

COMPONENTS

Chuck Tanzola, CPMR

Fusion Sourcing Group
Ithaca, N.Y.
ERA Senior VP/Industry

Deja vu all over again?

The Components Group represents the single largest constituent group within the Electronics Representatives Association, with greater than 80 percent of our member firms participating within this category. Yet due to circumstances, we find ourselves without a chair of this important marketing group (more about this later), so recent issues of *The Representor* have largely been without a report on this industry segment. With encouragement from members of our dedicated ERA National staff, let me try to remedy that for this issue.

In preparation for this endeavor, I took a look back at some Marketing Group Digest reports from past issues of *The Representor* for inspiration. One set, from the fall of 2012, caught my particular interest. (I found them on the ERA website – era.org – and I urge you check them out.)

In that issue, then Components Group Chairman (and current ERA Senior VP/Fiscal and Legal) Dave Norris reported about the “softening” of the components business in Q3 of 2012; and the uncertainty of the coming fourth quarter and following year. It seems very familiar. From all reports, 2015 continues to be a “soft” year in the components industry, and future predictions do nothing to suggest any significant changes coming.

In the same issue, Gary Ponto (chair of the Electronic Systems Integration Group) commented on the concern about the increasing proliferation of reporting requests from manufacturers. I know this is a different industry segment, but this too, seems very familiar. I wonder if there are any reps out there who have seen a reduced number of report requests. Gary went on to express the collective concern of reps that the reporting, while understood, generally was not helping close rates on opportunities and not helping productivity nor forecast accuracy.

Finally, in one more déjà vu moment, Troy Gunnin, chair of the Materials, Assembly, Production & Supply Group, noted in his report, written just before the 2012 election, that “... the political rhetoric is rampant. If these guys could produce all they promise, wouldn’t life be beautiful?” Familiar? I suspect it is. (By the way, this one is easy to predict. The rhetoric will increase over the next 15 months, and the political production will remain flat!)

So, ultimately what’s the take-a-way of this look back? The more things change, the more they stay the same? Perhaps.

We’ve been this way before, so if we don’t have permanent solutions for soft markets, increasing demands and unfulfilled promises, at least reps know how to persevere through them. For sure.

We could use a chairman of the Components Group with original thoughts to share. If that’s of interest to you, I encourage you to make that interest known to us. I welcome any thoughts or comments. Please contact me at ctanzola@fusionsourcing.com.

ELECTRONIC SYSTEMS INTEGRATION

Gary Ponto, CPMR

GP Marketing
Kirkland, Wash.

Reporting on training is becoming commonplace

The cover story in the Summer 2015 issue of *The Representor* focused on training as a challenge for manufacturers and rep firms in 2015 and beyond. Product training has always been a challenge, and it is key to sales with new technologies in the crowded markets of today.

The burden of training has largely been placed on the reps by the manufacturers who recognize this need. Reps are being asked to staff for trainings as well as meeting sales expectations as part of their territory responsibilities but with no further compensation. Many times, support of new technology is not being provided at the factory level in adequate measures and is left to the field salespeople.

Reporting back to the factories on training activities is becoming commonplace. Territory account information that just a few years ago was protected by reps at all costs and was rarely given up is now required in reporting our training and sales activity. What is interesting is that training time seems to often be equated to mind share for a product line when it used to be sales.

Relationship seems to have left the conversation in many cases, but that is what it really boils down to. Your relationship with customers and factories is more important than ever before. You need to think about what “relationship” means to your firm and customers. Pricing, delivery and product have always been parts of the equation, but the “value add” part is most often the closer. And most of the time, that comes from local independent representation.

This article deals with level sensing for the process industry, as this is one of the leading areas that is growing in the sensor and automation market. The drivers for the increased interest in level measurement are three-fold: 1) demands of sophisticated automated processing systems; 2) the need for ever-tighter process control for high quality process accuracy; and 3) the variety of accurate and state of the art sensing technologies.

Improved level measurement accuracy makes it possible to reduce chemical-process variability which results in higher product quality, reduced material and production costs and less waste of materials. Regulations, especially those governing electronic records, have set stringent requirements for accuracy, reliability and electronic reporting. The newer level measurement technologies help meet these requirements.

Refined digital electronics make level sensors and other measurement devices more user-friendly, more reliable and less expensive. Improved communication interfaces can feed level measurement data into an existing control and/or process information system.

Today's level sensors incorporate a variety of materials and alloys to combat harsh environments such as oils, acids and extreme temperatures and pressures. New construction materials, such as PTFE-jacketed material and electro-polished 316 stainless steel, allow sensors to be used in harsh process and food/beverage environments.

The trend today is to replace mechanical and pressure-based measurement tools with systems that measure the distance to the fluid surface by a timing measurement.

Ultrasonic, guided-wave radar and laser transmitters are among the most versatile technologies available. Such systems use the sharp change of a physical parameter (density, dielectric constant and sonic or light reflection) at the process-fluid surface to identify the level. These emerging technologies make use of the latest electronic techniques and incorporate embedded microprocessors for control, analysis and communication functions.

When more complex physical principles are involved, emerging technologies often use computers to perform the calculations. This requires sending data in a machine-readable format from the sensor to the control or monitoring system.

Useful transducer output signal formats for computer automation are current loops, analog voltages and digital signals. Analog voltages are simple to set up and deal with, but may have serious noise and interference issues. To overcome the interference and voltage drop issues, 4-20 mA current output, where the loop current varies with the level measurement, is a more common output technique. Digital signals coded in a number of protocols (Fieldbus, Hart, Profibus, and RS-232) are the most robust, but the older technologies, such as RS-232 and RS-485, can handle only limited distances. This makes them useful only in legacy systems. New wireless capabilities can be found in the latest transmitters' signals which allow the output signal to be sent over tremendous distances.

If you have any questions, please contact me at tom@agtechnologiesllc.com.

(continued on next page)

INSTRUMENTATION, AUTOMATION & CONTROLS

Tom Diercksmeier, CPMR
AG Technologies, LLC
Scottsdale, Ariz.

Level sensing for process industry is growth market

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MATERIALS, ASSEMBLY, PRODUCTION & SUPPLY

Troy Gunnin
Sun Rep, Inc.
Tampa, Fla.

Auto plant expansions and exports are good news for electronics industry

It's hard to believe that Labor Day is already past. Where has the year gone? The stock market has been on a roller coaster. Depending on whom you talk with, things may be looking up or poised for some trouble. We see a lot of positives, but we also hear from several manufacturers that business is "soft." The major players seem to be "accentuating the positive" and moving ahead. This seems certainly to be true in the automotive industry.

To reinforce that point, General Motors is set to invest more than \$5 billion in its U.S. assembly plants over the next three years. The beneficiaries are Kansas City, Kan., and three cities in Michigan — Lansing, Pontiac and Warren. GM may also spend some big bucks on plants in Arlington, Tex., and Ft. Wayne, Ind.

In other automotive expansion news, Volvo unveiled plans for a \$500 million assembly plant near Charleston, S.C. The company plans to build cars for sale in the U.S. and for export. The first vehicles are expected to roll off the assembly line in 2018.

Along the same train of thought, I found some other interesting facts. We look around us at all the "import" vehicles. Well, did you know that the U.S. exported a record high 2.1 million vehicles in 2014? Also, in the past few months, Chinese, French, German and Japanese automotive suppliers have announced plans to build U.S. assembly plants. Collectively, these four facilities will represent an investment of about \$200 million and potentially provide 1,000 jobs. Perhaps they are "foreign" brands, but they'll be made in the USA.

Speaking of made in the USA, more than 60,000 manufacturing jobs were brought to the U.S. by reshoring and foreign direct investment in 2014, according to the Reshoring Initiative. That's a 400 percent increase since 2003. Perhaps the bleeding has stopped. We have gone from losing about 140,000 manufacturing jobs per year to gaining 10,000 plus per year.

There's a lot of talk here about the automotive industry, but this industry represents a very large electronic component market and is a major contributor to our industry. So the health of this industry contributes strongly to our industry growth as well.

RF / MICROWAVE & WIRELESS

Mike Harris
E. G. Holmes & Associates, Inc.
Apex, N.C.

New capabilities are bringing many improvements

With more advanced R/F and microwave devices, we continue to see more activity in the development of test equipment having PXI computer controls (PXI = PCI eXtensions for Instrumentation). These extended test capabilities are required to validate many new products. PXI-based systems that meet each new requirement can be customized with modules to meet newer tests along with offering the promise of simple upgrades as may be required. LabVIEW software (National Instruments) is most often used to integrate these "component-based" test sets.

Traditional military new design business has been off for some time as many systems seem to have been designed for the long haul. We still see an occasional requirement for upgrades within platforms as old as the B-52 and on many long-deployed naval vessels. Newer designs more often involve remote control and remote sensing platforms. These systems would include remotely-controlled combat vehicles as well. Unmanned aerial vehicles (UAVs) and unmanned underwater vehicles (UUVs) seem to be where most of the new design is, and it will be for a while.

In new business developments, Cree (in North Carolina) has spun out a new subsidiary. Cree's business has mostly centered around the use of silicon carbide in production of LEDs used in lighting systems. Cree also owns a viable gallium-nitride-on-silicon-carbide-substrate business producing very high power and broadband RF products. The new company is named Wolfspeed, and it will concentrate on doing things at "higher voltages, higher temperatures and higher frequencies." One of its first projects will be to develop electronic systems as replacements for hydraulic controls within high performance aircraft.

Also on the horizon is extended use of 3D printing in the fabrication of very dense semiconductors. Coventor, Inc., (also in North Carolina) now offers a fifth-generation software package designed to better understand the effects of multiple variables within a semiconductor before it goes to process. In addition, the use of improved test equipment (as above) will help to assure validation of these products' performance as they are produced.

The automotive industry is becoming a large microwave product potential as many new systems required by various government agencies will use devices that range in frequencies at ultra-sound ranges up through 81 GHz and on into infrared and visible light. Look for adaptive cruise controls on newer automobiles and light duty trucks in the very near future.

With the above new capabilities in application, power, testing and performance, we look forward to many improvements in circuit board design and connection technologies.