

EXERCISE REPORT

Throughout history, America's armed forces have maintained a firm commitment to the safe and rapid recovery of American citizens and US government personnel from hostile or uncertain environments. Under Directive 3002.01E, the DoD established how the military should execute what are now referred to as Personnel Recovery (PR) operations and clearly defined PR as 'one of the highest priorities of the Department of Defense', calling for the mission to be rehearsed as an integral part of planning and training. Staged annually at Davis-Monthan AFB in Arizona, 'Angel Thunder' is currently the only US exercise that covers the full spectrum of PR training, having grown into the largest and most complex exercise of its kind in the world.

Successful PR missions demand rigorous training at all levels and service chiefs are tasked with ensuring PR preparation efforts keep pace with changes in the global operating environment. Further-more, they must be ready to plan and execute such operations with other inter-agency partners as well as be prepared to undertake recovery operations cooperatively with partner and host nations as needed.

Air Force Policy Directive (AFPD) 10-30 was modified and re-issued on 9 February 2012, making the Air Force responsible for establishing policy for a global coordinated PR programme. This service has primary responsibility for recovering Air Force personnel who become isolated in uncertain or hostile environments. Subsequently, the Operational Concept for Personnel Recovery directive, signed by the Chief of Staff, not only acknowledges that the sister services routinely call upon the Air Force to recover their personnel but it also expands PR tasks

Right and below: Meshing with the efforts of the Personnel Recovery (PR) specialists, co-ordinated air assets deploy as part of the 'package' to support the recovery mission in various ways such as air cover, communications, materiel support, refuelling, even enemy suppression when the need arises. The AH-64D Apache below is based at the nearby Silverbell Army Helipoint in Marana and was tasked in the exercise as an armed escort for HH-60G Pave Hawks. The HH-60G is fitted with a refuelling boom and probe allowing it to refuel in flight. During the exercise, HC-130P Combat Kings serviced the Pave Hawks thereby substantially extending their operating range.



'Angel Thunder'



Rescue readiness training at its finest

beyond the typical Combat Search and Rescue (CSAR) mission to include civil and military search and rescue, medical/casualty evacuation, non-combatant evacuations, disaster response, mass rescue operations, humanitarian relief, theatre security cooperation, specialised air and ground mobility, plus the re-integration of the individuals successfully recovered.

Overarching these DoD and USAF PR directives is National Security Presidential Directive (NSPD) 12, Annex 1, Title 10, which directs the policy for a coordinated PR programme. The mission calls for making rehearsals an integral part of operational planning and training, and the Angel Thunder exercise serves as that directive's validation exercise.

Angel Thunder currently is the only exercise of the US DoD covering the full spectrum of training and has grown to become the largest and most complex PR exercise in the world, covering natural disasters and what are termed irregular

warfare as well as advanced major combat scenarios. The exercise is designed to provide prioritised, realistic training for a 'Whole-of-Government' response to the recovery of isolated American citizens as envisaged in NSPD-12. The latter defines PR as the 'the sum of military, diplomatic, and civil efforts to effect the recovery and return of US military, DoD civilians, and DoD contractor personnel who are isolated or missing while participating in a US government-sanctioned military activity or missions in an uncertain or hostile environment, or as determined by the Secretary of Defense'. To meet the goals and objectives of the mission, the training 'bar' is set very high and requires individuals to meet initial qualification and mission qualification, continuously maintain currency requirements, undertake upgrade training, practice skill proficiencies, and undertake specialised mission certification and threat training.

The exercise is sponsored by Air Combat Command, shaped by the 23 Wing, and

executed by the 563rd Rescue Group (RQG) at Davis-Monthan AFB where the unit's commander, Col. Jason Hanover, is also the exercise director. He stated:

"The real value of Angel Thunder is the fact that it is a PR exercise designed by PR experts for the entire inter-agency community. We devote painstaking time to remain current in strategic and operational doctrine, to ensure we are preparing our forces to succeed in the current environment and forecasted future environment. We have the flexibility and responsiveness to rapidly morph scenarios, and to incorporate emerging threats and concepts. This year we have added a scenario that recreates the environment that spurred creation of the Joint Operational Access Concept and subsequent Air-Sea Battle Concept."

This high-fidelity rescue exercise had modest roots when it started in July 2006, first as a base-specific exercise at Davis-Monthan, where the 563 RQG is a component of the 355th Fighter Wing. Until that time



Left: A substantial number of HH-60G Pave Hawks from the USAF active-duty, Reserve and ANG communities are present for each staging of 'Angel Thunder'. The host 563rd Rescue Group (RQG) fields one such unit at Davis-Monthan, the 55th RQS.

Below: The locally based EC-130H Compass Call fleet served as communications jammers during the exercise. Conducted in the train-as-you-fight tradition, 'Angel Thunder' stages highly authentic real-world recovery scenarios.

however, the service had no dedicated CSAR exercise that provided realistic task force and PR training.

Founder of the exercise and currently designated its Professional Control Force Director, Brett Hartnett explains:

"At that time, personnel recovery units were unable to organize realistic composite force training on a regular basis due to the high ops tempo. When personnel recovery units were able to organize events they were

limited in scope, not always standardized, and had many notional assets involved. In addition, fighter units were tasked to conduct personnel recovery on Air Expeditionary Force (AEF) rotations and contingency deployments but didn't have regularly scheduled opportunities nor standardised training programmes. Due to these factors, the training didn't cover the full spectrum of personnel recovery events from notification to recovery, and never exercised the real-

world flow of information through the command and control, communications, computers, intelligence, surveillance and reconnaissance (C4ISR) structure."

It was around that time that USAF Chief of Staff General T. Michael Moseley tasked ACC's exercise division to create a CSAR exercise programme. What started out as a five-day local event with barely 200 participants in 2006 became a nationwide exercise when ACC offered official sponsorship to the exercise in 2007, primarily through the efforts of Todd 'Todo' Parker of ACC.

Planning

'Angel Thunder 2012' was testament to the growth and importance of the annual exercise when it hosted more than 1,700 USAF, joint, coalition and inter-agency players. Close to 50 aircraft participated, making the exercise by far the largest and most complex personnel recovery exercise in the world. By building security cooperation and partnership capacities, it continues to expand and develop, demonstrating its value and ensuring its place as the best venue of its kind. Additionally, Angel Thunder 2012 garnered the coveted Joint National Training Capability (JNTC) Certification and Accreditation, placing it with only 12 other exercises as a forum recognized by the US Joint Staff to be one of unparalleled value that offers consistency of training for the entire joint force.



Angel Thunder 2012 ran from 9 October until 21 October 2011 (As Fiscal Year 2012 began 1 October 2011, the exercise was thus designated '2012'). It included participants from US Southern Command, US Northern Command, US Africa Command, US Special Operations Command, the Joint Personnel Recovery Agency, the active-duty Air Force, as well as the US Army, Air National Guard (ANG) and Air Force Reserve Command (AFRC). Also present were personnel from the US Coast Guard, Customs and Border Protection Agency, National Reconnaissance Office, State Department, Drug Enforcement Agency, National Geospatial Intelligence Agency, Joint Forces Command, the Department of Justice (FBI), the US Agency for International Development, the Pacific Disaster Center and many international partners. In all, some 800 flight-hours were logged during the exercise, which comprised about 400 scenarios and the successful 'recovery' of around 200 people.

Sixteen different countries invested time and resources to take part in the exercise including Australia, Canada, Columbia, Denmark, France, the Netherlands, Pakistan, Singapore and Sweden. Personnel from these countries were active players who worked alongside US forces throughout each phase of the exercise. Additionally, representatives from Chile, Egypt, El Salvador, Lebanon, Peru, Uruguay and Qatar came to observe. Local participants included the National Park Service, US Forest Service, two trauma center hospitals, three sheriff's offices, a fire department and three universities.

Designed to provide realistic training across the full spectrum of rescue operations, the exercise involved joint, inter-agency and multi-national partners working together right from the mission planning stages to mission execution. Brett Hartnett continues:

"The unique part about this particular exercise is that it's planned from the bottom up. Leadership gives their overall vision as guidance but units that had expressed their interest to participate in this year's event got together at the Initial Planning Conference (IPC) where they told us what they wanted to practice, which we translated into objectives. The leadership did not dictate what the training should be, the participants did. From that point onwards the weapons and tactics officers and my team of contractors built the 'game', translating and integrating the objectives into scenarios for the participants to accomplish. With the training tailored to meet participants' needs, the combat rescue community is doing the planning and execution of the exercise themselves, maximizing the joint/combined force integration. When the planning was complete, more than 200 objectives had been established for Angel Thunder 2012."

Working with many diverse units from different backgrounds and with varying expertise levels, exercising together called for the 'script' to focus on overall safety. Col. Jason Hanover elaborated:

"The hard work is all done before the first participant shows up to D-M. When we craft the exercise we have to build a big enough 'playground' to facilitate whatever decisions the target audience (exercise participants)

make. We write the script with a vision of the direction we are trying to push the forces but these are smart guys with great insight and knowledge so we have to ensure all our pre-coordination for exercise areas or drop zones or landing zones cover all possible decisions the commanders make. Sometimes they surprise us with an idea we hadn't thought of and it's the job of the Exercise Control Group to gently nudge them back into the 'box' we've built."

Five-phase approach

The exercise provides a realistic train-as-you-fight experience and is designed to address ACC's Combatant Commander (CCDR) demands. These call for active duty, ANG and Reserve combat rescue forces to

personnel (IP) including theatre electronic surveillance, reconnaissance, command and control (C2) aircraft, global satellites, wingman reports and visual search by PR forces. The latter typically employ based on near real-time information about an IP's position. Even with precise coordinates that can pinpoint the location, PRO forces still have to authenticate the person's identity prior to facilitating successful support and recovery operations.

The 'Support' phase concentrates on the planned effort necessary to ensure the physical and psychological sustainment of the IP. It may include establishing two-way communications and providing morale-building support, aerial re-supply, or aerial escort to a cache. This phase may also



Above: Apart from US Army Apaches providing RESCORT, two Royal Netherlands AF AH-64Ds operated by the Joint Netherlands Training Detachment (JNTD) from Hood Army Airfield at Fort Hood, Texas, deployed to Davis-Monthan for 'Angel Thunder 2010'. The Dutch AF began receiving the 'Delta' model in May 1998 and during the time that delivery was awaited, operated 12 AH-64As leased from the US Army for the symbolic fee of one dollar each.

Below: The flash worn by pararescuemen (PJ) serving with USAF Guardian Angel units. The 563rd RQG fields one PR unit, the 48th RQS, from Davis-Monthan AFB and another, the 58th RQS, at Nellis AFB in Nevada.



maintain high-end proficiency and mature the command and control of the four core PR principles: preparing, planning, execution and adaptation, as well ensure successful execution of the five phases of the mission itself. The PR 'save chain' identifies these as: Report, Locate, Support, Recover, and Re-integrate. Angel Thunder provides the opportunity to practice and train in each and collects data that measure performance and effectiveness so that any gaps can be addressed. After the exercise, analysis is done to determine root cause of any under-performance and devise solutions using the Doctrine, Organization, Training, Materiel, Leadership and Education, Personnel and Facilities (DOTMLPF) methodology.

The 'Report' phase initiates the Personnel Recovery Operation (PRO) process where rapid and accurate notification is essential for a successful recovery. The response time and operations concept will depend on the mission, enemy, terrain and weather, troops and support available, plus time available and civil considerations (METT-TC).

The 'Locate' phase focuses on the various methods and resources used to find isolated



Left: The 40th HS operates this UH-1N 'Twin Huey' in support of the 341st Missile Wing at Malmstrom AFB in Montana. During the exercise, Twin Hueys assigned to various Global Strike Command wings deployed to Davis-Monthan AFB to provide essential logistical support.

Below: The mission of the HC-130 Combat King is to rapidly deploy to austere airfields and denied territory to execute all-weather PR operations and routinely perform high- and low-altitude personnel and equipment air drops. In addition, the type supports infiltration and exfiltration of personnel, helicopter refuelling and forward-area refuelling-point missions.

Opposite page: Aircraft availability remains a concern to the Air Force PR leadership and two initiatives have been developed to address immediate and long-term needs. They are designated the HH-60 Operational Loss Replacement (OLR) and Combat Rescue Helicopter (CRH) programmes. The high tempo of operations in harsh terrain and weather conditions takes a toll on the aircraft and equipment. With the rotor wash throwing up potentially damaging sand and dust during take-offs and landings in dry desert operations, crews must deal with 'brown out' conditions as a regular occurrence.

encompass the suppression of enemy threats to help preclude the the IP's capture as well as disrupt the adversary's response to PR efforts. When necessary, combat rescue officers (CRO), pararescue specialists (PJs) and/or equipment may be pre-positioned to support the IP until the recovery phase kicks into gear.

'Recover' encompasses the activities of commanders, staff, fielded forces and the IP to ensure their physical return to friendly control. CSAR is the Air Force's preferred recovery mechanism. As information of a potential PR incident becomes available, the Personnel Recovery Coordination Cell (PRCC) assesses the situation quickly, determining mission feasibility and disseminating data to units that might participate in the rescue mission. Once mission execution appears feasible, units may be tasked to initiate/continue planning or launch from alert. If they launch, the recovery force will include the PR team and all necessary supporting forces needed to execute the recovery operation. By their very nature, PROs are time-sensitive undertakings. According to numerous historical studies, after four or more hours on the ground, the chance that a survivor in combat will be rescued successfully is less than twenty percent. Ideally, the PRO will enable the individual to be brought under the safety of the recovery force in less than two hours.

The fifth and final phase of the PRO is 'Reintegration', which begins when the recovery force relinquishes physical control of recovered personnel to a designated team member or organization in the theatre reintegration process. As part of that process, PRO forces collect what is termed 'perishable, essential intelligence and survival, evasion, resistance, escape (SERE)' information while at the same time tending to the physical and psychological welfare of the recovered personnel.

When exercise participants returned to



Davis-Monthan for the Main Planning Conference (MPC) they were briefed on the objectives and specifics relating to the impending exercise, in accordance with the previously described CCDR and save-chain principles. Also discussed was how the many of the participating units' requirements would be tailored into exercise scenarios. The emphasis on highly disciplined principles and participation of so many diverse parties in Angel Thunder 2012, demonstrates just how unique it is among major military exercises.

Also accomplished at the MPC was a full analysis of the logistical requirements for the various exercise scenarios, each of which would involve a significant number of support personnel and a great deal of equipment. Site surveys were made and

exercise planning finalised so that participants were fully briefed. The Final Planning Conference (FPC) that ultimately followed thus served simply as a quality control check to verify that everything was clear and all aspects had been covered.

Synergies

For the duration of this exercise, the largest collection ever of HH-60G Pave Hawks serving with various active duty, AFRES and ANG squadrons was assembled, together with an equally impressive number of HC-130P Combat Kings and Guardian Angel teams. These came from rescue units across the USA. Presenting the rescue forces as a triad of helicopter, fixed-wing and Guardian Angels creates a synergistic affect where each complements and fills in performance gaps of

the other two, thereby creating a more complete PR task force.

For example, the HC-130P can overcome the range and fuel limitations of the HH-60 either by flying ahead and airdropping Guardian Angels into the landing area, or by refuelling the HH-60s to extend their range. On the other hand, due to the fact the HC-130 is limited by its weight to operating from more conventional landing strips, the HH-60 can overcome this limitation with its ability to land virtually anywhere.

Additional assets employed for the 2012 exercise included MC-130P Combat Shadows, EC-130H Compass Calls, PC12s, E-3 Sentrys, C-17 Globemaster IIIs and KC-135R Stratotankers, along with CH-47 Chinooks from the Singapore Air Force. These were critical for high-altitude operations.

Being part of the recovery force packages and providing essential airlift capacity to haul personnel and equipment to and from the surrounding exercise areas was a small number of Air Education and Training Command (AETC) and Air Force Global Strike Command (AFGSC) UH-1N Twin Hueys.

Finally, about a dozen A-10 Warthogs from the local 354th Fighter Squadron provided airborne rescue escort (RESCORT) to the PR Task Force (PRTF) during rescue missions. Rescort is an integral part of CSAR, delivering route 'sanitisation' as well as armed escort. In an increased threat environment, this assistance significantly improves the chances of a successful recovery. The task requires RESCORT aircrews to be thoroughly proficient in rendezvous procedures, escort tactics at medium and low altitudes and in defending rescue vehicles during mission execution.

Apart of providing RESCORT, the A-10s fulfill another critical role during PRO and CSAR missions, referred to as the 'Sandy One' mission. During the majority of CSAR missions, one of the present A-10s typically re-roles and becomes what is termed the



Guardian Angel Units

Air rescue is primarily a mission of the USAF's Air Combat Command (ACC) of which the aptly named Guardian Angel squadrons are a component. These units comprise what the Air Force calls its human/equipment-based weapon system. In essence, they are teams of rescue specialists tasked with addressing the core planning principles of the personnel recovery (PR) mission and conducting all stages of the PR mission itself. Each PR unit is composed of pararescuemen (PJ), survival specialists and combat rescue officers (CRO) who can conduct their work in a very dynamic manner, either in small groups or as larger teams assigned to a particular PR operation (PRO), depending on the nature of the situation. PR personnel thus deploy with great flexibility. Such squadrons can be found not only in the active-duty community but within Air Force Reserve Command (AFRC) and the Air National Guard (ANG), as well.

Within Guardian Angel units, PJs are the only DoD specialists specifically trained and equipped to conduct conventional and unconventional rescue operations. Essentially, each PJ is a personnel recovery specialist possessing emergency medical skills so that immediate medical care can be administered on site. They deploy in any available manner, having been trained in air, land and sea tactics as well as enemy evasion, and they are capable of operating within the full spectrum of terrain and weather conditions. As part of each mission, PRO forces also collect what is termed perishable essential intelligence and survival, evasion, resistance, escape (SERE) information. The effectiveness of units is the responsibility of CROs whose role is to manage operational planning and training at both tactical and strategic levels and thus direct and oversee all aspects of PR. CROs serve as direct combatant command and control officers in theatre and have overall charge for the planning, execution and success of rescue missions. It is their job to analyse the effectiveness of and identify any deficiencies related to the mission and to react appropriately in a timely manner.

Serial 97-5038 is an Apache AH-64A upgraded to AH-64D 'Longbow' configuration. Northrop Grumman's all-weather AN/APG-78 Fire Control Radar and Radar Frequency Interferometer located atop the rotor mast was incorporated into a number of the upgraded helicopters. Capable of locating and identifying both stationary and moving targets, the system's data link can transmit targeting data in real time to several platform types, including other 'Deltas'.





Above: Renderings of the flashes worn by combat rescue officers and SERE specialists. The latter recognises individuals tasked with gathering data and intelligence on all aspects of the mission.

Below: Besides providing RESCORT, the A-10 fills an important role during PR and CSAR operations, known as the 'Sandy One' mission. In many instances, the crewman of one of the Warthogs on site takes control of the operation and assumes the role of rescue mission commander (RMC), relieving the on-scene commander (OSC) of overall responsibility.

Rescue Mission Commander (RMC) on-scene, taking over command of the mission from the On-Scene Commander (OSC). The OSC is the individual who initiates the rescue efforts in the objective area until rescue forces arrive. The OSC may be any aircraft in the vicinity, including the wingman of a downed aircraft. The OSC's initial actions are to

attempt to establish communication, locate and authenticate the IP, and pass essential elements of information to the AMC. The OSC role is typically transferred to the RMC or lead recovery vehicle upon the latter's arrival. After transferring OSC duties to the RMC, the original OSC may remain on station in a supporting role.

The role of RMC is a distinct qualification for airmen specifically trained in CSAR tactics, techniques, and procedures (TTP). RMC responsibilities include establishing communications, locating and authenticating the IP, and protecting the IP until recovery assets arrive. Thus, the RMC will control all assets assigned to and tasks of the PR effort like rescue combat air patrol (RESCAP), suppression of enemy air defenses (SEAD), additional strike aircraft and any required aerial refuelling. It comes as no surprise that only the most competent and most capable pilots are selected and trained to perform the Sandy One mission.

The obvious choice

The Air Force continues to adapt its PR organization, training and equipment to enhance rescue capabilities and be the best at fielding joint/coalition personnel recovery missions. Angel Thunder originated at Davis-Monthan AFB and the decision to continue at this location should come as no surprise. The facility and surrounding areas are ideal for exercise purposes and allow the service to get good value from its training investment. A variety of training and logistical assets are found nearby, including:

- Sells, Ruby, Fuzzy, Jackal and Tombstone Military Operations Areas (MOA)
- Barry Goldwater Range Training Complex
- White Sands Missile Range Complex
- Melrose Range Complex
- Southern California Offshore Range Complex
- Florence Range
- Camp Navajo

- Fort Huachuca
- Bisbee-Douglas International Airport
- Flagstaff Pulliam Airport
- Playas Urban Training Facility (part of New Mexico Tech's Playas Training and Research Center [PTRC])

The town of Playas was built in the early 1970s to house the employees of and provide infrastructure for the nearby Phelps Dodge copper smelter. When the latter was shut down in 1999 a virtual 'ghost town' was left behind. Subsequently, New Mexico Tech developed Playas into a premier training and research facility for first-responders and for anti-terrorism programmes to be developed. A suburban setting was created within a 640-acre (259-hectare) area to represent the kind of setting in which terrorist attacks might occur, in other words a realistic suburban combat environment in which scenarios can be played out and responded to. Designed to replicate the look and feel of a typical small town, it features single family homes, an apartment complex, a medical clinic with helicopter pad, shops, a fire station, a community centre, a post office, churches, a grocery store and more. In addition, it boasts a 5,000-ft (1524-m) paved runway suitable for light aircraft. This world-class training environment also includes two replicas of Afghan villages and for the duration of the exercise the training facility is fully stocked with a very robust OPFOR including role players, livestock; even market fires. Furthermore, another 1,200 acres (486 hectares) surrounding the 'town' site is available to support Homeland Security activities.

Scenarios

As is clear, successful PR operations demand a precise mix of ground and air forces and this was amply demonstrated during Angel Thunder 2012. Combat aircrew forces, Guardian Angel elements, battle managers and joint search and rescue centre personnel from different organizations acted in concert to create 'rescue packages'.

The 2012 exercise stressed interoperability and cross-culture sharing of procedures and tactics, and sought to replicate all operational environments common to USAF rescue force employment. Over time, units from different organizations typically have developed their own tactics, techniques and ways of responding. Having everyone come together for the exercise was an opportunity to let everyone experience how others approach the mission and deal with communication issues. It was a way to establish how activities could best be integrated and allow participants to share in lessons learned. Needless to say, effective command and control of the various forces



was paramount from the outset and addressed in detail by the organisers. Col. Hanover explained:

"The 'Lightning Bolt' package of the past was a very small rescue package typically composed of three helicopters, two HC-130s, and a Guardian Angel team that had a small logistics footprint and could leave at very short notice to respond to a civil crisis. The concept of quickly deploying lean PR task forces to an austere civil disaster environment was validated during our disaster relief responses to Hurricanes 'Gustav', 'Ike' and 'Katrina' but the concept eventually gave way to the idea of an expeditionary PRTF that can execute a full range of capabilities.

"Central to this is the Rescue Operations Center (ROC) which becomes the C4I hub of the task force. Within the rapidly deployable command centre are workspaces for the entire A-staff as well as technology required to gain and maintain situational awareness across the area of operation and rapidly communicate with all forces through voice, data and video. We have the ability to deploy and establish classified and unclassified internet networks and phone lines within 30 minutes anywhere in the world."

When asked why the communication capability needed to be organic to the PRTF, he offered this explanation:

"A PR mission is like playing a chess game where the enemy is allowed to make the first five moves. We are at an inherent disadvantage because the enemy is dictating the timing and tempo of the mission. They created the situation we're forced to respond to. They isolated our brother or sister and they know we're coming to get them back. The only way for us to regain the momentum and establish timing and tempo beneficial to our success is for us to gain information superiority (and sometimes overwhelming force) through capabilities inherent in the ROC."

The 2012 exercise was sure to test ROC operations as in this instance the scenario was built around a tropical storm that had caused massive flooding across a fictional nation dubbed 'Valsura', plus an 8.9-magnitude earthquake that had destroyed thousands of homes causing a death toll of 500 that was climbing fast. Hundreds of people were missing, including some of the 10,000 Americans living and working in the fictitious country. A neighbouring state dubbed 'Sotostan' had activated army units along its border with Valsura, ostensibly for humanitarian relief but Valsura and Sotostan had fought a vicious war in the 1980s and border disputes had been ongoing since. Thus, it had to be recognised that the activity could equally signal an impending attack. To the south, a serious threat was posed by a force dubbed the 'Valsuran Liberation Group', which was linked to insurgents and drug runners in Valsura's eastern neighbor, a state dubbed 'Diyeme'.

As part of the scenario, Valsura had requested humanitarian aid from the United States, which placed Charles A. Ray – an enthusiastic supporter of the exercise and a regular participant who provided critical inter-agency training to the PRTF – into the role of US ambassador and 'chief of mission'



in charge of the relief effort. With this as the background, the exercise kicked off with a two-day Defense Support to Civil Authorities scenario deploying a JTF to rescue humanitarian workers isolated and injured in the earthquake and flood. For this purpose, 70 federal inter-agency 'survivors' were spread across half of eastern Arizona where the terrain is diverse. Swedish Air Force rangers brought in their search dogs to aid in locating the survivors in dense forests and mountain underbrush.

This event got a lot of attention as the survivors were flown to real-world trauma centres in Tucson and Scottsdale where Arizona agencies and respective medical centres ran their own mass casualty exercises in conjunction with Angel Thunder. As part of the scenario, a survey mission over the disaster area had ended when two helicopters transporting Ambassador Ray and his entourage flew into a sandstorm and drifted close to the border of Sotostan,

Top: Filling a vital role in the PR mission, the HH-60G came into being after cancellation of the HH-60D programme for budgetary reasons. With the USAF still needing a new combat rescue and Special Operations platform, Sikorsky developed the less-expensive and less-capable 'G' model as a compromise solution.

Above: This HC-130P Combat King is stationed at Moody AFB, Georgia, with the 71st RS, an active-duty rescue unit. The type is one of only three fixed-wing platforms in the USAF inventory dedicated to CSAR missions. The other two are the HC-130N and HC-130J. The latter, designated the Combat King II, is gradually replacing the 'P' in service. Davis-Monthan's 79th RS received its first HC-130J on 15 November 2012.

Valsura's reclusive neighbor and longtime adversary. Considering them to be targets of opportunity, both helicopters were shot down by the Sotostan military, throwing the humanitarian PRTF into a major combat operation given that Sotostan air and ground defences posed a significant threat to the downed personnel. Crews immediately



Left: PR operations extend far beyond the scope of typical CSAR missions, encompassing civil as well as military search and rescue, medical/casualty evacuation, non-combatant evacuation, disaster response, mass rescues, humanitarian relief, theatre security and re-integration of recovered individuals. The PR mission is accomplished through a comprehensive mix of human skill and dedicated platforms.

Below: Although its days are numbered, the HC-130P has provided sterling service to the combat rescue community. Tracing its roots to the C-130E and subsequent HC-130H, the 'N' variant was primarily designed to act as an aerial refueller extending the range of combat helicopters.

Opposite page: Both the AH-64 Apache and A-10 Thunderbolt II are prime examples of platforms that have endured well beyond probable expectations. The genesis of both dates back to the early-seventies yet, 40 years later, it is hard to imagine battlefield skies in which these lethal warriors are not present.

entered hasty mission planning and launched to recover them.

HC-130s searched and located the group. Once located, Guardian Angels aboard a Combat King parachuted into the area, linked up with the survivors and began medical care while all awaited extraction from inbound HH-60s. A Guardian Angel team aboard the Pave Hawk executed a high-angle recovery procedure. An HC-130 provided air-to-air refuelling to the HH-60Gs both to and from the recovery area, as well as immediate-area command and control synchronisation efforts between the on-site assets. As the Pave Hawks recovered the paramedic jumpers and survivors, Apaches and A-10s provided air cover to secure the area. Additionally, an EC-130H was present to provide communication jamming against the enemy forces while an E-3 Airborne Warning and Control System (AWACS) became the airborne mission coordinator (AMC), providing critical airborne communications and data relay between the rescue forces and command elements.

This event was followed by the next phase of the exercise: live-fire traditional CSAR operations that simulated the rescue of the ambassador and his entourage with continuous day and night combat rescue ops. that stretched over a period of four days. In turn, this was followed by four days of what is termed Urban Personnel Recovery Operations out at the Playas Training Center. Many federal inter-agency and international players were involved to shift the focus to countering 'Irregular Warfare' threats.

Brett Hartnett is a former combat rescue pilot himself and was 'Pedro' commander at Camp Bastion, Afghanistan. He clocked more than 4,000 flight-hours during his flying

career and was responsible for saving 91 lives. He continued:

"This is like putting on an elaborate theatrical production. However the stage is enormous. It's a 50,000-square-mile (130,000 sq km) swath of Arizona and New Mexico

world. For two weeks, they run around-the-clock missions and catch their naps in some of the base's two dozen tan Quonset hut-shaped tents.

If they forget to bring a critical piece of equipment or are unfamiliar with the skill



that will soon include part of California that morphs into the fictional countries of Valsura, Sotostan and Diyeme".

The cast is made up of a diverse joint, inter-agency and international crew that resembles a true-to-life coalition. As they deploy to Valsura, they're told only that they will be conducting humanitarian operations but to be ready for any contingency. They are not read in as to what will happen and they have to deal with it as they would in the real

sets of the other agencies in their coalition, too bad. Stress runs high but learning how to troubleshoot on the fly to accomplish the mission under pressure is the whole point. Jason Hanover adds:

"You know it's going to be a pickup game but you hope it will be a team of guys you've played with before and you're not just standing on the playground looking at each other."

The exercise is designed to increase in

complexity after each event but ramping up to the next phase only comes once the previous mission is successfully completed. Incomplete missions automatically roll into the next until they have been successfully concluded. By the end of Angel Thunder 2012, the goal of completing all scripted events had been achieved.

The Future

Angel Thunder has grown to become the world's largest PR exercise and is bound to build on its success further, increasing in size and scope as more players become involved. Many more specialized PR and CSAR units are eager to participate in the future. Furthermore, US national policy and strategy documents clearly indicate that future personnel recovery success requires an integrated DoD/inter-agency team while good cooperation with allied nations has proved vital for real-life joint rescue operations in countries like Afghanistan, Iraq and Libya. Such developments amply demonstrate the value of the exercise. It is not surprising, therefore, that just a few weeks after Angel Thunder 2012 concluded, it attained official Defense Department accreditation following six cycles as a base-level exercise. Brett Hartnett summed up:

"This is a David and Goliath story of an exercise being founded by rescue airmen in the trenches because what we needed was not in the system. Air Combat Command sponsorship over the past few years paved the way for JNTC certification on 30 November 2011. With no budget, we built the world's largest and most dynamic rescue exercise in our spare time. In turn, ACC recognized our success and made us their official personnel recovery exercise".

JNTC credentials affirm that the exercise offers a consistent standard of quality training with each cycle, also validating the training areas used. With the International Security Assistance Force (ISAF) mission to continue in Afghanistan, it is vital the exercise continues to build on lessons learned in real-world situations.

Additional allied participants are expected for the next exercise. The secretary of the Air Force has invited Australia, Brazil, Canada, Chile, Columbia, Denmark, El Salvador, France, Germany, Ireland, Pakistan, Peru, Singapore, United Kingdom and Uruguay to come as participants, and Egypt and Vietnam as observers. Brazil, Columbia, France and Germany have already indicated they will send aviation assets for the exercise. It is rumored even that Angel Thunder might eventually become an official NATO exercise within the United States. Time will tell.

The Only Planning Conference (OPC) for the 2013 staging of Angel Thunder took place between 15 and 19 October 2012 at Davis-Monthan AFB. Present were two dozen state and local agencies from Arizona and New Mexico, more than 30 DoD agencies, plus additional federal agencies and non-governmental organizations including all of the combat commands, the State Department, DHS, FEMA, USAID, Transportation Security Administration, Red Cross, Pacific Disaster Center and 15 foreign military representatives.

Angel Thunder 2013 is scheduled to take place 7-20 April. Activities will stretch across parts of Arizona and New Mexico, into southern California and out to sea as far as 60 miles (100 km) from San Diego. The Defense Support to Civil Authority's portion of the exercise will involve FEMA Region IX and Region VI). Scenarios will challenge participants with high-altitude missions, urban missions, contested and degraded operations, and air-sea battle scenarios.

Strategic resource

There is no doubt Angel Thunder has become a strategic resource for the United States and the international community as a whole. Those who are able to participate in the exercise will be richer for the experience, being far better prepared when their call comes to return isolated personnel to safety. They will know how to better develop, coordinate and communicate a rescue plan and thereby enhance the chance of a successful outcome.

Angel Thunder is dedicated to saving lives and preventing the costly blood equity mistakes of the past. It will continue to be a very unique but vital programme. It is being built by the PR community from the grass-roots level, all the while incorporating new lessons collectively learned in the field through realistic exercise scenarios that replicate real-world conflicts and rescue operations. It will remain the only exercise

exercised by the Whole-of-Government across the full spectrum of rescue operations and it will continue to save countless lives. United States national and defense policies do not stipulate a point at which saving a human life is not worth the cost in resources expended.

As the venue location, Davis-Monthan AFB has proved to be a low-cost hub at a particularly fiscally challenging time. The other players who come add their own individually funded spokes to the wheel, ensuring everyone gets the biggest 'bang for the buck' in terms of training dollars.

At a cost of less \$2.5 million per staging, the exercise deserves permanent funding to ensure it continues its mission of preparing US forces to keep the national promise that the United States government remains committed to the safe and rapid recovery of private Americans and US government personnel. It will mean lives saved.

As one of Angel Thunder's strongest and most outspoken supporters, the now-retired US congresswoman Gabrielle Giffords said:

"This time, these aid workers were not in distress and these Green Berets were not under fire. But the next time, when an aid worker is in danger or service member is under fire, rescue operations are likely to be faster, smoother and safer because of what has been learned at Exercise Angel Thunder".

Marnix and Christiaan Sap

