12</td>
<td>1-June-12</td>
</tr>
</tbody>
</table>

**TABLE 1. Representative Schedules Used in Analysis**

Contractor’s S.1 schedule (data date Aug. 24, 2011) was selected as the baseline schedule because it reflected the contractor’s plan for the project at the time and was developed in accordance with the contract, change order 1 (CO1), and an Aug. 24, 2011 meeting with the owner. The schedules were reviewed and analyzed. Inconsistencies observed in the schedules were adjusted, analyzed, and modeled. However, the corrections did not change the forecasted as-planned critical, near-critical path(s), or total float values; and were designated as minor adjustments. The analyst also interviewed the contractor personnel to understand the scope, durations, sequencing, and other schedule parameters.

**As-Built Schedule Sources, Reconstruction, and Validation**

The analyst developed a daily specific as-built schedule to reflect as-built conditions based on the as-planned schedules, interviews, and contemporaneous project documents (e.g., daily reports, correspondence, meeting minutes, design submittals, and photos).

**Contemporary Period Analysis (CPA)**

The analyst performed a CPA to identify project delays. The analysis typically begins with the baseline schedule and proceeds chronologically from update to update, tracking progress along the critical and near-critical paths. For each analysis period, the prior update becomes the baseline for the analysis of delays or accelerations.

For the purposes of this analysis, the analyst divided the project duration into the following three periods:

- **Period 1**: S.1 (data date Aug. 24, 2011) vs. S.2 (data date Nov. 2, 2011)
- **Period 2**: S.2 (data date Nov. 2, 2011) vs. S.8 (data date Jan. 19, 2012)
- **Period 3**: S.8 (data date Jan. 19, 2012) vs. remaining progress through June 15, 2012

The periods were selected after executing a thorough review of the as-planned schedules, contemporaneous documents, daily specific as-built, and performing interviews with the contractor. The specific reasons for selecting these as-planned schedules as the basis for each period are as follows:

- **S.1 (Data Date August 24, 2011)**
  - Approved baseline schedule by contractor and owner
  - Reasonably reflected contractors scope and plan for performing the work
  - Adhered to the contract and change order 1

- **S.2 (Data Date November 2, 2011)**
  - First revised schedule
  - Reasonably reflected contractors scope and plan for performing the work
• Used during the project to manage the work
• Depicted slippage in the forecasted substantial completion date
• Work Breakdown Structure (WBS) was consistent with S.1 schedule

S.8 (Data Date January 19, 2012)
• Reasonably reflected contractors scope and plan for performing the work
• Used during the project to manage the work
• WBS was consistent with S.2 schedule
• Depicted slippage in the forecasted substantial completion date
• Size of the period given the next update schedule was not until March 14, 2012

The analyst compared the as-planned schedule and daily specific as-built schedule for each period to quantify variances, determine concurrency, and ultimately quantify the critical path delays incurred during each period. The comparison included start dates, finish dates, and duration of the activities; and identified changes to schedule logic between analysis periods. Concurrent delay occurs when two or more delays that take place or overlap during the same period, either of which occurring alone would have affected the ultimate completion date. The “same” period from which concurrency is measured, however, is not always literally within the exact period of time [2, p. 20].

Identification of Responsibility for Delays and Gains During Analysis Period
A causation analysis was performed to determine the existence of a probable connection between variances in performance and disruptions/delays, duration of the disruptions/delays, and actions or inactions of the party contributing to the disruptions/delays.

The analyst apportioned critical path delays to either the owner, contractor, or weather based on the findings of the causation analysis.

APPLICATION OF MIP 3.3. AND CASE STUDY FINDINGS
The contractor was required to perform its work and achieve substantial completion by March 1, 2012. Despite these contractual requirements, the project was delayed.

The contractor’s contract schedule (data date May 4, 2011) was issued as a preliminary schedule. The contractor’s contract schedule was to be updated to reflect detailed engineering and construction activities on finalization of the contractor’s scope of work.

On August 24, 2011, the contractor and the owner met to discuss and finalize the contractor’s schedule. Accordingly, the contractor updated and finalized its baseline schedule with a data date of August 24, 2011 (S.1).

Subsequently, the contractor developed multiple project schedules indicating a slippage in the project’s substantial completion date. Slippage is the amount of time a task has been delayed from its original baseline plan. Slippage is the difference between scheduled start or finish date for a task and baseline start or finish date [2, p. 104]. Figure 1 illustrates the contractor’s projected slip in the substantial completion date for each project schedule after the development of the S.1 schedule.

In total, the contractor incurred 106 days of delay during the project. The analyst’s CPA identified the causation of the delays and the substantial completion date slippage. Figure 2 represents the total days of delay incurred by the contractor on the project in each of the respective periods.

Although this case study includes three periods, the following subsections only provide details of the events and delays that occurred within Periods 1 and 2.

**Period 1 Analysis**
Period 1 was defined as Aug. 24, 2011 to Nov. 1, 2011. At the beginning of Period 1, the contractor anticipated achieving substantial completion on March 1, 2012. However, by the end of Period 1, the
project's projected substantial completion date had slipped 26 days to March 27, 2012.

The contractor's S.1 schedule showed that between August and November 2011, the contractor planned to complete its process and instrumentation diagrams (hereinafter P&ID's), start/finish equipment setting/miscellaneous steel design, and bid. Figure 3 depicts the contractor's planned critical and near-critical paths during Period 1.

However, the contractor did not complete its P&ID's or design for equipment setting/miscellaneous steel during Period 1 even though both activities were in progress at the beginning of Period 1. Figure 3 depicts the contractor's planned and actual performance during Period 1.

Table 2 provides the representative quantum for the contractor's start and duration variances during Period 1.

The following subsection describes the identification of responsibility to the owner for the delay during Period 1. A similar discussion would occur for each gain or loss of time during Period 1.

Delay 1: P&ID's Process Engineering
Extended Duration 55 Days

The owner was required to make timely decisions for the contractor to perform the work within the timeframe identified in the S.1 schedule. The contractor relied on the owner's issuance of purchase orders for equipment to prepare specifications and complete P&ID's. However, the owner did not make timely decisions regarding vendor and equipment selection for the mill, and thereby prevented the contractor from completing the P&ID's in accordance with the S.1 schedule. The contractor had anticipated the owner's vendor selection on or about Aug. 30, 2011, to develop the P&ID's by Sept. 7, 2011, and for the owner to issue a purchase order by Sept. 13, 2011.

Between November 2011 and January 2012, the owner evaluated different mill options and vendors. On Feb. 1, 2012, the owner selected the mill vendor and issued a purchase order on Feb. 6, 2012. As a result, the owner's decision was 156 days beyond the contractor's anticipated date of Aug. 30, 2011.

The owner's untimely decisions regarding equipment and vendor selection caused the contractor to prolong completion of their P&ID's. The contractor planned to prepare final P&ID's, heat and material balance, and issue P&ID's for bid by Sept. 7, 2011. However, the contractor's P&ID's took longer to complete. The contractor continued development of the P&ID's throughout Period 1. As a result, the owner delayed the project between Sept. 8, 2011 and Nov. 1, 2011 for 55 days in Period 1 by not making a timely decision for their mill. However, the contractor mitigated the owner's delay by resequencing their S.2 schedule. Accordingly, the contractor reduced the owner's delay from 55 to 26 days for a forecasted substantial completion date of March 27, 2012.

Period 2 Analysis

Period 2 was defined as Nov. 2, 2011 to Jan. 18, 2012. At the start of Period 2, the contractor anticipated completing the project on March 27, 2012. At the end of Period 2, the contractor had a forecasted substantial completion date of May 30, 2012. Accordingly, the contractor incurred 64 days of delay during Period 2 for which the owner is responsible for at least 62 days.

The contractor revised and resequenced their Nov. 2, 2011 schedule to mitigate the owner's Period 1 delay. The contractor's as-planned critical path in Period 2 consisted of phase 1 foundations installation, crushed stone base installation, precast procurement and erection, underground plumbing installation, slab installation, and new dryer installation. The contractor's
The contractor started and/or continued to perform its various phase 1 foundation activities in November and December 2011. However, the owner changed the contractor’s phase 1 foundation scope of work and did not select the mill equipment and vendor. Therefore, the contractor’s planned phase 1 foundation work was extended beyond what the contractor had anticipated, and the contractor was unable to procure the mill. Figure 4 depicts the contractor’s planned and actual performance during Period 2.

The following subsections describe the identification of responsibility to the owner for the delay during Period 2. A similar discussion occurs for each gain or loss of time during Period 2.

**Delay 1: Install Foundations Phase 1 Extended Duration 18 Days**

The owner’s dryer foundation change delayed the project 18 days during Period 2. The contractor was responsible for removing and relocating the owner’s existing dryer #1 and installing the mechanical equipment to support dryer #2.

However, the owner changed the contractor’s scope of work after the contractor designed, subcontracted, and started the work. On Aug. 24, 2011, the owner requested that the contractor assist with the installation of a new dryer instead of replacing a drum and reusing the existing dryer located in the wet processing room.

The contractor coordinated with the owner’s dryer installer to determine the technical specifications required for installation. Accordingly, the contractor developed its design to accommodate the owner’s changed scope of work.

The owner’s changed work prevented the contractor from completing installation of the phase 1 foundation in accordance with the S.2 schedule. The contractor planned to complete the design and construction of the phase 1 foundation by Nov. 17, 2011. The contractor’s phase 1 foundation work generally consisted of excavation, rebar installation, forming and pouring the stem wall/base, and backfill.

However, the owner prevented the contractor from completing its phase 1 foundation work as planned. Although the contractor started/continued its work as-planned, the owner’s change to the dryer room foundation prevented the contractor from completing phase 1 foundation work on-time. As a result, the owner delayed the project between Nov. 18 and Dec. 5, 2011 for 18 days in Period 2.

**Delay 2: Procure Mill Late Start 44 Days**

The owner’s late selection of the mill vendor and equipment delayed the project 44 days. The contractor resequenced the project schedule to mitigate the owner’s delays, which resulted in a shift in the as-built critical path from procuring and setting the mill to the phase 1 foundation activities at the beginning of Period 2.

However, the owner prevented the contractor from completing its phase 1 foundation work as planned. Although the contractor started/continued its work as-planned, the owner’s change to the dryer room foundation prevented the contractor from completing phase 1 foundation work on-time. As a result, the owner delayed the project between Nov. 18 and Dec. 5, 2011 for 18 days in Period 2.

The owner’s late selection of the mill vendor and equipment delayed the project 44 days. The contractor resequenced the project schedule to mitigate the owner’s delays, which resulted in a shift in the as-built critical path from procuring and setting the mill to the phase 1 foundation activities at the beginning of Period 2.

However, the owner prevented the contractor from completing its phase 1 foundation work as planned. Although the contractor started/continued its work as-planned, the owner’s change to the dryer room foundation prevented the contractor from completing phase 1 foundation work on-time. As a result, the owner delayed the project between Nov. 18 and Dec. 5, 2011 for 18 days in Period 2.

As a result, the owner delayed the project at least 44 days during Period 2 by not timely selecting the mill vendor and equipment.
DISCUSSION
The case study described in this paper highlights the strengths of the CPA which are as follows:

• Easy to calculate and understand.
• Identifies delay/disruption as well as mitigation and acceleration quantities.
• Delays can be assigned to specific activities.
• Is an objective analysis because it relies on contemporaneous schedules.
• Considers real-time conditions and actual construction progress.
• Accounts for dynamic nature of the critical path (takes shifts in the critical path into account).
• Not subject to manipulation because the analyst cannot make major changes.
• Is not a hypothetical/theoretical model.

Analysts must also be aware of the limitations of the CPA before using it to perform a forensic schedule analysis. Examples of limitations include the following:

• The analysis is time consuming and therefore costly.
• It demands complete project records, which are often not available.
• It depends on reliable baseline schedule information, contemporaneous schedule updates, and as-built performance information, which may not exist and would require the analyst to perform a laborious analysis of project records and an interview of project members to create reliable updates.
• It is either performed after a delay event occurs or typically after the completion of the project. If performed too long after project completion, causation analysis and apportionment is a challenging task, especially if project records do not provide evidence of whether delays or changes delayed the critical path and/or near-critical path of the project.

SUILITY/APPLICABILITY
The analyst decided the amount and quality of information available allowed for a CPA. The analyst selected the CPA for this case study based on the following factors:

• Contract did not specify or mandate a specific schedule delay analysis method.
• Sufficient source data was available, including contemporaneous as-planned schedules, as-built data from daily reports, meeting minutes, pictures, etc.
• Contractor's damages were large enough to justify the time-intensive effort required to perform the analysis.
• Enough time and budget were available to perform the analysis.

CONCLUSION
This article describes the application of MIP 3.3 on a case study project in which the design-builder incurred numerous delays and disruptions throughout the project. The CPA methodology implementation and a comprehensive causation analysis allowed the analyst to identify that the owner's failure to make timely decisions and direct changes during the project delayed and disrupted the contractor. In addition, the analyst was able to understand how the contractor mitigated the owner's delay by resequencing and performing work out of sequence.

In addition, this article also provides a discussion on the rationale behind using the CPA, strengths and limitations, and recommendations regarding the suitability and applicability of the method. These recommendations are intended to contribute to the discussion and improvement of the MIP 3.3 implementation protocols of AACE International Recommended Practice 29R-03.

REFERENCES
1. AACE International, 2015, AACE International Recommended Practice No. 105-90 – Cost Engineering

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2017 COST ENGINEERING JOURNAL IS AVAILABLE IN PRINT FROM AMAZON
A combined print version of all six issues of the 2017 Cost Engineering journal, AACE International’s peer reviewed professional technical journal, are now available for purchase in hard copy print format at Amazon.com. Click the button to purchase. The Cost Engineering journal in 2017 was offered only in digital pdf format as an AACE member benefit. This print edition is designed for those who maintain a personal library of the journal in hard copy print format and for libraries and engineering schools that can benefit from having a print format edition on the shelves.
CENTRAL ASIA SECTION

The Central Asia Section, along with sponsors, organized the 2nd Annual Region 9 Conference in Central Asia. Participants included a new subsection from Iran for the regional support of cost engineering and project management professionals. Keynote speakers addressed Earned Value Management (EVM), big volume data, and case studies on projects in the Central Asia region. Director of Region 9, Sean T. Regan, CCP CEP EVP PSP, delivered an introductory presentation about AACE International, Region 9, Total Cost Management in international projects, and ISO program management. Speakers from Iran, Dr. Sadegh Yazdani and Timur Narbayev, from the Kazakh British Technical University (KBTU), brought valuable analysis of work in EVM that was shared in a panel discussion. A demo version of programs for estimating and cost management included interaction by all attendees. Central Asia Section President, Lyazzat Zhelimova, presented her experience in Kazakhstan companies that implemented EVM in their projects with the successful transmission of DCMA audits. The conference was sponsored by Region 9, the Project Controls Institute, PMSOFT, OnTrack Engineering, CZ s.r.o., Project Controls Guild, and the International Cost Engineering Council.

Above: The Central Asia Section President, Lyazzat Zhelimova, is shown with the Dean of the Master’s Program of Kazakh British Technical University and his Master’s program students at the 2nd annual Region 9 Conference in Central Asia.
COLOMBIA SECTION

To promote the founding of the Colombia Section in 2017, the section conducted its first Latin-American Congress in Bogota, Colombia, March 16-17. The two-day technical event was planned to promote Total Cost Management, AACE International, standard practices and the application of those practices to projects in various industries.

The Congress was at the Club Nogal in Bogota, Colombia. It was well received by all attendees which included individuals from several areas of Colombia, as well as professionals from Ecuador, Brazil, Venezuela, Chile, Peru and the US. There were over 100 professionals, representing practitioners of Total Cost Management from various industries and geographic locations in Latin America. The technical program addressed various subjects from the legal aspects of construction contracts by Attorney Elisa Figueroa to several presentations on risk management, risk quantification, planning and scheduling, estimating, and cost control. Additional discussions were held on productivity tools in project management and project status metrics for performance measurement against an established baseline, plus several sponsoring vendors shared their automation tools with the audiences during the presentation breaks. Two presentations from Colombian University professors, Dr. Jose A. Guevara and Guillermo Mejia addressed their research of project management and project controls practices as currently applied to projects in Colombia and proposed improved execution of construction methods resulting in cost effective execution with improved productivity.


(continued)
A closing panel was chaired by Nelson Bonilla and panelists Chris Carson and John Hollmann. The panel addressed Total Cost Management in Latin America and their own experiences in the execution of projects worldwide and in Latin America. The panel discussion was highly interactive with an enthusiastic crowd exchanging ideas with the panelists. The first Latin America Congress success was the result of the effective planning and coordination efforts of the Colombian Section Officers, including: Carlos Ortega, President; Betzaida Mendez, Vice President; Mariapilar Gonzalez, Secretary; Andres Pereira, Treasurer; and Manuel Cano, Director. The first AACE Congress in Colombia was successful and well received by attendees, who stayed late each day after the program to continue lively discussions with the speakers.

HOUSTON GULF COAST SECTION

On March 6th, Jeremy Hall, Project Manager for The Wood Group, gave a presentation titled “Oil & Gas Formation”. He talked about the complexity of designing an industrial facility. The many sources input to such a project, the overall requirements for the facility combine with equipment specifications, design requirements, codes and standards, software functionality, fabrication inputs, and schedule drivers to name a few. To complicate things further, many inputs can change during the design process. Project execution must manage this complexity while leveraging tomorrow’s technology to meet today’s tough economic environment.

The February 13th presentation was HGCS’s “Women in Project Controls Month” which included Carmen Ramos, Project Controls Professional at Jacobs. Her interactive presentation titled “Benefits of Project Controls Rotational Program” was well attended. Carmen talked about her experience in project Planning & Scheduling, Cost Engineering, and Estimating in the Petrochemical industry through Jacobs Project Controls rotational program. Her time spent facilitating interactive planning sessions has led to a variety of work and various analysis involved in the work.

Above, right: Jeremy Hall, project manager for the Wood Group, presented a program titled, Oil and Gas Formation, for attendees at the March section meeting of the Houston-Gulf Coast Section. Hall talked about the complexities of designing an industrial oil and gas facility.

Right: Carmen Ramos, a project controls professional with Jacobs, presented an interactive technical program on the “Benefits of Project Controls Rotational Program,” at the February Houston Gulf Coast Section meeting. February was “Women in Project Controls” month.
**KUWAIT SECTION**

Under the patronage of Bakheet Al-Rashidi, Oil Minister and Minister of Electricity and Water, the second Kuwait Project Management Conference was conducted April 18-19, at Jumeirah Messilah Beach Hotel in Kuwait City. The conference demonstrated how smart, sustainable, and innovative project management practices are executed to ensure successful outcomes. Invited local and regional expert speakers, along with the keynote speaker, presented their professional expertise and experiences on the latest initiatives, techniques, innovation, excellence and leadership in the project management industry.

AACE Region 7 participated as a technical partner in this event. Husain Al-Omani, CCP CEP DRMP EVP PSP, Regional Director 7 (Middle East), attended the conference and participated as a technical partner which is a part of Region 7 activities.

**MONTREAL SECTION**

On April 25th, the Montreal Section enjoyed a presentation entitled, “Understanding Uncertainties Using Scenario Planning: Application in a Capital Project Context” by visiting speaker Henk Krijnen, Managing Partner at Navlnicerca, based in the Netherlands. Mr. Krijnen previously completed a 35-year career with Shell where his work took him to Indonesia, Thailand, the United States and the Netherlands. During his last five years with the company he served in Shell’s Corporate Strategy and Planning Department, well known for the Shell Scenarios. In 2015, he founded Navlnicerca, a company aiming to assist organizations with improving their capabilities in the analysis of uncertainty and risk at the project level, as well as within the broader strategic context.

As described by Mr. Krijnen, scenario planning is a strategic method that some organizations use to come to grips with the broader contextual uncertainties that the organization faces when making strategic or major investment decisions. It is a way to better understand the complexity of the future business environment. As such, the scenario narratives that result from such exercises may be referred to as “memories of the future.” They provide a meaningful
framework for discussing the key trends in the contextual environment and their implications for business decisions.

Although the origins of scenario planning application date back to the 1950s, the method was pioneered for application in business by Royal Dutch Shell in the 1970s. The company thus has a long tradition in using scenario planning in support of strategic thinking. The presentation included an overview of scenario planning, explanation of the interrelation of scenario planning with decision making, application in mega projects and examples of use, including in the Canadian context. The meeting facilities were graciously provided by SNC-Lavalin.

On Jan. 30, the Montreal Section enjoyed a round table discussion titled, “Construction Claims – Avoidance and Resolution.” The panel approached the topics from the perspectives of the owner, contractor, and the claims consultant. The owner perspective was represented by André Morin, the contractor’s perspective by Harold Rousselle and the claims consultant perspective by Susan Klucinskas. Eric Davies, of Revay and Associates Ltd., served as moderator. André is the former senior director construction Dutch Shell in the 1970s. The company thus has a long tradition in using their implications for business decisions.

In the next round of discussion, the moderator asked, “Why do change order requests from contractors escalate into claims?” The responses also touched on the common causes of claims by contractors and owners. Acknowledging that more claims originate from contractors than owners, the panel also discussed the content an owner is looking for in a change order request or claim document.

All discussions circled back to common themes; in order to avoid disputes, it is important to be transparent in your dealings; communicate early and often; and try to build a relationship between owner and contractor that is based on trust and respect. An owner should be proactive and avoid the unreasonable transfer of risk to the contractor. A contractor should be reasonable in his requests.

The 57 enthusiastic attendees had many questions for the panel and some of their own insights as well. Hatch graciously hosted the event at their offices in Place Ville Marie in downtown Montreal.

At the January meeting of the Montreal Section, shown above from the left are: Harold Rousselle, Eric Davies, Susan Klucinskas, and Andre Morin. The four were part of a roundtable discussion titled, “Construction Claims – Avoidance and Resolution.”
Goleman says the five components of Emotional Intelligence are:

1. **Self-awareness**—The ability to recognize and understand personal moods and emotions and drives, as well as their effect on others. Hallmarks of self-awareness include self-confidence, realistic self-assessment, and a self-deprecating sense of humor. Self-awareness depend on one’s ability to monitor one’s own emotion state and to correctly identify and name one’s emotions.

2. **Self-regulation**—The ability to control or redirect disruptive impulses and moods, and the propensity to suspend judgment and to think before acting. Hallmarks include trustworthiness and integrity; comfort with ambiguity; and openness to change.

3. **Internal motivation**—A passion to work for internal reasons that go beyond money and status—which are external rewards, such as an inner vision of what is important in life, a joy in doing something, curiosity in learning, a flow that comes with being immersed in an activity. A propensity to pursue goals with energy and persistence. Hallmarks include a strong drive to achieve, optimism even in the face of failure, and organizational commitment.

4. **Empathy**—The ability to understand the emotional makeup of other people. A skill in treating people according to their emotional reactions. Hallmarks include expertise in building and retaining talent, cross-cultural sensitivity, and service to clients and customers.

5. **Social Skills**—Proficiency in managing relationships and building networks, and an ability to find common ground and build rapport. Hallmarks of social skills include effectiveness in leading change, persuasiveness, and expertise building and leading teams.

Mr. Wilson stressed the importance of working cohesively and balancing traits in an organization to create synergy. His presentation related to situations and conditions that many of us have faced in various organizations. When people feel like they belong to an organization, they’re more likely to stick around for the long term. That means lower turnover, fewer new hires to deal with, and better chemistry among your team.
SOUTHERN CALIFORNIA SECTION

On April 24, the Southern California Section had Janet Bradford, PSP, a scheduler for PCL Construction, discuss: “Primavera P6 Team Member: Implementations and Practical Applications”. Ms. Bradford has over 10 years of experience in project controls, planning, scheduling, procurement, purchasing, and cost control for alternative delivery and design-bid-build projects. Janet is certified through AACE as a Planning and Scheduling Professional (PSP) and is on PCL’s Planning and Scheduling Advisory Committee as a subject matter expert. The section had 18 in attendance, including a couple of students.

On March 21, the Southern California Section hosted Lance Stephenson, Director of Operations at AECOM, as he presented: “Strategic Portfolio Management: Improving Capital Utilization and Competitive Advantage”. Organizations can inadvertently introduce complexity and inefficiencies into the design and operability of their assets by not linking corporate strategy to project delivery. This approach eliminates the strategic relationship between projects, which cripples the attempt of effectively managing capital investments. Lance is a contributing member of the Technical Board for AACE International and supports the association’s efforts by developing industry standards and best practices.

DOES YOUR SECTION HAVE NEWS TO SHARE? See below for complete instructions for how to submit news and photos from your Section’s happenings to be included in the AACE® International Bulletin.

SUBMITTING SECTION NEWS: We invite all sections to submit news and updates to be included in the International Bulletin section of each Source issue. Please submit any and all text as a part of the e-mail or as a Microsoft Word file attachment. Please submit any photos as individual attachments in 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). For photos to be published, they must be in focus, of print quality, and of sufficient resolution.

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. 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. 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.

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. 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.

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.

Source has a submission deadline of two months in advance of the issue date.

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