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## **ATSSim Use Cases**

### ***ATS Supports the Task Force 76 DIGEX Exercise***

On April 6, 2021, Task Force 76 in Camp Williams, Utah, and Henderson, Nevada, underwent a training event in preparation for the VIBRANT RESPONSE 21 exercise in May 2021. ATSSim was brought on to simulate the detonation of an improvised nuclear device in the vicinity of Phoenix, Arizona. The software crafted a realistic constructive training environment using high fidelity products from the Department of Energy, Defense Threat Reduction Agency (DTRA), and other authoritative sources. In the simulation environment, the M&S Engineers created the multiple organizations based on the response to the event. Furthermore, ATSSim allowed for distributed simulation operations via its cloud-based architecture, as well as a realistic stimulation of the ESRI and Google Earth mission command systems and services used across the CRE and its community partners. The participants were able to fulfill their objectives.

### ***Puerto Rico National Guard Training Exercise***

On June 15, 2021, the Puerto Rico Joint Headquarters conducted a training exercise during which ATSSim was used for realism and visual effects, simulating a category 5 hurricane. The exercise was meant to ensure the JFHQ-PR staff understood roles, responsibilities, and actions associated with the Joint Operational Catastrophic Incident Plan (JOCIP), the Puerto Rico National Guard's 2020 All Hazard Response Plan, and the Puerto Rico National Guard TTPs and standard operating procedures as it anticipates and responds to category 5 hurricanes that threaten Puerto Rico. The software supported the tabletop exercise, as well as the other training modules, by providing a visual representation of the impact of severe flooding from tidal surges and rain on the area of operations. JFHQ-PR personnel were able to determine where "safe" locations for C2 nodes and units could be positioned based on the simulated images. The exercise was critical to prime the JFHQ staff for the Vigilant Guard exercise in August 2021.



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### ***North Carolina National Guard Collective Training Event***

From July 9 to July 17, the National Guard Bureau conducted a Collective Training Event for Joint Task Force – 60 of the North Carolina National Guard in Raleigh, North Carolina. ATSSim was brought on for exercise design and control, providing geospatial modeling, training simulations, and scenario and injects management. The ability to provide leading injects prior to Start of Exercise (STARTEX) on July 9 gave the training audience a sense of realism and allowed them to hit STARTEX running with situational awareness of the impacts of the rain and storm on the affected areas. ATSSim was also used to represent Lower Control (LOCON) unit locations, while also providing reports and other critical information requested by the training audience. The software was critical to keeping the “story” on track for the training audience as the exercise developed. ATSSim was integral to the JTF-60 staff’s preparation regarding how to respond to a complex and statewide disaster using the unique SOPs and products developed by the NCNG. Furthermore, the exercise allowed a fairly new staff to work together to refine battle drills and other procedures as they prepare for Annual Training in support of Arctic Eagle in Alaska in 2022.

### ***West Virginia National Guard Collective Training Event***

On July 28, 2021, in Charleston, West Virginia, the West Virginia Joint Headquarters conducted a Collective Training Event to help prepare the West Virginia National Guard and supporting agencies for the Vigilant Guard exercise in August 2021. ATSSim was used to represent flooding levels in and around key terrain and locations that were used in the discussion during the tabletop exercise. The flooding levels were realistic and challenged the participants to think of alternate means for evacuations of the assisted living facilities. The software was essential for keeping the “story” on track for what the training audience was developing. All participants were able to develop critical relationships and key understanding of each organization’s capabilities and limitations in response and recovery. Several key points were identified that will be worked into State Plans for future responses.



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### ***Tennessee National Guard Collective Training Event***

On August 5, 2021, the Tennessee Emergency Management Agency and the Tennessee National Guard conducted a full-scale exercise to strengthen cooperation between the agencies by practicing the state's Emergency Action Plan. ATSSim provided a hurricane simulation that swept up from the Gulf and impacted Tennessee. Emergency responders had to react to high winds and heavy rainfall and the impacts across the state. Extensive flooding, power outages, and destroyed infrastructure limited their capacity to act efficiently. Despite this, emergency responders were successful in mitigating losses and responding correctly to a destroyed hospital, as well as a crashed rail car that spilled hazardous material onto many roads. The software also managed the number and pace of exercise injects (things like a tornado or an ambulance) sent into the exercises as text messages, emails, and geospatial updates to the common operating picture. The participants were able to fulfill their objectives.

### ***Colorado National Guard Collective Training Event***

From August 19 – 21, 2021, the Colorado National Guard conducted a Collective Training Event in Centennial, Colorado. ATSSim was brought on to simulate a massive flooding scenario based on the 2013 Colorado floods. The exercise was designed to test each staff section against the Colorado National Guard's operational plan (OPLAN 1300-20), Centennial Sentinel. The software provided the National Guard and state agencies realistic exercise injects using their own organic command and control systems. ATSSim also displayed and tracked National Guard vehicles, personnel, and response locations effectively. The effectiveness of ATSSim was noted during the AAR as a definite sustain for future exercises.

### ***White Sands Missile Range Training Exercise***

On September 22, 2021, ATS designed and supported a training exercise for the US Army Garrison at White Sands Missile Range (WSMR), New Mexico, as part of the Installation Management Command Military Installation exercise program. ATSSim was used to simulate monsoon flooding to stress WSMR's ability to respond to personal injury, structural damage, disruption to



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critical resources, and degraded installation services. The complex exercise challenged WSMR's ability to synthesize information received from a variety of live and simulated sources, while synchronizing emergency management efforts amongst its tenant organizations and their senior leadership. ATS' team employed an exercise control cell to shape, affect, and support WSMR's staff actions and HQ IMCOM's external assessment. Throughout the exercise, the ATS team worked in-concert with WSMR's lead exercise planner to ensure event injects appropriately challenged response and recovery functions, while maintaining optimum operational tempo. Additionally, ATSim provided the IMCOM external evaluation team with 141 inject observations and insights based upon interaction with the exercise participants. The effectiveness of the tools to deliver this type of exercise were excellent.

### ***Fort Irwin Training Exercise***

On September 28, 2021, ATS designed and supported a training exercise for the US Army Garrison at Fort Irwin, California, to test the installations threat notification and mitigation activities as it relates to intelligence warning, as well as the response and recovery operations during a fire with multiple active shooter events. ATSim simulated the shooting incidents, as well as the intelligence lead-in messages gathered the week prior from also-simulated social media posts. ATSim was highly effective during this exercise.

### ***ATS Exercise Support – Fort Bragg and Fort Campbell***

In 2022, ATS provided event planning, execution, and review for the Determined Response-22 and SUDDENRESPONSE-22 exercises. Joint Task Force – Civil Support (JTF-CS), stationed across Fort Bragg, North Carolina, and Fort Campbell, Kentucky, participated in the exercises. ATSim was used to provide the training audience real-time interaction with subordinate and parent organizations. With the ability to have simulated internal email and chat functions, the team was able to replicate the Force Flow (units flying and/or driving) and it allowed for viewing of crewed vehicles executing missions in the Joint Operations Area. The participants were able to fulfill their objectives.



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### ***ATS Exercise Support – California National Guard Homeland Response Force***

In 2022, ATS supported a multi-day exercise for the California National Guard Homeland Response Force (CANG HRF). During the exercise, the CANG HRF was tested on their ability to manage and control up to three CBRN Enhance Response Force Packages, three Weapons of Mass Destruction Civil Support Teams, and three CBRN Task Forces during a variety of simulated disaster scenarios. ATSim was used to simulate the scenarios but also because it provided the CANG HRF real-time interaction with subordinate and parent organizations. The simulation allowed the civil support teams and response force packages to complete reports, simulate logistical and personnel reports, and determine the number of personnel who were decontaminated throughout the exercise. The complex exercise challenged the CANG HRF's ability to synthesize information received from a variety of live and simulated source, while synchronizing emergency management efforts amongst tenant organizations and their senior leadership.

### ***Vibrant Response 22 Exercise Event***

From April 19 – May 16, 2022, ATS assisted with VIBRANT RESPONSE 22, the culminating training event for the Defense CBRN Response Force (DCRF). The scenario for both phases of the event was a 20kT nuclear device detonation in the vicinity of Denver, CO. The DCRF and Command and Control CBRN Response Elements A and B (2CRE-A/B) deployed to the Denver area and conducted CBRN response operations, and other-directed mission assignments in support of FEMA (the lead federal agency) in order to save lives, mitigate human suffering, and prevent further injury. They also provided temporary critical support to enable community recovery and, ultimately, conducted a transition of responsibility to follow on forces or civil authority. ATS provided the ATSim Constructive Simulation environment to replicate the activities of the CBRN Response Enterprise (CRE). ATS also provided personnel which wrote and role-played elements of the higher headquarters and Federal and State partners. The event was a success, as the DCRF, C2CRE-A and C2CRE-B have been confirmed as mission ready. All personnel and equipment can redeploy safely and have been re-set in preparation for mission execution.



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## ***Vigilant Guard Oregon Exercise Event***

From June 9 – 12, 2022, ATS assisted with VIBRANT RESPONSE Oregon, an event meant to test the Oregon National Guard's Cascadia Subduction Zone earthquake response plan. ATSSim was used to simulate a massive 9+M earthquake off the coasts off Washington, Oregon and northern California. Soon after the earthquake hit, a tsunami triggered by the earthquake inundated the entire coast of Oregon. The effects of the earthquake and the tsunami left many areas of Oregon west of the Cascade Mountain range with devastating infrastructure and building damage. The Oregon National Guard was mobilized and stood up a Dual Status Command-led Joint Task Force to assist the state in responding to the disaster. The state was assisted by National Guard units from several states, in addition to active-duty Army forces. This exercise allowed the Oregon National Guard to practice their critical response tasks in leading the military response, while also allowing them to identify the parts of their plan that need refinement and where additional training might be needed. The use of ATSSim and the expertise of the ATS staff in modeling & simulation and exercise execution, allowed the exercise sponsors and the Oregon National Guard to achieve considerable cost savings over a full-scale exercise and still achieve the same training result end-state for the Dual Status Commander and his staff.

## ***North Carolina National Guard Collective Training Event 2***

From July 6 – 10, 2022, ATS assisted with the North Carolina National Guard Collective Training Event (NC NG CTE), done on behalf of National Guard Bureau for Joint Task Force-60 (JTF-60). ATSSim was used to simulate the exercise scenario and provide injects for the training audience. The scenario was meant to test JTF-60 to respond to a hurricane impacting the entire state. Injects created prior to the beginning of the exercise allowed JTF-60 to conduct mission analysis and prepare for the storm's impact, adding a sense of realism. ATSSim was also used to represent Lower Control unit locations and provide reports and other critical information requested by the training audience. The software was crucial for keeping the "story" on track for what the training audience was developing. The participants were able to fulfill their objectives.



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