



Greater El Paso  
Section  
The Global Voice of Quality™

*Amigo*  
*Quality*

Volume 38 Number 9

Welcome to the June 2018 issue of the Newsletter, your local provider of information and learning opportunities related to quality professionals.

**Notice: The section is actively looking for volunteers willing to serve on the leadership committee. If you are willing to volunteer, please send an email letting us know your willingness to serve to [Officers@asq1401.org](mailto:Officers@asq1401.org) with a subject of "Willing to serve on the leadership committee"**

**Or Click [HERE](#) to volunteer to serve on the ASQ section Leadership Committee**

**Or scan this QR code to volunteer:**



**Membership Meeting**

**DATE:** Wednesday, June 20, 2018

**SCHEDULED TIME:** 6:30 P.M to 8:00 PM

**LOCATION:** UTEP, College of Business Administration,  
Room 309  
500 W. University Ave., 79902

<b>SPEAKER:</b>	Sergio R. Vega	Chair, Greater El Paso Section 1401
<b>TOPIC:</b>	My First Trip to China Experience as an SQE for Dish	
<b>ABSTRACT:</b>	The China landscape has changed a lot during the past 25 years and so has the manufacturing industry and the impact it has had to make it the 2 <sup>nd</sup> largest economy in the world. I would like to give a small summary of this world through my eyes as an SQE for Dish and help explain a little bit to our guests not familiar with the auditing process of suppliers abroad.	

**Next Leadership Council Meeting**

**Saturday, July 14, 2018 from 9:00 am to 12 noon**

**United Blood Services, 424 S. Mesa Hills Dr.**

**THE CHAIR SPEAKS**

**SERGIO R. VEGA**

Greetings to all our Quality Professionals!

Let me first please apologize for not submitting an article on my section last month. It has been an incredibly busy last 2 months here at Dish and I am barely getting back on track from my first trip ever to China. Which is why I would like to share some of these awesome experiences with my colleagues and hopefully some of the students that have probably never been there before.

I was fortunate enough to visit several cities (Kunshan, Shanghai, Shenzhen, Zhuhai, Weifang and Beijing) and even had an opportunity to visit the Great Wall on my last day.

Needless to say, when you visit several manufacturing suppliers in a span of 10 days from sunrise to sunset and have to travel several hundred miles to go from one site to another, eventually it takes a toll on you when you get back across the pond and back home here in El Paso.

Jet lag? You better believe it! As some of you know, it takes a while before you get your clock back to “normal” and trying to adjust to a “normal” working schedule again.

So, I will take this opportunity to put a small presentation of life in China when you travel as an SQE for Dish. Hopefully I will make it interesting for most of you.

By the way, I was told that Alfonso Enriquez did an outstanding job with his presentation titled “DOE using ANCOVA in the plastic extrusion industry”. Thank you very much Alfonso!



*Here is our Vice-Chair, Evaristo presenting our appreciation award to Alfonso*

As always, cannot repeat enough how important it is to please promote our local ASQ chapter to as many people as possible, so please invite your friends, co-workers, even your relatives to join us once a month. You never know when you are going to learn something new.

See you at the meeting on Wednesday, June 20 at UTEP!

Sincerely yours,

*Sergio R. Vega*

Chair, ASQ Greater El Paso Section 1401

## **AUTOMOTIVE SECTION**

**HECTOR LUGO**

Thank you to all members who contribute with their articles on this exciting time in automotive world. The "winner" this month is that Toyota plans to start deployment of dedicated short-range communications (DSRC) systems on its Toyota and Lexus brand vehicles sold in the United

States starting in 2021, with the goal of adoption across most of its lineup by the mid-2020s.

“We believe that greater DSRC adoption by all automakers will not only help drivers get to their destinations more safely and efficiently, but also help lay the foundation for future connected and automated driving systems,” said Jim Lentz, CEO of Toyota Motor North America (TMNA).

In 2015, Toyota and Lexus became the world’s first auto brands in Japan to sell and commercialize vehicles equipped with DSRC as part of a national Intelligent Transportation System (ITS) program. As of March 2018, more than 100,000 DSRC-equipped Toyota and Lexus vehicles were on the road in Japan.

See you at the meeting!

## **EDUCATION SECTION**

KIM PRIES

I would like to address software safety.

First, let’s consider one of the most egregious examples of a software safety issue. This was the Therac-25 incident documented by Nancy Leveson in her book, *SAFWARE:” SYSTEM SAFETY AND COMPUTERS*. Therac-25 was a computer-controlled radiation therapy machine. By the way, the paper by Leveson is available at <http://sunnyday.mit.edu/papers/therac.pdf>. The machine massively overdosed six people. Some people only realized what was happening as they detected radiation burns afterwards, which led to lawsuits.

The manufacturer had largely done their duty by the Therac-25 by analyzing potential failures with a fault tree. Unfortunately, the fault tree included computer hardware failure but not computer software failure per se. I have heard similar issues regarding automotive software; that is, it is not susceptible to cold or heat or any hardware issue. The susceptibility issue is utter nonsense. All software runs on hardware and is therefore not immune to hardware misbehavior. In the automotive arena, we observed interesting issues at voltage boundaries during slow voltage decay testing.

Keep in mind that Therac-25 was a 1980s device. Also note that I do not favor fault trees and failure mode and effects analysis or FMEA precisely because the Black Swans are so often missed.

So, what is software safety and how do we achieve it? Requirement are always a problem for the same Black Swan issue. How do we know the customer, or the supplier has considered all possible issues? The short answer is...we don't. We do the best we can That is why merely testing to requirements is never sufficient. Based on experience, I came up with my 5-pronged attack formulation for testing:

- Compliance testing to requirements
- Combinatorial testing to validate all input and output behavior—a variation on black box testing
- Stochastic or exploratory testing to allow the experience of the tester come into play and capture hunches into the test plan
- Hardware manipulation through the nominal range and at the extreme to observe the behavior of the software
- Fuzzing attacks a la denial of service incursions, up to and including AI type approaches that modify themselves as time passes

The software process is a problem if we don't capture our mistakes and take the time to review our disasters with the development and the testing staffs.

Please note that languages can be a problem, also. For example, any language that allows unrestricted access to memory is asking for problems. That means all pointer-oriented languages can cause major issues. These include:

- C
- C++
- Objective C
- Others

Perhaps one of the safest tools today is the language created by Mozilla, known as Rust. Rust was designed from the onset to be safe. Memory is explicitly controlled. The user knows what goes on the stack and what goes on the heap. Variables are immutable by default. Variables that

change must have a “mut” designator. Some may ask how this is any less dangerous than pointers. I suggest they try Rust because the compiler catches most of the disasters before you can do anything. The information received during a failure to compile is useful, which also sets the language apart for most others. Anybody who has tried to figure out where the error is in a LaTeX run knows what I am talking about. Also, importantly, Rust provides excellent performance. That is, we can have our safe memory management and get performance at the same time. Note that Mozilla Firefox is written in Rust in part, which allows a nice improvement in performance, particularly when using multiple cores.

Rust is a pain to learn, but I would expect that given the feature set. My point is this: Rust is the first real contender to C++ that makes any sense. Why take the risk when you can get help from the language and its tools from the very start of the project?

Please note that I have no interest in language wars. I do not think Rust is a dumbing-down of the developer. I do not think Rust is perfect. Other alternatives exist, for example F#, but their performance is often an issue (it certainly is with F#, which by the way, I like for its concision).

Try out Rust—if you are a software geek—and let me know through your comments what you think.

Check it out!

**MANAGEMENT SYSTEMS**  
ALFONSO ENRIQUEZ

Working for Quality is a wonderful job

I was working on a routine task, when my boss called me to his office. We want to know if you could go to Alabama to visit a customer, because they have a problem with one of our products. I asked: when? he answered we want you to take the 17:30 plane today, it was 15:30. I accepted to go. The Quality Manager and the Quality Engineer explained to me which was the issue, gave me blueprints and samples of the part, I left the plant at 16:00, arrived at home at 16:20, grab some clothes, then went to the bank to get some money for the trip, my wife drove (she drives faster than I) I

arrived at the airport at 17:00, I told him I would like to go to Birmingham, the clerk said there is a flight at 17:30, he printed the boarding pass at 17:10, I hurried and went through customs, thanks to God there were just a few people before me, I arrived at the gate at 17:25, fortunately they have not started boarding the plane, I called to make a hotel reservation, they gave me the hotel confirmation just when all passengers have boarded the plane, and finally I boarded the plane just in time. I arrived at Birmingham at 22:45, I went to check if there was a car to rent, I tried all the different companies, they all were sold out, no cars, I took a taxi to the hotel. I made a reservation of a rental car for the next day. I was at the opening time of the car rentals at the airport at 6:30, and then drove for an hour to the customer plant.

At the customer plant, the quality engineer showed me the problem with our part. I asked to see the operation, and then made some measurements with the caliper that I was carrying, I discovered that it was a problem of three parts interacting, which involved three different companies—among them our company—and also it involved the design department of our customer, the maquiladora in Monclova where we send the parts. I tried to be objective and really find the root cause together with my customer's quality engineer, we agreed in some issues and disagreed in others, I waited to talk to the second shift. We discovered that they had different way of assembling the parts. We agreed on a follow up plan.

I returned to the airport to take my plane back to El Paso at 19:30, arrived at midnight. My wife was waiting for me to go home.

On the next day, I reported the findings to the staff and showed them the samples I brought. All of them understood the issue and they asked me what else—I said it was a good trip, I saw how green everything is over there: big pine trees, I saw a big river (Coosa River), where our customer plant is in the middle of a forest.

To work in solving quality problems is a wonderful job.

## RE-CERTIFYING AND ASQ CERTIFICATIONS

STEVEN SCHAFER

Out of a total of 8 member(s) whose certifications expired June 2017, 0 member(s) are in the process of submitting their certifications and 8 member(s) completed their re-certifications.

Out of a total of 7 member(s) whose certifications expired December 2017, 3 will lose their certifications if they do not re-certify by the end of June 2018, 0 member(s) re-certifications are being processed and 4 member(s) completed their re-certifications.

Out of a total of 9 member(s) whose certifications will expire June 2018, 6 will lose their certifications if they do not re-certify by the end of December 2018, 0 member(s) re-certifications are being processed and 3 member(s) completed their re-certifications.

**Members can re-certify early!** As long as you have enough points you can re-certify as early as six months before your certification expires. Your Certifications will be extended 3 years beyond the certification expiration date you currently have for your certification, so you don't lose anything by re-certifying early. Remember, you can only claim points that you have accumulated up to the time you submit and these points need to be collected during your 3 year certification period. Out of a total of 4 member(s) whose certifications will expire December 2018, 4 will lose their certifications if they do not re-certify by the end of June 2019, 0 member(s) re-certifications are being processed and 0 member(s) completed their re-certifications.

If anyone has questions on how to re-certify to extend their ASQ Certifications and/or how to synchronize them if they have more than one, please let me know. Re-certifying by exam costs more and is a lot more difficult than re-certifying through the accumulation of RU points. You can reach me, the Re-Certification Chair, at 915-241-4780 or (501) 615-8170. Please leave a message on the answering machine if no one answers and I will call back you as soon as I can. You can also reach me via the Internet at [spikequate@sbcglobal.net](mailto:spikequate@sbcglobal.net). I am ready to help with any questions you might have about Re-Certifying or about any ASQ Certifications you might have, call me. The Re-Certification Journal is at the following link and will guide you in the re-certification process <https://asq.org/cert/recertification>

When re-certifying, **always get the most recent Re-certification Journal information.** The lasted Re-Certification Journal is January 2018. For ASQ members the fee for one certification is \$69.00 and for two or more \$89.00; for non-members the fee for one \$109.00 and for two or more \$109.00 each).

Members who **renew their membership early online** will receive a **coupon code: RCRT in which \$69.00 will be deducted off their recert fees.**

Projected Events					
2018	Month	Date	Day	Event	Location
	Jun	20	Wednesday	General Membership Meeting	UTEP College of Business Administration, Room 309
	Jul	14	Saturday	Leadership Committee Meeting	United Blood Services 424 S. Mesa Hills Dr.
	Jul	18	Wednesday	General Membership Meeting	UTEP
	Aug	4	Saturday	Leadership Committee Meeting	TBD
	Aug	15	Wednesday	General Membership Meeting	UTEP

## 2018 Officers/Committee Chairs

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<p>Vice Chair: Evaristo Campos Torres          Cell Phone: (915) 929-3142          e-Mail: <a href="mailto:evarito.campostorre@dish.com">evarito.campostorre@dish.com</a></p>	<p>Newsletter: Kim Pries          Home: (915) 525-1724          e-Mail: <a href="mailto:jpries1@elp.rr.com">jpries1@elp.rr.com</a> or  <a href="mailto:khpries@gmail.com">khpries@gmail.com</a></p>
<p>Treasurer: Rebecca Diaz          Mobile Phone: (915) 321-0279          e-Mail: <a href="mailto:rbkgomez@yahoo.com">rbkgomez@yahoo.com</a></p>	<p>Publicity Chair: Fernando Urbina          Phone: (915) 845-7700          e-Mail: <a href="mailto:furbina@sewsus.com">furbina@sewsus.com</a></p>
<p>Secretary: Keith Fong          Home Phone: (915) 351-7535          Work Phone: (915) 612-7147          e-Mail: <a href="mailto:fongk@asme.org">fongk@asme.org</a></p>	<p>Refresher Classes/Workshops Chair: Hector Lugo          Phone: (915) 208-2502          Home Phone: (915) 581-8091          e-Mail: <a href="mailto:h7teter@hotmail.com">h7teter@hotmail.com</a></p>
<p>Membership: Jose Luis Torres          Cell Phone:          e-Mail: <a href="mailto:joseluis_td@yahoo.com">joseluis_td@yahoo.com</a></p>	<p><b>Business Student Section: Vacant</b>  <b>Cell Phone:</b>  <b>e-Mail:</b></p>
<p><b>Nominations Chair: Vacant</b>  <b>Cell Phone:</b>  <b>e-Mail:</b></p>	<p><b>Partners In Education: Vacant</b>  <b>Cell Phone:</b>  <b>e-Mail:</b></p>
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