

JTAGS Early Missile Warning in Theater

Tactical Ballistic Missile Early Warning in the Middle East

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Since the onset of Desert Storm, the missile threat in the Middle East has been of great concern to the peace and stabilization of the area. The proliferation of tactical ballistic missiles (TBMs), with increased distances and improved warhead lethality has brought about the need for a system to provide early warning. As many people saw on CNN, Iraq used TBMs as a terrorist weapon against both military and geopolitical targets. We also saw Chechnya use over 200 short range TBMs in their conflicts with Russia. An in-theater early warning dissemination system was clearly needed for the protection and survivability of U.S. Forces and allies. The Joint Tactical Ground Station (JTAGS) is the system that has answered that call.

As operations began in Afghanistan and the instability in the Central Command area of operations increased, it was determined that there was the need for a dedicated JTAGS unit in the Middle East. Led by a Chief Warrant Officer 2, a JTAGS section was deployed to the Persian Gulf area to establish that direct link to the warfighters in the CENTCOM area of responsibility. In this time period, over 800 “events,” including TBM warnings and bombings, were reported. The lessons from Desert Storm, the uncertainty of what missiles might be fired, and the build up of forces for the impending operations in Iraq, increased the responsibilities of tactical ballistic missile early warning. This responsibility did not rest solely on the JTAGS section in the CENTCOM area. Due to the history of Iraqi TBM attacks against Israel and the fact that Israel is in the European Command Theater, the JTAGS section in Germany also provided early warning support to that region. Additionally, if needed, the JTAGS section in Pacific Command could also provide support to the CENTCOM area of responsibility. Operation Iraqi Freedom was truly a test for the entire JTAGS community, not just one unit.

The mission of JTAGS is to provide the 24/7 continued, assured, in-theater tactical ballistic missile early

warning. This continued assured early warning enables the warfighter to have a direct link to information that aids in the engagement of a TBM, force protection, or go after the shooter. JTAGS supports all Theater Missile Defense pillars (attack operations, active defense, passive defense, and battle management/command, control, computers, and intelligence (BMC4I)). These pillars allow our operators to understand the importance of their mission and the affects of their early warning.

Theater Ballistic Missile Warning must keep pace by exploiting technological innovations such as sensor data fusion and information correlation. This and future early warning concepts must incorporate the potential for the fusing of Space based infrared (IR) data with data from other surface, air and Space-based sensors. The goal is to provide TBMW information using standard data and voice dissemination systems, which are common throughout the theaters and Shared Early Warning partner countries. Integration of Enhanced Early Warning and Joint Range Extension will facilitate JTAGS ability to support data fusion and near real-time information transfer to support passive, active and defense activities. These enhancements will reduce force vulnerability, enhance force survivability, help eliminate threats before a launch and increase the battle space.

Currently, in order to provide the early warning, JTAGS processes data from the Defense Satellite Program to determine launch points, vectors, and predicted impact points. This warning is provide across a variety of data networks: IBS subsystems are IBS-Interactive (IBS-I), commonly called Tactical Information Broadcast Service (TIBS), and IBS-Simplex (IBS-S), commonly called Tactical Receive Equipment and Related Applications (TRAP) Data Dissemination System (TDDS). JTIDS networks exchange Tactical Digital Information Link (TADIL) J series (Link 16) messages. In addition to data transmissions, JTAGS provides redundancy through voice

early warning. Detecting tactical ballistic missiles is the primary mission focus. This early warning ability was facilitated with JTAGS units being re-stationed into the EUCOM and PACOM theaters. Although these elements could monitor all the necessary areas, it left the CENTCOM Theater without a dedicated unit.

Many of the lessons taken from Operation Iraqi Freedom are currently being used to determine how to best modify our procedures and improve our ability to provide that continued assured early warning. As the planning and eventual operations continued to mature, the JTAGS sections relied on the in-theater Space Operations Officers to provide continual current situational awareness. This process was not normal to either the Space Operations Officers or the JTAGS sections. MAJ Richard Lewis, the FA40 at the CENTCOM Combined Force Air Component Command, (CFACC) ensured that our JTAGS section received mission intelligence, current situational awareness and worked any issues that the JTAGS section needed help with. Additional means of acquiring situational awareness came through the 32nd Army Air and Missile Defense Command (AAMDC), Army Space Support Teams and the Army Central Headquarters in Qatar. JTAGS also reached back to the SMDC Operations Center to help keep up with the progression of hostilities. The information availability was not the concern; rather the amount of information from a variety of sources became an issue. One of the lessons we are looking at is the feasibility of deploying a 1st Space Battalion or Theater Missile Warning Company C2 element, collocated with the CENTCOM operations center in order to maintain current situational awareness, disseminate information to the JTAGS section and facilitate coordination and control.

Due to the manning requirements needed to provide the necessary 24/7 TBM early warning, personnel from the JTAGS sections at Ft. Bliss and Colorado Springs were used to man this section. Additionally, the U.S. Navy provided personnel to complete the manning requirements. A majority, if not all, of the CONUS based JTAGS qualified soldiers have already completed one tour in CENTCOM and are beginning to do another 6 month hitch. The strains that are common with these deployments are not only felt in the unit, but also the soldiers and sailors' families. Because this is a new location, work is in progress to facilitate a permanent presence in the CENTCOM Theater. This would allow the company to have better assignment predictability and continue to enhance our mission areas by having soldier and leader stability.

Currently the doctrine used by JTAGS/M3P is designed by U.S. Strategic Command, with input from all the Combatant Commanders, AFSPC, NORAD, and



SMDC-Colorado Springs. As the Army representative for Space operations to the unified commands in each theater SMDC-Colorado Springs is more focused on joint doctrine and TTP environment today and for the future. SMDC-Colorado Springs has the flexibility to work directly with Combatant Commanders when defining and designing Space doctrine to support their early warning requirements. JTAGS is now under an approved Space Battalion MTOE and all JTAGS/M3P individual and collective training and doctrinal documents under development reflect those changes using an SMDC proponent and specific system code and numbering scheme. JTAGS/M3P shelters are COTS/CLS systems supporting space missions, and as such the software and hardware are in a continual cycle of change. USSTRATCOM and SMDC-Colorado Springs, as the Army Space Component to USSTRATCOM, ensures these needed changes to mission and doctrine occur within the shortest amount of time to support the Combatant Commander needs in each theater.

Since the inception of JTAGS, the Theater Missile Warning Company has provided the ability to sustain quality, qualified JTAGS operators in each of our sections through the operations of our schoolhouse. The section currently based at Ft. Bliss not only provided soldiers to each of the forward deployed sections and being a deployable section, but also has the mission of teaching the JTAGS Individual Qualification Training Course. On average, this course produces 52 qualified JTAGS operators. Because Theater Missile Warning Company has the ability to run its own school house as well as conduct a war time early warning mission, it enabled the company to take daily lessons and incorporate them into the instruction at the school house. The ability to quickly incorporate lessons not only increased the knowledge base of our JTAGS Operators, but also provided "ownership" to the forward

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This ship was in the region supporting Operation Iraqi Freedom. The USS Nimitz provided Secure Internet, Internet and DSN phones to Fleet Command. This use of the DSCS satellite system shows the spectrum of support the 1st Satellite Control battalion provides to the joint warfighter.

In addition to supporting the warfighter from the DSCSOC, four soldiers of the 1st Satellite Control Battalion deployed to the region and two went to United States Central Command to provide expert DSCS satellite support. SPC Corey Wilson of Alpha Company in Fort Detrick deployed

with an Army Space Support Team from the 1st Space Battalion to Afghanistan. CPL Chad Duncan of Bravo Company in Fort Meade also deployed with an Army Space Support Team to Iraq in support of the 4th Infantry Division. SFC Gregory Schuetz deployed from Landstuhl, Germany to work with the 10th Special Forces element in Iraq under the Worldwide Augmentee Program. SPC Daniel Alvarez deployed to Oman with the Space Electronic Warfare Detachment, and SFC Jerry Mobry and SFC Brent Smith went to CENTCOM to help out in Tampa, Fla.

The DSCS constellation is the workhorse satellite systems of the Department of Defense, and its effective operation relies upon the soldiers and civilians in the DSCS Operation Centers. The soldiers of the battalion showed their skills in satellite control during operations Iraqi Freedom and Enduring Freedom by providing exceptional and flexible support to the warfighters on the ground, sea and in the air. The 1st Satellite Control Battalion, with its worldwide, twenty-four hour, seven-day-a-week mission is always there for the warfighter.

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deployed sections. This practice continues today and continues to build our knowledge base.

A big plus for our sustainability was through our Depot support. Northrup-Grumman, which runs our Depot, provided a full time contractor, on the ground in CENTCOM, to help diagnose and fix any problems that we encountered with our equipment. Robert Ramsey's expertise not only enabled JTAGS to maintain our 24/7 posture, but also provided the necessary guidance in which to prevent failures that might come up.

Our operators are now focusing on smaller areas in which to identify possible missile launch sites. This focus enables our operators to provide better situational awareness to the warfighters and confirming possible intelligence for missile attacks. Our operators can help narrow a search area for an aircraft that has gone down or be able report static events that will enable first responders to get to a location quicker. We also are increasing our ability of situational awareness through upgraded equipment and procedures.

JTAGS is also continuing to develop the "Sensor to Shooter" capability. This capability will allow

a JTAGS section to send data direct to a Patriot Battalion, Aegis Cruiser or even through to a fighter aircraft. This data dissemination not only increases the situational awareness but also decreases the enemy's ability to use ballistic missiles against U.S. and Coalition forces. Through the use of Joint Range Extension, the ability to push information Beyond-Line-of-Sight will enable units to process information without the data being filtered or delayed through a theater operations center data dissemination process. This does not diminish the need for such data dissemination, but rather enhances the ability of the warfighter to have the direct cue and readiness to handle a threat.

The road ahead to answer or improve upon our mission requirements is being answered with the Multi-mission Mobile Processor (M3P). The Multi-mission Mobile Processor (M3P) for the Space Based Infrared System (SBIRS) is a Pre-Planned Product Improvement (P3I) to the Joint Tactical Ground Station (JTAGS) currently operational with SMDC-Colorado Springs. M3P will have more missions related to the strategic environment, thus bringing SMDC-Colorado Springs in line

with the Air Force, USSTRATCOM and Combatant Commanders' overall mission requirements in each theater, thus increasing our role within the Joint community. Because of the lifespan of both the JTAGS shelters and DSP constellation, it is necessary to bring new systems on line that will increase our awareness, improve our predicted impacts, provide better accuracy for TBM launches, and bring tactical advantages to our warfighters.

Operation Iraqi Freedom and Enduring Freedom reinforced the requirement for an in-theater early warning dissemination asset. Although hostilities are officially concluded in Iraq, the threat of TBMs around the world continues to exist. JTAGS continues to provide 24/7, 365 days a year early warning through our dedicated soldiers and sailors, on point. The proliferation of tactical ballistic missiles will continue to threaten not only the U.S. military, but also the freedom of the world's citizens. Providing timely, accurate, assured early warning will help to crunch global terrorism as well as provide confidence of freedom for all people.