

# 2016 NTSA Modeling & Simulation Awards and Governor's Award

NTSA presented its annual Modeling & Simulation Awards, as well as the 2016 Governor's Award for Lifetime Achievement in Modeling & Simulation, at the NTSA M&S Awards Dinner at the Hyatt Regency Orlando on Tuesday, November 29. NTSA President RADM James Robb, USN (Ret), presented awards to a diverse group of teams and individuals from the US Air Force, US Navy, US Army and industry.

## 2016 Governor's Award for Lifetime Achievement in Modeling & Simulation

### Mr. Rob Matthews Naval Air Warfare Center Training Systems Division

Mr. Rob Matthews, Deputy Technical Director for the Naval Air Warfare Center Training Systems Division (NAW-CTSD), was recognized for a lifetime of achievement in M&S excellence. From his days as an enlisted sailor to his current role as a senior civilian leader, the imprint he has had on the M&S and Training (MS&T) landscape is as extensive as it is varied. His lasting contributions span not only a variety of disparate Navy training projects across all Navy warfare branches (Aviation, Surface, Sub-surface, and Personnel), but also a variety of Navy and DoD MS&T infrastructure initiatives. Mr. Matthews was recognized for his unending commitment to advancing M&S during his 35 plus year career, and for the enduring legacy and impact his wide ranging and visionary contributions will have on the Navy and on the M&S and Training communities.



## 2016 NTSA Modeling & Simulation Awards – Acquisition

### Armament Sustainment Engineering Team Air Force Materiel Command

The Air Force Materiel Command Armament Sustainment Engineering Team aggressively and rapidly transitioned all Technical Data Packages from two dimensional products to a three dimensional model-based environment with extraordinary results. The incorporation of 3D printing tools and in-house modeling, simulation and Finite Element Analysis capabilities resulted in reduced manufacturing lead time requirements; the identification of multiple and previously unknown root failure causes; and reduction in First Article failures, part costs, and the number of physical tests required. Their work saved millions of dollars and impacted thousands of air platforms across five major Air Force Commands.



Rear Admiral James Robb, NTSA (l) and Dr. Michael Oliver, Air Force Materiel Command (r)

## 2016 NTSA Modeling & Simulation Awards – Training

### Mr. Darius Salemizadeh L-3 Link Simulation & Training

Mr. Darius Salemizadeh, working on the Gray Eagle Composite Maintenance System Trainer program, implemented a creative modeling and simulation solution unlike any of the traditional approaches – a solution which has proven to reduce development and sustainment costs. The need to simulate thousands

of electrical and mechanical connections representing the position or state of connectors and plugs located throughout the aircraft posed a major technical challenge. Mr. Salemizadeh viewed the challenge fundamentally as a graph problem, and created two graph structures with node-edge connections, one representing physical connections, and the other representing power connections. His innovative modeling approach allows for easier updates – to the data file instead of to the source code. This combination of data-file based modeling and the absence of application code modification resulted in a tangible reduction of development hours relative to typical design alternatives.



Billy Pate (l) and Darius Salemizadeh (r) of L-3 Link

## 2016 NTSA Modeling & Simulation Awards – Training

### Training Squad Overmatch Tactical Combat Casualty Care US Army PEO STRI & Other Organizations

The Squad Overmatch team, led by the US Army's Program Executive Office for Simulation Training and Instrumentation and comprised of multiple organizations with expertise in training and experimentation techniques, conducted Tactical Combat Casualty Care training experiments at Fort Benning, GA. They developed an integrated training approach consisting of both virtual and live training designed to improve situational awareness, resilience and stress management. Each squad went through a three-step training process (Concept – Virtual – Live) that utilized augmented reality, role players, advanced effects kits and sensory cues to enhance the training. The realistic training shortened the time required to develop trained and cohesive squads. Ninety-seven percent of the Soldiers and Marines felt that Squad Overmatch better prepared them for the operational environment. US Army Central Command has requested deployment to Camp Buehring, Kuwait, and the Army Surgeon General's Office will continue funding development through FY18.



Paul Butler and Mike Evans of Mitre