

# Testing at the Speed of Need

Agility, flexibility, and accelerated testing will be increasingly demanded of our T&E workforce and our testing facilities. Declaring this as a challenge is easy; doing it is difficult. How will DoD and other government T&E leaders, in cooperation with industry and academia, develop the workforce and evolve the T&E resources to meet the future needs? The solution probably relies on a combination of policy, process, and facility changes, making partnering and integrated test commonplace, and developing the current and future workforce equipped to scientifically test faster.

I encourage you to come out to sunny Southern California and participate in the 2012 ITEA Annual Symposium to engage with, learn from and influence our T&E Community in these challenging times within our industry. I look forward to seeing you there!

Randy Surch  
2012 Annual Symposium Chair



# 2012

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## 2012 ITEA ANNUAL SYMPOSIUM

### Testing at the Speed of Need

Sept 17-20, 2012

Huntington Beach, CA

*Connect with ITEA to Learn, Share, and Advance!*

# Call for Papers and Exhibits

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# Testing at the Speed of Need

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## Topics for Consideration

### What Policy, Process, Procedures, and Facilities are Needed for Future T&E?

Are policies today hampering the more complete use of integrated testing? Would policy, process, and procedural changes allow more complete testing earlier, saving time and funding? Physical ranges are often too small, too limiting, or too insecure for all the testing we need to do. Modeling and simulation (M&S) is often judged too inaccurate to fully augment live testing. As the Cyber threat domain grows, coupled with limitations and vulnerabilities of physical ranges and accuracy concerns about M&S, how do we position future facilities to test our systems?

### How will Government, Industry and Academia Partner to Consolidate and Share our Test Infrastructure?

Government, Industry, and Academia have very capable test resources that both overlap and complement. Government has the need to test on demand, evaluate quickly, and produce the best possible systems. Industry uses its test resources for competitive advantage to win and execute on programs, produce successful systems, and increase shareholder value. Academia is more driven by interesting research and capable facilities that attract faculty, students, and sponsored research. It would seem that the integrated, cohesive whole of these capabilities as a test resource would allow faster, agile, more comprehensive T&E, but how do we leverage the motivations of government, academia, and industry to make that test infrastructure readily available?

### How has Integrated Testing Improved T&E? Does Integration Accelerate T&E?

We have been pushing integrated developmental and operational testing earlier and earlier. It is probably a good time to review how that integration has worked. Are their success stories and lessons learned in industry or in government in any country? Has integrated testing resulted in time and funding savings or better systems delivered to the customer? Can the pendulum still swing toward more integration?

### Workforce Development: What's the Answer for this Growing Problem?

The bow wave of retiring T&E experience will ultimately arrive with limited capability for backfill. We can attack this issue on two fronts: first, push education in Science, Technology, Engineering, and Math (STEM) related fields as early in students' academic careers as possible as a key way to enter the interesting field of T&E, and second, design a technical education plan for the current workforce in industry and government that stresses the subjects needed to complete scientifically-based T&E. These two entirely different thrusts have the same ultimate focus: a T&E workforce that can meet the T&E challenges of today and tomorrow.

### Scientific Principles: How can we Afford the Statistical Rigor Needed to Sustain User Confidence?

The need to mathematically determine and justify the correct sample size has been a key driver of the recent discussion of scientific principles in test. Those scientific principles have always been part of test, but often not part of the discussion of how small or large the sample of items tested should be. The topics of sample sizes, detection of specified shifts in outputs, declared statistical confidence, and estimated statistical power to detect the shifts are now being stressed. When the reality of statistical confidence and power is confronted with the cost or lack of assets to test the "right" number of items, how do we resolve that conflict? It's easy to say "use M&S," yet M&S is often not initially accurate enough to blend simulation and live test data. Some T&E professionals have found ways to use live tests to validate simulation data and thus blend live and simulation data to save funding and time. From programs that have stressed statistical rigor or used validated simulations mixed with live data, are there success stories or lessons learned for other systems under test?

### What are the Future Opportunities for Developing a More Integrated Government/Industry T&E Team?

As we integrate testing, the government and industry roles seem to remain distinct. Is there a way to integrate the industry and government test support so that there is an integrated testing force that is supporting developmental, live-fire, interoperability, and operational testing and evaluation of capabilities, effectiveness, and safety as an integrated government-industry team?

### How is T&E Supporting Agile Development?

The process of converting a concept into requirements and then requirements into a working model as quickly as possible will forever remain the future challenge. Agile development is providing customers with the opportunity to assess Operational Concepts in complex systems quickly through developing working prototypes. The knowledge gained allows customers the flexibility to modify their system with minimal impacts to a contractor. How is the T&E workforce supporting the Agile development activities on a program? How is T&E integrated into influencing the Agile development process? What training and experience would the T&E workforce need in order to support the Agile development process?

### Can we Continue to Test at the Speed of Need as Budgets are Reduced?

Given the dramatic changes in the world's socio-political and economic environments, there will have to be continued major changes in the way the DoD acquires weapon systems in the future. Almost certainly, future DoD acquisition budgets for new systems will be significantly constrained, resulting in a significant decrease in the number of new program starts and down scoping of existing programs. This translates to reduced customer use of test facilities which will, in turn, drive up per system test costs. When new programs are initiated, there will no doubt be requirements to contain the costs. This cost containment will pressure programs to reduce budgets for T&E and concurrently, may even force contractors to reduce budgets or close test facilities due to unaffordable operating costs. Testing at the speed of need may require the acceleration of test schedules, which may result in additional T&E costs instead of savings. Given this combination of reduced budgets and increased costs, how will the DoD T&E community afford testing at the speed of need?

[www.itea.org](http://www.itea.org)

## Abstract Information

Please visit [www.itea.org/events.asp](http://www.itea.org/events.asp) to obtain the details and a copy of the new Abstract Submission Form and submit electronically to [Symposium@itea.org](mailto:Symposium@itea.org). Once abstracts are accepted, authors will be notified of their assigned session and they will be given the contact information for their Session Chair. Authors can choose to write a paper and present or make a presentation only.

If you would like to also submit a paper for consideration for publication in *The ITEA Journal* you will need to prepare a full manuscript that adheres to the Journal guidelines. The submitting author must also complete and sign a copyright agreement and release form. Visit the ITEA website for all the details: [http://www.itea.org/files/ITEA\\_Journal\\_Article\\_Submission\\_Guidelines\\_At-A-Glance.pdf](http://www.itea.org/files/ITEA_Journal_Article_Submission_Guidelines_At-A-Glance.pdf).

If you have any questions, please contact us at [symposium@itea.org](mailto:symposium@itea.org)

The due date for abstracts is **March 15, 2012**. Authors will be notified of acceptance by **April 27, 2012**.

## Call for Tutorials

Tutorials that address the theme of the symposium are being requested. Pending final program decisions, the tutorials will be scheduled in 2-4-hour blocks on Monday, September 17. Tutorials must be strictly non-marketing in scope, unclassified, and public releasable.

Please visit [www.itea.org/events.asp](http://www.itea.org/events.asp) to obtain the details and a copy of the new Tutorial Abstract Submission Form and submit electronically to [Symposium@itea.org](mailto:Symposium@itea.org). The due date for tutorial abstracts is **January 31, 2012**.

## New: Best Paper Award for Early Career Professionals

In order to encourage a new generation and our future workforce to participate in the symposium, ITEA will make a cash award for Best Paper presented by a young professional, those who have been practicing in the field of T&E for five years or less, and first and second place in Poster Paper presentations. We challenge you to entice the young professionals in your organization to participate!

## Exhibits

The Exhibit space is 50% sold! Join the companies that have already signed up! ASD, Boeing, Calulex, EWA GSI, GD/C4 Systems, GTRI, JT3, NAVAIR, Naval Aviation T&E University, NM Tech Playas Training & Research Center, SRC, TENA/JMETC, TRMC S&T Program Office, Virtual Targets, and Wyle.

Space is limited so in order to guarantee your place on the floor, make your reservation today. You may obtain the application and review the floor plan on line at [www.itea.org](http://www.itea.org). If you would like more information on exhibiting at this event, please contact Mr. Bill Dallas, Manager of Exhibits, **703-631-6220 x202**, or at [wdallas@itea.org](mailto:wdallas@itea.org).

## Sponsorships

The ITEA Corporate Development Committee wishes to thank **EWA/GSI** for being the first company to sign up as a Gold Sponsor and extends an invitation to all of our corporate members and other companies with T&E divisions wishing to be highlighted at this Symposium to contact us today! Last year we had over 500 attendees, and with an anticipated record number of attendees this year, the opportunity for your company to have an exceptional return on investment will be inevitable. Sponsorship dollars defer the cost of the Symposium and support the ITEA scholarship fund, which assists deserving students in their pursuit of academic disciplines related to the test and evaluation profession. For more information on the levels of sponsorship and the benefits associated with each level, please contact Mr. Bill Dallas, **703-631-6220 x202**, or at [wdallas@itea.org](mailto:wdallas@itea.org).

## Meeting Location

**Hyatt Regency Resort and Spa**  
**21500 Pacific Coast Highway, Huntington Beach, CA 92648**  
**888-421-1442**

ITEA has a room block available to all of our attendees, and we are truly pleased to offer our attendees the prevailing government per diem rate of \$125. When making your reservation, please indicate that you are with the ITEA group. Deadline for this rate is **Friday, August 24, 2012**. You are encouraged to make your reservations early.

Rosh Hashanah begins at sundown on Sunday the 16<sup>th</sup>, and our host hotel will be able to provide information on local Synagogues for our Jewish members to plan accordingly.