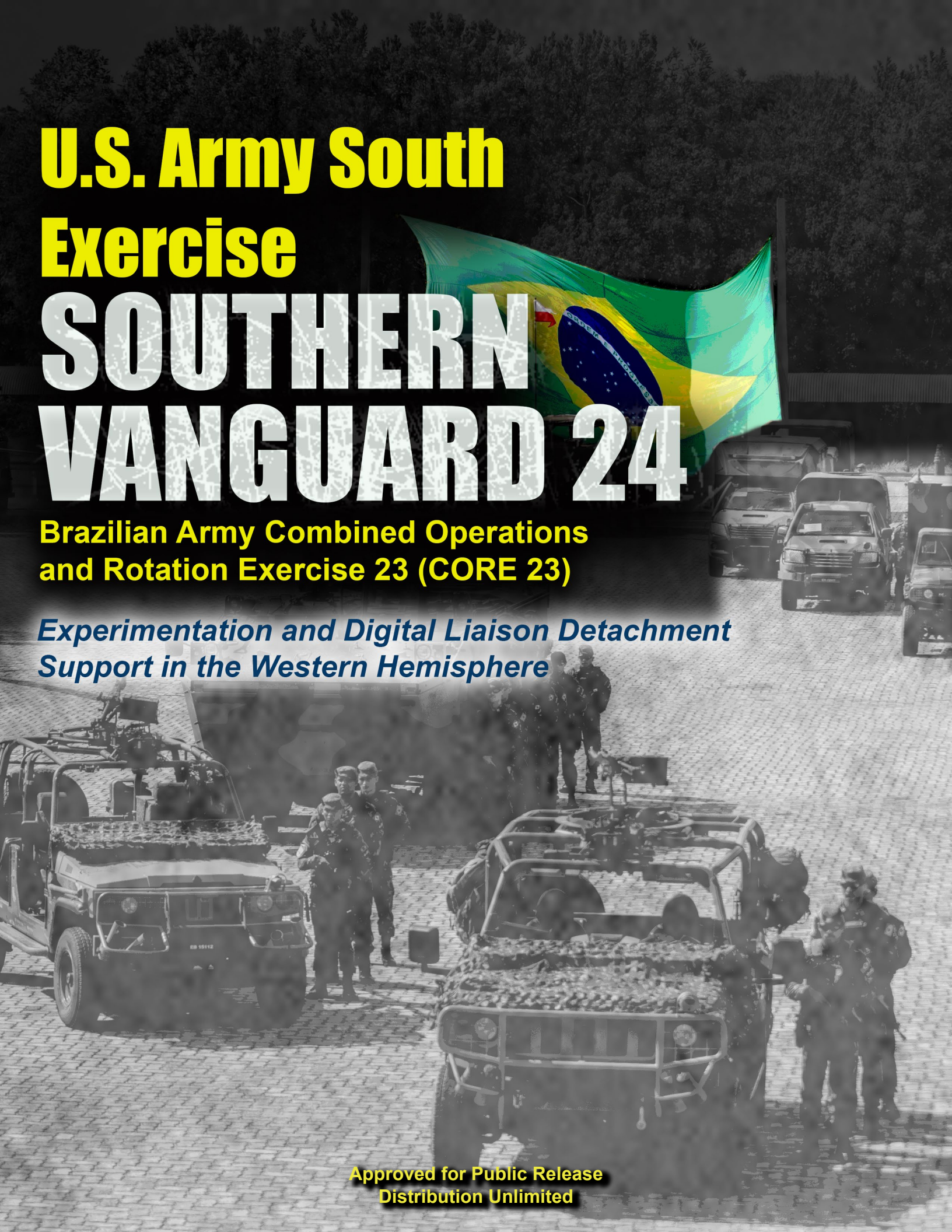
U.S. Army South Exercise

SOUTHERN VANGUARD 24

Brazilian Army Combined Operations and Rotation Exercise 23 (CORE 23)

Experimentation and Digital Liaison Detachment Support in the Western Hemisphere



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CONTACT US

10 Meade Ave.
Bldg 50
Fort Leavenworth
KS 66027

DSN: 552-9533
913-684-9533

DIRECTOR
COL Scott Allen

ANALYSTS/AUTHORS
Paul (Keith) Warman
Robert Schafer

INFORMATION DIVISION CHIEF
Eric Hillner

CHIEF, PUBLISHING AND DIGITAL MEDIA
Diana Keeler

PUBLIC AFFAIRS OFFICER
Michael Hagen

EDITOR
Zack Shelby

ILLUSTRATOR
Julie Gunter

SECURITY
Sandra Griffin

PHOTO CREDITS
U.S. Army South Public Affairs Office

53rd Digital Liaison Detachment

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CHAPTER 1. Introduction to Exercise SOUTHERN VANGUARD

> "As the commander of U.S. Army South over the past two years, I have witnessed the strengthening of our bonds as we work together countering threats and improving interoperability when we come together for combined exercises. Exercise SOUTHERN VANGUARD 24 (ExSV24) affirms that working together is our greatest advantage when it comes to long-term competition with adversaries that seek to undermine our shared values and security."[1]
>
> —MG William L. Thigpen, Commander, U.S. Army South
> Closing Remarks at Exercise SOUTHERN VANGUARD 24 in Brazil
> 16 November 2023

HISTORY

The U.S. Army South (USARSOUTH) SOUTHERN VANGUARD series of exercises is built to enhance relationships, promote mutual military readiness, and increase interoperability between the United States and Western Hemisphere forces. This annual exercise is a cornerstone for USARSOUTH to establish the foundation for lasting integrated deterrence with select partner nations across the U.S. Southern Command (USSOUTHCOM) area of responsibility (AOR). Although executed at the tactical level, the exercise is proving to have an operational impact at the Army-to-Army level. To better prepare for SOUTHERN VANGUARD, partner-nation (PN) companies go to the Joint Readiness Training Center (JRTC).

The first iteration, ExSV21 command post exercise (CPX) was conducted 11 to 31 August 2021, in Portillo, Chile. This exercise was designed as USARSOUTH's pilot program, and future rotations have built on what was learned. This included adjusting force structure, command and control (C2), training objectives, doctrinal communication, and long-term funding procurement. During ExSV21, USARSOUTH established the exercise control group (ECG) and the Chilean Army formed the higher headquarters white cell. Participating units came from the U.S. Army's 2nd Brigade Combat Team, 10th Mountain Division, and the Chilean Army's 3rd Mountain Division. Combined forces at the company level conducted cold weather, survival, medical evacuation, movement and maneuver, and mountain warfare training under the tutelage of the Chilean Army Mountain School.

The second iteration, ExSV22 CPX was conducted 29 November to 5 December 2021, in Lorena, Brazil, later moving to Resende, Brazil. USARSOUTH established the ECG and the Brazilian Army (BRAAR) formed the higher headquarters white cell. Participating units came from the U.S. Army's 3rd Brigade Combat Team, 101st Airborne Division (Air Assault) and BRAAR's 12th Infantry Brigade (Air Mobile). ExSV22 merged the BRAAR's Land Operations Command (Comando de Operações Terrestres [COTER])-sponsored Combined Operations and Rotations Exercise (CORE) 21 with the USSOUTHCOM-sponsored ExSV22. A first of its kind, not only by committing the largest U.S. Army conventional force ever sent to train in Brazil, but

[1] SSG ShaTyra Reed-Cox, U.S. Army South Public Affairs Office, *U.S., Brazilian armies complete Southern Vanguard exercise in Brazil*, 20 November 2023, https://www.southcom.mil/MEDIA/NEWS-ARTICLES/Article/3594112/us-brazilian-armies-complete-southern-vanguard-exercise-in-brazil/.

also by integrating separate national exercises into one. The exercise established C2 under a battalion-level combined task force (CTF) headquarters (Task Force Brazilian Infantry Light [TF BIL]). Additionally, this rotation included the Georgia Army National Guard's (GAARNG) 1st Battalion, 54th Security Force Assistance Brigade (SFAB) (1st SFAB), which was keenly positioned across tactical echelons conducting its doctrinal security force assistance (SFA) mission to "assess, train, advise, and assist" the foreign security force.

The third iteration, ExSV23 CPX was conducted 30 October to 18 November 2022, at Tolemaida Military Base, Colombia. Before the start of (the training) exercise (STARTEX), teams from the 1st SFAB, already positioned in Colombia supporting USARSOUTH Operation ALAMO SHIELD (OAS), completed select training and advising with Colombian Army forces (ARFOR) on multiple warfighting functions to be better prepared for ExSV23.

USARSOUTH established the ECG and the Colombian Army formed the higher headquarters white cell. Participating units came from the Illinois Army National Guard's (ILARNG) 130th Infantry Regiment, 33rd Infantry Brigade Combat Team, working shoulder-to-shoulder with the Colombian Army battalion commander and staff formed under a battalion-level CTF headquarters (CTF SCORPION). Of note, the BRAAR and Peruvian Army sent observers. This rotation once again included the 1st SFAB. Its ever-expanding regional SFA experience and mentorship proved invaluable to the CTF and down-trace units.

U.S. and Colombian forces executed weapon familiarization lanes and medical evacuation training, culminating in a combined maneuver exercise. ExSV23 had an overarching objective to improve interoperability between the U.S. and Colombian forces. The exercise objectives across the human, technical, and procedural interoperability domains were considered. Interoperability observations were analyzed and assessed in the context of tactical, operational, and strategic operational environments across the warfighting functions and mission sets. This included the exercise's premier training event of a combined air assault operation.

CHAPTER 2. Exercise SOUTHERN VANGUARD 24

OVERVIEW

This year, the fourth iteration, ExSV24 command post exercise (CPX) was conducted 24 October to 22 November 2023, at multiple locations across Brazil, including Belem, Macapa, and Oiapoque as noted in the exercise calendar in figure 2-1.

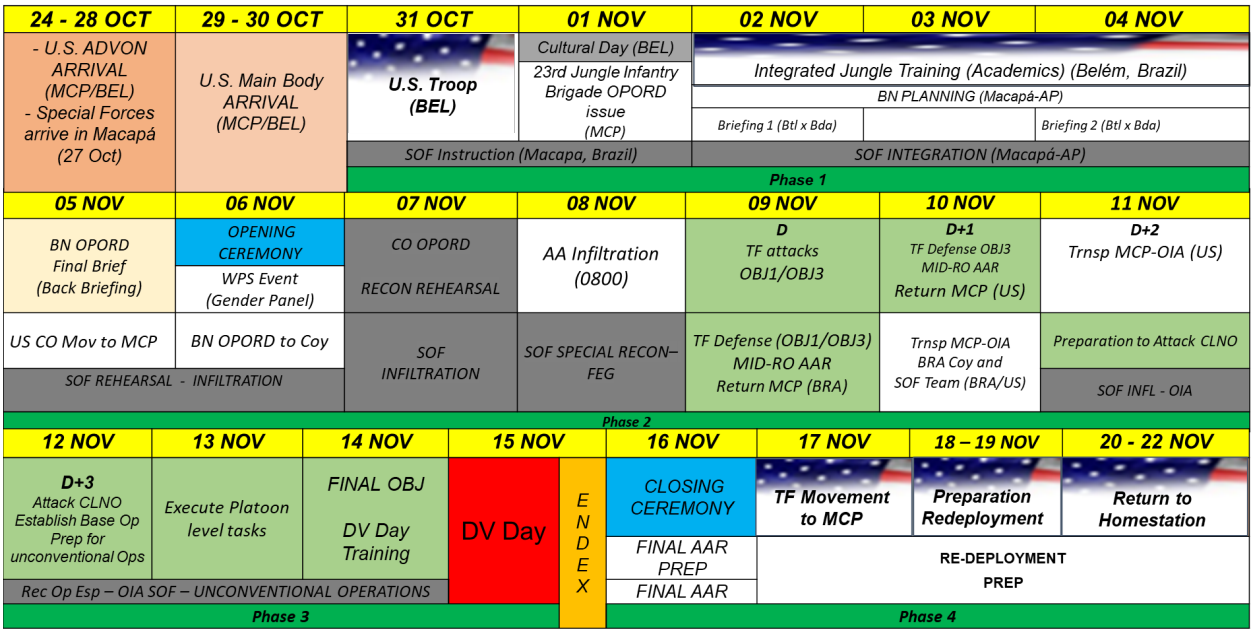

Figure 2-1. Exercise schedule
(provided by USARSOUTH G-7 Training and Exercise [TREX])

As in ExSV22, the exercise combined the BRAAR's Land Operations Command (COTER)-sponsored Combined Operations and Rotation Exercise (CORE) 23 with U.S. Southern Command (USSOUTHCOM)-sponsored ExSV24. USARSOUTH established the ECG and the BRAAR's 23rd Jungle Infantry Brigade (JIB) provided the exercise director and the higher headquarters white cell. The CPX command and control (C2) formed under a battalion-level CTF, Task Force (TF) 52nd Jungle Infantry Battalion (TF 52 JIB). This headquarters, led by a Brazilian commander, leveraged an integrated staff. See below.

TF 52 JIB COMMANDER AND STAFF BY COUNTRY

- Commander (BRA)
- Deputy commanding officer (U.S.)
- Command sergeant major (BRA)
- S-1 (BRA)
- AS-1 (U.S.)
- S-2 (BRA)
- AS-2 (BRA)
- S-3 (BRA)

- AS-3 (+2 U.S.)
- S-4 (BRA)
- AS-4 (U.S.)
- S-6 (BRA)
- AS-6 (U.S.)
- Fires (BRA)
- AFires (U.S.)

—Provided by USARSOUTH G-7 TREX

Participating U.S. Army units included 1st Battalion, 26th Infantry Regiment, 2nd Brigade Combat Team, 101st Airborne Division (Air Assault), which provided staff in the CTF and an air assault company, working shoulder-to-shoulder with the BRAAR as demonstrated during riverine operations in figure 2-2. Additionally, the New York Army National Guard's (NYARNG) 53rd Digital Liaison Detachment (DLD) provided warfighting function subject matter experts (SMEs) to advise the CTF commander and augment the combined staff. The NYARNG State Partnership Program (SPP) provided fires and medical assets. The U.S. Army Combat Capabilities Development Command (DEVCOM) conducted experimentation on capabilities of the Radio Interoperability Capability-Universal (RIC-U) supporting tactical communications in a jungle operational environment.

As in previous SOUTHERN VANGUARD rotations supporting USARSOUTH, the Security Force Assistance Command (SFAC) provided exercise observer coach/trainers (OC/Ts). At ExSV24, 1st SFAB committed 13 OC/Ts from Fort Moore, GA and teams already conducting SFA in Panama. The SFAB's professional and detailed mentoring and assessing across multiple warfighting functions again proved invaluable to the exercise's success. Additionally, SFA teams recorded ExSV24 interoperability successes and challenges.

Participating BRAAR units included 22nd JIB, who provided support and the opposing force (OPFOR). The 23rd JIB provided player units, including the TF 52 JIB.

Figure 2-2. Infantryman assigned to 1st Battalion, 26th Infantry Regiment, 2nd Brigade Combat Team, 101st Airborne Division (Air Assault), disembarks a boat during a platoon-level jungle reconnaissance on an island in Oiapoque, Brazil (USARSOUTH Public Affairs Office courtesy photo)

USARSOUTH MISSION STATEMENT

USARSOUTH planned, coordinated, and executed ExSV24 in Brazil from 30 October to 18 November 2023, to advance U.S.-Brazil strategic partnership, increase interoperability, and enhance mutual readiness.[2]

USARSOUTH COMMANDER'S INTENT

Purpose. ExSV24-Brazil continues to advance the U.S.-Brazil strategic partnership and increase U.S.-Brazil human, procedural, and technical interoperability, and enable regional crisis response capability and capacity.

Method. Develop ExSV24-Brazil in conjunction with the BRAAR's Combined Operations and Rotational Exercise (CORE) to execute these key tasks of a strategic deployment of the U.S. task force, formation of a combined U.S.-Brazil operations group, formation of a combined task force, and the execution of a combined army maneuver exercise in jungle operations.

End state. U.S.-Brazil interoperability and crisis response capabilities increased in support of the U.S.-Brazil strategic partnership.

Risk. Inaction would forego an opportunity to build strategic partnership, resulting in risks to force and mission, given the COVID-19 pandemic must be mitigated.[3]

BRAAR LAND OPERATIONS COMMAND COMMANDER'S GUIDANCE

Purpose. CORE 23 will advance the U.S.-Brazil strategic partnership by increasing Brazil-U.S. human and procedural interoperability and enable regional crisis response capability and capacity.

Method. Develop CORE 23 in conjunction with the U.S. Army's ExSV24 exercise to execute the key tasks of deployment of the TF 52 JIB combined with U.S. Task Force (2nd Brigade Combat Team, 101st Airborne Division (Air Assault), and the execution of a combined jungle training and maneuver exercise, including air assault operations.

End state. Certify Brazilian troops from 23rd JIB and develop U.S.-Brazil interoperability and crisis response capabilities increased in support of the U.S.-Brazil strategic partnership.

Risk. Inaction would forego an opportunity to build strategic partnership, resulting in risks to force and mission, given the COVID-19 pandemic must be mitigated.[4]

TF 52 JIB MISSION STATEMENT

Mission. On order, TF 52 JIB conducts air assault, attacks to seize 01 and 03 NET 090500NOV23, and prepares to defeat counterattacks, support forward passage of lines with 9th

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[2] U.S. Army South, Exercise SOUTHERN VANGUARD 24 (ExSV24)/Combined Operations and Rotation Exercise 23 (CORE 23) final planning conference (FPC), final out brief, 24 August 2023.

[3] Ibid.

[4] Ibid.

Mechanized Brigade, conduct battle handover with 22nd JIB, and conduct counter irregular forces operations.[5]

TF 52 JIB COMMANDER'S INTENT

Commander's intent. It is this command's intent to act with security and minimum collateral damage.

Broad purpose. The purpose of this operation is to maintain essential services.

End state:

- **Enemy.** Enemy forces neutralized in our area of operations (AO).
- **Terrain.** Hydroelectric power plant (HPP) seized and working as usual.
- **Civil.** Collateral damage to critical civilian infrastructure minimized during tactical operations[6]

TF 52 JIB KEY TASKS

Key tasks:

- On order, conduct air assault.
- Conduct an infiltration through two different lanes.
- Seize and protect HPP CACHOEIRA CALDEIRAO, and COARACY.[7]

ExSV24/CORE 23 COMBINED EXERCISE OBJECTIVES

- Conduct the military decision-making process (MDMP) with combined staff to build interoperability with an emphasis on maneuver and fires planning.
- Establish a Brazilian led, U.S.-Brazil CTF to conduct combined operations with American and Brazilian subordinate units to develop human, procedural, and technical interoperability.
- Conduct and assess bilateral training between Brazil and the United States in accordance with USARSOUTH interoperability framework to close interoperability gaps across the human and procedural domains with an emphasis on fires interoperability.
- Conduct theater sustainment in support of combined operations conducted in a jungle environment.

[5] Ibid.
[6] Ibid.
[7] Ibid.

- Conduct experimentation with RIC-U support to tactical communications in an austere environment.[8]

LESSONS AND BEST PRACTICES

The below observations represent some of the most significant findings from ExSV24. They address training and issues across the warfighting functions, and highlight successes and challenges in planning and conducting combined air assault operations. These observations were discussed at the ExSV24 combined after action review (AAR) in Brazil on 16 November 2023, with issue resolution already beginning to improve these areas.

Training

Observation. The BRAAR's jungle operations training was essential for U.S. forces conducting jungle operations in Brazil's demanding terrain.

Discussion.

- Facilities at the BRAAR Jungle Operations Training Center (JOTC), jungle training course, and program of instruction (POI) effectively prepared U.S. forces to conduct jungle operations.

- JOTC cadre provided tactics, techniques, and procedures (TTPs) and demonstrated best practices to conduct jungle operations, which prepared U.S. forces for the exercise.

- The 101st Airborne Division (Air Assault) Soldiers who attended the jungle operations course appreciated the hospitality and support from 2nd Jungle Infantry Battalion in Belem, Brazil.

Recommendations.

- Retain JOTC POI, including introduction to riverine operations for U.S. units conducting future SOUTHERN VANGUARD exercises in Brazil.

- Establish Army Training Requirements and Resources System (ATRRS) accessibility to the BRAAR JOTC Course, resulting in an additional skill identifier (ASI) equivalent to the 25th Infantry Division Jungle Warfare Course.

Observation. BRAAR requests ramp up training before going through a Joint Readiness Training Center (JRTC) rotation.

Discussion. BRAAR requests additional training to better prepare its formations for the Leader Training Program (LTP) and force-on-force missions at JRTC.

[8] Ibid.

Recommendations.

- USARSOUTH and the BRAAR mutually address all identified ExSV24 observations requiring improvement, develop a plan of action and milestones (POAM) to correct, and submit for scheduling activities at the next U.S.-Brazil bilateral staff talks.

- USARSOUTH hosts and conducts a staff planning exercise, for example, a tabletop exercise (TTX) before the BRAAR goes to its next JRTC rotation.

Observation. There is a need to synchronize requirements during transition from pre-exercise jungle operations training to a field training exercise (FTX).

Discussion. The 48-hour transition between the jungle training phase at the JOTC and the STARTEX, particularly the first air assault, was not effectively synchronized between the BRAAR white cell, TF 52 JIB, 101st Airborne Division (Air Assault), and the USARSOUTH exercise control group (ECG). Each entity had competing requirements in a compressed timeline, which detracted from planned key events impacting air assault company troop leading procedures (TLPs). Conducting a combined arms rehearsal (CAR) and logistics rehearsal of concept (ROC) drill at the exercise location proved essential for mission success.

Recommendations.

- Identify reception, staging, onward movement, and integration (RSOI) requirements during the main planning conference and lock RSOI schedules, and identify decision-approval authority for any changes at the final planning conference (FPC).

- Develop a synchronization matrix for the BRAAR director of exercise (DIREX) for specific coordination that supports exercise execution. Examples are for real-world health services, real-world aviation support, and OC/T support requirements.

Intelligence

Observation. Intelligence integration between armies requires detailed analysis.

Discussion. Throughout EXSV24, there were slight differences between the United States and Brazil when conducting intelligence preparation of the battlefield (IPB) in support of maneuver operations.

- **Similarities**. The BRAAR completes all steps of IPB to drive "blue force (BLUFOR)" (friendly force) planning. Products are similar with the United States and may be used interchangeably, with translation and slight explanation.

- **Differences**. The BRAAR conducts IPB steps 3 and 4 after completing mission analysis (MA) during wargaming. The BRAAR completes all steps of IPB, but with more focus on the terrain than on the enemy course of action (COA). For example, the enemy

scheme of maneuver is not broken down by phase with branches or sequels. There is little discussion about disruption, battle and support zones, or high-value targets (HVTs) by warfighting function (WfF) and zone.

Recommendations.

- Invest more time analyzing and developing the enemy scheme of maneuver—tie it to time—then overlay and integrate it with the collection plan. This will support identifying the enemy COA.

- Develop an event matrix or event template—tie it to time—and develop a more detailed collection plan. This provides greater situational awareness for the commander and more focused employment of collection assets.

Movement and Maneuver

Observation. Air assault operations motivated combined planning and execution.

Discussion. Air assault operations provided an ideal opportunity to highlight BRAAR capabilities while also cross-training 101st Airborne Division planning process and execution TTPs. Varying types of aircraft provided a useful planning challenge for American and Brazilian staff members. Air assault offered a unique opportunity for 101st Airborne Division personnel to train on partner-nation aircraft platforms. The BRAAR accommodated 101st Airborne Division pickup zone (PZ) control requirements during execution.

Recommendations.

- Continue to include air assault operations in future ExSV exercises.

- Maximize the number and type of BRAAR aircraft to promote cross-training with the partner nation army on different aircraft platforms.

- Always conduct an air operations briefing during air assault preparation. The lack of an air operations briefing during ExSV24 impeded individuals from knowing the necessary coordination, control measures, and contingency situations.

Observation. TF 52 JIB's key task, in its order, of conducting an infiltration through two different lanes proved effective in the exercise at the powerplant.

Discussion. The BRAAR approach direction was different from its attack direction, resulting in the enemy being surprised by the attack's direction during the exercise. Direct and indirect fires were used to confuse the real attack direction and objective. Also, the BRAAR used smoke obscuration to support troops advancing.

Recommendation. Establish more command and control between formations before the attack starts to avoid potential friendly fire and fratricide.

Fires

Observation. Limited IPB impacted TF 52 JIB integration of fires into the maneuver plan.

Discussion. The TF 52 JIB indirect fires plan was developed separate of the maneuver plan (not in concert) and was added in after IPB. Limited IPB resulted in a degraded information collection plan, negatively impacting target nominations for the targeting cycle and reducing potential fire support to maneuver units. TF 52 JIB was able to echelon fires, incorporating minimum safe distances (MSDs); however, the BRAAR does not currently use risk estimate distances (REDs) that could reduce fratricide risk.

Recommendations.

- Ensure the indirect fires plan is in concert with the maneuver plan.
- Tie (integrate) terrain and objectives in fires planning.
- Ensure pre-planned targets are condition-or reaction-based and tied to something expected by either friendly planned for, or enemy anticipated maneuver.
- Develop REDs to better enable echeloning of fires and limiting the need for constant "safety lines" throughout the area of operations (AO).
- Establish target reference points (TRPs) on easily understood terrain or in the vicinity of known locations.
- Implement a dedicated battalion fire support element (FSE) with an integrated communications net and full control of organic indirect fire assets.
- Increase fire observer manning on the ground to improve situational awareness and responsive dynamic fires.

Medical Support

Observation. Real-world medical support was not integrated with maneuver units until 24 to 48 hours before tactical lanes.

Discussion. The U.S. concept of medical support was not integrated with the BRAAR plan during the mid planning conference (MPC) or FPC, resulting in hasty planning and adjustments throughout the exercise. Although the medical support was responsive and thorough, the training audience was not briefed in sufficient time to incorporate real-world medical support into the tactical planning process.

Recommendations.

- Ensure medical support plans meet the standards of both armies, are transparent to the training audience, and support personnel before the STARTEX.

- Identify medical support requirements during the initial planning conference (IPC), plan responsibilities and coverage at the MPC, lock down operational protocols, and identify the decision-approval authority for any changes at the FPC.

- Incorporate medical support into logistics the ROC drill during FPC and identify decision-approval authority for any changes.

- Establish a medical support concept for tactical lanes before the FPC and conduct a lane walkthrough before execution. This allows medical personnel to review and establish a medical common operational picture (MEDCOP) to support maneuver units from point of injury to role 1 and definitive care.

Sustainment

Observation. Personnel not knowing the classes of supply differences between American and Brazilian armies challenged combined sustainment operations.

Discussion. Classes of supply are similar, but there are noted differences that may cause sustainment issues. For example, U.S. Army class II includes individual weapons, but in the BRAAR these fall under class V.

Recommendations.

- Annotate classes of supply and note the differences between armies in an appendix to the operations order (OPORD) and disseminate in both languages.

- Produce training aids for logistics personnel in both languages.

- Produce a point of contact (POC) list on exercise commodity managers and disseminate in both languages.

CHAPTER 3. Experimentation at Exercise SOUTHERN VANGUARD 24

By MAJ Aaron M. Spence
U.S. Army Combat Capabilities Development Command (DEVCOM)
International Technology Integrator at U.S. Army South

> "We know that U.S. strategic advantage in achieving our national security goals and maintaining our technological edge lies in our relationships with allies and partners. We will further strengthen our science and technology defense cooperation with allies and partners through both bilateral and multilateral initiatives …."[9]
>
> —U.S. Department of Defense,
> National Defense Science & Technology Strategy 2023

OVERVIEW

DEVCOM is the Army's technology developer, or experimentation arm of U.S. Army Futures Command (AFC). Its mission is to provide research, engineering, and analytical expertise to deliver capabilities that enable the Army to decisively defeat adversaries now and in the future by assessing and integrating technologies on future operational environments, emerging threats, and developing innovative solutions. DEVCOM leverages unique resources across academia, industry, and other government organizations nationally and internationally to collaboratively address Army challenges and priorities.

BACKGROUND

"Today, we face a more level playing field in technology, and we need to rapidly adjust how fast we get technology to the warfighter to maintain dominance and confound the adversary. The U.S. Southern Command (USSOUTHCOM) area of responsibility (AOR) provides a permissive environment that has a high tolerance for technology experimentation, willing partners, and diverse climates and geography, all close to the U.S. homeland. This affords us great opportunities to conduct innovative activities with our partners that help gain and maintain a strategic advantage over the PRC, Russia, and other malign actors."[10]

"The U.S. Army is transforming how it prepares to fight and win the nation's wars. Senior Army leaders developed fresh concepts and logic to guide the Army's most significant transformation in the past 40 years to ensure the service retains the capability to defeat current and future adversaries. The Army plans to do this by maintaining an advantage in speed of decision-making, an ability to create a shared understanding of the battlefield, and an overmatch in lethality in time and space. … When combined with tough, realistic training, continued leader development, and organizational modifications,

[9] U.S. Department of Defense, *National Defense Science & Technology Strategy 2023*, page 5, https://media.defense.gov/2023/May/09/2003218877/-1/-1/0/NDSTS-FINAL-WEB-VERSION.PDF.

[10] USSOUTHCOM Posture Statement, *Statement of GEN Laura J. Richardson, commander, U.S. Southern Command, Before the 118th Congress, House Armed Services Committee*, page 31, 8 March 2023, https://www.southcom.mil/Media/Special-Coverage/SOUTHCOMs-2023-Posture-Statement-to-Congress/.

new materiel solutions can increase the lethality and survivability of our formations. The Army also has the support of Congress to assess various acquisition pathways/authorities using a 'buy, try, modify/decide' methodology to rapidly target existing industry solutions while continuing to refine requirements for enduring capabilities. … Theater armies play essential roles in competition and conflict. Theater armies plan and execute active campaigning in support of combatant commander priorities with exercises, bilateral engagements, and forward-positioning capabilities to deter aggression. Large-scale combat with either China or Russia would require multiple corps of ground forces from many nations, and we must reinvest to expand the capacity of our Army service component commands from an economy of force echelon to a warfighting headquarters." [11]

What is DEVCOM?

"The DEVCOM, part of AFC, is a world-class team of science and technology experts, explorers, and developers, fully focused on empowering the future American Soldier." [12]

"The DEVCOM team is formed by U.S. Army Soldiers, civilians, and contractors. Engineers, scientists, technicians, and analysts, many of whom are the Army's leading experts in their fields, form part of the team. They leverage cutting-edge technologies, such as synthetic biology, hypersonic weapons, quantum, energetics, autonomy, robotics, and artificial intelligence to empower the American Soldier with the data and ability to see, sense, make decisions, and act faster than our adversaries – today and in the future." [13]

Where is DEVCOM?

The DEVCOM headquarters is located at Aberdeen Proving Ground, MD, and consists of seven centers located across the country, each with a specific core competency, and one lab that focuses on foundational research. Additionally, there are three regionally aligned international elements that work around the globe to provide access to world-class research and technology.

What Does the DEVCOM International Technology Center in Brazil and Chile do?

"The International technology centers within the DEVCOM forward elements identify opportunities in basic and applied research with foreign partners through academia, industry, and government partnerships." [14]

What Does the DEVCOM International Technology Integrator (ITI) do at U.S. Army South?

"The ITI liaisons between Army commanders and research laboratories, and they identify critical needs and experimentation opportunities that support the Army's mission. The ITI reaches back

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[11] GEN James Rainey and LTG Laura Potter, War on the Rocks, *Delivering the Army of 2030*, 6 August 2023, https://warontherocks.com/2023/08/delivering-the-army-of-2030/.

[12] U.S. Army Combat Capabilities Development Command (DEVCOM), https://devcom.army.mil/who-we-are/.

[13] Ibid.

[14] Ibid, GLOBAL https://devcom.army.mil/partner-with-us/devcom-global/.

to quick reaction coordinators, located in DEVCOM centers and labs via requests for information."[15]

How Does DEVCOM and U.S. Army South Mutually Decide on Experimentation Opportunities in Their AOR?

The ITI updates the DEVCOM database, called the Experimentation Master Plan Tool, and makes opportunities known at U.S Army South (USARSOUTH) exercises. These updates provide the exercise concept of operation to each DEVCOM center to review and determine if project timelines and requirements align to conduct experimentation at the different exercises in the USARSOUTH area of responsibility (AOR). Once a technology is identified to meet the requirements and timeline, the ITI coordinates follow-on meetings as required to verify funding, logistics, and mission requirements with USARSOUTH G-7 training, G-5 planning, and other applicable staff.

How Should U.S. Army South Project Funding for Future Experimentation With DEVCOM?

Funding requirements can be requested through the U.S. Southern Command (USSOUTHCOM) Science and Technology (S&T) Office, which is responsible for setting aside funding to test and evaluate technologies in support of its lines of effort. Planners and scenario developers should work with DEVCOM ITI and USSOUTHCOM S&T at least two years in advance (of an exercise) to ensure funds are programmed.

How Was the Radio Interoperability Capability-Universal (RIC-U) Employed During This Exercise and How Well Did it Support Operations? Based on the Results, What Improvements Will Be Made to it?

DEVCOM ITI and the U.S. Army Command, Control, Communications, Computers, Cyber Intelligence, Surveillance, and Reconnaissance (C5ISR) Center demonstrated the Radio Interoperability Capability-Universal (RIC-U) to Soldiers from the 1st Battalion, 26th Infantry Regiment, 2nd Brigade Combat Team, 101st Airborne Division (Air Assault) and our BRAAR counterparts. See figure 3-1. The successful demonstration bridged the gap between both encrypted networks and showed the value of the technology. During the demonstration, the RIC-U was shown to be useful in the tactical operations center (TOC) and tactical command post (TAC) environment and in a limited dismounted scenario within proximity to both the networks.

[15] Ibid.

Figure 3-1. International technology integrator at USARSOUTH demonstrating the RIC-U to Brazilian soldiers at ExSV24 in Macapa, Brazil (53rd Digital Liaison Detachment courtesy photo)

This demonstration also highlighted some RIC-U limitations. The RIC-U requires physical cabling between American and Brazilian tactical radios, which limits its value in a dismounted scenario. The RIC-U also requires radio frequency (RF) coupling shielding, both internally to the case, and externally to the power cord. The overall Soldiers' attitude toward the RIC-U was positive; however, inserting it into the operational portion of the exercise was not as successful. In future exercises, the scenario should prioritize the technology as an objective in the exercise's operation order (OPORD) and ensure additional cabling is available.

What Other Equipment or Services are Recommended for U.S. Army South in future SOUTHERN VANGUARD Exercises?

Aside from referencing the command's integrated priority list, it makes sense to develop a common operational picture (COP) with new technology to use during exercises and crosswalk those technologies with current U.S. Army capabilities. This ensures we are leveraging what is currently available. For example, during ExSV24, the 101st Airborne Division (Air Assault) used the Windows Team Awareness Kit (WinTAK) for its COP in the TOC, whereas our BRAAR counterparts used Synchronized Pre-deployment and Operational Tracker (SPOT) device. This resulted in two separate COPs in the TOC and only an Excel document depicting the operational timeline (H+Hour). Further complicating things, each nation provided their own tactical radio networks and did not leverage a tactical voice bridge (TVB) for interoperability.

Alternatively, in the future, other opportunities exist to evaluate DEVCOM prototypes, such as cold weather boots in the unique environments located in the USARSOUTH AOR.

How Can a Unit Request DEVCOM Equipment?

DEVCOM ITI is the responsible point of entry for each command to leverage DEVCOM assets, if available.

What is the Process for Funding DEVCOM Support?

USARSOUTH must establish a separate line of accounting in the Defense Travel System (DTS) for DEVCOM personnel who travel in support of their exercise. Equipment will be transported by DEVCOM to the unit participating in the exercise for loading and transport to the USSOUTHCOM AOR.

CHAPTER 4. Digital Liaison Detachment Support to the Theater Army

LTC Robert C. Stealey, Executive Officer, 53rd Digital Liaison Detachment
LTC John E. Pielli, Operations Officer, Joint Operations Center (JOC)
Administrative and Logistics Operations Center (ALOC)
New York Army National Guard

> "A digital liaison detachment (DLD) is comprised of several teams with expertise and equipment in specialized areas, such as intelligence, operations, fire support, air defense, and sustainment. DLDs provide the theater army commander a forward liaison element with major subordinate or parallel headquarters. They consist of staff officers with a broad range of expertise, capable of analyzing a situation, facilitating coordination between multinational forces, and assisting in cross-boundary information flow and operational support."[16]
>
> —Army Techniques Publication (ATP) 3-94.1, *Digital Liaison Detachment*, page 1-3, 28 December 2017

What are Digital Liaison Detachments?

DLDs are designed to provide a critical capability for mission command liaison and to enhance interoperability capabilities at higher-level echelons between U.S. and allied/coalition headquarters. They provide capabilities across all warfighting functions (WfFs) and between higher-level staffs. DLDs consistently work closely with allies and multinational partners in support of U.S. national military strategy (NMS). Notably, the Department of Defense (DOD) routinely requests support from its allies and multinational partners to prevail in contemporary, regional, and internal conflicts. One key challenge when operating with coalition partners is how to integrate relevant information and display a common operational picture (COP) to continuously synchronize operations to ensure unified action partner (UAP) interoperability. DLDs can provide this requirement. They can also provide liaison capabilities between Army forces (ARFOR), joint force land component commands (JFLCCs), coalition forces land component commands (CFLCCs), joint task forces (JTFs), and subordinate headquarters to a multinational headquarters. This ensures communication, mutual understanding, unity of purpose, and action across the battlefield.

At the core of the DLD's communications mission is the use of U.S. Army mission command systems (MCSs), such as the Army Battle Command System (ABCS). DLDs operate across an array of networks. This includes Command Post of the Future (CPOF), command post computing environment (CPCE), Advanced Field Artillery Tactical Data System (AFATDS), Distributed Common Ground System-Army (DCGS-A), air and missile defense workstation (AMDWS), and the Tactical Airspace Integration System (TAIS). DLD operators can manually enter information obtained from the UAP to build a universal COP with U.S. armed forces. Personnel are proficient in providing necessary staff interface, mentoring, support, and communication augmentation for allies and partner staffs.

[16] ATP 3-94.1, *Digital Liaison Detachment*, page 1-3, 28 December 2017
https://armypubs.army.mil/ProductMaps/PubForm/Details.aspx?PUB_ID=1003806.

DLDs may be assigned directly at a coalition partner headquarters to assist in clarifying orders, interpreting the commander's intent, and identifying and resolving problems involving plans, policies, and procedures. Detachments are helpful when coalition partners lack understanding on U.S. Army doctrine and tactics, techniques, and procedures (TTPs); and are inexperienced in large-scale combat operations (LSCO). DLD teams provide coalition partners with U.S. Army subject matter experts (SMEs) on maneuver, fires, intelligence, air defense, and sustainment. These SMEs assist coalition forces in planning, executing, and assessing military operations. They also mentor them to ensure their operations are adequately coordinated and synchronized with the multinational force commander.

What Does a DLD in a Real-World Mission Look Like?

In division operations, DLDs provide the division commander with an augmentation liaison element for major subordinate or parallel multinational headquarters. For example, in Afghanistan, U.S. Army divisions frequently operated with a North Atlantic Treaty Organization (NATO) general-officer-level headquarters at a brigade-equivalent echelon. The division commander may deploy a TAC co-located with a multinational formation to ensure the multinational force has full connectivity with the division main command post. Normally, the division receives a DLD to provide liaison between the two command posts. Detachments are leveraged to enhance multinational force interoperability, improve unity of effort, and help sustain a coalition COP.

How Did the 53rd DLD Participate and Contribute to ExSV24?

The 53rd DLD participated in ExSV24 at Macapa and Oiapoque, Brazil. Planning began at the initial planning conference (IPC) in August 2022. This planning event was coordinated through the New York Army National Guard (NYARNG) State Partnership Program (SPP) with U.S. Army South (USARSOUTH) and the Brazilian Army (BRAAR). We were allotted one representative to attend the IPC and sent the maneuver officer in charge (OIC). At the IPC, USARSOUTH and the host nation determined that the 53rd DLD would not bring any of its MCS digital platforms to the exercise. It was deemed unnecessary from USARSOUTH and the host nation. A broad list of tasks and purposes were established for 53rd DLD under USARSOUTH's direction. The initial personnel requirement for the exercise was set at 25 Soldiers with the detachment tasked to work with the 23rd Jungle Infantry Brigade (JIB) (BRAAR) in the Brazilian director of exercise (DIREX) direction cell.

In May 2023, we sent two representatives to the mid planning conference (MPC) held in San Antonio, TX. At the conference, USARSOUTH, because of funding constraints, reduced the number of DLD participants from 25 to 10—a sharp reduction. However, once on the ground at ExSV24, the reduced number proved a much more conducive element size to work with the Brazilian DIREX. Another value of the MPC was the productive logistics coordination made between the 53rd DLD and USARSOUTH.

The final planning conference (FPC) took place in Macapa, Brazil, 19 to 26 August 2023. We did not send a representative; however, the NYARNG sent personnel from the G-3 operations section. At the FPC, the 53rd DLD received reconfirmation on an assignment to work closely with the 23rd JIB (BRAAR) in the Brazilian DIREX.

We arrived five days before the STARTEX and established operations in the Brazilian DIREX. Per DLD doctrine, personnel integrated with their BRAAR WfF counterparts. The detachment and 23rd JIB (BRAAR) worked closely throughout the exercise. Together, we provided essential guidance to the training audience across three separate training locations. Additionally, 53rd DLD provided the necessary liaison between the Brazilian exercise staff and U.S. training forces, including 2nd Brigade Combat Team, 101st Airborne Division (Air Assault), 7th Special Forces Group (Airborne), and NYARNG SPP. See figure 4-1 for the 53rd DLD task organization.

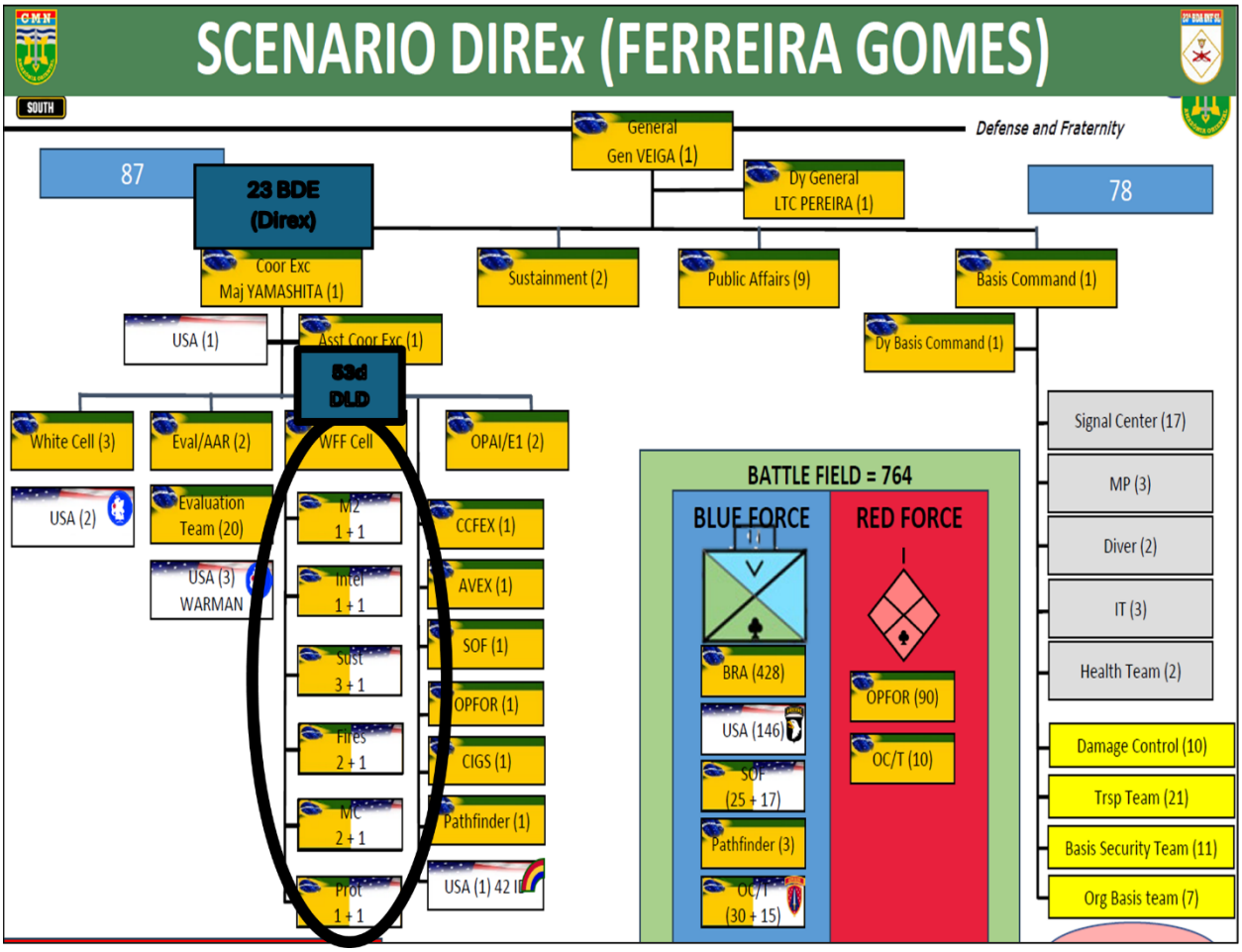


Figure 4-1. Task organization for 53rd DLD during ExSV24 (provided by USARSOUTH G-7 TREX)

Of note, the detachment provided overall supervision for all NYARNG Soldiers at the exercise. This includes a medical section that provided most of the U.S. medical support. These medical professionals also provided planning liaison between American and Brazilian medical personnel. Additionally, the detachment coordinated with and mentored the BRAAR logistics officers and soldiers on sustainment operations. Perhaps the greatest contribution we made over the four-week exercise was discussing doctrine in great depth with the Brazilian brigade. In lengthy conversations, we identified similarities and differences. As understanding increased, we shared a more common doctrinal language. This demonstrates enhanced interoperability. Of note, WfF

cells in 53rd DLD were able to record detailed comparisons between American and Brazilian doctrine. Below, we will discuss two of the WfF cells' outcomes.

COMMAND AND CONTROL WfF ANALYSIS

It is important to emphasize exchanging information and ideas across echelons and in a JTF. Communications link information to decisions. Decisions drive actions. Any communication system, regardless of level, must be robust, redundant, and resilient to enable effective operations. Understanding the processes and how each tool enhances these processes is key to communications across JTFs and at exercises, such as ExSV24.

53rd DLD observed several similarities and differences in command and control (C2) reporting requirements criteria between the U.S. Army and the BRAAR. The exercise was conducted almost entirely using analog communications systems with limited digital capabilities. By comparison, a conventional U.S. Army reporting process uses multiple digital platforms with analog backup that enable commanders to depict the operational environment (OE) via a digital COP. We observed the BRAAR has a similar conceptional approach to command and communication in its staff functions. Although we share similar reporting methods, our tools facilitate brevity in reporting through automation. This allows for improved battle tracking and reporting. Though the tools vary between militaries, the processes remain similar enough to build shared understanding between multinational partners.

At the platoon level, the need for communication stems from routine reporting requirements and significant activities (SIGACTs). Communication between echelons is important as it plays a key role in current operations and in developing the higher headquarters' COP.

The communications process in the Brazilian command post was noted to be the same as ours across all echelons. The only difference is the tools each army uses to meet those requirements. We discovered the BRAAR generally uses one standard format to report any activity on the battlefield via frequency modulation (FM) radio. This report may vary based on information needs required by higher headquarters, but it essentially mirrors the template of a U.S. Army size, activity, location, unit identification, time, and equipment (SALUTE) report. Our tactical units typically use an FM radio to report similar activities via SALUTE, but may also use an abbreviated size, activity, location, and time (SALT) report. Other common quick-fire FM transmissions include the medical evacuation (MEDEVAC) 9-Line report and unexploded explosive ordnance (UXO) 9-Line report.

Both armies share an ability to pinpoint an element's location via Global Positioning System (GPS) tracking equipment. A U.S. platoon will use a GPS platform that allows real-time location tracking with a high degree of accuracy. The BRAAR uses Synchronized Pre-deployment and Operational Tracker (SPOT), which enables higher echelons to track movement or unit placement in real-time, allowing for effective and efficient battle tracking.

At the company level, the BRAAR has access to more reporting systems, but its communications processes remain similar. U.S. companies will track movement via Joint Battle Command-Platform (JBC-P), a real-time reporting platform depicting the battlefield while importing information crucial to battle tracking. They also use FM radio for broadcasting activity or any

decisive action in the area of operations (AO) by using a "push and pull" methodology. U.S. companies also have access to high frequency (HF) radios and tactical satellite (TACSAT) communication. However, these tools are not normally the primary means of communication. BRAAR companies also uses the "push and pull" method by employing FM radio and internal battle tracking methods. This process allows the company commander to see the status and disposition of troop formations. The BRAAR does not have a comparable capability to the JBC-P at the company level.

The U.S. Army, at battalion and brigade levels, uses reports from subordinate units to generate and maintain running estimates, supporting commanders' decision making. Staffs at these levels analyze, generate, distribute, and share information and knowledge management products. U.S. brigades also employ CPOF (eventually CPCE) and are the highest echelon to use JBC-P to compile reporting data from all subordinate units. FM radios are also available to U.S. brigades. However, they are not usually the primary means of communication. BRAAR brigades receive information from the field using (1) FM radio, (2) a digital system, such as ZIMBRA, which is an electronic messaging system internal to the Brazilian military, (3) SPED, an additional messaging system, which allows the sharing of information across all echelons, (4) satellite phones, and (5) SPOT, which allows brigades to receive real-time data and GPS locations on assigned elements. Staffs aggregate data from each system to create a visual representation of the battlefield and produce a COP for enhanced C2 capabilities and efficient battle tracking. **Note:** This COP must be individually updated and is not a GPS-filled system. This represents a significant difference and technology gap between the two brigade-level organizations. See figure 4-2 for the U.S. Army C2 flow chart. See figure 4-3 for the BRAAR C2 flow chart. Both depict command and communication operations for their respective army.

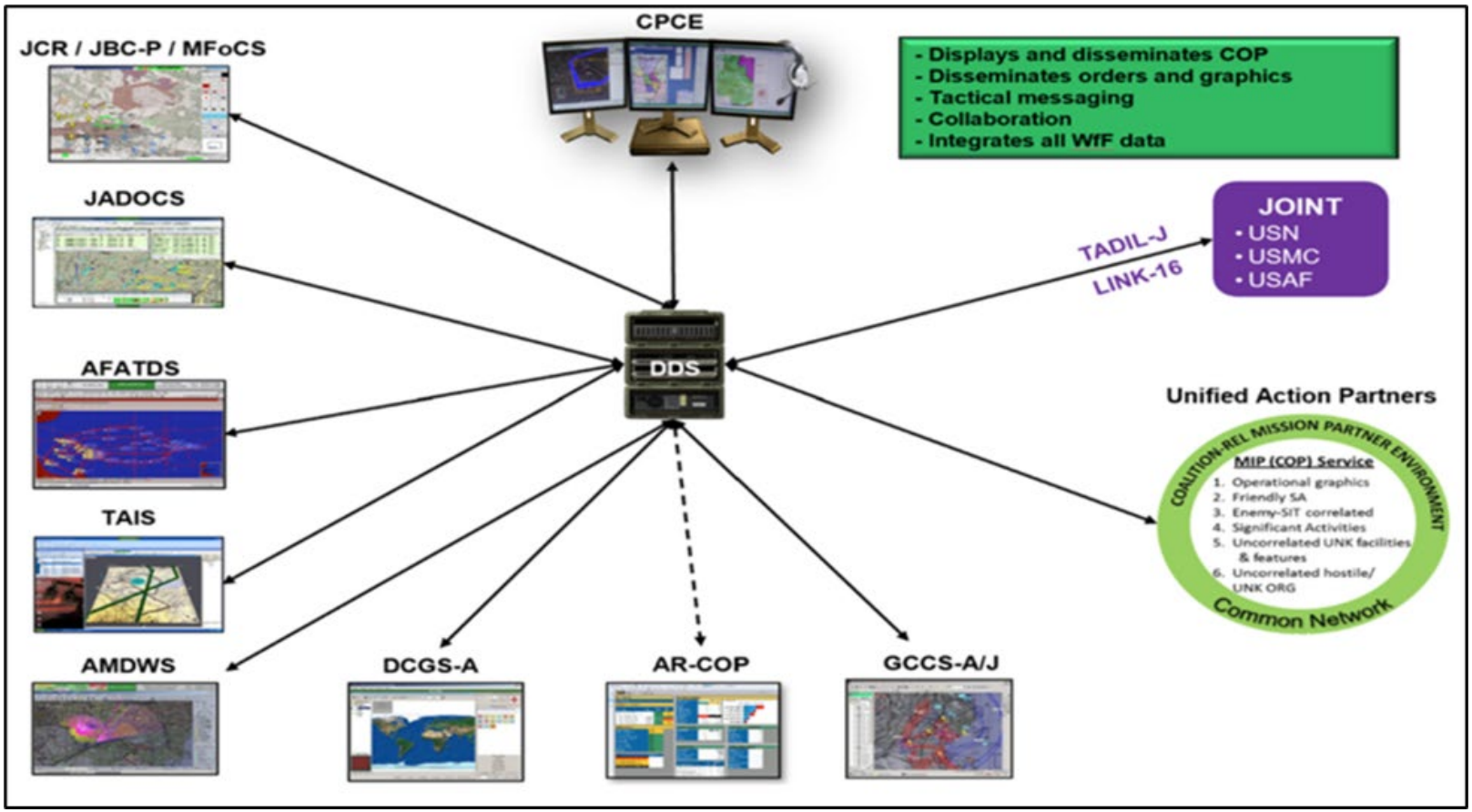


Figure 4-2. U.S. Army C2 flow chart
(provided by 53rd Digital Liaison Detachment)

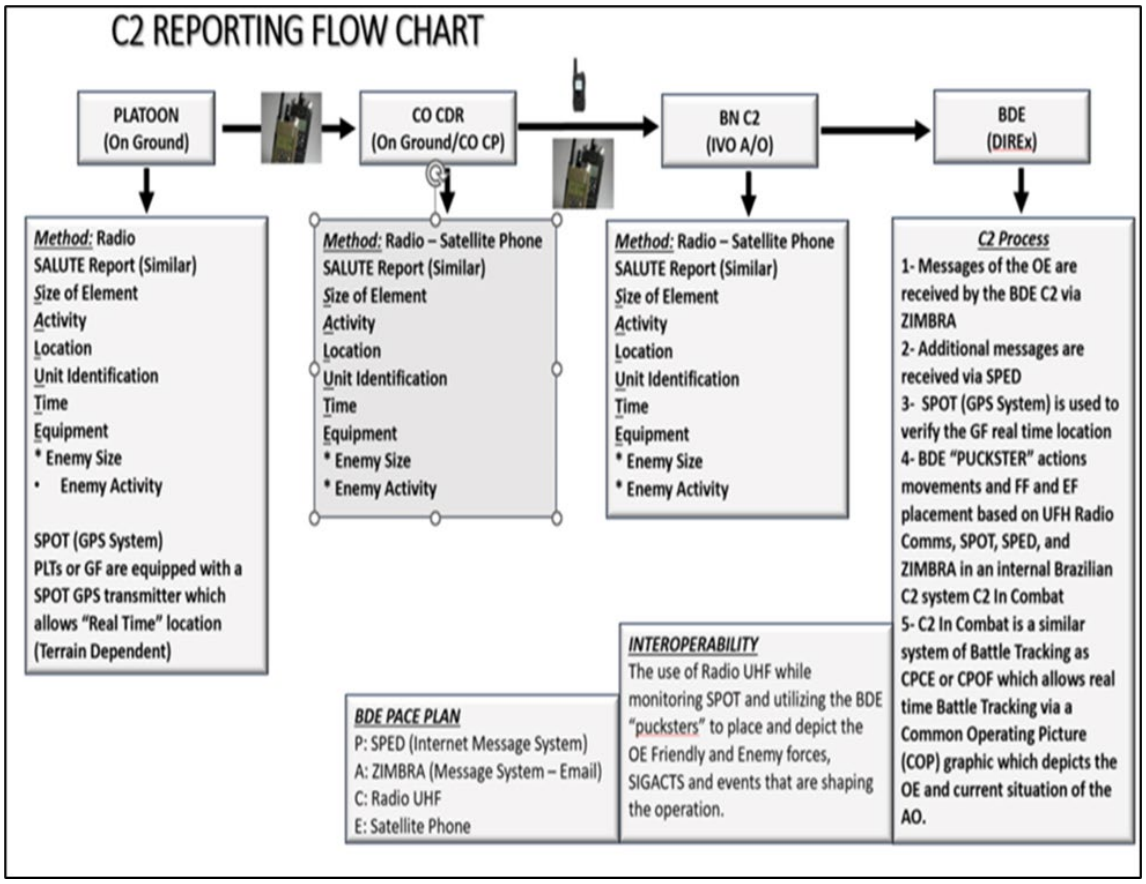


Figure 4-3. BRAAR C2 flow chart
(provided by 53rd Digital Liaison Detachment)

The 53rd DLD also observed some differences in the BRAAR orders production process and product development. Given this, the overall structure of the operation's base order was generally similar in structure and easily adapted by U.S. formations during the exercise. Minor differences included the location of the BRAAR commander's intent and end state, which were found in the "Mission" paragraph instead of the "Execution" paragraph, as in a U.S. Army operation order (OPORD). All major parts of the BRAAR OPORD are similar and posed minimal problems in directing future combined missions.

The biggest difference in the base order is the BRAAR has a sixth paragraph called "Pessoal, Comunicação Social E Assuntos Civis," which translates in English to "Personnel, Social Communications, and Civil Affairs." In U.S. Army OPORDs, this information is found in our Annexes F, J, and K. This difference in how we structure annexes can lead to partner-nation confusion. For example, it would not be obvious to a BRAAR S-1 that personnel support information is found under Annex F: Sustainment. Additionally, while our annexes are always the same letter for each WfF, the BRAAR annexes are lettered in the order in which they are referenced in the base order. For future training events, 53rd DLD recommends distributing a "cheat sheet" to the attached unit to ensure the staff proponent of each WfF can quickly and easily find the right information. Table 4-1 provides a BRAAR example of OPORD annexes.

Table 4-1. BRAAR OPORD annexes
(provided by 53rd Digital Liaison Detachment)

EXÉRCITO BRASILEIRO	U.S. ARMY
Composição Dos Meios	Annex A – Task Organization
Pessoal	Annex F – Sustainment: Appendix 2 – Personnel Services Support
Inteligência	Annex B – Intelligence
	Annex L – Information Collection
Operações	Annex C – Operations
Calco de Operações	Annex C – Operations: Appendix 2–Operation Overlay
Plano de Apoio de Fogo	Annex D – Fires
Logistical	Annex F – Sustainment
Comunicação Social	Annex J – Public Affairs
Assuntos Civis	Annex K – Civil Affairs Operations
Comando e Controle	Annex H – Signal
Proteção	Annex E – Protection
Engenharia	Annex G – Engineer

Finally, observations made at a previous SOUTHERN VANGUARD training exercise revealed the Brazilians using latitude and longitude (LAT/LONG) instead of the military grid reference system (MGRS) as their map coordinate reference system. This difference created interoperability difficulties across all WfFs, but especially in movement and maneuver, and fires. Upon our arrival, map graphics were converted into MGRS at the DIREX level, which led to improved interoperability. During the exercise, there was minor spillage of coordinates in LAT/LONG, that led to some confusion because of limited organic means of converting LAT/LONG coordinates to MGRS in an efficient manner.

SUSTAINMENT WfF ANALYSIS

We identified similarities and differences in the sustainment WfF between American and Brazilian staffs. Classes of supply are similar, but we noted discrepancies that could lead to sustainment issues during combined operations. Notably, these differences can lead to misunderstanding when submitting supply requests. We recommend American and Brazilian armed forces produce training aids for future exercises or missions. The detachment developed a "classes of supply comparison chart" with our BRAAR counterparts to enhance interoperability. See table 4-2.

Table 4-2. Classes of supply comparison chart (provided by 53rd Digital Liaison Detachment)

USA		Brazil	
CL	**Description**	**CL**	**Description**
I	Food, rations, and water	**I**	It is the same.
II	Clothing and equipment	**II**	It is the same. Does not include individual weapons (class V in Brazil)
III	Petroleum, oils, and lubricants (POL)	**III**	It is the same.
IV	Construction and barrier materials	**IV**	It is the same.
V	Ammunition	**V**	Weaponry and ammunition (includes steering and fire control equipment)
VI	Personal demand items (class X in Brazil)	**VI**	Engineering and cartography. Topography, cartography and geodesy material, mine detection, disguise, generators and lighting equipment, water treatment, and vessels and destruction
VII	Major end items (class V in Brazil)	**VII**	Information technology, communications, electronics, and computers
VIII	Medical supplies and equipment	**VIII**	It is the same.
IX	Repair parts and components	**IX**	Ground vehicles and aviation (includes vehicles and aircraft)
X	Miscellaneous supplies	**X**	It is the same.

A second point of comparison in the sustainment WfF addresses the scale of logistics between the two armies. BRAAR echelons of sustainment mirror the U.S. Army's in many ways, but with some alterations. A major variance is the scale of logistic operations. We can sustain during multi-country-level operations with strategic-level assets. The BRAAR operates in internal military regions. U.S. forces must be cognizant that its levels and organizations in sustaining theater-level operations are much larger and more complex than what the BRAAR faces. However, the foundation of the echelons of support are quite similar at the tactical level. See table 4-3, which displays operational-term differences.

Table 4-3. Sustainment echelons comparison chart (provided by 53rd Digital Liaison Detachment)

Escaloe	Brazil	United States	Echelon
Operational	CLTO (comando logistico do teatro de operacoes)	Theater sustainment command (TSC)	Operational
Tactical	CLCEx (comando logistico de corpo de exercito)	Expeditionary sustainment command (ESC)	Operational
Tactical	GPT LOG (grupamento logistico) que opera um BLT (base logistica terrestre)	Division sustainment brigade (DSB), which operates a division support area	Tactical
Tactical	Batalhao de logistica que opera um BLB (base logistica de brigada)	Brigade support battalion (BSB), which operates a brigade support area	Tactical
Tactical	ATE (area de trens de estacionamento	Combat trains command post (CTCP)	Tactical

ADDITIONAL STAFF WfF ANALYSIS

The 53rd DLD originally assessed that there would not be a strong BRAAR air defense artillery (ADA) component in ExSV24. The fires section learned that BRAAR ADA is not a separate branch from field artillery (FA), as it falls under the fires WfF. The BRAAR does not currently have target acquisition radars, but uses ADA radars attached to their ADA systems, which are comparable to the U.S. Army's Sentinel radar.

In the detachment's view, the language barrier is one of the hardest obstacles to overcome in any training environment when working with a foreign partner. Senior leaders in the 23rd JIB (scenario cell) had to provide all the Portuguese-to-English translation for each individual presentation and meeting. This drained the BRAAR leaders' work capacity. The lieutenant colonels and majors in the scenario cell also provided language interpretation. This further took away their ability to conduct their assigned roles. It would be beneficial if exercise directors provided outside interpreters. Tasking for additional host-nation interpreters from units not participating in the exercise should be considered. Another option is hiring civilian interpreters. Interpreters are most effective at interpreting and translating written orders when positioned at participating unit locations.

53RD DLD FINAL THOUGHTS ON ExSV24

The 53rd DLD had two mission-essential tasks (METs) for ExSV24:

- **MET #1- 71-DET-0001.** *Provide digital liaison to a unified action partner headquarters for detachments*. In our self-assessment, there was limited opportunity in this exercise to accomplish MET #1 because of a lack of host-nation digital platforms.

- **MET #2- 71-DET-0002.** *Provide liaison to a unified action partner headquarters.* In our self-assessment, we were highly successful in conducting MET #2 by providing a liaison role with the host nation, who had less-than-ideal digital equipment, by executing liaison operations in an analog environment.

The 53rd DLD accomplished many of its sub-METs during ExSV24, including—

- Performing pre-deployment supply activities.

- Supporting the mission command operations processes.

- Conducting command post operations.

- Integrating situational understanding through knowledge management.

- Employing operational security measures.

- Conducting foreign disclosure procedures.

- Providing liaison to a unified action partner headquarters.

- Processing relevant information for U.S. headquarters.

- Providing warfighting function support to forces.

- Integrating linguistic support to a foreign partner.

The 23rd JIB and 53rd DLD went into this mission excited to learn from each other's ideas, doctrine, and experience. Brazilian partners integrated the detachment in all exercise planning and movements. Our WfF leads provided multiple presentations on U.S. Army doctrine, expounding on similarities and differences between the two armies. We found the BRAAR as a highly motivated and professional military force. Together, we achieved proficient interoperability, despite lacking organic MCSs on station. In our view, the exercise was highly successful.

WAY AHEAD FOR DLDs

DLDs, by doctrine, are assigned to division-or-higher U.S. headquarters and their equivalent foreign armed forces echelon. They are particularly qualified to bridge command post digital gaps between armies. To accomplish this level of liaison operations, DLDs must be proficient in

digital system platforms and understanding staff functions of planning and execution. These detachments must be able to synchronize operational staff products between U.S. and allied forces. To accomplish this, the DLD cell will embed within the foreign partner's headquarters to pull information and upload it into U.S. command post digital platforms. Subsequently, DLDs will push this information to a U.S. higher headquarters staff for coordination.

DLDs potentially have an important liaison role to play at operational and strategic levels. To prepare for their mission set, it is essential they are properly trained to meet their mission-essential task list (METL). Below are some thoughts on how this might be accomplished. First, DLDs must be proficient in WfF digital platforms and up to date with current doctrine. Significant training is required on these digital platforms when the unit is not conducting major training events or real-world missions. Second, DLDs will benefit by participating in one or two division-level Mission Command Training Program (MCTP) warfighter exercises (WFXs) under a five-year training plan to maintain staff proficiency and practice system integration with a U.S. higher headquarters. When possible, participating in WFXs with foreign partners should be prioritized. Soldiers selected to DLD formations should be arriving from brigade/division staff assignments. Likewise, having career experience working with foreign partners is recommended.

53rd DLD participation in ExSV24 has opened a new suggestive model regarding training preparation and assigned missions for all DLDs. We participated under the direction of the USARSOUTH G-7 exercise directorate. ExSV24 training audience was at the battalion level and the exercise directorates operated at a brigade (Brazilian) staff level—one echelon below a DLD's normal minimum assignment. However, this exercise proved to be invaluable for the 53rd DLD. Despite limited digital platform systems during the exercise, the inherit challenge and value of working with foreign armed forces was on display. The detachment executed its fundamental liaison role between the BRAAR exercise directorate staffs, USARSOUTH, and the American and BRAAR player units. We were able to implement all warfighting staff functions alongside our Brazilian counterparts. 53rd DLD accomplished all mission tasks outlined at exercise planning conferences.

There is discussion whether DLDs should be afforded the opportunity to participate in exercises like SOUTHERN VANGUARD across all combatant commands, and that its formations be embedded with the highest echelon level participating in a training exercise. Being involved in these exercises will complement the DLD five-year training cycle model by augmenting division warfighters. We were selected to participate in ExSV24 through a state partnership with the NYARNG. Future SOUTHERN VANGUARD exercises will likely invite the 53rd DLD to participate. Other National Guard DLD units may want to consider working with their states to see if they have similar opportunities to participate in exercises in their state partnership host-nation regions.

ANNEX A. Key Leader Interviews

The following are interviews from five key U.S. Army and BRAAR leaders regarding ExSV24, covering subjects including, but not limited to missions, training, interoperability, challenges, successes, and areas for possible improvements for future iterations of the exercise.

MAJ Andrew S. Campbell

Deputy Commanding Officer, Task Force 52 Jungle Infantry Battalion
(Executive Officer, 1st Battalion, 26th Infantry Regiment,
2nd Brigade Combat Team, 101st Airborne Division [Air Assault])

Interview conducted 30 November 2023

1. **How was intelligence and other combat information prioritized, processed, and disseminated? What problems were identified in information sharing?** (*Response includes input from CPT Mitch D. Bona, S-2, Task Force 52 Jungle Infantry Battalion (S-2, 1st Battalion 26th Infantry Regiment, 2nd Brigade Combat Team, 101st Airborne Division [Air Assault])*

   - The only link to the 23rd Jungle Infantry Brigade (JIB) was the Brazilian Army (BRAAR)-only chat and file-sharing portal.

   - There was no "coalition network" or portal for disseminating information or sending requests for information (RFIs) to brigade.

   - The Google shared drive was the only viable course of action (COA) for sharing and building products internal to the battalion task force.

   - The brigade was slow to respond to RFIs, particularly during the first planning iteration. Responses became timelier as the exercise progressed, accelerating from an average of 36 hours to 3 hours. The BRAAR does not typically provide much detail in their operation orders (OPORDs), generating a significant number of battalion RFIs, particularly from the U.S. staff.

   - The brigade pushed intelligence summary (INTSUM) reports in Portuguese down to the battalion by email and hard copy. This was translated by a BRAAR soldier or Google Translate. It was then pushed to the staff and company in English. Google Translate often loses some of the nuance of military terminology. Next, the information from the INTSUM was incorporated into the planning process.

   - The battalion pushed Portuguese and English INTSUMs from the tactical operations center (TOC) to the tactical command post (TAC) via BRAAR email, which was pushed forward to the companies.

2. How did you establish and maintain a common operational picture (COP)? What inputs and outputs were lacking to make it more complete?

- The TAC and TOC maintained separate COPs with both command posts having difficulty maintaining an updated and matching COP. This was because of sparse reporting from American and BRAAR units. The U.S. company used single-channel ground and airborne radio system (SINCGARS) for internal communications and the Mobile User Objective System (MUOS) for the battalion command net. Our battalion fires initially used frequency modulation (FM) SINCGARS before switching to MUOS for better reliability at distances. Specifically, the TAC switched between SINCGARS and MUOS to maintain communications with the company at distances. For all but the final mission, the TOC operated MUOS only to maintain communications at distances up to 137 kilometers. MUOS communications were assisted by creating battalion command net profiles. I recommend MUOS-capable units create additional net profiles for battalion operations and intelligence (O&I), battalion administrative and logistics (A&L), battalion fires, and company command net.

- The BRAAR indicated it typically does not exercise mission command from the TOC, but instead, it employs a mobile command post or TAC concept. Aligning with that, the commander elected to concentrate WfF capabilities in the TAC. For all missions, the TAC consisted of the BRAAR battalion commander, (colonel), S-3 (captain), S-2 (captain), S-6 (lieutenant), fire support officer (FSO) (captain), and multiple radio telephone operators (RTOs). Additionally, it included two U.S. assistant S-3s (major and lieutenant), FSO (captain), and an S-6 representative (captain or sergeant). For certain missions, an assistant S-2 (captain) was additionally added. This depleted staff capability from the TOC, transforming it into an administrative and logistics center (ALOC) run by the battalion executive officer.

- Most of the company-to-battalion TAC reporting came through the fire support team (FIST) SINCGARS communications (particularly after the company RTO was evacuated during the first mission). Because of the extended distance, the TOC could only monitor the battalion MUOS net.

- Android Team Awareness Kit (ATAK) was useful at the company level for the commander to use and mesh networks to track locations of platoons and squads. But it proved minimally effective at supplementing a battalion COP because of the lack of host-nation cellular network coverage in the exercise area of operations (AO).

- BRAAR maintained a digital COP using unsecure Synchronized Pre-deployment and Operational Tracker (SPOT) devices. The SPOT app was projected in the battalion and brigade TOCs, providing a real-time feed of the front-line trace for American and BRAAR units. Our U.S. staff maintained a digital COP using the Windows Team Awareness Kit (WinTAK), but unit positions had to be updated manually since host-nation cellular network coverage did not enable ATAK to provide a digital link.

- The scenario lacked the depth to force commander decisions. This was complicated by the BRAAR being unfamiliar with the decision support matrix (DSM) tool. To mitigate, the U.S. S-3 coached counterparts and prepared a DSM for each mission. However, it was not used by the Brazilian battalion commander.

- The BRAAR used high frequency (HF) communications supplemented by Motorolas. BRAAR RTOs in the battalion TOC were not initially "asking" the BRAAR TAC for updates but simply "eavesdropping" on periodic situation reports (SITREPs) from the TAC to the brigade to update the COP. This resulted in significant information delay until TOC staff members encouraged them to pull information required to update our COP.

- Predetermined communication windows reduced electronic warfare (EW) signature and preserved radio battery life for units on mission but also hindered the command post's ability to maintain an accurate COP at any given time. Although this seems to be a common practice within the BRAAR, it requires an adjustment for U.S. commanders and their staffs, who are more accustomed to constant situational awareness of where their forces are on the battlefield and what exactly they are doing at any given moment. U.S. forces should practice this at home-station training and leverage staff tools to aid the commander in visualizing the battlefield when reporting is limited.

3. **What went well and not so well in the targeting process and fires?** *Comments from CPT Kendall Hughes, fire support officer, Task Force 52 Jungle Infantry Battalion (1st Battalion 26th Infantry Regiment, 2nd Brigade Combat Team, 101st Airborne Division [Air Assault])*

- American and BRAAR fire support elements (FSEs) assisted the S-2 during step 2 (mission analysis) of the military decision-making process (MDMP), conducting enemy indirect fire analysis and building running estimates. Additionally, both nations built a fires annex during step 7 (orders production). However, the BRAAR Annex C is an overall picture of fires for the operation. It included positioning guidance, class V (ammunition) allocation, and fire support coordination measures. Although the U.S. Army Annex D is similar, the fires concept is broken down by phase. Both nations used a target, trigger, location, observer, delivery system, attack guidance, and communications (TTLODAC) variant, although the BRAAR did not include in-depth triggers, or a communication primary, alternate, contingency, and emergency (PACE) plan. Both nations developed a fire support overlay, OPORD annex, and target list worksheet—the key difference was the fire support execution matrix (FSEM), which highlighted the overall fires picture.

- BRAAR fire supporters planned numerous targets along their friendly infiltration lane, similar to a target reference point (TRP). However, these targets lacked a clearly defined task/purpose and specific trigger (only positive identification [PID] during movement). Overall, the BRAAR FSE plan targets to provide simplicity to its howitzer fire direction center (FDC), while the U.S. FSE plan targets to shape the environment and supports the maneuver commander's intent. We also discovered the BRAAR does not use the bottom-up refinement process for fires planning as much as the U.S. Army.

- BRAAR fires may improve effectiveness by adopting a few changes. First, BRAAR FSEs should consider planning fewer targets, enabling fire supporters to develop clearly defined task/purpose, triggers, and measures of performance (MOPs) and measures of effectiveness (MOEs). Second, the BRAAR should consider increasing observer manning on the ground to improve situational awareness and responsive dynamic fires. Third, it could implement a dedicated battalion FSE with an integrated communications net and full control of organic indirect assets. Finally, a strong recommendation is to use and standardize risk-estimate distances (REDs) to enable echeloning of fires and limiting the need for constant "safety lines" throughout the AO.

- The brigade did not execute a formal targeting cycle and the battalion was not allocated priority for any external assets that would have driven a deliberate targeting cycle.

4. Did we achieve interoperability? If so, where, and at what level? What more needs to be done?

- The exercise featured two missions where platoons were exchanged between American and BRAAR companies and where elements within the task organization (for example, reconnaissance, support by fire, etc.) included American and Brazilian Soldiers. Along with a combined American-Brazilian staff in Task Force 52, this satisfied many of the exercise's interoperability objectives. However, interoperability, particularly as it relates to warfighting, involves much more and has human, technical, and procedural dimension considerations:

- Human

    - There was considerable human interoperability demonstrated between American and BRAAR battalion staffs and companies. Many Task Force 52 BRAAR staff members had a functional command of the English language. Nevertheless, the planning process was challenging since orders and annexes were only provided in Portuguese.

    - The BRAAR company commander was fluent in English and is a U.S. Maneuver Captain's Career Course (MCCC) graduate. This background enabled him to understand and use U.S. Army doctrinal terms as a common language for coordination with the U.S. commander.

    - The Jungle Training Academy laid a common foundation for tactical operations in the local operational environment.

- Technical

    - There are still significant areas for improvement in technical interoperability.

    - American and Brazilian forces tested the U.S. Army Combat Capabilities Development Command (DEVCOM) provided Radio Interoperability Capability-

Universal (RIC-Us) devices at the final planning conference (FPC) and during the command post exercise's (CPX's) communications exercise (COMMEX) before the air assault. The RIC-U functions like a tactical voice bridge (TVB), enabling cross-platform communication between American and BRAAR forces. However, BRAAR S-6 personnel were not interested in breaking from their standing communications configuration to incorporate the RIC-U during the actual exercise.

- The BRAAR uses FM SINCGARS (possibly unsecure) for company-to-battalion communications and HF for battalion TAC-to-battalion TOC and to the brigade TOC.

- The BRAAR also liberally used Motorola land mobile radios (LMRs) for communication. Although this was briefed as a contingency/emergency method, the BRAAR used it quite regularly for reliability and easy use compared to HF.

- Procedural

  - Interoperability achieved in terms of a general planning process (for example, a blend of the MDMP and BRAAR planning and conduct of land operations process [PPCOT]).

  - Staff learning was somewhat artificial since it seemed like the BRAAR's Task Force 52 Jungle Infantry Battalion already executed its planning process before the exercise. It walked through the steps of a blended MDMP/PPCOT, but generally knew what course of action (COA) it would ultimately execute.

  - The BRAAR's capability to execute more complex missions could be enhanced through familiarization and adoption of tools like the decision support template (DST) and DSM.

  - The BRAAR recognizes the MDMP has an advantage over PPCOT regarding enemy analysis and developing a friendly COA that accounts for enemy COAs. Task Force 52 staff members deliberately modified the PPCOT to conduct enemy COA analysis in conjunction with friendly COAs (rather than after) but still did not devote much time to intelligence preparation of the battlefield (IPB).

  - The U.S. training audience needs to prepare for the exercise through deliberate staff training in PPCOT. Recommend leader professional development (LPD) activities for U.S. staff members to familiarize with the PPCOT before the next exercise with Brazil.

  - BRAAR OPORDs lack the detail and scenario depth typical for an exercise at a U.S. combat training center (CTC). This led to some helpful discussions, as U.S. staff members pushed the Brazilian brigade to provide additional enemy analysis and answer numerous RFIs during the planning process.

- The BRAAR seemed more comfortable with assuming risk associated with companies and platoons executing complex missions with minimal guidance or planning time. The U.S. staff occasionally had to shape conditions to mitigate exercise risk and enable platoons to have, at least, minimal time to conduct troop leading procedures (TLPs).

LTC Robert C. Stealey
Executive Officer, 53rd Digital Liaison Detachment (DLD)

Interview conducted 2 January 2024

1. What specific capabilities and support does the DLD provide to a theater army at combined exercises like ExSV24?
The 53rd DLD brings experienced staff officers and noncommissioned officers who can coordinate with foreign military staffs across all staff warfighting functions as a liaison element for a higher U.S. Army headquarters. Normally, a DLD unit will be assigned at division-and above-echelons; however, I believe a DLD staff can also work at the brigade level director of exercise (DIREX) cell as effectively demonstrated during ExSV24.

2. What were the impediments to effective combined operations and what can be done to enhance them at the tactical level? Where were we the most successful?
The biggest challenge during ExSV24 was coordinating across all exercise DIREXs and cross synchronization down to the training audience at the tactical level. It was apparent that the host nation prepared in advance for this exercise and our initial challenge was understanding its prepared overall exercise plan. It took us several days into the exercise before we discovered which host-nation (HN) brigade directorate was responsible for each line of effort. For example, sustainment across the training area was split between two DIREXs. Another challenge for U.S. forces was understanding the complete medical plan across the entire exercise effort. I believe many of these impediments could have simply been solved with better coordination efforts during the initial, mid, and final planning conferences (FPCs) leading up to the exercise. Additionally, I recommend an operational synchronization meeting at the exercise DIREX cell level between U.S. and HN leaders several days in advance of the training audience arriving to the training site.

Overall, the exercise was successful once the military decision-making process (MDMP) was conducted at the training audience level and U.S. Army South (USARSOUTH), 1st SFAB, and 53rd DLD coordinated further with our counterparts. The Brazilian forces were professional and certainly proud of their jungle operations experience and skillset. Specifically, the 53rd DLD was most effective when we merged with the 23rd Jungle Infantry Brigade, Brazilian cell and exchanged classes in doctrine. The 53rd DLD analyzed across the WfFs on the similarities and differences in tactical terms and staff products between the forces. This led to breakout sessions and exchanges or briefs presented to both staffs. This created a foundation for a future common operational picture (COP) to be used during future SOUTHERN VANGUARD exercises.

3. What common doctrine, shared standard operating procedures (SOPs), and MDMP were used between armies to promote situational understanding? What was lacking and needs to get published and shared?

The 53rd DLD discovered significant similarities in common doctrine between both armies at the brigade and battalion staff levels. American and Brazilian armed forces could conduct battalion-level, real-world missions with minimal coordination upfront. Brazilian forces have similar MDMP staff steps. Their higher-level staffs have similar WfF sections in their task organizations.

An identified shortcoming was the level of products produced during the operational process. Our U.S. forces have more robust OPORD products that contain a greater degree of detail. Specifically, U.S. staffs prioritize IPB analysis and publication during the MDMP. A recommendation for future SOUTHERN VANGUARD exercises is to conduct a pretraining event between U.S. and HN staffs on MDMP steps and products. This could be practiced by developing the exercise director's overall plan for the exercise.

4. What were the greatest successes and challenges to interoperability across the three domains (human, procedural, and technical) between the United States and Brazil?
The essence of a DLD unit is to synchronize across digital platforms at higher staff levels. We could not reach this level of coordination because of a lack of digital systems used for this exercise. A clear message expressed by the HN was its interest in acquiring more digital technology platforms. Through an interoperability reference, technical interoperability was challenging for the 53rd DLD. However, we adjusted to a more analog environment and it provided effective internal training. Enhancing interoperability mainly occurred through human interaction, despite the language barriers. Secondly, shared understanding was developed through procedural interoperability. We quickly adjusted to the BRAAR's battle rhythm and lines of communication as the exercise moved forward. The 53rd DLD had to make some mental adjustments as we were supporting a pre-planned exercise and not a real-world mission with a full functioning brigade staff.

5. How can we make the Combined Operations and Rotational Exercise (CORE)/SOUTHERN VANGUARD series an even better exercise in your lane?
For future exercises, the 53rd DLD would like to work with the DIREX planners during the initial MDMP. This would have to take place before the exercise and could be conducted more robustly at the planning event conferences or as an additional one-week training event before the exercise commences.

COL Alexandre Grangeiro de Lima (BRAAR)

Commander, Task Force 52 Jungle Infantry Battalion

Interview conducted 17 November 2023

1. What were the greatest successes and challenges in Combined Operations and Rotational Exercise (CORE 23)/ExSV24?
Our greatest successes included the following:

- Ability to integrate both planning processes, similar in some points, but different in others.
- Fire support integration between both armies.

- Intelligence planning process integration.

- Relationships based on confidence and respect, despite some different points of view.

- Pragmatism observed in each staff member during the exercise.

- Knowledge about the composition of both staffs, trying to line the capabilities of each staff cell for combined work.

- All mission resupplies were completed even with different logistic assets and doctrine.

Our greatest challenges included the following:

- Language barrier. There was a huge effort from Brazilian staff members to speak and understand English, but it was sometimes difficult.

- U.S. Army staffs understood the intent of the BRAAR's DIREX and conducted the activities, sometimes with short times for planning or to rest.

- Integration of logistic doctrine between both armies.

2. What were the impediments to effective combined operations and what can be done to enhance them at the tactical level? Where were we the most successful?

- We needed more time to work before the operation with the staff and by the company commanders to combine and improve tactical tasks and procedures to provide better products.

- One of the most successful areas was understanding that both doctrines can be combined, as they are not so different, which confirmed we are capable to fight side by side.

3. What were the greatest successes and challenges to interoperability across the three domains (human, procedural, and technical) between the United States and Brazil?

- Different languages and military terms were a challenge. However, the previous preparation by Brazilian staff members overcame this challenge.

- Combined activities were developed in a positive way, and we could integrate our planning process in very good conditions.

4. How can we make CORE/SOUTHERN VANGUARD series an even better exercise?

Develop a week of leveling for planning processes between staff members from both countries before the staffs work for the exercise itself, so it can start without the delay caused by the adaptation to work together, and discover similarities and differences from both doctrines.

MG Eduardo da Veiga Cabral (BRAAR)

Commander, 23rd Jungle Infantry Brigade

Interview conducted 14 November 2023

1. What were the greatest successes and challenges in Combined Operations and Rotational Exercise (CORE 23)/ExSV24?

I believe the greatest success was the knowledge exchange on tactics, techniques, and procedures (TTPs), and the integration between warfighting functions (WfFs), which highlighted the fire support.

During the exercise, we built camaraderie at the tactical level, improved readiness for both countries, and strengthened partnership. The combined arms rehearsal (CAR) demonstrated that before the beginning of the exercise, American and Brazilian maneuver companies clearly knew their mission, essential tasks, and necessary coordination measures for maneuver execution. This activity facilitated maneuver understanding, potentialized the combat power to accomplish the mission, and contributed to safety improvement in all senses.

Talking about the challenges, one significant point was the necessary adjustment on the time for planning and time balance. This was because of differences in TTPs between Brazilian and American armies. This adjustment and balance were fundamental to assuring actions were integrated and combined as we expected from multinational combined exercises.

2. Where did we achieve interoperability and how can we improve it between the U.S. Army and the BRAAR?

I truly believe we achieved an ideal interoperability level, especially in planning methodology. There are several similarities between Brazilian and American processes.

However, previous knowledge on exact equivalent terms in each other's main planning products could improve interoperability even more. Besides that, I consider we have achieved a good level of interoperability, specifically regarding the following WfFs: command and control (C2), movement and maneuver, and fires. Further, the integration solutions between Brazilian and American communications equipment are currently satisfactory.

Another topic to be pointed out is the use of the Radio Interoperability Capability-Universal (RIC-U) voice bridge system and its implementation during ExSV24. It allowed digital interoperability between the U.S. encrypted network and Brazil's radio encrypted network.

In my point of view, interoperability improvement could be accomplished through more combined exercises and increased use of combined equipment and systems between both countries.

3. What additional types of training would you like to see conducted in the future between the United States and Brazil?

I believe receiving U.S. observer coach/trainers (OC/Ts) in Brazil to conduct presentations and briefings, and most importantly support the Brazilian staff and company's preparation for the next rotation at the Joint Readiness Training Center (JRTC) in 2024 (**Note:** Rotation occurred in

August 2024), could be beneficial. This activity may give pertinent preliminary knowledge regarding the particularities of the U.S. Army's exercise evaluation process.

Another type of training that could be added is a tabletop exercise (TTX) with the main elements of the BRAAR that will be composing brigade and battalion staffs during our next combined exercise before the rotation. Thus, it would be possible to improve planning integration on this level before the combined exercise execution. This may also improve the planning process and understanding MDMP. This would enhance interoperability between our countries.

Concluding, I, commander of the 23rd Jungle Infantry Brigade, a strategic employment force, consider it crucial to increase the number of combined exercises between U.S. and Brazilian armies.

4. What common doctrine, military decision-making process (MDMP), and standard operating procedures (SOPs) were used between our armies to promote better situational understanding during this exercise?
In general, our doctrine and procedures are about the same. We could improve by having a more common synchronization matrix to use during the planning phase. From my perspective, U.S. planners are used to working with a lot of time. For Brazil, we tend to conduct a shorter planning phase. At this exercise, I believe the difference was because of the BRAAR's background and experience in a jungle operational environment (OE).

In my point of view, we should work more combined exercises to improve mutual planning and synchronizing, and for terrain analysis. I had the opportunity to follow all the planning work and staff actions from the combined staff. They were almost always well-coordinated. But sometimes U.S. forces used MDMP steps differently than the BRAAR. We always reached the same objective, even with the differences. I believe this situation confirms my opinion that the more we work together, the more we can align our planning processes. This would put us in position to be more on the same page.

Additionally, from my perspective and what I saw during this exercise, our procedures are almost the same. However, of note, some specific procedures linked with the exercise's OE are different, probably because the United States is not used to the jungle environment.

5. What went well and not so well in the targeting process and prosecuting fires?
First, I would like to highlight and compliment how U.S. forces conducted fires. One of our exercise objectives was to improve on fire support. We put a big effort into this. During this exercise, the BRAAR looked hard at how the United States conducts fire support and where we may improve. From a positive perspective, we leveraged the fires WfF and employed more fires in this exercise than in previous ones. During the preparation, we used reports and lessons learned from CORE 21/ExSV22, our last combined FTX with the United States, along with six other previously conducted multinational exercises. Our fires commanders discussed and studied these well to prepare for this exercise. The battalion task force staff focused and worked hard on planning and prosecuting fires to support maneuver. This resulted in solid artillery effects because of the American and Brazilian companies' ability to receive and coordinate calls for fire support.

Another point to be mentioned is the improvement on the standardization of scale for grid reference for fires. This step was fundamental to speed up the process of call for fires and execution.

To keep the momentum, we need more combined exercises with even more fire support rigor to increase capabilities. I believe in our next CORE/SOUTHERN VANGUARD exercise, we should employ not only organic fire support assets, but also include higher-echelon army fires, along with joint fires. Our next challenge is integrating air and naval fires. This will stress fires synchronization at all echelons.

6. In your opinion, how did the 53rd Digital Liaison Detachment (DLD) contribute to the exercise?
It helped the exercise a lot and established effective liaison between the director of exercise (DIREX) and units on the ground. It facilitated the exercise's complexity and mentored the battalion task force staff across multiple WfFs, especially protection and security cells.

We designed and conducted this exercise in an open and real-world area, and not a controlled space. The 53rd DLD understood this impact on the exercise. Also, it understood requests from the U.S. staff in the combined task force and facilitated needed exercise changes through effective and timely coordination with the BRAAR. This was accomplished by balancing requests and determining what was necessary for exercise execution. Further, there was a good relationship between the 53rd DLD and U.S. Army South (USARSOUTH) at the exercise control group (ECG).

It is also important to mention they conducted briefings with the aim to construct common knowledge by explaining U.S. Army doctrine, terminology, and products. So, it was possible to confirm how close both doctrines are and establish cultural exchange objectives that were achieved during CORE 23/ExSV24.

7. In your opinion, how did the 1st SFAB contribute to the exercise?
It did an excellent job and worked in a similar way to Brazilian OC/Ts. It ably understands maneuver and the exercise's purpose. Its outspoken feedback is important for improving TTPs in all levels, especially at the small-group level. Thinking about a bigger perspective, I recommend bringing in SFA teams before the rotation and have them participate in BRAAR preparations for the exercise. Doing this enables the staff and troops to know more about the exercise, plan for their requirements, and train with their BRAAR OC/T counterparts. It is also important to mention that during CORE 23/ExSV24, American and Brazilian OC/Ts had instructions and briefings to put all of them at the same level and make them aware of what kind of simulated military situations the troops would face. That helped a lot in the evaluation process.

8. Is there anything not asked that you would like to add?
I would like to add that the military relationship we share nowadays comes from our long-term history together. It has been a high honor to work again with the U.S. Army. Brazil knows the U.S. Army's vast experience. As partners, I believe we have a lot to learn from each other. What I saw during this exercise were soldiers working together with common goals. This is the main essence of our profession. We are soldiers and should never forget this principle. We must

always work together with fellowship, comradeship, and friendship. Whatever we do together must be based on these values. In the BRAAR we like to say, “We are simple, we are strong, and we are soldiers!” I always look forward to working with Americans and other partner nations.

MG Andre Laranja sa Correa (BRAAR)

Director, Operations Coordination Center, Northern Military Command
and Combined Operations and Rotational Exercise (CORE) Exercise Director

Interview conducted 16 November 2023

1. What planning, coordination, and training did the BRAAR do to prepare for Combined Operations and Rotational Exercise (CORE 23)/ExSV24?
The planning for CORE 23 began with the deployment of liaison officers during CORE 21 and CORE 22, which took place in the United States and Brazil, respectively. Since then, numerous meetings have occurred between Brazilian and American military personnel, on Brazilian and American soil.

In terms of coordination, the hierarchical structure of the operation is noteworthy. At the highest level of the organization, a major general conducts the exercise as the chief of the coordination center for operations of the Northern Military Command (NMC). The staff is composed of senior officers, who assist with the coordination center for operations of the NMC. As a subordinated structure, two cells, each one commanded by two general officers, are responsible for the operation's infrastructure and scenario, respectively.

The training involved six exercises conducted throughout 2023. From Operation MUNDURUKU I to Operation MUNDURUKU VI, the preparation of the staff and the BRAAR’s Task Force 52nd Jungle Infantry Battalion (TF 52 JIB) was carried out. The exchange between Brazilian and American military personnel, all involved in key roles of the operation, facilitated the understanding of doctrine and tactics, techniques, and procedures (TTPs), as well as the capabilities of both countries. The deployment of Brazilian military personnel to Fort Sam Houston, TX, and Fort Campbell, KY, in key roles, enabled the on-site consolidation of this knowledge.

2. What were the greatest successes and challenges in CORE 23/ExSV24?

Achievements:

- Conducting preparatory FTXs called “Operation MUNDURUKUS,” with the final exercise conducted at the operational exercise location.

- Advanced planning with establishment and functionality of the general staff, including the division of cells in the exercise directorate and scenario.

- Exchanging experiences regarding TTPs to enhance interoperability between the U.S. and Brazilian armies.

- Coverage of tactical actions and operational missions within TF 52 JIB in a jungle operational environment while employing all combat functions synergistically.

- Establishing appropriate connections and communications for command and control (C2) during the exercise, enabling situational awareness (SA) at all levels.

- Employing numerous resources in the exercise for personal and collective troop security, as well as operational health, including rotary-wing aircraft.

- Strategic concentration of resources and personnel in Macapá using air, land, and riverine transportation methods, establishing adequate logistical flow during the exercise.

- Controlling security and health measures suitable for conducting the exercise in a jungle operational environment in civilian areas outside of the military training base.

Challenges:

- Executing the strategic concentration of resources in Amapá, crossing the Amazon River using air (fixed-wing and rotary-wing), river, and land transportation.

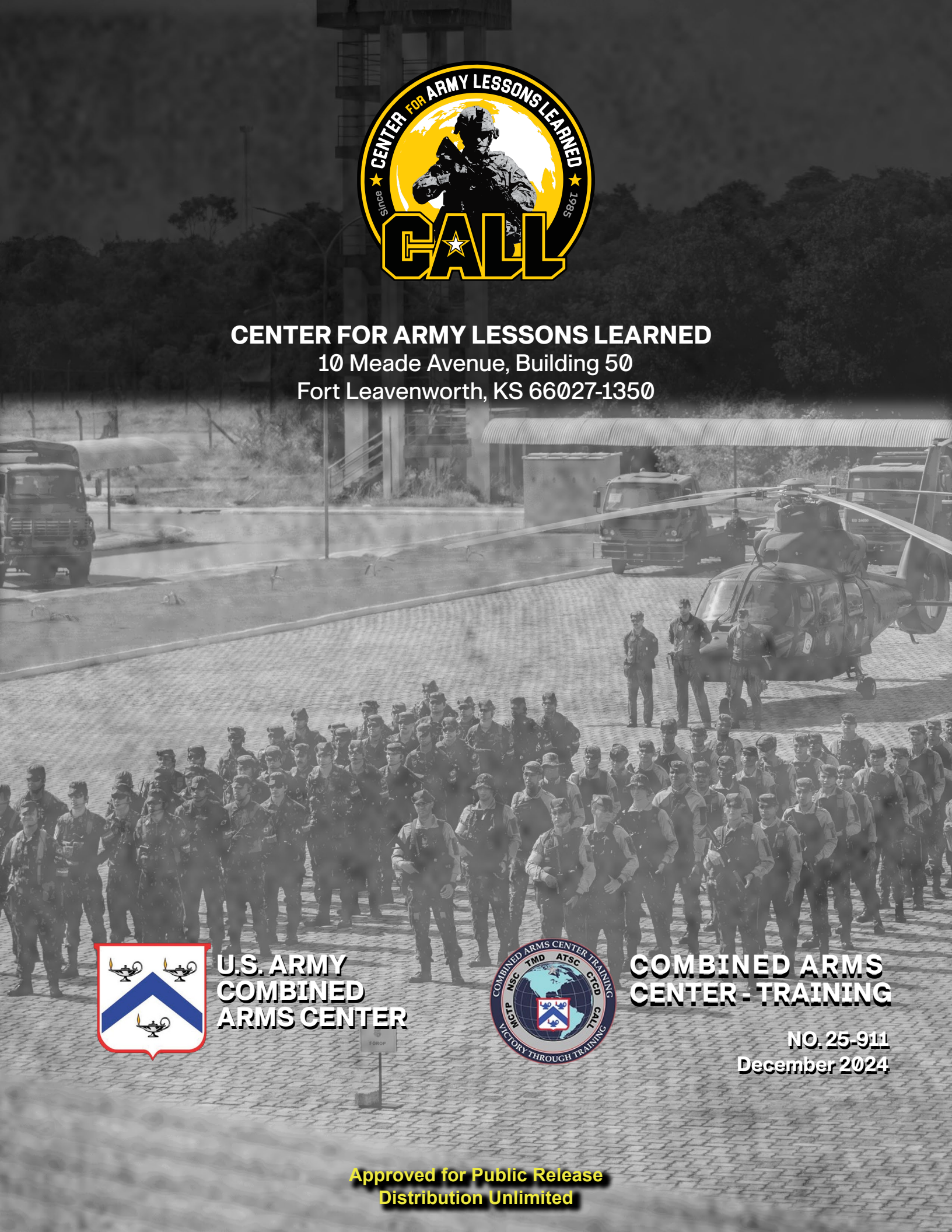
- Establishing appropriate C2 in a jungle operational environment to provide SA to the exercise directorate in the three phases of CORE, at four different locations: Belém-PA, Macapá-AP, Ferreira Gomes-AP, and Oiapoque-AP.

- Extensive operational area with operational and logistical maneuvers from Belém to Oiapoque, covering approximately 700 km in a straight line, with a significant obstacle to overcome the outfall of the Amazon River.

- Controlling security and health measures for conducting the exercise in a jungle operational environment in civilian areas and outside of the military training base.

3. Where did we achieve interoperability and how can we improve it between the U.S. Army and the BRAAR?

Interoperability in CORE 23 was initiated through bilateral coordination meetings held in the United States and Brazil, promoting the integration and exchange of military experiences. This integration continued through military exchanges involving operational activities in both countries throughout 2022 and 2023. In these activities, it was possible to understand the doctrine, capabilities, and organizational methods of both armies. Interoperability was solidified through various combined planning and preparation efforts, successfully executing TF 52 JIB missions, and through coordination efforts by the exercise directorate and scenario cell during CORE 23. To broaden interoperability, we must enhance the learning of each other's language to improve communication at all echelons. This may be accomplished by expanding our military doctrine and combat function exchanges, especially in C2, fires, movement and maneuver, and logistics. This will facilitate integration in combat units. Additionally, conducting military exchanges on planning and organizing military exercises would enhance interoperability at the exercise directorate group level.



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NO. 25-911
December 2024

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