CHAIR’S NOTE

Dan Burrows
Chair
ASQ Reliability & Risk Division
dan@asqrrd.org

Hello ASQ Reliability & Risk Division Members,

As most of you are probably aware of by now, ASQ is undergoing a transformation that may significantly alter how technical communities such as the ASQ Reliability & Risk Division operate and our future state. The ASQ Reliability & Risk Division Management Committee has been meeting to map out the future of our division in the context of ASQ Transformation and we are hopeful that we will be able to effectively serve you as we have been doing for many years. Our end goal is to preserve ASQ member value and the value that we bring to the reliability and risk professional community at large. And we still intend for our division to be subject matter experts and thought leaders through our webinar offerings, conference sponsorship and participation, Body of Knowledge development, and outreach.

Due to the changing IT landscape, you may have noticed changes in the www.asqrrd.org website and access to content to make it simple and easier to manage in the near term as we prepare for the IT aspects of ASQ transformation. You no longer need to log in to the site to access the information in the site, so never mind the login at the top right of the home page – we are working on removing that but we need to make sure that removing it doesn’t mess up the rest of the website.

Congratulations go out to Jim Breneman, who is our current Treasurer but also serves as an outstanding educator for our division, as this year’s recipient of ASQ’s Eugene L. Grant Medal which recognizes individuals for outstanding leadership in the development and presentation of meritorious educational programs in quality. Jim’s citation reads “For founding the Engineering Technical University at Pratt and Whitney, which has been benchmarked against similar programs of other major Fortune 500 companies. At the time of Breneman’s retirement in 2008, Pratt and Whitney had already provided more 450,000 hours of instruction to employees. Breneman also has contributed at multiple schools and has taught many public course offerings for the ASQ Reliability & Risk Division.” Well done, Jim.

We are always looking for volunteers, like Jim, to serve, so please let me know if you are interested in serving as a volunteer for things such as IT/Website/Webinars, education, outreach, and even division leadership.

Dan Burrows

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CHAIR’S NOTE
New ASQ-RRD Conference Coming 2019!

The ASQ Reliability and Risk Division will be bringing you a new conference beginning in 2019. It will be in the fall of that year – details of location, Featured speakers, and negotiations with hotels are continuing.

This new conference will enjoy a focus of the content that has been shared and presented at the ASTR conference, as well as focusing on reliability, risk and associated topics.

More news to come! Stay tuned to future newsletters and our website for news!

Trevor Craney, 2019 Conference General Chair

Interested in Risk-Based Decision-Making?

What is Risk?:
- Anything that can affect our ability to achieve the organization’s objectives.
- A course of action or inaction taken under conditions of uncertainty which exposes the risk taker to possible loss (or gain) to reach a desired outcome.
- An undesirable situation or circumstance that is likely to cause a harm or a loss.

ASQRRD is teaching a course at RAMS 2019 (Orlando, FL, Jan 28-31, 2019 at Disney’s Contemporary Hotel) entitled: “The Role of Reliability in Risk-Based Decision-Making”

Subjects covered:
- What is Risk & Risk Management?
- What is the connection between Risk Management and Reliability?
- What type of data do I need for making a Decision under Risk?
- What’s the difference between Quantitative and Qualitative tools in deciding Risk?
- What should I expect from Managers & Customers when I present my analysis?

Division Budget Report

- Checking account as of May 31, 2018: $61,911.74
- Income over expenses (\$30,505.28 - \$30,136.67): $368.61
- Other funds/investments:
  - Investing in ASQ (though 4/30/2018): $229.57
    (Acct total end of Dec 2017 $32,900.62 withdrawn by ASQ HQ)
  - PNC investment account: $0.00
    (Investment account withdrawn by ASQ HQ end of April 2018)
ASQ-RRD MEMBERSHIP STATISTICS

By Member Type

ASQRRD Members (Yrs of ASQ membership)

Mean=13.6 years
Median=9.25 years
Maximum=64 years

7 members > 50 yrs
**Social Media and Webinar Roundup!!**

*Social Media (Tim Gaens tim@asqrrd.org)*

Current follower status on the social media:
- LinkedIn: 4,002 --> **we passed 4000 followers**
- Twitter: 589
- Facebook: 23

**Upcoming Webinars**

**June 2018:**
- **Date:** Thursday June 14: Capital Asset Management; “Prioritizing Critical Assets and Securing Their Reliability”
  - **BY:** JD Solomon [http://www.asqrd.org/webinars/222](http://www.asqrd.org/webinars/222)
- **Date:** Friday June 15: Es panelista en ”Practice Session IMPORTANCIA DE LA PLANIFICACIÓN EN LA GESTIÓN DEL MANTENIMIENTO“ (Spanish Webinar)
  - **BY:** JOSÉ CONTRERAS MÁRQUEZ
    - [https://register.gotowebinar.com/register/126546482877999873](https://register.gotowebinar.com/register/126546482877999873)

**July 2018:**
- **Date:** Thursday July 12: “Essential Competencies for Improving Software Development”
  - **by:** Linda Westfall [http://www.asqrd.org/webinars/226](http://www.asqrd.org/webinars/226)
- **Date:** Thursday July 26: "Introduction to “R” – Basic Manipulations"
  - **by:** Helen Rogers

**New Recorded webinars online:**
1. “DEMYSTIFYING THE COMMON MISCONCEPTIONS ABOUT RELIABILITY CENTERED MAINTENANCE (RCM)” by Nancy Regan
2. “NEXT GENERATION SOFTWARE RELIABILITY PREDICTION USING CAUSAL LEARNING” by Robert Stoddard
3. “BASIC QUANTITATIVE RMA FOR THE PRACTITIONER” by TIM ADAMS
$1000 Annual Award for Best RELIABILITY Paper!

Continuing in 2017-2018, the ASQ Reliability & Risk Division will administer a $1000 annual award for the Best Reliability Paper published in Quality Engineering. To be eligible for the award, at least one of the authors of the paper must be a member of the ASQ Reliability & Risk Division at the time when their paper was published. The reliability focused papers appearing in the four issues from July 2017 to June 2018 will be considered.

For more information, please contact Prof. Rong Pan at rong.pan@asu.edu.

Calling all Webinar Authors!!

Dave Auda (davidauda@yahoo.com)

We would like to extend an invitation on behalf of the ASQ Risk and Reliability Division (ASQRRD). If you would be interested in being a presenter of an ASQRRD webinar, contact Dave Auda. Webinars run every 2nd Thursday of the month at noon EDT for 1 hour,. The content should be something that the attendees can use, Reliability-related knowledge and/or skill.

Why present? A large potential audience that we invite, an additional entry to your resume demonstrating competence, refine your skills, AND earn recertification points.

If you have need of support in developing, preparing and/or presenting at such an event, we can support. Become a recognized subject matter expert!
R&M In The Second Machine Age
– The Challenge of Cyber Physical Systems

January 28-31, 2019
At the Walt Disney Contemporary Resort, Orlando, Florida, USA
Relyence offers a complete solution for all your reliability and quality software needs. Along with our software tools, we offer top-notch technical support, implementation services, and training.

The Relyence Solution. Providing seamless integration between FMEA (including Process Flow Diagrams and Control Plans), FRACAS, Fault Tree, Reliability Prediction, and RBD analyses, the Relyence tool suite empowers you to effectively manage your products throughout their lifecycle. You can use each module stand-alone, or combine the tools you need in our Relyence Studio integrated platform.

Power & Innovation. Relyence tools pack an impressive list of features. Just a few of the highlights include: customizable cross-module dashboards; user-interface customization; flexible report generation; data importing and exporting; API functionality; device libraries; workflow, approvals, and notifications; user and group roles and permissions; and Relyence innovations such as *always-in-sync* technology, smart-layout, *Knowledge Bank* for lessons learned reusability, and FMEA-Fault Tree *link-sync*.

Flexibility & Collaboration. All Relyence tools can be accessed from any computer, PC, Mac, laptop, tablet, or smartphone for ultimate flexibility and team collaboration. You can use Relyence either as on-premise installation on individual computers or a network, or as a zero-client, browser-based platform with your data hosted in the Microsoft cloud or in your own private cloud. You choose!

Rely on Excellence. In conjunction with our software tools, we provide world-class services to help ensure your success. Our Implementation and Training teams can get you up to speed quickly, and our Technical Support team consistently provides support that is unparalleled in the industry.

Sign up today at relyence.com!
ReliaSoft promotes the use of engineering methodologies to evaluate and improve reliability and maintainability through software, services and solutions. Our products facilitate a comprehensive set of reliability analysis techniques, including life data analysis (Weibull analysis), quantitative accelerated life testing, system reliability/maintainability, reliability growth, design of experiments, standards based reliability prediction, FMEA, RCM, RBI, FRACAS and others. We also offer an extensive curriculum of reliability training courses that provide thorough coverage of both the underlying principles and theory, as well as the applicable software. Total life cycle support and expert resources are available on demand for organizations and projects of any size.
Prenscia Access

Flexible access to engineering software for durability, reliability and maintenance

Prenscia Access is a unified, token-based licensing model that provides annual leased access to any combination of nCode and ReliaSoft desktop products.

Upgrade your organization's toolkit

Prenscia Access allows any number of users to run any configuration of products — limited only by available tokens.

Unite your engineering processes

nCode software streamlines test and CAE durability processes, and ReliaSoft's Synthesis Platform leverages data from all reliability activities.

Save money across the enterprise

Every engineer can utilize any combination of nCode or ReliaSoft desktop products at a fraction of the cost of individual licenses.

Keep every user’s software up-to-date

All version upgrades and new desktop product releases are included with the Prenscia Access license.
2018-2019 ASQ-RRD LEADERSHIP POSITIONS

**Elected Positions**

**Chair**
Dan Burrows
dan@asqrrd.org

**Chair-Elect**
Trevor Craney	
tacraney@yahoo.com

**Secretary**
Tim Gaens	tim@asqrrd.org

**Treasurer**
Jim Breneman	weibullman@gmail.com

**Past Chair**
Dave Auda
davidauda@yahoo.com

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**Appointed Positions**

**Membership Chair**
Tim Gaens
tim@asqrrd.org

**Membership Vice-Chair**
Suprasad Amari
suprasad.amari@gmail.com

**Nominating Chair**
Marc Banghart
marc@asqrrd.org

**Education & Arrangements Chair**
Trevor Craney	
tacraney@yahoo.com

**Regional Counsellors Coordinator**
Dan Burrows
dan@asqrrd.org

**QE Best Paper Award Chair**
Rong Pan
rong.pan@asu.edu

**Newsletter Editors:**
Jim Breneman
weibullman@gmail.com
Mohammad Pourgol-Mohammad
mpourgol@gmail.com

**Social Media:**
Tim Gaens	tim@asqrrd.org

**Webmaster:**
Tim Gaens	tim@asqrrd.org

**Marketing**
Angleat Shelikoff
adshelikoff@gmail.com

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**Webinar Outreach**

**Executive Producer & Speaker Manager:** David Auda (davidauda@yahoo.com)

**Chinese Host:** Frank Sun (franksun99@yahoo.com)

**English Hosts:** David Auda, Kiruthika Sundarrajani, Susan Czyrny

**Spanish Host:** Norma Antunano (normaantu@aol.com)

**Data Analysts:** Rachel Stanford (stanford.rachel@gmail.com), Tim Gaens

**Video Editor:** Ward Baun (wardbaun@gmail.com)

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Contact Dan (dan@asqrrd.org) to volunteer with us today!
1. The predicted reliability is higher than the long term realized probability. Which of the following is the MOST likely cause of this difference?
A. Deterioration of the manufacturing processes and procedures.
B. Lack of adequate employee training and process audits.
C. The accumulation of random process variations.
D. A poor initial estimation of reliability.

2. In a corrective action system, trend analysis can be defined as:
I. Long-term movement.
II. The short term status of problems.
   A. I only
   B. II and III only
   C. I, II and III only
   D. I, II, III and IV
III. A cyclical component of a time series.
IV. Seasonal variations.

3. The MOST valid source of failure rate data is:
A. Test data obtained under very closely controlled conditions.

4. A comprehensive failure analysis and corrective action feedback loop must determine:
I. What failed. II. How it failed. III. Why it failed.
   A. I only
   B. I and II only
   C. II and III only
   D. I, II and III

5. What is this system's reliability at 700 hours?
Where component failure data is:
- Failure rate of A = 0.0007 failures/hr
- MTTF of C = 1400 hours
- Reliability of B = 0.92
- Reliability of D = 0.85.
   A. 0.986
   B. 0.998
   C. 0.994
   D. 0.952

6. Given mean-time-to-failure of 200 hours for each of two components, what is the probability of system failure if both components operate in parallel for one hour?
   A. P = 0.010
   B. P = 0.005
   C. P = 0.001
   D. P = 0.000025

7. Reliability prediction is:
A. A one time estimation process.
B. A continuous process starting with paper predictions.
C. More important than reliability attained in the field.
D. A popular method as simulation theory.

8. Ideally for a FRACAS to be effective, how many failures should be allowed to pass before corrective action is to be undertaken?
A. First occurrence of a failure mode.
B. Second occurrence of a failure mode.
C. Third occurrence of a failure mode.
D. Fourth occurrence of a failure mode.

9. All of the following Boolean algebra expression are incorrect EXCEPT?
   A. 1 + 1 = 2
   B. 1 - 1 = 1
   C. 1 - 0 = 0
   D. 1 + 0 = 1

10. What is the MOST accurate method to verify that the maintainability requirement of a design is being met?
A. By analysis of the design.
B. By performing maintainability prediction.
C. By thorough design reviews.
D. By demonstration at the customer's facility.

Answers will appear on ASQRDD blog by June 21