

Redesigning the Battalion CP:

Balancing Function and Survivability

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The U.S. Army has had to rethink its command posts (CPs), particularly at the battalion and brigade level, after lessons in Ukraine have indicated that CPs must be faster and leaner to survive on the modern battlefield. Unlike the global war on terrorism (GWOT), the modern battlefield has more advanced unmanned aerial systems (UAS) and precision fires, which have made the bigger legacy CPs a ripe target for enemy artillery. Lighter and leaner CPs are necessary for the survivability of both personnel and equipment and, simply put, to maintain tempo with the “speed of war.”

During Joint Readiness Training Center (JRTC) Rotation 23-09, the 2nd Battalion, 30th Infantry Regiment, 3rd Brigade Combat Team, 10th Mountain Division, developed and tested a new command post with assistance from Task Force 3 observer-coach-trainers (OCTs). We set up this CP in a record five minutes and 38 seconds and jumped it 21 times during the extended 14-day rotation. The techniques used for this CP should be replicated across light infantry formations as a baseline. To transform CPs, leaders must first understand the challenges related to balancing function and survivability, the hardware going into the CP design, and the layout of the command post before finally training on the new CP setup. Although this may sound like an easy process, it could take months to completely refine.



The photos above and below show 2nd Battalion, 30th Infantry Regiment’s command post during Joint Readiness Training Center Rotation 23-09 as seen from on the ground and by a drone overhead. (Photos courtesy of JRTC)



The challenge of redesigning a CP is not just configuring it for speed of setup; this could be achieved with a portable radio. The challenge is choosing a layout that allows staff to accomplish the CP's required functions as specified in Army Techniques Publication, (ATP) 6-0.5, *Command Post Organization and Operations*. These include:

- Conduct knowledge management and information management;
- Build and maintain situational understanding;
- Control operations;
- Assess operations;
- Coordinate with internal and external organizations; and
- Perform CP administration.

During GWOT, CPs at the battalion level consisted of as many as four different tents, which offered ample room for a staff to conduct and develop current operations (CUOPS) planning and logistical efforts. The CP design that battalions operated in previously had up to six standard-issue Standard Integrated Command Post System (SICPS) tents or two DRASH tents. This was a common CP layout, with deviations being minor from organization to organization. Regardless of where a battalion positioned its CP or how it attempted to conceal it, the command post was still large and produced a large footprint — physical, electronic, audio, etc. Detection efforts of conventional CPs, either through visual detection due to the use of UAS or the advances in signal detection, were first seen in the Second Nagorno-Karabakh War and the invasion of Ukraine, where, “near the southern Ukrainian city of Kherson, Ukrainian strikes hit Russian command posts... at least 22 times and killed the commander of the 49th Combined Arms Army.”¹ Now strikes from both sides regularly target CPs. As described by LTG Milford “Beags” Beagle and his co-authors in their article, “The Graveyard of Command Posts,” “...the current command-and-control dilemma reflects an imbalance in the functional requirements for command posts to be both effective and survivable.”² At the battalion level, redesigning the CP must start with the hardware available to a light infantry battalion.

Hardware

When redesigning a CP, organizations must first start with the hardware they have available. To steal computer terminology, the hardware is what the Army already provides to units through their organic equipment.

First and foremost, the CP should revolve around a unit's organic mobility platform. This will provide the platform for a unit's power and command and control (C2) systems as well as allow it to maneuver quickly if required. Although a battalion CP can operate out of a man-portable system for short periods of time (usually referred to as the assault command post [ACP] or, in our battalion's case, a mounted ACP, which consisted of MRZR all-terrain vehicles), the major platform for a unit's CP must be capable of providing consistent power to all of its mission command systems and transport the minimum amount of people to conduct the CP's functions. For most light infantry formations, the platform will either be the legacy High Mobility Multipurpose Wheeled Vehicle (HMMWV) or, for those units that have received the fielding, an Infantry Squad Vehicle (ISV). Other platforms tested in our battalion either failed to generate the power required to operate mission command systems, couldn't transport all the staff, or required parts outside of the Army's ordering systems for maintenance and repairs. For this reason, we kept MRZR with mission command packages for our mounted ACP but utilized HMMWVs as the basis of our CP redesign. We used four M998 HMMWVs — one for each of the following: CUOPS, plans, fires, and intelligence. These four vehicles made up the basis for the rest of the CP.

Mission command requirements are the second hardware consideration. Each of our M998 HMMWVs had a fabricated metal stack built into it, which housed two Advanced System Improvement Program (ASIP) radios with a power amplifier, the Joint Battle Command-P (JBC-P), and either a tactical satellite, high frequency (HF) radio, or other system (see Figure 1). This stack can be moved between vehicles and modified to fit in either a HMMWV or an ISV. The system receives its power from the vehicle itself, giving

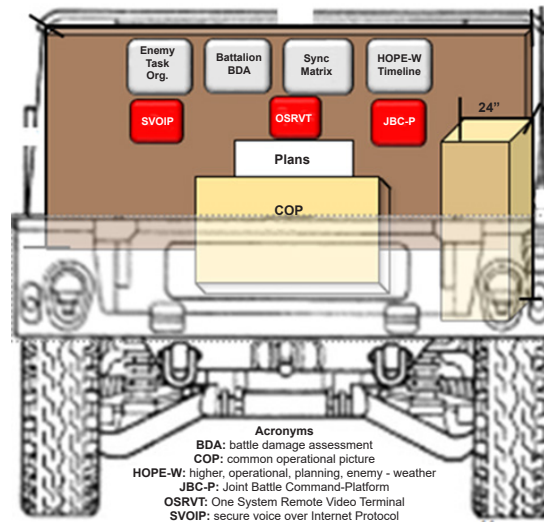


Figure 1 — Vehicle Configuration

This design was mirrored with all M998s in the command post to create a baseline main CP setup as well as improve redundancy with mission command systems and current operations tracking.

each of the four vehicles an on-the-move C2 capability and the battalion the ability to operate without a generator if needed. To maintain multiple nets, we mounted additional antennas on a fabricated mounting bar located on the cab of the vehicles. This provided better line of sight and allowed the camo netting to be set up over the back of the vehicle without interference.

We only set up the Satellite Transportable Terminal (STT) once during the rotation. The large satellite dish towers over every other piece of equipment and requires its own vehicle and generator, and in our opinion, it is not worth the capability it provides. Most of the information from higher headquarters was sent via the JBC-P and not over secret internet protocol router (SIPR), which is the only reason to need an STT. The STT does provide a non-secret internet protocol router (NIPR) capability to the CP; however, there are numerous conditions that must be met in both positioning and provisioning to access that capability. Unfortunately, bandwidth used to access NIPR takes away from the full capability of SIPR, thus reducing the effectiveness of both forms of connectivity. Additionally, during active military operations, the use of NIPR is limited due to operation orders (OPORDs) and directives being transmitted over SIPR. In short, the Army must explore ways to transmit information without this piece of cumbersome equipment.

The last item to consider with the hardware associated with the CP is the covering and camouflage required to fully set up the CP. During our battalion's JRTC rotation in August 2023, we used camouflage netting that was pre-cut and tied to the rear of each vehicle. Once vehicles were in place, we stretched the camouflage netting between each vehicle and used poles to provide a working space. Camouflage netting served as the fastest, most spacious, and most effective way to cover the CP, allowing our battalion to establish the CP in just over five minutes. The camo netting provided shade but did not block any light or noise. During hours of limited visibility, we were forced to plan under red lens, and the operations sergeant major had to constantly monitor security and noise/light discipline. During inclement weather, we used one SICPS to prevent products from getting wet, which could also be accomplished by using several tarps. During the defense, when the CP was furthest from the frontline trace, we expanded the layout to include two full SICPS, with all four vehicles booted (vehicle boots are attachments that allow for tents to wrap around cargo HMMWVs, limiting the noise and light signatures from the attached vehicles). This design, which was still established in less than 20 minutes, allowed for operations during cold and/or inclement weather.

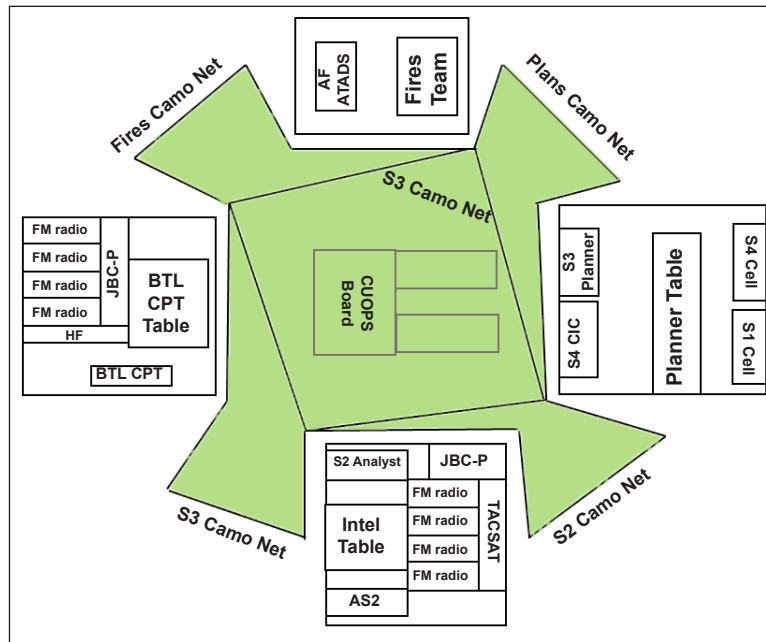


Figure 2 — The CP Design

This design, which consists of four M988s and camo nets, is beneficial during periods when reactivity and maneuverability are paramount to success and survival.

Functionality Inside the Command Post

When looking at the design inside the CP, or the “software,” there should be three main considerations: the need for analog products, how to design the CUOPS and plans, and what personnel is needed inside the main CP. These factors will dictate how the interior of the CP is laid out.

When redesigning the CP, analog products are a requirement. During GWOT, units became accustomed to large orders that were produced on laptops and then printed. For CUOPS, units were fielded the Command Post of the Future (CPOF), a desktop computer with three screens that required a SIPR connection. This is large, cumbersome, and no longer feasible for a mobile CP. Command post computing environment (CPCE), the Army’s new CPOF replacement, has the same requirements and is not needed at the battalion level. The power requirements for computers and printers, the noise and light discipline, the supplies, and the bandwidth needed to operate this way are not conducive to a mobile CP. All products in our mobile CP were maintained on two boards, one for plans and one for CUOPS. Instead of using PowerPoint for the military decision-making process (MDMP), we printed out and laminated slides. Staff sections updated their running estimates by hand using map pencils. For orders production, we provided overlays to company commanders, while we reproduced essential products like execution checklists (EXCHECKS) by hand and then laminated them for subordinate commanders. It is key to identify what products units want to produce before going to the field. Our standard products included an updated operations overlay, fires overlay, execution matrix, and decision support matrix. These essential products were all made and distributed by hand, while warning orders and OPORDs were distributed via JBC-P or over FM. All hard-copy products were distributed either at an in-person orders brief, via runner, or during battlefield circulation.

Another important element of the mobile CP is how these analog products are displayed and designed to move quickly in case the CP needs to reposition. For both CUOPS and plans, we used magnetic white boards mounted on a lean-to structure. These boards held maps, overlays, and other running estimates with magnets. The white board materials allowed planners and the battle captains to use map pens to make notes or products and then erase them later. We positioned the CUOPS board, which served as the CP’s centerpiece, right behind the operations section’s M998. We mounted radio speakers and hand mics

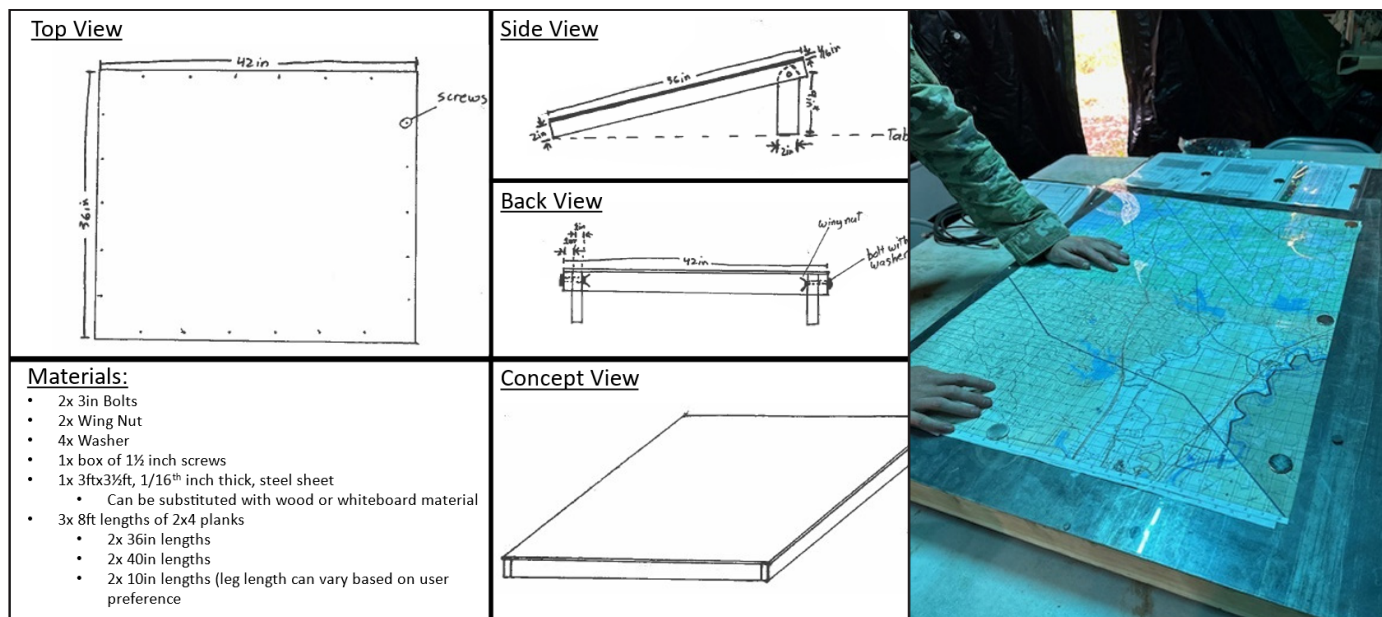


Figure 3 — Planning Board Design

Schematics are at left with the completed item shown at right. Note how the metal board allows for magnets.

Later, a magnetic white board was added so staff could quickly take notes.

at the rear of the vehicle to allow the commander to stand over the map board. Inside the operations vehicle, we fabricated a metal table, allowing the magnetic products from the CUOPS board to move onto the metal table while the vehicle was moving. This ensured we had no loss in awareness while the CP displaced or moved. The planning board could also be removed from the plans vehicle and set up for MDMP or OPORD briefs.

The last item to consider for the CP is personnel — which staff members the commander wants with the command post. The hardest part of reducing the size of the CP is regulating who stays with the main CP and who stays under the headquarters and headquarters company (HHC) commander at the combat trains command post (CTCP). With only four vehicles in our CP, the number of seats in the M988s was limited. This required the battalion executive officer (XO) to ruthlessly manage who would go forward as the CP moved. All the staff primaries went forward with the CP to enable simultaneous planning and managing of operations. This will become increasingly difficult as enablers are pushed down to battalions. These enablers increase the footprint, usually in both personnel and vehicles. Just as the CP's size is essential to maneuverability and survivability, the amount of "stuff" enablers bring to the fight (based off a legacy understanding of what is required) is just as important to consider. Again, the XO must manage which enablers are allowed to come forward for planning and which elements will remain at the CTCP.

Training

As important as the hardware and layout of the CP are, so too is the training for the staff sections that will use these systems. Our brigade had a deliberate process to train CP staff leading up to our Combat Training Center (CTC) rotation. The constant setup and refinement of the CP will enable a maneuverable CP that can both displace rapidly and continue planning. One of the biggest hindrances to displacement is the staff's reluctance to jump to the next location. This can only be overcome with practice. A competent staff is capable of jumping the CP in limited visibility with no disruption to the planning process and/or tracking operations, and this is only possible with constant training and familiarization.

All training events should be multi-echelon and involve the staff. When the CUOPS board moved into the S3 shop, our staff conducted a battle update brief (BUB) twice a week of analog products. Although this



The interior of the modified vehicle includes a communication stack and metal table built into the vehicle, allowing for products to be quickly transferred. (Photo courtesy of authors)

practice was cumbersome at first, it both increased the familiarity with the analog products and provided a chance for the staff to refine their running estimates. Additionally, when two or more companies went to the field, staff also deployed the CP. This gave the staff repetitions at emplacing and jumping the CP in the field with the same vehicles they would use during the CTC rotation. Identifying the vehicles that will be used for a CP, and making the hardware adjustments early in training progression, will give units time to make refinements and upgrades to their CPs prior to a CTC rotation or deployment.

Use your analog products whenever possible, even during your Leader Training Program (LTP). When our brigade conducted its LTP at JRTC, it brought along the planning board and analog MDMP products. Running estimates were updated using map pens, and MDMP briefings were conducted off the planning board. For staffs to become proficient, they must use these products as often as possible.

Prior to the JRTC rotation, the brigade also conducted several CP exercises, which culminated in an external evaluation (EXEVAL) by another brigade. The CP exercises included setting up the CP and conducting MDMP from the field. Units may be tempted to conduct CP exercises more like a communication check (where a unit validates its radios, tactical satellite, and SIPR systems), but this does little to ensure a unit is ready to conduct a CTC rotation. The 10th Mountain Division did an excellent job of providing external evaluators from O5 down to E7 from a brigade that had just completed a JRTC rotation to evaluate every battalion as it conducted MDMP, jumped during daylight and limited visibility, and battle-tracked a live simulation with “pucksters.” This training event, which lasted seven days, did more to set CPs up for success than any other training event.

The Mobile CP and the Next Fight

To make a CP survivable and mobile for the next fight, units must review the hardware, fine tune the functionality of their CP, and train on how to conduct seamless operations. For hardware, this requires identifying the platform from which the organization will fight and heavily modifying the equipment. However, this should not be left to units to do alone. Although units can request metal fabrication from their brigade support battalion to make these modifications, this is not something that should not be left to individual units. The Army should design a communications shelf that will easily fit in HMMWVs,

ISVs, or any other vehicle platform; and standard designs for metal tables should be available to order through Army procurement systems. Additionally, the current STT does not allow a CP to be mobile or camouflaged. It should either provide a lightweight and smaller package, like a proprietary low earth orbit system, or battalions should not be required to remain on SIPR while in the fight. This is an unrealistic expectation at the battalion level. For the functionality of CP interiors, the magnetic white board designs should also be able available to order. The Army mass-produced field desks in World War II to provide standard desks across headquarters, and the same should be true for today's CP products. Units should be able to train on these as part of LTP programs, and if they cannot transport their own materials, they should have examples to use at the LTP location. Finally, training progressions, like the EXEVAL our brigade received, should become standard practice. This should be an expected gate prior to a CTC rotation. These advancements should be implemented if the Army expects its CPs to survive and thrive in the future fight.

Notes

¹ Michael Peck, "Ukraine's Attacks on Russian Commanders Have the U.S. Army Worried About Its Own 'Fat and Ponderous' Command Posts," *Business Insider*, 6 July 2023, <https://www.businessinsider.com/ukraine-attacks-on-russia-us-army-command-post-vulnerability-2023-7>.

² LTG Milford "Beags" Beagle, BG Jason C. Slider, and LTC Matthew R. Arrol, "The Graveyard of Command Posts: What Chornobaivka Should Teach Us about Command and Control in Large-Scale Combat Operations," *Military Review* 103/3 (May-June 2023), <https://www.armyupress.army.mil/Journals/Military-Review/English-Edition-Archives/May-June-2023/Graveyard-of-Command-Posts/>.

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Soldiers with 2nd Battalion, 30th Infantry Regiment utilize the plans board during a command post exercise. (Photo courtesy of authors)