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Editor’s Message:
Hello there and welcome to the 2014 fall edition of the ISA AD newsletter from your friendly editor. This has been an excellent year once again for the ISA Analysis Division. Baton Rouge was a roaring success and you can read all about it (and follow the links to the paper and product winners) within the pages of this edition of the newsletter.
Also prevalent this year our industry has, and still is, embarking on some very interesting times, as those who attended the presentation from our guest speaker, Rod Spiller, in Baton Rouge can attest to.

The rapid growth in the shale plays, tight seams, unconventional hydrocarbons – call it what you will, as it truly has many names and many forms – has certainly perked the industry up; poked and prodded at the conventions until even the most experienced amongst us are not exactly sure where things are going. Although, we are all sure that, all other concerns aside for the moment, it seems to be somewhere good for the world of analysis.

And therein lays the cautionary tale for all of us old dogs. The once mighty T Boone Pickens predictions of peak oil seems, in such a short space of time, to be so very archaic now. Pickens declared in 2008 that the world is producing the most oil it will ever produce; ‘never again will we pump more than 82 million barrels’ (per day). Of course we all know now that by 2012 the daily average was over 92 million barrels.

But Pickens was not the first. Such predictions go back to the early days of oil production in the 20’s, and continued each decade in one form or other until larger and larger finds allayed these fears. Then the term peak oil really caught fire in the 70’s with the ‘father of peak oil’ MK Hubbert, yes he of the infamous ‘Hubbert’s Peak’, who (quite rightly at the time) predicted the decline in US oil production.

That sparked the race not to whether the prediction was correct anymore
but to when it would happen. The fear was oil peaking would be no gradual change, but abrupt and world changing. It was a race with many different voices and various predicted end dates but then one voice ultimately wins through the noise and that was T. Boone Pickens. So it is at him now that much of the attention is focused.

All this was before Shale. As we stand today, clearly peak oil hasn’t happened and is unlikely to do so for some time to come. The facts have changed and so must we all. But as I write, oil prices have been in steady decline for some months now and are predicted to continue in decline well into 2015. The euphoric moods of earlier in 2014 are being replaced with caution and concern. Clearly current oil production more than meets the demand, an idea at the very root of concern in peak oil theory.

So where does all this chatter leave us as we look ahead to 2015? Truth is, we don’t really know, and to wrap things up nicely, therein lays our cautionary tale. None of these folks above were really wrong until they were. We can only work with the knowledge we have. But if we think the answer is simple, we need to go back and think about it again, because history tells us it rarely is.

So without further ado, please dive into the Fall edition of our newsletter. As always it is loaded with excellent messages, insightful information and a home for all things process analysis.

Stuart Simmonds
ISA Analysis Division Newsletter Editor

Outgoing Message from 2013-2014 Director:

Hello again,

In a few months 2014 will end and so will my service as ISA Analysis Division Director. Tracy Dye will take the helm, 2015 – 2016 and Paul Barnard, 2017 – 2018. In parting, I want to express my thanks to you for the privilege to serve in this capacity. It has been a great honor. Being involved in AD for quite some time and especially from this position, one has the opportunity to observe the dedication and high standards of volunteers among our ranks.

I observe that everyone has a day job, AD has no payroll; everything that is produced comes from someone’s desire and personal time and effort, not from assignments completed in order to receive a pay check.

I observe the diversity of the division and how all components are vital to the overall success. We continually speak of the collaborative efforts of vendors, educators, end-users, engineering firm personnel, students and manufacturing representatives to form one cohesive, well-oiled organization. This group produces an annual symposium that is a blend of information exchange and hardware displays. We are also international as indicated by the membership roster and registration at the symposia.

I observe the foundational pillars of education, training and standards. The annual symposium provides peer reviewed papers regarding process analyzer technology and applications. The training program spans basic fundamentals, advanced and hands-on equipment courses to meet the needs of our end-user members in maintenance and engineering. Standards committee members, both domestic and international, work to develop documentation to be used by practitioners of our technology.

I observe the fact that it “takes a village” to sustain excellence in the division. Functional roles must be filled, allow me to name them: Honors & Awards, Newsletter, Director Elect, Marketing, Publications, Paper Review Chair, Education Chair, Web Master, Historian, Membership, Standards Chair, Liaison Representatives and all the positions required to make the symposium a success: General Chair, Vendor Chair, Fundamentals Course Instructors, Factory Training Instructors, Product of the Year Committee, Photographer. An amazing number of volunteer hours are invested.

I observe that we have excellent support from our ISA liaison staff who work tirelessly to ensure Analysis Division is well connected to Headquarters and the other divisions. Their support is most visible and appreciated during the symposia as they are relentless in meeting our needs.

Lastly, I observe that to sustain Analysis Division as a growing, significant, center of excellence for process analyzer technology, there must be a continuance of volunteer involvement.

Thank you to those who are currently serving! I encourage those who have not yet volunteered, join in even with a small start, and you’ll find the team is incredible, even ‘family’.

Once again, thank you for being part of the ‘family’.

Don Nettles
Director ISA Analysis Division (2013-2014)

Symposium Chair’s Message:

Thank you all for attending the 2014 International Society of Automation Analytical Division Symposium held in Baton Rouge. This year’s motto was “Analytical Technology and a Little Lagniappe”. Lagniappe literally translated means “A little something extra”, and this year’s Symposium lived up to the phrase.

As always we had a great advanced and vendor specific training program and turn out. A hearty thank you for all of the instructors that participated, the amount of effort that goes into preparing for the classes is undoubtedly significant. In addition, thank you to all of the vendors for making the exhibits a huge success, we were full to capacity not long after registration opened. Without the vendor support, the Symposium simply would not exist.

One of the biggest draws to the Symposium is the technical presentations, and this year did not disappoint. The presentations delivered were relevant to the discipline, and scientific in nature without being overwhelming. Thank you very much to the many presenters, whose hard work and fore thought was unmistakable.

This year we tried something a little different. In keeping with the Louisiana flare, we decided to throw a shrimp boil on Wednesday night as a way for everyone to take their ties off, relax poolside, enjoy each other’s company, and have leisurely fellowship with attendees. The shrimp boil was a huge success, and a good time was had by all. I hope that this would become a tradition for future Symposums.

Most people don’t know, but I am relatively new to the Analytical Division. Initially I was asked to help co-chair this event, but was then coerced into the Conference Chair role when long time member Bill Johnson retired. I can’t help but think that this was his diabolical plan from the get-go. I was a good
bit intimidated with taking on this responsibility, but the team of individuals I had working with me are truly world-class. All of the help for pulling off the Symposium are volunteers only, and these people do it because they truly care for the organization. They are the unsung heroes that work behind the scenes to make this the most successful symposium in the ISA organization. Thank you team for allowing me this rewarding opportunity to serve as the 2014 ISA Analytical Symposium Conference Chair. Special thank you goes out to the following: Rod Spiter-Dow chemical (Banquet keynote speaker), Mike Blount, Mike Chaney, Dale Merriman, Don Nettes, Randy Hauer, Phil Harris, Manny Alvarez, Tracy Dye, Paul Hromadka, Paul Barnard, Bill Johnson. And last but certainly not least our right hand man Rodney Jones.

For those who have not attended, I urge you to do so. There is a reason we have attendance and participation from across the globe. The opportunity to listen, converse, and learn from the true experts in the field of process analytics cannot be purchased, please do make it a part of your annual travel and growth plan. I sincerely hope to see you at AD 2015. Until then, keep safe out there, and I wish you nothing but great success for the future.

**Justin P. McCarty**  
*ISA Analytical Division Symposium Conference Chair (2013-2014)*

**Publications Chair’s Message:**

First we should look back on AD2014 as another step forward in growing our community. Thanks to Justin McCarty for spending a lot of hours to make it happen. A big thanks to our authors and presenters, without whom there is no symposium, and also I want to thank the audience for listening, because without people to listen, there is no point in the presentation. Our authors again came from multiple countries and continents, and we had a wait list for contributors, so there is no doubt an upswing in interest.

A big congratulations to our GTFK Award winning papers –

**First Place** – *IN-SITU, REAL TIME ANALYSIS OF LIQUID AND GAS HYDROCARBON STREAMS USING A BROADLY TUNABLE SPECTROMETER*  
Phil Harris, HarrTec  
Paul Little, Jie Zhu, JP3 Measurement

**Second Place** – *Real Time Measurements of Acetylene in Ethylene Manufacturing Process. Field Trials of the TDLAS Based Analyzer*  
Airat Amerov, Mike Fuller, AMETEK Process Instruments  

**Third Place** – *New Wireless IR Gas Detector for SIL2 Applications using MEMS Technology*  
Knut Sandven, GasSecure AS

My apologies to the community about the incorrect announcement at the symposium on winning papers, I had to leave early and there was a small miscommunication that lead to the wrong paper in the end of symposium announcements. The error was unfortunate, and I hope that since this is the first time it has happened nobody was impacted negatively.

AD2015 will be my last as the Publications Chair, we are actively seeking a replacement as I transition to Director-Elect. There is a team of reviewers, it is a tough but rewarding job, and the Chair simply marshals the information and tracks the numbers, does some final format editing and takes all of the credit. A job in high demand. Please take time consider the position, I have had a lot of satisfaction in holding the position since 2008, but it is time to move on.

**Paul Barnard**  
*ISA Analytical Division Publications Chair (2013-2014)*

**ISA Analysis Division Spring Symposium 2015 Call for Papers:**

The 60th Analysis Division Symposium will be held 26-30 April 2015 in Galveston, Texas, USA

This symposium is recognized as the outstanding forum for discussions of new and innovative analytical techniques, developments, and applications for process and laboratory. Speakers and attendees to the symposium are world-wide and share the opportunity to speak to an international audience, participate in informal discussions and social gatherings, and acquire the latest information about analytical sciences.

Papers are accepted which address topics in chemical analysis including methods, applications, hardware and software, systems and operation, and maintenance. Subject content may concern technology in development or technology applied in industry practice. Proceedings are marketed and sold globally. An International Standard Book Number (ISBN) will be assigned to the proceedings.

**General subject areas of interest**

- Chemical Analyzers
- Systems Integration
- Physical Properties
- Maintenance
- Spectroscopy
- Chromatography
- Gas Detectors
- Sampling Systems
- Emerging Technologies
- Validation / Calibration
- Environmental

**Submission guidelines**

All papers are reviewed by the Analysis Division Paper Review Committee and must conform, or be modified to conform, to Analysis Division and ISA format and content guidelines. Papers must address the technology and may not be commercial in nature.
All papers must be submitted in electronic format (Microsoft Word) suitable for publication in the proceedings by the deadlines indicated below. All overhead slides or presentation materials used at the symposium must be provided in electronic format (Microsoft PowerPoint) prior to the symposium for review and approval. A publication release form is required by ISA for all papers.

To submit
An “Intent to Present” is due immediately to Mike Chaney, the Technical Program Chairman, at michael.chaney@lyondellbasell.com, with abstracts submitted by 12 December 2014 to the Paper Review Committee Chairman, Paul Barnard at paul.barnard@lyondellbasell.com.

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**Honors and Awards:**

Every year in the fall the ISA national society celebrates the remarkable achievements and contributions of its members. The Analysis Division puts forward nominations for a very select number of our members who have contributed to the process analytical profession. Dr. Jerry Clemons is our H&A chair and we are grateful for all the work he puts in to getting our members recognized. As well we wish to thank Phil Harris for standing the nomination for Ted Barben (Excellence in Analytical Technical Innovation endowed by the ISA Analysis Division) and documenting his many accomplishments.

**Excellence in Analytical Technical Innovation endowed by the ISA Analysis Division**

This award is the most prestigious. It can be given to anyone in the society at large and we are proud to say that in the six years this award has been cast as Excellence in Individual Technical Innovation it has been won by the nominee put forward by the AD, and this year’s honor goes to Ted Barben.

Ted Barben II was born in Los Angeles, California, in 1934). Ted is an inventor and entrepreneur who is credited with revolutionizing the control of pH, conductivity, and anti-scaling agents in industrial water systems, by fully automating the process. His innovations are the subject of The Fail-Proof Enterprise, by Bob Thomas (2003). Currently, he is the Chairman of the Board of Directors for Universal Analyzers Inc. and Barben Analyzer Technology, LLC. He served in the United States Navy Reserve during the Korean War and received an Honorable Discharge in 1956 as a second class Petty Officer (E5). In the Navy, Ted specialized in electronics with emphasis in communications.

After spending a few years teaching math, physics, and chemistry at a Junior College, a group of investors took notice of Ted Barben and his talents as a chemical engineer. The market presented an opportunity for high precision pH and conductivity sensors for waste water and water cooling systems; industrial pH control is done many ways, but for cooling towers, it was a very sloppy process. In 1964, Ted and four other partners started Uni-Loc. Before Ted Barben and Uni-Loc came about, industrial pH control was done by introducing various chemical mixtures into the water stream to maintain a neutral pH level (7 pH). Human error led to inaccurate doses of anti-scaling agents, resulting in toxic water and corrosion of the process lines. The industry standard for anti-scaling agents was to keep them at 200 parts per million (ppm); Ted’s patented system offered the unprecedented accuracy to between 20 and 30 ppm. The fail-safe system, relied on analyzers to regulate the pH and conductivity, thereby eliminating human guesswork and error. Automating the control of water quality, leads to greater conservation of potable water, by making the process more efficient. Uni-Loc was sold and is now a division of Rosemount Inc. Ted went on to found Thomas Barben Instruments (TBI) with Bob Thomas in 1975. TBI pushed the limitations of pH control, and designed and marketed a stronger sensor. TBI was subsequently sold to Bailey Controls and is now a division of ABB Group.

Not ready to retire, Ted remains on the vanguard of process monitoring equipment. However, having signed a Non-compete clause when he sold TBI, Ted was forced to switch gears. In 1990, United States Congress passed the Clean Air Act and pursuant Acid Rain Program. This legislation increased regulation on industries marked by heavy air pollution, such as refineries, fossil fuel combustion, and other processes requiring flue gas stacks. Therefore, in 1990, Ted founded Universal Analyzers Inc (UAI). UAI designs and manufactures gas sample conditioning equipment for Continuous emissions monitoring systems (CEMS). Subsequently Ted returned to his passion for liquid analytics, and he started Barben Analyzer Technology, LLC (BAT) as a division of Universal Analyzers Inc. in 2000. He remains the Chairman of the Board for both companies. We roundly applaud Ted and thank him for all he has given to our profession.

**Excellence in Enduring Service**

This award recognizes dedicated volunteer service to the Society at the grassroots level and two of our members were so honored

**Jim Tatera** is a past director and has been deeply involved in our analyzer standards and practices (SP76) committee. He travels to Europe in his capacity of private consultant and puts in countless hours to keep our S&P 76 updated. We know Bac Vu (SP76 Chair) depends heavily on Jim and hopes he can “Endure” for a decade or more to come

**Dale Merriman** is also a past director of AD, has been involved in the society at several levels over 3 decades and has worked the hallways of ISA for us over many years. Add to that his leadership of the local Houston sub-section of AD and his yeoman service as perennial AD Symposium chair every other year (now co-chair with Cindy) and you have the postcard picture of enduring service.

**Excellence in Technical Innovation endowed by the Analysis Division**

Sherry Liu was voted by the select committee of the AD to receive our award. Sherry has been involved with TDL spectroscopy for many years and responsible for many TDLAS innovations. She has received many honors including the top technical paper (GTFK award).

**ISA Fellow**

Phil Harris will become an ISA Fellow which is ISA’s most distinguished membership grade, conveyed to qualified members to recognize exceptional engineering or scientific attainments in the field of automation.
Retirement news.

Bob Farmer, from Siemens (and formally Applied Automation) has recently retired after over forty years in the world of process analyzers. Over those years Bob had been involved with AD but it wasn’t until 1999 that he started his ‘active duty’ with us. Since then he has been very active in a number of roles, including AD Director from 2003/04, and an integral fixture at each of the Symposia.

Thankfully for all of us at ISA AD Bob plans to continue with us for the foreseeable future and also plans to be attending the Symposium in Galveston in April 2015. For our Spring edition of the newsletter we will have a feature interview with Bob. Please look out for that in the spring time.

(Editor’s note: For many of us younger analyzer pups we remember well trips to Applied Automation in Bartlesville working closely with Bob’s teams. On each visit we were always extended warm hospitality and a willingness to transfer knowledge that has proved invaluable to our own paths in the process analyzer world)

AD-2015 Galveston / Headline News:

Cindy Cauthen is our returning Symposium Chair and is in the process of forming her team. Details of the 60th annual AD Symposium will be posted on the web site commencing Nov 24 with the following information as it becomes available;

Call for Papers:
See the web site for details (www.adsymposium.org).
Abstracts will be accepted in the order they are received and a waiting list will form when the program is filled.

Hotel(s)
The conference hotel is the Hilton Galveston Island Resort, right next door to the convention center. Book early if you expect to have space here. As in 2013 we will have overflow space at adjacent properties

Technical Program
Paul Barnard and Mike Chaney will have the preliminary program on the web site in February. There will be the usual three full days of peer reviewed papers.

Educational Programs:
The Fundamentals courses will be held on Sunday as well as the Advanced course(s). The schedule will be posted to the web site by end of March.
The Hands-On courses will be held on the Thursday, details will be posted to the web site by end of March.

Vendor Technical Forum:
Shana Kiser of Teledyne is our Vendor Chair.
We expect 60+ vendors, registration information will be available on the web site in January.

Banquet and Keynote Speaker:
The banquet will be held on Tuesday night.
The Banquet sold out early last year, be sure to sign up for your tickets when you register.

Spouses Program
There will be a full spouses program; details will be available in early April on the website.
A Special Thank You to Johnny Austin at AMETEK who kindly formats the Newsletter for us.

Our Supporting Sponsors

The AD invites vendors who participate in the technical forum at the AD to support the newsletter. We know there is keen competition for their promotion budget. They have chosen to contribute to the Newsletter and underwrite the special projects we fund with the proceeds. In addition, each year at AD a standing committee makes an award for the “Innovative Product of the Year” and this year’s recipient is Cascade Technologies. They carry title to the award for one full year and receive a full page space in the Newsletter which you see following.

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