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Training the Command and Control Warfighting Function

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Training the Command and Control Warfighting Function

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Preface

TC 6-0, *Training the Command and Control Warfighting Function*, is the introductory guide for commanders at battalion through corps echelons to use to incorporate command and control training during unit training management. This publication provides the background information for commanders, leaders, Soldiers, Service Members, and Civilians who plan, prepare, execute, and serves as the Command and Control Warfighting Function Training Strategy, superseding the *Mission Command Training Strategy 2013-2019*. This TC provides the background to the follow-on planned TCs within the TC 6 series (note – these titles will be updated to reflect the command and control warfighting function with their next revision, and TC 6-6 will be renumbered to TC 6-0.6):

- TC 6-0.1, Mission Command Information System Integration Training and Qualification: Digital Crews.
- TC 6-0.2, Training the Mission Command Warfighting Function – Battalions, Brigades, and Brigade Combat Teams.
- TC 6-0.4, Training the Mission Command Warfighting Function – Divisions and Corps.
- TC 6-6, Training the Mission Command Warfighting Function – Transitioning to a Joint Task Force Headquarters

TC 6-0 includes several training audiences: commanders at battalion echelon and above, and their chiefs of staff, deputy commanding officers, executive officers, and operations officers (S-3 or G-3). It applies to the commanders of all unit types – maneuver, functional, and multi-functional. TC 6-0 applies to the Active Army, Army National Guard/Army National Guard of the United States, and United States Army Reserve unless otherwise stated. Units should use the TC and command and control collective tasks discussed herein that best match their echelon. For example, a regional support group should use the brigade chapter of TC 6-0.2 and collective tasks at the brigade echelon

TC 6-0 provides guidance for curriculum developers and trainers at centers of excellence (COEs) and schools in achieving the Army Learning Areas (ALA) and General Learning Outcomes (GLO) for command and control.

Commanders, staffs, and subordinates ensure their decisions and actions comply with applicable United States, international, and host nation laws and regulations. Commanders at all levels ensure that their Soldiers operate in accordance with the Army Ethic, the law of war, and the rules of engagement (See FM 6-27, *The Law of Land Warfare*).

TC 6-0 uses joint terms where applicable. Selected joint and Army terms and definitions appear in both the glossary and the text. TC 6-0 is not the proponent publication for any terms or definitions. For other definitions shown in the text, the term is italicized and the number of the proponent publication follows the definition.

The TC 6-0 applies to the Active Army, Army National Guard/Army National Guard of the United States and United States Army Reserve unless otherwise stated.

The proponent of TC 6-0 is the U.S. Army Mission Command Center of Excellence (MCCOE). The preparing agency is the Directorate of Training, U.S. Army Mission Command Center of Excellence, Combined Arms Center, Fort Leavenworth, KS. Send comments and recommendations on DA Form 2028 (Recommended Changes to Publications and Blank Forms) to Commander, U.S. Army Mission Command Center of Excellence, ATTN: DOT MCCOE, Bldg. 472, Room 301, 310 McPherson Ave., Ft. Leavenworth, KS 66027; or submit an electronic DA Form 2028 to: usarmy.leavenworth.tradoc.list.mission-command-coe-dot-ted@mail.mil

Introduction

This publication is updated with the command and control warfighting function, whereas the previous version was written when doctrine still referred to the mission command warfighting function. *Command and control* is the exercise of authority and direction by a properly designated commander over assigned and attached forces in the accomplishment of a mission (refer to JP 1). The Army defines *mission command* as the Army's approach to command and control (also known as C2) that empowers subordinate decision making and decentralized execution appropriate to the situation (ADP 6-0). To assist in commanding forces and controlling operations, commanders establish their ***command and control system***, which is the arrangement of people, processes, networks, and command posts that enable commanders to conduct operations (ADP 6-0). Effective commanders use this publication to increase the state of readiness of their command and control system to ensure their units are prepared to conduct unified land operations.

The command and control training strategy described in this publication applies to all three components, all echelons (battalion through corps), and all unit types in the operational domain. The command and control training tables that implement this strategy complement the Army's new Regionally Aligned Readiness and Modernization Model (ReARMM) by providing a way to focus on specific command and control tasks and drills during limited collective training opportunities at battalion and above echelons. This publication highlights the training pathway for the commander and staff as they implement the command and control system throughout the Training Circular (TC) 6 series. Unlike most training circulars, this publication does not address specific training activities. Instead, this publication provides the introductory information commanders, leaders, and Soldiers need to train command and control and the mission command approach. This publication assumes reader familiarity with FM 7-0, Training.

As the proponent for the command and control warfighting function, the Mission Command Center of Excellence provides a comprehensive portfolio of individual, collective, and drill task training and evaluation outlines (T&EOs) that establish the tasks, conditions, and standards for C2. Leaders can use these to establish training objectives for the command and control system for training events from sergeant's time training through an external evaluation (EXEVAL) or combat training center (CTC) rotation. (See Annex C). These T&EOs are the building blocks of the Command and Control Training Tables, and are layered into the tables in a "crawl-walk-run" strategy that provides leaders a road map for establishing and refining training objectives during the training management cycle.

Chapter 1, Training and the Command and Control Warfighting Function, describes the command and control system, explains the commander's role in training Soldiers in it, determines how the principles of training apply to command and control training, and describes other command and control training considerations such as training materials available, key personnel supporting command and control training, and training for command post survivability.

Chapter 2, The Command and Control Training Tables (C2TT), divides the command and control system into four groups of Soldiers that require training proficiency: the commander, the staff, the personnel operating command posts (CPs), and the digital crew operating the command and control network.

Chapter 3, Training Management for Command and Control, describes how the command and control training tables are applied like those of typical gunnery tables for each of the four training audiences, and how commanders use the tables to certify and validate their command and control system. This chapter describes how the commander integrates these training tables into other training events on the unit training calendar throughout the training management cycle, leading to executing the final table in conjunction with the unit's external evaluation (EXEVAL).

Appendix A, Institutional Domain Command and Control Training Strategy, describes the strategy for command and control training and education conducted by the generating force.

Appendix B, Operational Domain Command and Control Training Strategy, outlines the command and control warfighting function in the operational domain for all components.

Appendix C, Self-Development Domain Command and Control Training Strategy, identifies Soldier and leader responsibilities for self-development pertaining to the skills, knowledge, and attributes that contribute to command and control competency.

Appendix D, Command and Control Training Support System, describes training resources available to units to support command and control training.

Chapter 1
Training the Command and Control Warfighting Function

This chapter describes how commanders at all echelons (battalion through corps) organize their command and control system consisting of the people, processes, networks, and command posts. Next, it describes the commander's role in training the Soldiers in the unit's command and control system by applying the principles of training defined in FM 7-0, *Train to Win in a Complex World*. Finally, this chapter addresses other considerations the commander takes into account for training their command and control system under challenging conditions, including threats to the unit command posts.

SECTION I – INTRODUCTION TO COMMAND AND CONTROL TRAINING

1-1. To successfully execute command and control, commanders and staffs need to first clearly understand the mission command approach to command and control and their command and control system. *Command and control* is the exercise of authority and direction by a properly designated commander over assigned and attached forces in the accomplishment of mission (refer to JP 1) (see Figure 1-1 on page 1-2). Commanders command forces, control operations, drive the operations process, and establish their command and control system to support these activities. The command and control system is the arrangement of people, processes, networks, and command posts that enable commanders to conduct operations.

OVERVIEW

1-2. Commanders apply the mission command approach to command and control (also known as C2) by empowering subordinate decision making and decentralizing execution appropriate to the situation. The elements of command are authority, responsibility, decision making, and leadership. The elements of control are direction, feedback, information, and communication.

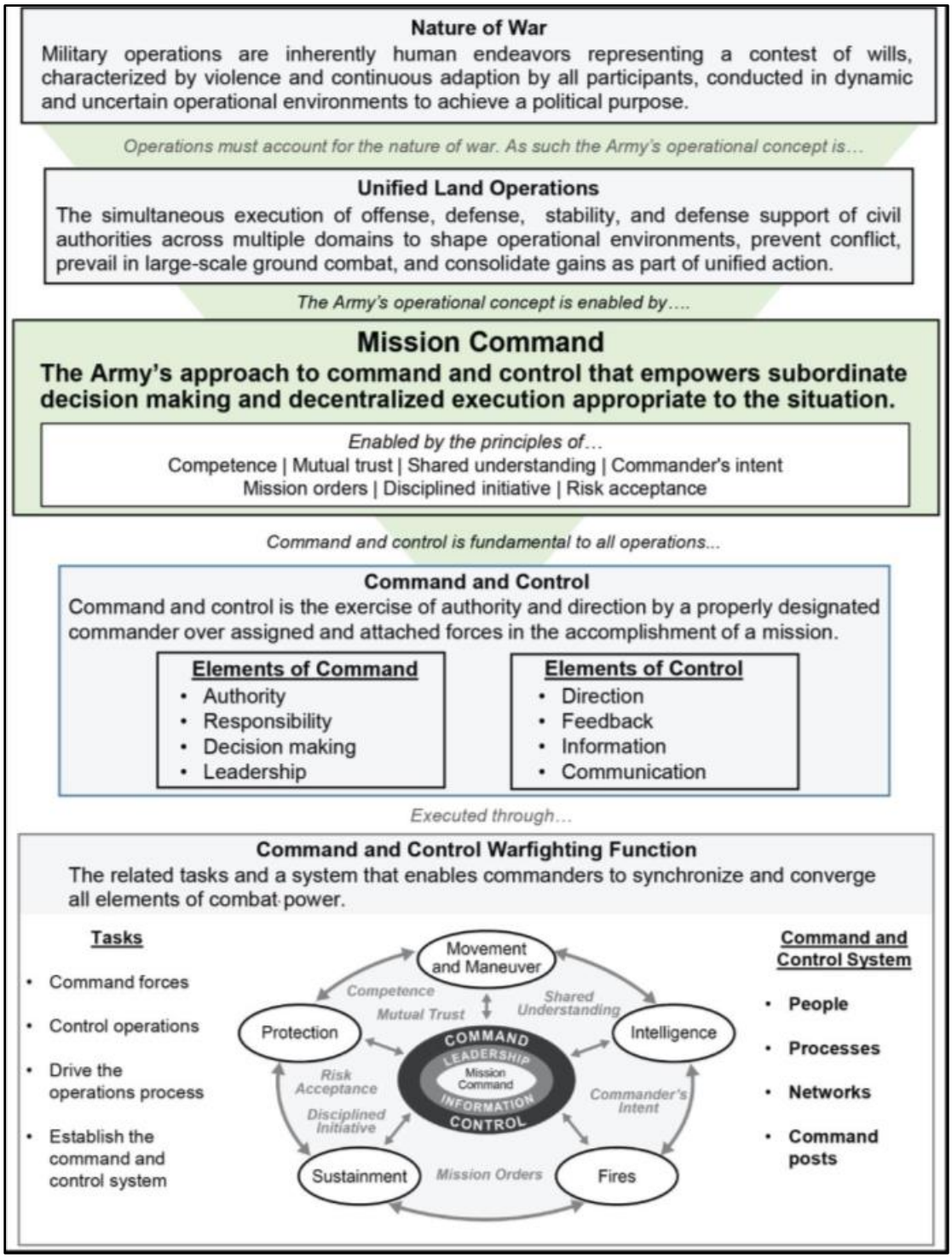

Figure 1-1 Logic Map

1-3. The unit commander is responsible for training the Soldiers in their command and control system, to apply the elements and principles of command and control in operations, as well as for reinforcing the mission command approach in training management and the execution of training events. Training and training management both employ and reinforce the principles of mission command:

- Competence.
- Mutual trust.
- Shared understanding.
- Commander's intent.
- Mission orders.
- Disciplined initiative.
- Risk acceptance.

1-4. The Army operations process of plan, prepare, execute, and assess is foundational to accomplishing objectives and completing missions. Commanders, supported by their staffs, employ the operations process to understand situations, make decisions, direct action, and lead forces to mission accomplishment. The importance of the operations process to the proper execution of Army operations is reflected by the attachment of an operations process supporting collective task (SCT) to every mission essential task (MET) on every battalion-and-above unit mission essential task list (METL) in the Army. For example, every MET for every Army brigade combat team (BCT) METL includes the supporting collective task 71-BDE-5100, *Conduct the Operations Process for Command and Control*.

1-5. Repetitive, realistic, and challenging training creates common experiences that develop the teamwork, trust, and shared understanding that commanders need to exercise the mission command approach to command and control and to achieve unity of effort. Training together is one of the most effective ways to develop teamwork, trust, and shared understanding. Since commanders must foster teamwork among task-organized units, often with unified action partners, realistic training includes task organizing for training as the unit intends to fight, and including or replicating unified action partners in training whenever possible.

1-6. The TC 6-0 series manuals explain the Command and Control Training Tables (C2TT) that provide commanders an iterative, progressive, crawl-walk-run approach to achieving training proficiency in applying the mission command approach to command and control. They provide the commander the background and foundation of training, certifying, and validating the command and control system using a standardized, holistic, and comprehensive training model. The approach breaks the command and control system into four training audiences or 'cohorts' for training — the commander, the staff, the command posts, and the digital crew. Staffs support the commander in understanding, visualizing, and describing an operational environment (OE); making and articulating decisions; and directing, leading, and assessing military operations. The command post provides an organized and staffed facility to carry out C2 activities. Crews of the digital systems provide knowledge and understanding required for conducting command and control.

1-7. The TC 6 series uses ten training tables for training, certifying, and validating each training audience. See Table 1-1 on page 1-5. Tables I through IV comprise individual, cell, and section crawl-level training designed to prepare Soldiers, sections, and cells to participate in collective training. Table V is a rehearsal for Table VI, which is the event for the unit commander to certify all cohorts are prepared for collective training as an entire command and control system. Tables VII through IX advance the proficiency of the staff, command posts, and digital crew as a collective command and control system. Table X is the formal evaluation of training proficiency at which time the senior commander validates the unit's command and control system is fully prepared to support decision-making in large scale combat or other operations. Each table details collective, individual, and drill tasks to be performed and assessed to establish unit proficiency. Chapter 3 provides greater details on the tables and addresses how the commander incorporates the training tables into the unit training plan (UTP). For more information about the tables listed below for a particular unit, see the unit echelon specific TC and chapter within the TC 6-0 series.

1-8. Commander Training Tables focus early on the things the unit commander must do to direct the training of the other cohorts. For example, the Commander's Table IV calls for the commander to provide guidance on the common operational picture (COP) before the digital crew develops the COP in their Table V. Commander's Tables progress from setting the conditions for command and control training, to certifying the training readiness of the various parts of the command and control system, to actively driving the

operations process through the mission command approach, to leading the unit while training the unit's METL tasks.

1-9. The staff consists of the Soldiers and staff leaders that support the commander in conducting the operations process and supporting the commander's decision making. Effective staffs multiply a unit's effectiveness. They provide timely and relevant information and analysis, make estimates and recommendations, prepare plans and orders, assist in controlling operations, and assess the progress of operations for the commander. The Staff Training Tables begin with staff members establishing personal and section/cell-level preparedness for command and control training by developing an understanding of their role on the staff and how the headquarters operates. After certification of section/cell-level proficiency in Table VI, the staff trains as a whole, leading to their validation in Table X

1-10. Most units employ a main CP. Depending on the unit type, it may have a tactical CP (TAC), a combat or field trains CP, or some other alternate command post. The command post training audience consists of the officers, noncommissioned officers (NCO), and Soldiers that establish each command post, conduct command post operations, and displace the command post as needed. The Command Post Tables take a similar approach as those for the staff, building from individual and section level proficiency, to CP level proficiency, to operating the CP as part of the whole command and control system. Each command post in the unit's table of organization and equipment, or described in the unit doctrine or standard operating procedure (SOP), should undergo training, certification (Table VI), and validation (Table X). For units where the tactical command post (for example) is a subset of the main command post that sometimes breaks off to support the commander for a specific operation and period of time, this challenges command post leaders to ensure their Soldiers are prepared to perform their role in both command posts, it also challenges the main command post to train to still be able to accomplish all collective tasks when TAC (or other command post) personnel are no longer located in th7e main command post.

1-11. The digital crew consists of the command and control information system operators and digital master gunners. While referred to as the 'digital' crew, these personnel also build mastery in maintaining a backup, analog COP. Digital Crew Tables begin with establishing individual operator to crew level proficiency, building the COP according to the commander's guidance, then mastering maintenance of the COP as the unit progresses to METL training.

Table 1-1. The Command and Control Training Tables

Method	Table	Commander	Staff	Command Post	Digital Crew
Cell and Section Based Training	I	Establish Organizational Business Rules and Develop Training Strategy	Organize and Acclimate Staff to the Organization	Conduct Pre-combat Inspection (Equipment and Maintenance)	Execute Basic Command and Control Information System Operations
	II	Establish the Training Environment	Develop Military Decision Making Process Skills at the Section Level	Develop Command Post Characteristics	Integrate Command Post Systems
	III	Frame the Operation	Establish Staff / Cell Processes and Integrate Warfighting Functions	Establish Command Post Infrastructure	Develop the Common Operational Picture
	IV	Prepare the Headquarters for Operations	Synchronize Command Post Operations	Conduct Command Post Survivability and Sustainability	Synchronize Operations
Collective Training	V	Drive the Operations Process	Conduct the Operations Process	Rehearse Command Post Operations	Conduct Command and Control System Rehearsal
	VI Certification	Assess and Certify the Headquarters	Conduct Staff Certification	Conduct Command Post Certification	Digital Crew Certification
Collective Training with Augmentees	VII	Direct Command and Control System Integration	Integrate the Command and Control System	Conduct Command Post Operations	Integrate the Command and Control System
	VIII	Command Forces and Control Operations	Synchronize Operations with Unified Action Partners	Sustain the Command Post	Synchronize Operations with Unified Action Partners
Formal Evaluation	IX	Command and Control Warfighting Function Validation Exercise Rehearsal			
	X Validation	Command and Control Warfighting Function Validation Exercise			

1-12. There is considerable overlap between the last three training audiences. For example, an NCO in the current operations cell that, as a member of the digital crew, operates a command post computing environment (CPCE) terminal, might also participate in the rapid decision-making and synchronization process (RDSP) as a member of the staff, and later contribute to displacing the CP as a part of the command post cohort. As such, commanders, chiefs of staff/executive officers, and staff leaders must plan for each cohort to have designated time for training their discrete tasks during the earlier training tables. Later, as the command and control system comes together to train as a whole, tasks for the different cohorts may be conducted simultaneously, forcing Soldiers and leaders to prioritize execution.

ROLE OF THE COMMANDER

1-13. This section describes the role of commanders in training generally, and specifically when training command and control. Commanders are solely responsible and accountable for the training and performance of their units. They train and resource training one echelon down and evaluate two echelons down. They are responsible for assessing unit training proficiency and prioritizing unit training—in particular, mission-essential tasks.

1-14. Commanders perform the specific and recurring activities within the operations process that facilitate training to achieve and sustain proficiencies, just as they lead to success in operations. These activities—understand, visualize, describe, direct, lead, and assess— ensure the commander drives training. As commanders plan, prepare, execute, and assess training, they ensure all training is performed to Army standards, and repeated as necessary to maintain proficiency.

UNDERSTAND

1-15. Commanders strive to understand the training challenges their units face. For command and control training proficiency, this includes understanding the higher commander's guidance for the conduct of the command and control training tables; understanding the current and desired proficiency levels of themselves, the staff, unit command posts, and the digital crew, which may be different for each training audience; understanding the operational environment their training environment must replicate, and understanding the training resources available to the unit.

VISUALIZE

1-16. Commanders visualize a path to attaining training proficiency in the unit's METs, and overlay on that visualization the companion path to command and control proficiency (see Chapter 3 for how to use combined arms training strategies (CATS) to do this). Command and control proficiency must progress sufficiently to enable reaching MET proficiency goals for each training event the unit conducts.

DESCRIBE

1-17. Commanders issue clear, detailed, unambiguous training guidance to subordinate units and the staff that describes what MET and command and control task proficiencies and weapon proficiencies to achieve, when to attain them, and how long to sustain them.

LEAD

1-18. Commanders influence unit training with their presence and leadership by providing purpose, direction, and motivation. During every aspect of unit training, commanders give the unit the benefit of their experience, knowledge, and guidance from planning training to execution. Not only is this true for command and control training, it is essential for the staff, command posts, and digital crew to gain proficiency that the commander personally provide guidance and feedback to each training audience for key training events.

ASSESS

1-19. Commanders assess training using the standards and performance steps and measures from proponent approved T&EOs for individual and collective tasks and drills to determine if training objectives have been met. When assessing command and control training, they seek key staff leader input, because even the commander cannot personally observe everything. They also conduct after action reviews (AAR) to get subordinates' input on how to improve proficiency. In the case of command and control training, the commander should conduct an after action review of Table VI training – at a minimum – before certifying the staff, command posts, and digital crew. Based on training assessments, the commander directs re-training as necessary. They also assess the conduct of training events to improve the conduct of similar future events.

COMMANDER TRAINING ACTIVITIES

1-20. When training the command and control warfighting function, commanders participate even as they train the staff, command posts, digital crew, and subordinate units by:

- Making risk decisions.
- Providing a shared understanding of the unit's current training readiness and the plan to establish and/or maintain proficiency.
- Developing subordinate leaders.
- Developing teams and building mutual trust.
- Employing the mission command approach to command and control by underwriting junior leaders' honest mistakes.
- Leading the operations process.
- Providing commander's intent for the tactical situation.
- Providing planning guidance to the plans team.
- Leading the Army design methodology (ADM).
- Leading the military decision-making process (MDMP).
- Leading the rapid decision-making and synchronization process (RDSP).
- Making risk decisions.

TRAINING GUIDANCE

1-21. Commanders provide clear and concise guidance on what is trained, when it is trained, who is trained and why—task and purpose. Training guidance provides subordinate commanders and leaders a clear vision of their training expectations giving the unit direction, purpose, and motivation necessary to train effectively. Training guidance should take a mission command approach by being broad enough to enable subordinate leaders to exercise initiative while being sufficiently detailed to ensure training readiness.

1-22. Unit commanders issue training guidance to the staff for the development of long-range training plans and through the issuing of those plans, to subordinate commanders. When issuing long-range plans, commanders must leave sufficient time for subordinate units to develop their own long-range training plans. Parallel and collaborative planning is an important factor in modifying long-range plans. Commanders at every level work together, sharing planning and resource information as each echelon concurrently refines their training plan.

1-23. Training guidance may include (see Appendix A of FM 7-0 for a more detailed list):

- The unit's prioritized METs and the required proficiencies to achieve.
- Weapons qualifications guidance.
- Collective live-fire tasks to train.
- When (date) training proficiencies must be achieved.
- The operational environment to replicate in training.
- External evaluation (EXEVAL) expectations and schedule.
- Implementation of the Command and Control Training Tables.
- Leader development planning.
- Leader certification.

1-24. Commanders are responsible for resourcing external evaluations two levels down, to include appointing and training external evaluators. The commander's guidance for senior evaluators should include guidance on evaluating the unit's command and control training proficiency using Command and Control Table X for each: the commander, staff, command posts, and digital crews of evaluated units' command and control systems.

TRAINING OBJECTIVES

1-25. Commanders define the training objectives for each training event by clearly identifying the tasks, conditions and standards, as well as the training proficiency to be achieved by the conclusion of the training event. A *training objective* is a statement that specifies the desired outcome of a training event. Training objectives are expressed as:

- Task. A clearly defined and measurable activity accomplished by organizations and individuals.
- Condition. The circumstances and environment in which a unit is to perform a task.
- Standard. The minimum acceptable proficiency required in the performance of a particular training task.
- Training proficiency. The task proficiency rating the commander expects the unit to meet at the conclusion of the event.
  - Individual task proficiency is determined by GO or NO GO.
  - Collective task proficiency levels are determined using the Objective Task Evaluation Criteria Matrix in the task T&EO.

1-26. As the proponent for the command and control warfighting function, the Mission Command Center of Excellence provides a comprehensive portfolio of individual, collective, and drill task training and evaluation outlines (T&EOs) that establish the tasks, conditions, and standards for C2. Leaders can use these to establish training objectives for the command and control system for training events from sergeant's time training through an EXEVAL or combat training center (CTC) rotation. (See Annex C). These T&EOs are the building blocks of the Command and Control Training Tables, and are layered into the tables in a "crawl-walk-run" strategy that provides leaders a road map for establishing and refining training objectives during the training management cycle.

COMMAND AND CONTROL AND THE PRINCIPLES OF TRAINING

1-27. The principles of training provide foundational direction for all commanders and leaders. These principles guide and influence training at every echelon. The principles of training are complementary to one another, providing task and purpose to every aspect of how we train—

- Fight to train.
- Train as you fight.
- Commanders are the primary trainers.
- NCOs train individuals, crews, and small teams.
- Train to standard using appropriate doctrine.
- Train as a combined arms team.
- Train using multi-echelon techniques.
- Sustain levels of training proficiency over time.
- Train to maintain.
- Training is multi-echelon and combined arms.

FIGHT TO TRAIN

1-28. As the Army moves to implement the Regionally Aligned Readiness and Modernization Model (ReARMM) this principle becomes particularly challenging to implement at battalion and above echelons. Under ReARMM, live training resources will be focused on establishing and maintaining company-level and below training proficiency. Commanders must schedule lower-resource training events such as Tactical Exercises Without Troops (TEWTs), map exercises (MAPEXs), and command post exercises (CPXs) to practice the command and control training tables.

1-29. Commanders should also leverage other activities to train command and control functions. For example, when a battalion has it's companies in the field with one company conducting weapons qualification, another conducting platoon live fire, and a third conducting platoon lane training, the commander can deploy the command posts to the field (or even in the motor pool) to monitor and support

the company commanders as they train. In this circumstance, battle captains, DMGs, and section/cell leaders can execute tasks and drills from the C2TT simultaneously with performing their role of supervising and supporting training.

1-30. Furthermore, it is every leader's duty to fight through distracters and protect training. For training the command and control warfighting function, this often means fighting through the 'distracters' of essential staff functions, higher headquarters imposed meetings, and headquarters company administrative requirements. Nevertheless, commanders and staff section/cell leaders must persevere to establish specific timeframes during which the staff, command post, and digital crew all train to develop and maintain tactical proficiency.

TRAIN AS YOU FIGHT

1-31. Leaders create training environments as close to combat-like conditions as possible. For the staff, command post, and digital crew, this should include replicating the higher, subordinate, adjacent, supporting, and supported units the headquarters typically deals with in combat. It should also include training the staff, command posts, and digital crews in their designated shifts in the later stages of training, prior to the unit's EXEVAL. All staff, command post, and digital crew shifts must demonstrate proficiency in command and control tasks under the conditions specified for each T&EO for their cohort to be certified or validated. See FM 7-0 for an explanation of how to use the Conditions statement of a T&EO to plan training.

COMMANDERS ARE THE PRIMARY TRAINERS

1-32. Commanders are solely responsible and accountable for the training and performance of their units. They train and resource training one echelon down as the higher commander and evaluate two echelons down as the senior commander. They are responsible for assessing unit training proficiency and prioritizing unit training—in particular, mission-essential tasks. This is also true for headquarters— the commander trains the command and control system, typically with the assistance of the chief of staff (COS) or executive officer (XO).

NONCOMMISSIONED OFFICERS TRAIN INDIVIDUALS, CREWS, AND SMALL TEAMS

1-33. NCOs set the foundation for Army training. They train Soldiers, crews, and small teams to be battle-ready. In the context of command and control training, the command sergeant major, staff NCOs, and the mission command digital master gunner train staff sections, command post cells, and the digital crew. They provide crucial input and advise the commander on what is trained and how it is trained. NCOs —

- Provide the foundation of Soldier and section/cell/crew training proficiency.
- Identify and train Soldier, section/cell, and crew tasks.
- Help identify unit collective tasks that support unit mission-essential tasks.
- Train and enforce task standards using command and control training and evaluation outlines provided for the unit.
- Continually focus training on sustaining strengths and improving weaknesses.
- Develop junior NCOs and help staff officers develop junior staff officers.
- Provide timely and objective training advice to the officer corps.

TRAIN TO STANDARD USING APPROPRIATE DOCTRINE

1-34. The primary doctrinal resources for training the command and control warfighting function are ADP 5-0, ADP 6-0, this training circular; and the Field Manuals (FMs) and Army Techniques Publications (ATPs) in the 5-0 and 6-0 series. The standards expressed in the training and evaluation outlines (T&EOs) for the command and control warfighting function and the Training Circular (TC) 6-0 series are derived from them.

TRAIN AS A COMBINED ARMS TEAM

1-35. The Army fights as a combined arms team. To win, units must regularly train with the organizations they operate alongside. Leaders must proactively plan and coordinate training to take into account as many

of the elements as possible with which they will operate. For example, the division staff, command posts, and digital crew should include the elements of the division artillery (DIVARTY) headquarters that form the Joint Air Ground Integration Center in the division command post.

1-36. Furthermore, command and control proficiency is essential to fighting as a combined arms team. Command and control is the warfighting function that integrates all the others towards the common goal of accomplishing missions.

TRAIN USING MULTI-ECHELON TECHNIQUES

1-37. The simultaneous training of multiple echelons on complementary tasks is the most efficient and effective way to train because it optimizes the use of time and resources. Units of the same organization at brigade and below are usually on the same training cycle and can conduct C2 training at multiple echelons simultaneously. At division echelon and above, typically the subordinate units of a force are not all on the same training cycle, so multi-echelon training is only possible by replicating some portions of the force in simulation.

1-38. ReARMM will likely impose similar restrictions on training battalion and brigade command posts using simulated subordinate units as the resources to train with live subordinate units are reprioritized.

1-39. When it is not possible for the headquarters to train with its full complement of higher, flank, subordinate, adjacent, supporting, and supported units and unified action partners, one technique is to train one staff shift at a time, with the other shift simulating the interaction with those other units and partners to provide realistic combined arms operations.

SUSTAIN LEVELS OF TRAINING PROFICIENCY OVER TIME

1-40. Commanders and staff leaders not only strive to reach training proficiency, but also seek to sustain levels of proficiency over time. Leaders understand the impact of task atrophy—that over time and circumstances, individual and unit skills naturally erode. Leaders actively and aggressively work to mitigate the effects of task atrophy by utilizing available training resources to extend training proficiency when possible. The command and control training tables are designed to support this sustainment training at the section/cell/crew level between major training events by leaders conducting additional sets and repetitions of training tables I through IV.

TRAIN TO MAINTAIN

1-41. Maintenance is essential for effective operations and is therefore integral to training. Maintenance includes maintaining personnel, equipment and systems over extended periods. Leaders ensure units conduct maintenance as they train to keep personnel, equipment and systems in the fight. In the case of unit command posts, this includes enforcing a battle rhythm in training that includes scheduled maintenance of generators, vehicles, and other command post equipment; and rest, meal, and down time periods for the personnel.

SECTION II - OTHER COMMAND AND CONTROL TRAINING CONSIDERATIONS

OPERATIONAL ENVIRONMENT

1-42. One of the principles of training is “Train as you fight”. That principle can only be met when the conditions under which units train replicate as closely as possible the conditions under which they will fight. Thus, establishing the operational environment for every training event is an essential part of planning and preparing training. Key to getting the operational environment right is developing an understanding of the operational and mission variables of the operational environment, and understanding how those variables are evolving in the contemporary operational environment

1-43. The Army’s Training and Doctrine Command (TRADOC) has extensively analyzed the current and near-future conditions under which the Army may have to fight and has created various Decisive Action Training Environment (DATE) scenarios to support commanders. These scenarios incorporate the

operational and mission variables, and emerging conditions in the theaters they endeavor to replicate, including near peer threats. These DATE scenarios are a tool for commanders and staffs preparing training, not a complete solution. Commanders must understand the variables and conditions in the environment in which their higher commander expects them to establish training proficiency. See Chapter 3 for additional information on using DATE to establish training conditions

OPERATIONAL AND MISSION VARIABLES

1-44. The operational and mission variables are tools for analyzing and describing an operational environment. As commanders begin building training, they may do so in relatively simple operational environments where only a few variables are in play. However, as they build towards training proficiency, they should establish operational environments that are increasingly complex and dynamic. Ultimately, when the unit undergoes its EXEVAL, the commander two levels up (senior commander) will ensure that the conditions for the evaluation include dynamic interaction in all eight operational variables (four at battalion and below).

OPERATIONAL VARIABLES

1-45. The *operational variables* are a comprehensive set of information categories used to describe an operational environment (ADP 1-01). The eight categories are political, military, economic, social, information, infrastructure, physical environment, and time, often abbreviated to PMESII-PT. Commanders use these variables to prepare the operational level context, or background, for training events.

1-46. Unit commanders and their staffs use these variables to describe the situation in which the unit will train or fight when conducting army design methodology or the military decision-making process. They then use this framework during execution of training and operations to identify variances from expected or anticipated conditions that may require the commander to make decisions.

1-47. Training scenario planners should be prepared to inject events into execution of training exercises that challenge the commander and staff to analyze the impact of each event on the mission variables, and determine what (if any) action to take to either take advantage of an opportunity or mitigate a new risk. These injected events will usually come into the command post via reports from higher, subordinate, or other units, or other unified action partners. Others are actions taken by the opposing force (either in free play or at the direction of the exercise director) or role players. Training planners must be sufficiently familiar with the operational variables themselves to answer follow-up questions from the unit, or to script the reaction of the environment to unanticipated unit actions that effect it. This dynamic scripting of the interplay between the unit and the environment challenges the commander and staff, and adds to the reality of the training event.

MISSION VARIABLES

1-48. The mission variables of mission, enemy, terrain, troops available, time, and civil considerations (METT-TC) are categories of specific information needed to conduct operations. Army leaders filter information from operational variables into mission variables during mission analysis. They use the mission variables to refine their understanding of the current situation, versus the operational environment as a whole. As with the operational variables, injects to the commander and staff, or actions of the OPFOR, will change the current situation, requiring them to analyze and react to the changes.

Large Scale Combat Operations

1-49. ***Large-scale combat operations*** (LSCO) are extensive joint combat operations in terms of scope and size of forces committed, conducted as a campaign aimed at achieving operational and strategic objectives (ADP 3-0). While the Army has been largely immersed in conducting stability operations for most of the last 20 years, it has recently refocused on being prepared to conduct large scale combat operations as new or re-emergent global powers increase in capability, capacity, and appetite. These competitors have peer or near-peer capabilities in the realm of land warfare that the Army must prepare to defeat. This training circular and the command and control training tables are designed to assist commanders in gaining and maintaining command and control training proficiency in the conduct of large scale combat operations, but are applicable to other mission sets as well

1-50. Successful operations against nuclear, chemical, and multi-domain capable peer threats require units prepared to react to the employment of those capabilities and operate degraded in contaminated environments, including degraded conditions in the electromagnetic spectrum and cyber domain. Planning and training must include active and passive measures for protection against the effects of these weapons, as well as techniques for mitigating their effects to preserve combat power. This includes greater emphasis on dispersion, survivability, and regenerating communications between echelons. These requirements must be incorporated into every facet of training, so units and commanders are technically and psychologically prepared for the environment they may encounter.

1-51. Tasks should be exercised across all the strategic roles of the Army (shape, prevent, large scale combat and consolidate gains), but the focus on METL tasks within the construct of large scale combat operations is the bedrock of training readiness.

1-52. While the Army has published a concept for conducting operations in the multi-domain environment in the year 2028 and beyond, already today peer threats can employ resources across air, land, sea, space and cyberspace domains and in the information environment to create lethal and nonlethal effects with operational significance throughout an operational environment. They seek to delay deployment of U.S. forces and inflict significant damage across multiple domains in a short period to achieve their goals before culminating. A peer threat uses various methods to employ their instruments of power to render U.S. military power irrelevant.

1-53. Threats might use cyberspace attack capabilities (such as disruptive and destructive malware), electronic warfare, and space capabilities (such as anti-satellite weapons) to disrupt U.S. communications; positioning, navigation, and timing; synchronization; and freedom of maneuver. Commanders and training planners should strive to establish the conditions in the training environment where the staff, command posts, and digital crew are challenged to converge effects across multiple domains to defend against and ultimately defeat threat capabilities and to gain a position of relative advantage.

Multinational Operations

1-54. *Multinational operations* is a collective term to describe military actions conducted by forces of two or more nations, usually undertaken within the structure of a coalition or alliance (JP 3-16). The likelihood the Army will conduct large scale combat operations as part of a military coalition nears certainty. The Army must work seamlessly with partner military forces. While multinational operations present greater opportunities to bring combinations of capabilities against an enemy, they also present challenges and demands. These include cultural and language issues, interoperability challenges, national caveats on the use of respective forces, the sharing of information and intelligence, and the rules of engagement.

1-55. In any such scenario, it is almost a certainty that Army forces will conduct command and control on a mission-specific, multinational network, with only ‘not releasable to foreign nationals’ (NOFORN) information maintained on a US-only network. To that end, the Army is fielding a mission partner environment (MPE) at the SECRET//RELEASABLE (S//REL) classification level for Army units to train and fight alongside foreign partners. The MPE includes a network package that is reliable, protected and configurable at the desired classification level to meet information and data exchange requirements within the human, technical and procedural domains. Training for command and control should always be conducted using the mission partner environment (as it becomes available), or as if the unit is in the mission partner environment until it is, so staffs can master procedures such as foreign disclosure, write for release, and operations security for the multinational operations environment.

Other Unified Action Partners

1-56. *Unified action partners* are those military forces, governmental and nongovernmental organizations, and elements of the private sector with whom Army forces plan, coordinate, synchronize, and integrate during the conduct of operations (ADP 3-0). Army forces, with unified action partners, conduct land operations to shape security environments, prevent conflict, prevail in ground combat, and consolidate gains. Army leaders use Army capabilities to complement those of their unified action partners. They also depend on partners’ capabilities to supplement Army capabilities. Effective integration requires staffs to create a shared understanding and purpose through collaboration with unified action partners.

1-57. The complexity of integrating all unified action partners into operations demands that Army forces maintain a high degree of proficiency that is difficult to achieve quickly. Leaders at all echelons seek training opportunities involving the Regular Army and Reserve Components, and with unified action partners at home station, at CTCs, and when deployed.

LEADER DEVELOPMENT IN TRAINING

1-58. Effective training and leader development form the cornerstone of operational success. Unit training provides the framework for leaders to develop their leadership skills and evolve as effective leaders. Training provides significant learning opportunities for junior leaders to make honest mistakes, and adjust their leadership proficiency. These concepts apply equally to staff leaders as to line unit leaders.

1-59. Employing the mission command approach to command and control during training is essential to developing junior leaders. Commanders should emphasize mission orders during training when actual consequences are low, allowing subordinates to develop their own solutions to problems, and intervening only when necessary to avoid a serious problem. Leaders coach, mentor and guide junior leaders, underwriting their honest mistakes without prejudice.

1-60. Command and control collective task T&EOs identify unit leaders that are essential to successful execution of the task. During training, commanders and senior staff leaders coach the less experienced staff leaders on their role in achieving the desired level of proficiency at the task.

1-61. In training, commanders emphasize the Warrior Ethos, to all Soldiers and Leaders. The Warrior Ethos is a set of principles by which every Soldier lives, and it states—

- I will always place the mission first.
- I will never accept defeat.
- I will never quit.
- I will never leave a fallen comrade behind.

1-62. This ethos is as important to the officers and Soldiers of the command and control system as it is for Soldiers in line units, though it is somewhat more difficult to create the conditions to reinforce it for them in training at higher echelons. Training planners should inject incidents into training scenarios that challenge the commander and staff to reinforce the Warrior Ethos.

1-63. An important aspect of leader development is to develop their capability and capacity to train their units, or staff sections/cells in the case of staff leaders. They must be able to conduct the training management cycle of planning, preparing, executing, and assessing training.

1-64. Junior leaders of the command and control system must know and understand their roles in executing training. Commanders and leaders must—

- Be present and actively engaged in training.
- Demonstrate tactical and technical proficiency. Ensure training is conducted to standard as prescribed in Army training and evaluation outlines (T&EO) and applicable doctrinal publications.
- Ensure training is led by trained officers and NCOs.
- Protect training by eliminating distracters.

1-65. Senior NCOs ensure—

- Junior leaders are trained and prepared.
- Training is conducted to standard, not time.
- Task execution is repeated until the standard is reached.

1-66. How training is presented is key to its effectiveness. Training is presented by the chain of command whenever possible. Unit leaders are present and responsible for training even if a technical trainer provides the instruction.

1-67. Training is performance oriented. Performance reinforces instruction, fixes the Army standard for tasks, and continues until the desired results are achieved. Performance is trained and evaluated against

standards found in applicable proponent publications (training and evaluation outlines, training circulars, etcetera).

1-68. Leaders progressively adjust task conditions to increase task difficulty. This builds task familiarity and Soldier and leader confidence. Leaders add realism and complexity to task conditions as rapidly as possible to achieve near-operational conditions.

1-69. Train and assess the intangible – mental toughness, intrepidity, valor, and the Army ethic are imputed in training. Soldiers and leaders should be trained in such a way as to challenge and draw out those qualities not easily measured, the very thing that produces and guarantees victory. For example, routinely adding unexpected, tough requirements at the end of challenging training, forces Soldiers and Leaders to dig deep, be mentally strong and to expect the unexpected, building reserves that can be drawn upon in combat. This is particularly applicable to C2TT's VI and X.

TRAIN EVALUATORS

1-70. The senior commander two echelons above an evaluated unit initiates, organizes, and provides the resources to conduct the external evaluation and designates the chief evaluator. The senior commander is responsible for training and certifying the evaluation team. The higher commander, in discussion with the evaluated unit commander, selects training objectives for the EXEVAL. The senior commander approves the training objectives.

1-71. Certification of the evaluation team should include verifying that the evaluators fully understand the training and evaluation outlines for the EXEVAL training objectives and how to complete them. Since the EXEVAL also serves as the C2TT Validation Exercise, they should also fully understand the training and evaluation outline for the echelon-appropriate *Conduct the Operations Process for Command and Control*, or – if the unit is training to become a joint force headquarters – *Conduct Joint Operations Processes for Joint Task Force*, 71-JNT-5100. The senior evaluator that will be evaluating the unit commander should fully understand the individual task 150-LDR-5100, *Lead the Operations Process*. Table 1-2 on page 1-15 shows each collective task by echelon.

1-72. Evaluators should also clearly understand the desired training outcomes for each task as expressed in the EXEVAL training objectives. Understanding the proficiency level the senior and higher commanders want the unit to achieve will aid the evaluators in teaching and coaching the unit's Soldiers to achieve the desired outcome.

1-73. Evaluators must be doctrinally competent to effectively evaluate a unit. The evaluator is a neutral external component and must remain completely objective to the evaluated unit. The T&EO is a mandated outline for a specific task leading to unit success when executed correctly. This is especially true when evaluating a T&EO that is robust and requires multiple iterations to observe and coach (for example 71-BDE-5100, *Conduct the Operations Process for Command and Control*).

1-74. Coaching opportunities are presented as professional inquiries and recommendations. The evaluator must always ensure the commander, or impacted staff section is not surprised about their observations identifying incomplete tasks, omissions, or anything pertinent to the evaluation. Daily exchanges between evaluators and evaluatees to review observations are highly encouraged.

1-75. Evaluators may conduct AARs after each battle or decision point, but at a minimum should conduct midpoint and final AARs. Midpoint AARs are opportunities to highlight challenges that must be corrected or completed to qualify for validation. Final AARs are opportunities for the unit commander and key leaders to review the externally evaluated event and how decisions or actions were determined and executed. Evaluators are also responsible for elevating observed conflicts or concerns to senior evaluators for mediation.

Table 1-2. Operations Process Training and Evaluation Outlines

Echelon	*Commander*	*Staff*
Detachment	150-LDR-5100, Lead the Operations Process	71-DET-5099
Battalion		71-BN-5100
Brigade		71-BDE-5100
Division		71-DIV-5100
Corps		71-CORP-5100
Command		71-CMD-5100
Theater army		71-TA-5100
Joint	150-LDR-1009,Lead the Joint Planning Process for a Task Force	71-JNT-5100

TRAINING MATERIALS

1-76. Training materials that describe what to train, how to achieve Army standards, and how to train are developed by Army proponents for specific unit types (BCTs) and functions (Knowledge Management). These products are made available to the force in the Central Army Registry (CAR), the Army Training Network (ATN), and in some cases in Digital Training Management System (DTMS). The Mission Command Center of Excellence develops training materials for training the individual and collective skills at the core of the command and control warfighting function. Soldiers and Leaders can access most of the products described below in the field using personal electronic devices with a downloadable app for the.

COLLECTIVE TASKS

1-77. Collective tasks are clearly defined, observable, and measurable activities or actions that require organized team or unit performance leading to the accomplishment of a mission or function. A collective task describes the performance required of a unit under the conditions a proponent has identified to replicate the anticipated operational environment. The training and evaluation outline (T&EO) describes the conditions under which a task should be executed, the standard the intended audience should achieve, and the steps and performance measures that help determine whether that standard is achieved. Leaders use T&EOs to identify other supporting collective and individual tasks that support higher level tasks. The standards and steps/measures of a collective task are written to be objectively evaluated by an observer not participating in the training. See FM 7-0 for an explanation of using a T&EO to assess unit training proficiency for reporting training readiness in DTMS.

DRILL TASKS

1-78. A drill is a collective action or task performed without the application of a deliberate decision making process. A cue, such as enemy action or a simple leader command, initiates a drill. The unit executes a trained response to the given stimulus. A drill requires minimal leader orders to accomplish, and is usually performed by lower echelons and battle staffs, and is standard throughout the Army. Drills for command and control tasks typically involve the battle staff and digital crew. Use a drill to train one action, one way. Drill task T&EOs describe the conditions under which a drill should be executed and define the performance steps and measures for the drill. However, for staff drills units can revise the conditions, steps, and measures of a drill in their tactical SOP to fit their unit type, operational environment, and situation, as long as the end state described in the standard is achieved.

INDIVIDUAL TASK

1-79. An individual task is a clearly defined, observable, and measurable activity accomplished solely by an individual. It is the lowest action, skill, or knowledge level in a job or duty. An individual task supports one or more collective tasks or drills and often supports another individual task. For example, the individual task for conducting mission analysis will support both the individual and collective tasks for conducting MDMP. An individual task must be specific, and have a definite beginning and ending. It is generally performed in a relatively short time; however, there may or may not be a specific time limit.

MISSION ESSENTIAL TASK LIST (METL)

1-80. METL is a tailored group of mission-essential tasks that reflect the doctrinal functions/designed capabilities for a specific unit type and echelon and is constructed using proponent-approved collective task T&EOs. There are two types of METL, HQDA Standard METL and assigned mission METL.

1-81. A HQDA Standard METL is designed for a specific Table of Organization and Equipment (TO&E) unit type and echelon from company through ASCC level (a division headquarters battalion [TO&E # 87000K100]) by an Army proponent (MCCOE) and approved by HQDA G-3/5/7.

1-82. An assigned mission METL (A-METL) is developed by the unit commander and approved by the higher commander when a unit is assigned a mission that is not fully executable using the Army Standard METL for their unit. See FM 7-0 for more information on developing an assigned mission METL, or for developing a METL for a unit that does not have an approved Standard METL.

COMBINED ARMS TRAINING STRATEGIES (CATS)

1-83. CATS are the Army's overarching strategies for training the force to achieve proficiency. There are two types of CATS, Unit CATS and functional CATS.

1-84. Unit CATS are designed to lead to proficiency in MET performance, individual and crew-served weapons qualification, and unit collective live fire execution for a specific unit type/echelon. Unit training planners are primarily concerned with unit CATS when building their UTP. The basis of the CATS program is a series of proponent-developed unit training strategies describing recommended training events, frequencies, and resources required to train to standard. CATS are descriptive unit training strategies that suggest a path for a unit to achieve and sustain training proficiency. Commanders use these recommended strategies to build unit training plans, modified to account for local conditions and resources available. Training events in the CATS provide recommendations of the methods that can be employed to train specific sets of related tasks. Training events are designed to suggest a progressive training path so that commanders can select the appropriate level of event difficulty to match the unit's current and desired levels of proficiency. CATS are nested crew-level to brigade combat team (BCT) or functional/multi-functional brigade, division, and corps. They provide recommendations on who, what, how often to train. They provide recommendations on use of training aids, devices, simulators, and simulations (TADSS), training gates, multi-echelon training, and provide a base line purpose, outcome and execution guidance for each event.

1-85. Functional CATS. Are designed for training tasks associated with a specific function by units of a particular echelon (command and control functional CATS for the battalion echelon). These CATS are typically the purview of training developers who use them to ensure they're incorporating the functional proponent-recommended tasks and training events into the unit CATS they develop. For example, the MSCOE incorporated the Command and Control Functional CATS for Brigades into the Maneuver Enhancement Brigade unit CATS.

1-86. There are two occasions when unit training planners draw elements of functional CATS into their unit training plans. When the proponent for the unit's CATS have not included the functional CATS in the unit CATS, unit training planners can pull task selections from functional CATS into the training events they build in their unit training plan. For example, when a battalion training planner has been directed to conduct C2TT Table VI at a particular CPX, they can pull the task selection associated with Table VI from the battalion level C2 functional CATS into the unit's training event.

1-87. The other occasion when a unit training planner can pull from functional CATS into the unit training plan is when they've been given a mission that isn't covered in their METL, and therefore is not in their unit CATS. For example, if a National Guard sustainment brigade directed to prepare for a Defense Support of Civil Authority (DSCA) mission, the brigade's training planners can pull task selections from the DSCA functional CATS into the UTP. A second example would be a unit trainer executing task sets of the C2 Functional CATS into the training plan when preparing for CPCE new equipment training so operators enter that training prepared to integrate existing C2 information systems with the new CPCE.

DECISIVE ACTION TRAINING ENVIRONMENT (DATE)

1-88. The Decisive Action Training Environment allows Soldiers to use combat "tools" to solve tactical problems in a wide range of real-world scenarios derived from actual threats across the Army's operational environment, or OE, instead of a training scenario derived from a known deployment location. There are four DATE environments with a detailed description of the conditions across four regions of the globe: Africa, Caucasus, Europe, and Pacific. They presents trainers with a tool to assist in the construction of scenarios for specific training events but does not provide a complete scenario. The variables used to create the DATE OE conditions are the Political, Military, Economic, Social, Information, Infrastructure, Physical Environment, and Time (PMESII-PT) aspects of the environment. The variables combined with embedded real-world actors create an array of potential threat capabilities that anticipate future conflicts. Together, they create a picture of the environment's nature and characteristics that would significantly impact the military if deployed to that area of the world. DATE OEs are relevant for all US Army units (Active Army, Army National Guard, and Army Reserve) that participate in an Army or joint training exercise.

TRAINING CIRCULAR (TC)

1-89. Official departmental publications that are not doctrine, but doctrine based, and provide a means to distribute unit or individual training information that does not fit standard requirements for other established types of training publications. Typically TCs provide guidance on conducting training events that require live fire, though not always. The TC 6-0 series does not require live fire but does describe certification and validation events.

TRAINING SUPPORT PACKAGES (TSP)

1-90. A TSP is a complete, exportable package integrating instructional products/materials and information necessary to instruct one or more tasks or competencies. The contents of the TSP will vary depending on the number of lesson plans included. A TSP is made up of a cover sheet, administrative instructions, and complete lesson plans. As an example, a commander could use ITSP 150-MC-9000, “Operationalizing CPCE: NET Command Group Leader Training”, either as self-development or to drive a discussion with key staff personnel planning for their upcoming transition from CPOF to CPCE.

WARFIGHTER TRAINING SUPPORT PACKAGES (WTSP)

1-91. A warfighter training support package (WTSP) is a complete, stand-alone, exportable training package that integrates all training products, resources, and materials necessary to support operating force training. Based on specific CATS training events, a WTSP meets the broader scope of what the collective training community requires for training events. WTSPs may vary greatly in size and depth of content, training environment, audience, and available TADSS. A WTSP provides variable levels of detail for describing a unit training event for use in live, virtual (including gaming), and constructive environments, or any combination thereof. A WTSP contains the information needed to plan, prepare, execute, and assess an event. The elements of a WTSP include overview, tactical materials, control materials, setup materials, administrative materials, evaluation plan, and references. One example of a command and control WTSP is Displace the Command Post for Brigade Combat Teams (WTSP_71_TS_BDE201).

LESSON PLANS (LP)

1-92. A lesson plan is the detailed development of content and resources used by instructors/facilitators to execute the instruction prescribed in one lesson within the prescribed time limits using the specified resources. A lesson plan includes the content and supporting information for only one lesson, which supports the learning and assessment of one learning objective. It provides detailed instruction/facilitation notes that orient instructors/facilitators as how to execute particular instructional methods and alternative instructional methods should the primary/selected instructional method not work. Typically lesson plans are used in the institutional domain, but may be used by leaders in the operational force to conduct classroom-type training.

INDIVIDUAL CRITICAL TASK LIST (ICTL)

1-93. An individual critical task list (ICTL) is the list of individual tasks that a Soldier must be able to perform to successfully accomplish their mission and duties at a specific military occupational specialty (MOS) and skill level (13B10, Cannon Crewmember) or for a specific function (Army skill identifier (ASI) 5C, for a Mission Command Digital Master Gunner). ICTLs are used by training developers to build courseware and to develop Soldier training publications for Soldiers and leaders to use to maintain proficiency.

SOLDIER TRAINING PUBLICATION (STP)

1-94. An STP is an Army-wide doctrine and training literature program (ADTLP) publication that contains critical tasks and other training information used to train Soldiers. STPs serve to standardize individual training for the whole Army; provide information and guidance in conducting individual training in the unit; and aid the Soldier, NCO, officer, and commander in training critical tasks. Unit trainers use STPs to train and sustain both leader and Soldier task proficiency. There are various types of STP for common tasks (Soldier manual of common tasks [SMCT]), military occupational specialty (MOS) specific tasks for enlisted personnel (Soldiers manual and training guide [SM-TG]), and specialty-specific tasks for officers (officer foundational standards [OFS]).

PERSONNEL THAT SUPPORT COMMAND AND CONTROL TRAINING

1-95. Among the resources the Army makes available to commanders to support command and control training are personnel trained to support specific aspects of command and control training. Some of these personnel are embedded in the unit, while others may be available through the installation mission training complex or through material developers.

SIMULATION OPERATIONS OFFICER

1-96. Simulation Operations Officers (Functional Area 57) provide the Total Army with a technically educated and tactically grounded cadre of officers specializing in the core areas of modeling and simulation (M&S) operations, mission command systems integration and knowledge management (KM). FA57 officers integrate Army command and control systems to invigorate home station command and control training and optimize resources to confront the increasingly complex environment. FA57 officers assist commanders to accomplish diverse training objectives by leveraging virtual and constructive capabilities to produce operationally ready and adaptable leaders and forces. The FA57 officer integrates and leverages all TADSS in support of the commander's staff training objectives. The FA57 officer provides a linkage between the unit and the mission training complex (MTC). They create exercises based on the Commander’s training objectives and requirements and orchestrate training events behind the scenes working with technical support elements and the unit’s chain of command to ensure every aspect of the training runs smoothly. FA 57 officers may in the unit TO&E or available through the local MTC.

MISSION COMMAND DIGITAL MASTER GUNNER (MCDMG)

1-97. The mission command digital master gunner (MCDMG) is a subject matter expert that can operate, maintain, integrate, and train others on the mission command workstation and other command and control information systems to generate a COP for the commander and battle staff using a unit’s integrated system-of-systems command post. A DMG will possess the ability to integrate, visualize, and troubleshoot the primary information systems and will be a leader capable of training and mentoring other unit DMGs and command and control system operators on the integration of their respective systems within the CP. The MCDMG conducts home station training with GO/NO GO evaluation criteria using the digital training tables found in TC 6-0.1: Digital Training and Qualification Digital Crews. MCDMGs are allocated for specific positions on a unit’s TO&E, but the unit may be required to coordinate the MCDMG course for nominees that have not yet earned the 5C ASI.

SIGNAL DIGITAL MASTER GUNNER (DMG)

1-98. The Signal DMG is responsible for the configuration and installation of Army networks, including command and control information systems, Battle Command Common Services, Digital Tactical Operation Center components, and the tactical local area network. The Signal DMG is responsible for coordinating the installation, planning, and management of unit signal communications. They serve as the commander's subject matter experts on the signal flow, architecture, and operations of communications network systems integration, leading to the digital COP development and display. Like the MCDMG, signal DMGs are on the unit's TO&E, but the unit may be required to send qualified Soldiers to the Signal DMG course.

KNOWLEDGE MANAGEMENT OFFICER (KMO)

1-99. The KMO helps organize people, processes, and tools to establish the C2 system to set conditions for successful conduct of the C2TT. During the execution of training the KMO makes adjustments to Annex Q (Knowledge Management) to the operation order and supporting KM action plans as the unit identifies weaknesses or sees opportunities to improve the C2 system across all warfighting functions.

1-100. The KMO leads the Knowledge Management Working Group (KMWG) in preparing the knowledge management action plan that postures the unit to conduct successful C2 training events that meet the commander's intent. The KMO works directly for the Chief of Staff/Executive Officer to create shared understanding across warfighting functions, section/cells, command posts and special staff. They identify what requirements are needed within the C2 structure prior to training, put them into place, and supervise to achieve desired training objectives during execution. When planning and preparing training, KMOs nest with the higher echelon's KM plan to achieve effective battle rhythm, employ battle drills in reaction to scenario-driven master scenario events list (MSEL) injects for controlling training event and documenting the results.

ANALYSIS, MODELING AND SIMULATION SPECIALIST

1-101. Army Civilian Career Program 36 (CP 36), Analysis, Modeling and Simulation is the civilian counterpart of the FA 57 officer. Analysis, modeling and simulation is pervasive throughout the Army, and is found in the Acquisition, Analysis, Operations, Testing, Training, Experimentation and Intelligence communities. They are typically available to commanders through the MTC (operational force) or the MCT (generating force).

FIELD SERVICE REPRESENTATIVE (FSR)

1-102. Field Service Representatives are embedded within the military to assist Soldier's with technical support, troubleshooting command and control systems, and network capabilities. FSRs are employees of the vendors of the equipment purchased by the Project Manager. They can assist with the design interface, spare maintenance, vehicle maintenance, on-site repairs, major exercises, and technical assistance. While the use of field service representatives for information systems and networks have declined with the increasing expertise and employment of signal and digital master gunners and FA 57's, they may still be available for some training events or deployments.

PRIORITIZING COMMAND AND CONTROL TRAINING

1-103. Prioritizing training acknowledges that units cannot achieve or sustain training proficiency on every task simultaneously due to limitations of time or other training resources. Commanders use a prioritized training approach to optimize limited training time and resources to achieve proficiencies based on their unit's mission. To focus this effort, the commander in dialogue with the next higher echelon commander, determines the priorities for each component (mission essential task proficiency and weapons qualification) based on mission requirements.

1-104. A mission-essential task is a collective task an organization trains to be proficient in its designed capabilities or assigned mission (FM 7-0). A mission-essential task list is a tailored group of mission-essential tasks (FM 7-0). Each MET has no more than seven supporting collective tasks, with supporting collective tasks that directly support the selected MET. 'High-payoff tasks' are tasks that support more than one MET. While very few units have command and control tasks as METs, every MET for every battalion and higher

echelon unit has "Conduct the Operations Process for Command and Control" as a supporting collective task, making training of the operations process task among the highest payoff tasks a unit can use valuable training time to master.

ATROPHY, FREQUENCY, AND REPETITION

1-105. Command and control individual skills can atrophy like any other skills. Collective staff/command post/section/cell/crew skills for command and control can erode even more quickly due to the relatively higher turnover rate experienced by Army staffs than in its line units. Chiefs of staff, executive officers, and principle staff officers should monitor turnover in the staff and direct certification of new staff members, and refresher training of section/cell/crew collective tasks as needed to combat skill and task atrophy.

1-106. Meanwhile, some C2 skills atrophy over time if not conducted frequently as refresher training. For example, conducting the military decision-making process is frequently cited as a training shortfall at combat training centers that improves with repetition. The C2TT I through IV are designed to be trained more frequently with low overhead drivers so that sections, cells, and command posts can conduct refresher training to maintain proficiency once it is achieved, minimizing the negative effects of personnel turnover and skill atrophy. Battle rostering of sections, cells, and digital crews is one way atrophy can be monitored and moderated.

1-107. The training tables also have repetition built into them to drive progression through crawl, walk, and run as the unit builds proficiency while facing more challenging conditions. For example, multiple tables require the unit to displace the command post under increasingly difficult conditions.

TRAINING COMMAND AND CONTROL IN ALL COMPONENTS

1-108. When deployed for operations, the Army executes missions as one force in conjunction with joint forces, multinational forces, and interagency organizations. Both the Regular Army and Reserve Components —the Army National Guard and Army Reserve—share the same training doctrine and procedures and train to the same standard as active units of the same type. The planning and activities for Regular Army and Reserve Components training have four differences. The planning horizon for Regular Army units is more compact than the planning horizon for the Reserve Component units. The resource coordination differs because the Reserve Component units coordinate (and compete for) resources with the Regular Army and other Reserve Component units. Reserve Component units conduct yearly training briefings rather than quarterly training briefings. Lastly, Regular Army units use the T-week concept whereas Reserve Component units may adopt a monthly based concept.

1-109. Reserve units also adapt premobilization and postmobilization training. The requirements differ from Regular Army requirements. Reserve Component units focus premobilization training on individual tasks, company level and below collective tasks, and individual weapons proficiency. They focus postmobilization training on company level and above collective tasks and unit weapon system proficiencies. Premobilization training directly links to postmobilization training. Reserve Component commanders train their units to standard on established premobilization tasks. Postmobilization expands organizational training, raises the echelon trained, and increases the amount of multi-echelon and combined arms training accordingly. Due to these circumstances, Reserve Component units may only be able to conduct C2TT through Table VI during premobilizaiton training except during their final Preparation year when they conduct their EXEVAL. Other units, due to size, mission, or resources available may only be able to proceed past Table VI once mobilized.

1-110. Premobilization training plans identify training requirements, training events, equipment, and training support packages to attain and sustain task proficiency. The command and control training tables integrated into CATS provide training planners with the information required to develop these plans. Using CATS to plan training events for executing the C2TT is explained in greater detail in Chapter 3.

1-111. Postmobilization training focuses on company-level and above collective tasks. These plans identify training requirements, training events, equipment, and training support packages needed to train the unit to METL proficiency upon mobilization. The CATS can assist mobilization station commanders determine the resources required to prepare for units to execute C2TT as part of postmobilization training.

1-112. The National Guard and Army Reserve, unlike the Active Army, require an extended training timeline due to limited training opportunities. Annual training is generally two or three weeks long and follows the reserve force generation planning cycle. Reserve component Soldiers are constantly challenged to plan, prepare, execute, and assess unit training. The C2TTs provide a proven plan to progress across the "crawl-walk-run" continuum while the unit builds proficiency for each T&EO under increasingly difficult conditions.

COMMAND AND CONTROL SYSTEM SURVIVABILITY

1-113. As mentioned above, large scale combat operations are expected to present significant threats to the C2 system. Commanders and staff leaders should seek to incorporate measures that facilitate command post survivability into all aspects of C2 training. Commanders ensure the Soldiers of their C2 system operate as if there is a hybrid threat maintaining conduct with the unit in the air, land, space, and cyberspace domains, the information environment, and a contested electromagnetic spectrum.

1-114. The C2TT incorporate survivability considerations both by including specific survivability-related T&EOs (71-DIV-D5148 React to Indirect Fire on the Command Post), and in the conditions and standards of T&EOs for many of the C2 tasks and drills (inclusion of EW threats in the conditions for displacing the command post task). As the staff gains basic proficiency in command and control tasks and drills, they should conduct some iterations with degraded command and control networks, degraded conditions in the electromagnetic spectrum, and/or with a degraded, denied, and disrupted space operations environment (D3SOE).

1-115. Even when not actively conducting C2TT, Staff, command post personnel, and digital crews should routinely perform their duties consistent with protection measures discussed below that are designed to increase survivability of the C2 system. They consist of a combination of physical security, information protection, operations security (OPSEC), and electronic protection measures.

DISPERSION AND MOVEMENT

1-116. Due to enemy means of detecting command posts, it is increasingly important to reduce the signature of the unit's command posts. Commanders must carefully balance the benefits of dispersion and frequent movement to prevent detection against the increasing vulnerability to physical security threats to the CPs.

1-117. To the extent possible given the communications equipment, vehicles, CP tentage, power generation platforms, and security forces available, commanders should disperse command post facilities to make the CP harder to detect by enemy forces, and to limit the damage from air or indirect fire attacks should the CP be detected. Techniques for dispersion include

- Employing remote antennas
- Physically dispersing CP cells (placing the planning cell tent, the intelligence analysis and control element (ACE), and the combined operations and intelligence cell (COIC)) out of artillery burst radius from each other.
- Placing CP support and life support areas away from emitters.

1-118. Another technique for CP survivability is to move the command posts frequently. Commanders trade temporary degradation of command and control capacity for the security gained by moving the CPs.

CONCEALMENT

1-119. Operation plans and orders should include provisions to conceal command posts and communications personnel, equipment, and transmissions.

1-120. It is difficult to conceal most communications systems; installing antennas as low as possible on the backside of terrain features, and behind manmade obstacles, helps conceal communications equipment while still permitting communication.

1-121. Commanders should use terrain and structures, and natural and man-made camouflage to mask command posts from visual observation from ground and air.

1-122. Leaders in charge of command post security should reduce to the extent possible coming in and out of the command post area, and vary routes and timing of necessary traffic into the command post to confuse enemy surveillance.

1-123. Leaders must also enforce noise discipline for power generators, radios (reduce volume, use handsets), vehicles (only run as necessary for power or maintenance), and Soldiers.

EMISSION CONTROL (EMCON)

1-124. Emission control is the selective and controlled use of electromagnetic, acoustic, or other emitters to optimize command and control capabilities while minimizing, for operations security: a. detection by enemy sensors; b. mutual interference among friendly systems; and/or c. enemy interference with the ability to execute a military deception plan (JP 3-85).

1-125. The G-6/S-6 develops a primary, alternate, contingency, and emergency (PACE) communication plan for communications. A PACE plan is a communication plan for a specific mission or task, not a specific unit. The plan considers both intra- and inter-unit sharing of information. The PACE plan designates the order in which an element will move through available communications systems until establishing contact with the desired distant element. The PACE plan must account for friendly emissions and the enemy's ability to intercept or interrupt them.

1-126. Methods of Emission control include:

- Reduce frequency and limit the length of transmissions to 15 seconds (net discipline).
- Operate at reduced power (particularly with omni-directional emitters).
- Pre-plan radio messages.
- Use data-burst transmission technologies.
- Use brevity codes.
- Prepare and use pro-word execution matrices for abbreviated direction and reporting of anticipated actions.
- Employ directional antennas.
- When using line of site communications means, position so that transmissions parallel the forward line of troops (FLOT).
- Employ satellite communications means (SATCOM).
- Use alternate means of communication during planning and preparation, reserving primary means for execution.
- Relay ultrahigh frequency transmissions using aircraft.
- When landline is available, use secure telephones.
- Employ couriers.
- Limit the use of high-frequency radios and directional super-high-frequency transponders.
- Use terrain or structures to electronically mask emitters.
- Carefully site radio equipment.
- Change frequencies IAW signal operating instructions (SOI).
- Avoid patterns of communications.
- Employ radio silence during movement or other activities where operations security is necessary.
- Inspect equipment for Proper grounding, installation, cables shielded, cable connection.
- Eliminate or greatly limit the use of personal electronic devices in the command post area.

DECEPTION

1-127. Using deception to confuse the enemy as to the actual command post positions can be effective, forcing the enemy to commit more resources to their reconnaissance and surveillance operations. Techniques for deception can include:

- Decoy transmitters.
- Decoy tentage/vehicles.

- Deceptive radio transmissions.

SECURITY

1-128. Security measures are important to prevent or reduce the risk of enemy contact at command post locations. Security measures include:

- Establishing local security upon first arriving at the site.
- Conducting patrols.
- Establish listening posts/observation posts (LP/OP).
- Varying traffic in/out (routes, timing of routine ops such as resupply) of command posts.
- Randomly using of multiple LZ for visitors/medevac/resupply.
- Burning or shredding paper.
- Enforcing light discipline during periods of limited visibility.
- Enforcing noise discipline.
- Encrypting communications (particularly for EEFI).
- Employing COMSEC equipment and procedures.
- Conducting battle drills when enemy activity is suspected, such as the electromagnetic interference (EMI) battle drill detailed in Chapter 7 of ATP 3-12.3, Electronic Warfare Techniques.

COMMAND AND CONTROL SYSTEM MODERNIZATION

1-129. Currently, near peer threats can detect and target command and control nodes. Large legacy CPs are vulnerable due to signature (physical, electromagnetic, thermal, cyber, etc.), limited mobility, and lack of standardization. The Army is developing material and non-material solutions to mitigate what is recognized in a gap for conducting large scale combat operations in this multi-domain environment.

1-130. The Command Post Integrated Infrastructure (CPI2) program has the mission to develop modern and mobile command posts (CPs), which are the field headquarters where Soldiers, the network, procedures and processes, and information systems come together. It will develop, procure, and field more survivable command posts at corps, division, brigade combat team (BCT)/brigade (BDE), and subordinate battalions. The mobile CPs replace large legacy CPs that are vulnerable because of their physical signature, limited mobility and lack of standardization. The program provides integrated infrastructure via a mix of vehicle platforms and shelter systems that enable CP functionality, increasing survivability through mobility and rapid displacement of the CP infrastructure.

1-131. Among the technologies that are being developed and fielded for modernizing command and control are:

- Mission Command Platform (MCP) vehicles that will blend with the maneuver formations they support, and have similar survivability and mobility as those formations
- Command Post Support Vehicles (CPSV) to host the servers, radios, and other computer and communications equipment for command posts.
- Command Post Computing Environment (CPCE) that replaces CPOF as the primary system for the electronic COP that will operate in the Common Operating Environment (COE)
- Additional visualization and collaboration devices that allow the commander and staff to view the COP and communicate internally and externally.
- Army intelligent power systems using micro-grid and other technologies that will reduce noise, fuel consumption, and set-up/take-down times.
- Rapidly erectable shelters with integrated environmental controls, lighting, and cable management.
- Improved camouflage netting with better radio-frequency (RF) and thermal signature scattering properties.
- Secure wireless local area network (LAN) that will reduce requirements for cabling.
- Land and airborne remote antenna technologies.

1-132. Army Futures Command will field these evolving technologies in increments whereby fielded units will receive packages of these technologies in a window of approximately six weeks. New equipment training will be part of the fielding plan, but will be insufficient to reestablish command and control training proficiency.

1-133. It will be imperative for commanders to plan collective command post training (at C2TT Table VI or higher) in a field environment immediately following completion of NET for any of these CPI2 fieldings in order to establish expertise in the employment of the new technologies, to update unit SOPs to account for them, and to reestablish certification that the unit's C2 system is prepared to support the commander using the new technologies. This training should include at least one displacement of the unit's CPs, preferably at night.

Chapter 2

The Command and Control Training Tables

This chapter describes the Command and Control Training Tables that provide commanders an iterative, progressive, crawl-walk-run approach to achieving training proficiency in applying the mission command approach to command and control. They provide the commander the background and foundation for training, certifying, and validating the command and control system using a standardized, holistic, and comprehensive training model. The approach breaks the command and control system into four training audiences, or cohorts, for training – the commander, the staff, the command posts, and the digital crew. Staffs support the commander in understanding, visualizing, and describing an operational environment; making and articulating decisions; and directing, leading, and assessing military operations. The command post provides the headquarters organized and staffed to carry out C2 activities. Crews of the digital systems provide knowledge and understanding required for conducting command and control.

SECTION I – INTRODUCTION TO CHAPTER 2

2-1. C2TT are designed to allow the commander to enter at any point in Tables I through IV for each cohort. The commander's assessment of the proficiency of each training audience allows the commander to include in their training guidance which Table should be the starting point for each cohort. For example, a unit's digital crew might have two school-trained Mission Command Digital Master Gunners (MCDMG), and mostly experienced command and control information system operators. This might lead the commander to determine the digital crew should begin C2 training at Digital Crew Table IV. Meanwhile the same unit might have an entirely new planning team and section/cell leads due to recent battle roster changes driven by professional development transfers for field grade officers and senior NCOs. The staff might have to begin C2 training at Staff Table I to familiarize them with their new positions and duties.

2-2. Leaders of the staff sections, command post cells, and digital crew shifts train their Soldiers to accomplish the individual and section level tasks of Tables I through IV to prepare them for training in their Table V with the rest of their cohort. During Table V, the senior leaders of the staff, command post, and digital crew integrate the sections/cells/crews with each other and begin to integrate with the other training audiences. This prepares all of them for the unit commander to certify in Table VI that the command and control system is ready to begin training as a unit, working with higher, subordinate, and external mission partners. Tables VII through IX are designed for unit leaders to progress the system from basic level proficiency through mastering the command and control warfighting function. Table X is usually conducted in conjunction with the unit's EXEVAL and serves to validate that all cohorts function seamlessly together as one command and control system that is prepared to support the commander in executing command and control while conducting unified land operations.

SECTION II – COMMAND AND CONTROL TRAINING TABLES I THROUGH IV

TABLES I-IV

2-3. Tables I through IV are designed to improve and enhance individual skills and establish limited collective task proficiency while the unit progresses towards exercising mission command. They are the 'crawl' of command and control training.

OVERVIEW

2-4. Tables I-II facilitate reoccurring training throughout the year to integrate and build proficiency in new personnel assigned to the unit. They consist primarily of individual task and familiarization with unit doctrine and SOPs. Tables III-IV are designed to establish staff cell level proficiency prior to the individual cells integrating into the unit command post(s). Commanders can choose to run Tables I-V in a single event or over the course of several events. For example, prior to a CPX, the commander may use a staff exercise (STAFFEX) (days one and two) to exercise the headquarters through the first four tables, and then train and retrain Table V with tougher conditions on days three and four.

COMMANDER TABLES

2-5. Unit commanders can use Commander Tables I through IV for their own professional development and as a resource in counseling subordinate commanders. Many of the tasks in the early tables are designed to complement the Center for Army Profession and Leadership publication, Army Handbook for Leadership Transitions. Commanders complete Tables I-IV at a pace consistent with the unit's training plan, mission variables, and the higher commander's guidance.

2-6. In Table I, commanders establish organizational business rules and assess the unit's training proficiency. Commanders may use Table I as a reference prior to or at the onset of command to establish expectations for the organization. In Table II, they establish the basic command and control structures that establish the climate for conducting C2 training. The decisions the commander makes in this table directly impact the actions the staff takes in Tables I through IV. Table III consists of organizing the command and control system. In Table IV the commander prepares the headquarters for conducting collective training by issuing guidance and direction for staff training preparation. Unit commanders prepare themselves for driving the operations process in Table V by beginning their own visualization of how they foresee conducting operations.

2-7. The commander executes some of the tasks in the commander tables ahead of the staff, command posts, and digital crew executing their own in order to set conditions for those cohorts to conduct their own training. For example, the commander establishes COP requirements in Commander Table III prior to the digital crew being able to establish the COP in their own Table III.

STAFF TABLES

2-8. The commander, COS/XO, and staff leaders use Tables I through IV to train individuals (including themselves) and staff sections and cells to gain basic proficiency in the skills required for their sections and cells to perform the tasks required of them for the unit to successfully execute command and control within the SOP of the unit.

2-9. Unit commanders, COS/XOs, and principal staff officers are constantly balancing daily operational requirements with training opportunities. The COS/XO will leverage the principal staff officers, and section and cell NCOs to conduct many aspects of tables I through IV independent of one another. These tables are typically conducted through self-study and events like leader professional development sessions, brown bag lunches, TEWTs, classes, sergeant's time, and hip-pocket training.

2-10. Tables I and II are designed to develop each staff member's individual competence and understanding of their role in their section, and of the SOP they'll execute. These tables are designed to occur on an on-going basis as Soldiers and officers join the staff. Section and cell leaders assess their proficiency and develop training plans to successfully achieve the standards of tables III and IV.

2-11. Table III is designed to provide the COS/XO the tools to build section and cell level proficiency in staff basics such as information management, developing the section's staff estimate, or conducting planning according to the integrating cell's SOP. As the staff executes these tables, the COS/XO implements guidance the commander has given for organizing the staff sections and cells, and the manning of the command posts, and then validates the warfighting functions. The planning staff conducts the military decision-making process to develop the operation order that will provide the tactical backdrop for training in tables IV through VI.

2-12. In table IV, the COS/XO and other staff leaders synchronize command post and staff operations, to include establishing a battle rhythm. The staff rehearses staff battle drills, conducts rehearsals for the operation that will drive Table V, refines the plan as understanding of the situation improves, and maintains the COP and the running estimates that support it.

COMMAND POST TABLES

2-13. Command post Tables I through IV are directed at the individuals, teams, and cells led by the operations NCO. Tables I-II are designed to occur on a continuous basis as new personnel arrive to the command post and must become familiar with command post operations and their role in them. Those tables ensure command post Soldiers are able to operate and maintain command post equipment, understand the command post configuration and the command post SOP.

2-14. Table III and IV establish and then build on basic command post collective task proficiency. At the conclusion of table IV, the command post team should be able to emplace and displace the command post, implement the knowledge management plan, protect information, sustain and maintain the command post, and secure the command post to include minimizing the command post's electromagnetic signature.

DIGITAL CREW TABLES

2-15. The Digital Training Tables are designed to assist the Digital Master Gunner, system operators, and knowledge management officer to integrate staff efforts into a COP for the commander. The tables offer measurable outcomes for individual and collective tasks that provide a base operating level for the staff's performance. Command and control information system operators should be proficient on digital training tables I-II, which establish basic operator skills for setting up and preparing information systems for operation, prior to starting Tables III-VI, which are designed to establish the digital crew's ability to operate as a team and share relevant information across platforms that provide a common situational understanding for the commander via the digital COP.

2-16. Digital Crew Table I establishes individual tasks that evaluate the performance of the individual digital crew Soldiers in establishing the command and control network according to unit SOP and the commander's guidance. The digital crew should train for forming the network architecture, initial set-up, and a "jump TOC" scenario per the unit SOP. The digital crew should be prepared to update the unit commander and staff on the capabilities and limitations of each system.

2-17. Digital Crew Training Table II provides standards based training for the integration of efforts across each information system according to warfighting function. The execution of table II is vital to prevent the duplication of staff products while allowing for parallel planning in accordance with the most current guidance. The digital crew must be effective in ensuring the staff has the ability to share, view, and edit plans efficiently. This table builds on the tasks outlined in Table I and requires the entire digital crew to be present for the integration of all systems.

2-18. Digital Crew Training Table III begins the process of integrating individual information systems data by warfighting function to provide a COP for the commander. This table requires the digital crew to integrate efforts that will assist the commander in making timely decisions. The DMG should train the unit's digital SOP to all digital crew members. This training should specifically focus on information to display on the COP, naming conventions, and knowledge management.

2-19. The purpose of Digital Crew Training Table IV is to prepare digital crew members to synchronize operations. Table IV builds on Table III skills of COP development and prepares the digital crew to synchronize the operation of their digital systems in order to provide understanding and recommendations to the commander and staff. Digital synchronization skills include the ability of digital crewmembers to recognize and act on critical information, and manage the transition of information from planning to current operations. The end state of Table IV is the digital crew demonstrating their ability to operationalize the commander's intent for a digital COP.

SECTION III – COMMAND AND CONTROL TRAINING TABLES V AND VI

TABLES V AND VI

2-20. Table VI is the unit commander's certification that all training audiences are prepared to advance to collective training as a complete command and control system. Table V is where staff, command post, and digital crew leaders conduct final training to ensure their Soldiers are ready for the commander's certification.

OVERVIEW

2-21. Table V is the first Table in which the commander, staff, command posts, and digital crew are training with each other. The staff and digital crew establish their command posts and conduct the operations process, led by the commander. The COS/XO, operations sergeant major (SGM), and staff leaders validate that each section, cell, command post, warfighting function, and digital crew are prepared for the commander to certify them in Table VI. In table VI, the unit commander assesses the work of their subordinate leaders and certifies that the staff, each command post, and the digital crew that comprise the unit's headquarters are prepared to train together as one command and control system.

2-22. Typically, Tables V and VI will be conducted in different training events, giving leaders an opportunity to retrain as needed or to refine procedures and operations. However, if the commander determines during their initial training readiness assessment of the unit's command and control system in Commander's Table I that the headquarters is already functioning well, it's possible for the unit to conduct Tables V and VI in the same training event by, for example, conducting Table V training in the first three days of an exercise and Table VI Certifications in the last few days. Table VI, certification, is conducted during a CPX or FTX ideally conducted in a field environment with 24-hour operations.

2-23. At the conclusion of Table VI, the unit commander validates that their command and control system is prepared to conduct collective training as a system. Should one or another cohort fall short of achieving a desired training proficiency on any of their Table VI task T&EOs, the commander may direct retraining on that/those task prior to validating that cohort.

COMMANDER TABLES

2-24. In table V and VI, the commander leads the operations process using the operational environment in which the unit will conduct its external evaluation. In doing so, they are providing the staff sections and cells, all command posts, and the digital crew the commander's guidance they need to fulfill their responsibilities for the command and control system to execute the operations process. Table VI is the certifying event for the unit commander and the headquarters. This table is conducted as a collective unit event during which the staff, command post, and digital crew execute their respective Table VI certifications using the same training scenario.

2-25. Battalion commanders are certified by their brigade/group-level commander using Commander Table VI. Brigade and higher echelon commanders certify themselves.

STAFF TABLES

2-26. The staff in all unit command posts, function as one mission command system to conduct the operations process and support the commander's decision making. To do this successfully, all staff members must understand the roles and functions of not just their section and command post, but of all sections and command posts in the mission command system. In Tables I through IV the staff strove to become proficient at their own role and tasks. In Tables V and VI the staff begin developing their understanding of how the rest of the command and control functions.

2-27. In table V, the staff should be functioning at a walk level of proficiency in their designated command posts, interacting with subordinate units, and performing basic staff functions such as executing the battle rhythm. The chief of staff or executive officer uses staff table V to confirm that the sections, cells, and command posts are prepared for the unit commander's certification in Staff Table VI. At the conclusion of

Table V, the COS/XO should conduct an after action review with the goal of identifying adjustments to staff operations that should be made prior to the unit commander's certification.

2-28. Table VI, Certification is an internally evaluated event whereby the unit commander and key staff leaders determine whether the staff works as a cohesive unit, led by the commander. Commanders choose which tactical tasks (usually METs) are to be performed as the backdrop for the certification. The unit commander certifies the staff has met all training criteria for Table VI by achieving proficiency in each of the tasks listed therein. Once the staff is certified, they can proceed to unit training in Tables VII through X.

COMMAND POST TABLES

2-29. The unit commander may opt to conduct Tables V and VI with all command posts simultaneously and interoperably, but the C2TT model does not require this condition until Table VII. Instead, they could train/certify the main command post during a higher headquarters' command post exercise (CPX), and train/certify the rear command post during a logistics exercise (LOGEX).

2-30. During table V, the command post team improves teamwork to the point they begin displaying crew-drill-level proficiency in tasks such as emplacing and displacing the command post (a trained response to a given stimulus, or initiated cue), and conducting battle drills from the command post SOP. The operations sergeant major, operations NCO, or other senior NCO for each command post will validate each command post as operational, ensure it meets the commander's intent and guidance, and confirm it is ready for command post table VI (Certification).

2-31. The command post crew implements measures to reduce the command post physical and electronic signatures discussed in Chapter 1, such as using terrain masking and employing remote antennas. The training and evaluation outlines for establishing and displacing command posts at each echelon detail provisions the command post should implement to reduce the chances of being detected, thereby increasing survivability.

2-32. This table is conducted within a larger collective training event determined by the unit commander, using the unit CATS as a reference (see Chapter 3). As budget and training days allow, this table is conducted in a field environment with 24-hour operations. The staff demonstrates proficiency in all areas that were rehearsed in table V. The unit commander conducts an after action review and certifies each CP at the conclusion of this event, unless retraining in some particular area is required prior to entering table VII training with the entire command and control system.

DIGITAL CREW TABLES

2-33. The purpose of Digital Training Tables V and VI are to rehearse establishing the COP then certify the ability of the digital crew on COP establishment. Successful completion of Digital Training Table VI will certify the digital section's ability to integrate into the staff for collective training. The desired end state is a digital crew prepared to leverage the command and control network to enable the operations process. Certified digital sections should be able to plan an operation using their assigned information system, and not rely on PowerPoint, Excel, or Word.

SECTION IV – COMMAND AND CONTROL TRAINING TABLES VII THROUGH IX

TABLES VII THROUGH IX

2-34. Tables VII through IX constitute collective training of the entire command and control system in preparation for Table X validation that the unit's command and control system is prepared to support the commander's decision-making during operations. After completing Table VI, the unit should receive a change of mission fragmentary order (FRAGORD) from the higher headquarters to drive the unit's training in Tables VII through X. It should include the task organization the unit will fight with when conducting its external evaluation in conjunction with Table X, with additional FRAGORDs as needed as the unit progresses through the tables. The unit should begin training with any external units or organizations included in the

task organization or that the order requires the unit to coordinate with. When those units or organizations are not available, they should be replicated in simulation and/or using role players.

OVERVIEW

2-35. Units executing tables VII through X build on unit competency and include augmentees, unified action partners, or liaisons. Tables VII-IX incorporate the full complement of echelon appropriate associated assets, a rigorous and dynamic operational environment, and the stresses typically experienced during capstone training events or deployments. It is important during tables VII through IX to build the larger unit team while working with higher, lower, flank, supporting, and supported units and other unified action partners. In some cases these partner organizations will have to be simulated (foreign military partners).

2-36. Using the crawl-walk-run methodology, commanders should consider tables I through V crawl-stage training as individuals and sections/cells/crews build competence and capacity. Table VI certifies that the staff is at walk level proficiency. Tables VII – VIII are the walk-to-run stage with the whole command and control system building confidence, competence, and capacity. By table IX, the headquarters should be at the run stage as it makes final refinements prior to the validation exercise/ external evaluation.

2-37. As the unit progresses through Tables VII through IX, the unit should practice displacing its command posts with increasing frequency and toughness of conditions. Likewise, the threat of being detected and having contact with the enemy should increase, challenging the staff, command posts and digital crews to implement measures to increase security and survivability, and reduce their electronic and visible signatures.

2-38. The validation exercise, Table X, is conducted in a real or simulated operational environment. If a unit is allocated to a given contingency, the exercise should be conducted in an operational environment that replicates that contingency. Otherwise, the unit should conduct these tables in one of the Decisive Action Training Environment (DATE) scenarios. Tables VII through IX should be conducted in that same operational environment. (See Chapter 3 for more on selecting the training OE).

COMMANDER TABLES

2-39. In Table VII, the commander makes final changes to the command and control system to account for liaisons, other augmentees, and recommendations emerging from the unit after action review of Table VI. The commander organizes personnel, directs information system retraining, refines guidance for the digital and analog COP, directs security measures for the network, and refines the SOP.

2-40. In Table VII (and the later tables), the commander should also evaluate the physical and electronic signatures of the unit's command posts and make changes necessary to make the command posts harder to detect and easier to defend as discussed in Chapter 1. In Table VII, the commander leads Army design methodology (at appropriate echelons – typically BCT and general officer commanders), and the military decision-making process at all echelons battalion and above.

2-41. In Table VIII, the commander focuses on increasing the competence and capacity of the unit's command and control system. The commander driving the operations process through their activities of understanding, visualizing, describing, directing, leading, and assessing (UVDDLA) is integral to completing these tasks. In Table VIII, the commander drives the operations process with an emphasis on reinforcing the mission command principles of competence, mutual trust, shared understanding, commander's intent, mission orders, disciplined initiative, and risk acceptance.

2-42. Table IX is the rehearsal for the unit's command and control validation, Table X. The commander continues to drive the operations process, leading the unit through additional "sets and reps" of the collective command and control tasks facing situations of increasing complexity and more demanding challenges in terms of time and the enemy. In Table IX, the commander leading the rapid decision-making and synchronization process (RDSP) will be essential to tactical success.

STAFF TABLES

2-43. Upon completion of Table VI, staff certification, the staff, led by the executive officer or chief of staff, and principal staff officers, and under the guidance of the commander, transitions to Tables VII through IX.

In these tables, the staff integrates external elements (liaisons and unified action partners), and the staff conducts more interactions with higher, lower, adjacent, supported, and supporting headquarters, and unified action partners. To do this successfully, all staff members must understand the roles and functions of not just their section and command post, but all sections and command posts in the command and control system.

2-44. The venue and facility for executing these tables is determined by the unit commander in accordance with mission requirements, higher command training guidance, and unit and C2 functional CATS as a recommended training strategy. For example, the unit commander may conduct table VII in the command post set up at the installation mission training complex (MTC) during a CPX, and conduct tables VIII and IX in a field environment during a field training exercise.

2-45. Table VII begins with the staff conducting Army design methodology (at appropriate echelons) and/or the military decisionmaking process using the order from higher headquarters that will drive the unit's external evaluation. Depending on the unit type and echelon, and the nature of the planned EXEVAL operation, the staff will begin integrating liaisons and building the larger team with subordinate units and unified action partners. Cells and sections will identify and establish reporting requirements through the correct channels, and the COS/XO will ensure the headquarters can report these requirements to higher and supported commands. The command will task organize based on mission requirements, and refine the unit knowledge management plan to accommodate new units or partners in the task organization.

2-46. The focus of table VIII for the staff is synchronizing operations. The table is event and scenario driven in a manner that the unit can work towards MET proficiency in accordance with collective task T&EOs while the staff builds command and control proficiency. The staff conducts the operations process in support of the commander, to include exercising the battle rhythm, conducting rehearsals, exchanging relevant information, maintaining the COP through running estimates, and conducting, the rapid decision-making and resynchronization processes (RDSP).

2-47. The Table IX exercise is conducted using 24-hour operations and lasts more than two days. The intent is for this exercise to match as closely as possible to the training circumstances and requirements anticipated in Table X, the command and control warfighting function validation exercise. The staff should conduct as many repetitions of the activities of the operations process as is practical during Table IX.

2-48. Exercise planners should plan for increasing the challenges posed to the staff in Table IX over those they faced in the earlier tables, and should further increase during the conduct of the exercise.

2-49. At the conclusion of executing Table IX, functional and integrating cell chiefs conduct informal internal after action reviews prior to the commander's unit after action review. Finally, the staff should make final adjustments to the SOP, COP, and knowledge management plan after the after action reviews are complete and prior to executing Table X validation.

COMMAND POST TABLES

2-50. In Tables VII through IX, the command post teams incorporate new elements of the force as established in the operation order for the unit's EXEVAL and develop proficiency in supporting the commander and staff as they conduct the operations process to make and implement decisions, and to synchronize operations.

2-51. In Table VII, the command post leaders integrate external elements such as liaisons and unified action partners into the command post layout, the knowledge management plan, command post administration, and into crew and battle drills as needed.

2-52. In Table VIII, the command post teams continue to refine and improve command post operations and practice sustaining and securing their command post.

2-53. Table IX is a rehearsal for the command post validation during its EXEVAL. The command post team should be executing battle drills to standard under the toughest conditions. They should be providing the right information to the commander and staff at the right time and in the right format. They should be able to displace the command post at night and in any weather conditions. At the conclusion of Table IX, command post leaders should conduct after action reviews and make any final adjustments to the command post or its procedures prior to enter the validation exercise.

DIGITAL CREW TABLES

2-54. In Tables VII through X, the digital crew is integrated into their staff sections and command post cells as the staff and command post conduct their tables VII through X as well. The digital crew plays a supporting role and will be evaluated as such. The training and evaluation outlines used to train the staff in Digital Training Tables III and IV continue to be used to assess and evaluate digital crew training proficiency as the conditions become more challenging in the later tables. The Digital Crews enable the command posts and staff to conduct current operations and plan future operations using CPOF/CPCE to analyze information, make recommendations, and synchronizing information resources for the formation and dissemination of the COP.

2-55. From the lens of the digital crew, Training Tables VII and VIII are the first tables that evaluate the digital crew's ability to integrate and operate as part of the command post cell and/or staff section. The digital crew members should be seen as the SMEs on their staff section's information systems and understand how to leverage the information on the network to help develop the COP and build situational understanding for the Commander.

2-56. As with previous tables, evaluating Table IX assesses staff and digital crew proficiency of their ability to integrate command and control information systems into the operations of their staff sections and command post cells. This table is conducted under conditions similar to the projected Table X environment.

SECTION V – COMMAND AND CONTROL TRAINING TABLE X

TABLE X

2-57. Table X, The Command and Control Validation Exercise, is typically conducted in conjunction with the unit EXEVAL or CTC rotation. At the conclusion of Table X, the senior commander validates that the unit command and control system is prepared to support the unit commander in conducting the operations process, and making and implementing decisions while conducting unified land operations. Should one or another cohort fall short of achieving proficiency on any of their Table X T&EOs, the senior commander may direct retraining on that/those T&EOs prior to validating that cohort.

OVERVIEW

2-58. The evaluation team assesses unit proficiency at performing the command and control tasks associated with the table, thereby providing the higher and senior commander's data to support their validation of the unit command and control system. These tables should be conducted under the toughest conditions, consistent with higher headquarters' command training guidance. For example, displacing the command post should be conducted at night with a high probability of enemy contact across multiple forms of contact. For example, this could be electronic warfare contact (detection and/or jamming) followed by observation (from an enemy unmanned aerial vehicle or civilians posting video to social media) followed by indirect fire and chemical agent contact utilizing training CS gas.

COMMANDER TABLE X

2-59. During the course of the validation exercise, the unit commander demonstrates their ability to drive the operations process through the activities of understand, visualize, describe, direct, lead and assess, leading to successful execution of tactical tasks. The outcome of Table X is the evaluating commander validating that the commander is prepared to lead the unit in the command and control of unified land operations.

STAFF TABLE X

2-60. The staff conducts the operations process and knowledge management, that supports the commander in making and implementing decisions, displaces the command post (with the command post and digital crew), conducts command post operations, and executes the unit battle rhythm. The outcome of Table X is the evaluating commander validating the staff as prepared to support the unit commander in executing command and control during large scale combat operations.

COMMAND POST TABLE X

2-61. Each command post established in the unit modified table of organization and equipment, or in the Army training publication (ATP) for the unit, undergoes validation. During the exercise, the training scenario drives all command posts to interact with each other and with higher, lower, adjacent, supported, and supporting units, and unified action partners, according to the unit SOP. Command posts conduct command post operations, maintain continuity of command and control, implement the knowledge management plan and maintains command post security.

2-62. The Table X outcome is the evaluating commander validating all unit command posts are prepared to support the unit commander and staff in the execution of command and control, to include the ability to displace under the toughest conditions.

DIGITAL CREW TABLE X

2-63. In Table X the digital crew demonstrates that it is fully integrated into the staff while executing the operations process, supporting the commander's decision making with the COP, and displacing the command posts. During the execution of Table X the digital crew should be challenged with conditions in cyberspace and the electromagnetic spectrum that cause them to react to communications outages and at times force the temporary use of the analog COP.

Chapter 3

Training Management for Command and Control

Chapter 3 describes the use of Training Management as the implementation of the operations process in regard to planning, preparing, executing and assessing both the outcomes and execution of training. It describes how the command and control training tables are integrated into CATS, and how trainers use the CATS to plan and prepare for command and control training.

SECTION I – PLANNING COMMAND AND CONTROL TRAINING

LONG RANGE PLANNING AND THE UNIT TRAINING PLAN

3-1. The Army uses the operations process of plan, prepare, execute, and assess as its training framework, as described in FM 7-0. Using this framework, the unit commander remains central to the training process in the same way the commander is central to the operations process. Each unit commander begins the training cycle with top-down training guidance from the higher commander.

3-2. Senior leaders develop and communicate training guidance. Over a set period, they provide clear and concise guidance on what is trained, when it is trained, who is trained, why, and to what level of proficiency — task and purpose. Senior leaders provide a clear vision of their training expectations giving the unit direction, purpose, and motivation necessary to train effectively.

3-3. Long-range planning and preparation determines the training required to progress from the unit's current state of training proficiency to the desired proficiency level. The unit commander conducts long-range planning to sequence training events with resources over time to determine who, what, when, and where to train. Long-range preparation ensures coordination and actions needed to secure long-lead time resources are accomplished prior to training. The products of the long-range planning process are a unit long-range training plan and a long-range training calendar.

3-4. In developing the unit's long-range training plan, commanders and planners take into account several key planning considerations. These include—

- Higher headquarters training guidance/training requirements. Ideally, senior leaders' guidance will include instruction for conducting command and control certification (Table VI) and validation (Table X) in conjunction with MET proficiency and collective live fire events for all units under their purview. Absent that guidance, commanders should determine for themselves how mission command training best nests with other directed training.
- Multi-echelon training is a training technique that allows for the simultaneous training of more than one echelon on different or complementary tasks. Command and control training beyond Table V is improved when different echelons interact, as opposed to when a command post or staff trains with simulated subordinate or higher headquarters interaction. This also builds mutual trust and teamwork within a formation.
- Commanders prioritize training by utilizing a time management system. A time management system is a method of protecting allocated training time and resources for subordinate units while accounting for necessary Army requirements that detract from training. The most common time management system used within the Army is the Green-Amber-Red cycle:
  - Units in the green cycle have training resource priority and focus predominately on unit collective training and multi-echelon training. Higher commanders protect these units from taskings and other training distracters. Green cycle presents the greatest opportunity for

command and control training above the section/cell level (Tables V through X) because multi-echelon training requires C2 interaction.

- Amber cycle units have training resource priority behind green cycle units. Commanders normally focus training in the amber cycle on individual, leader, and battle task proficiency. While a unit may eke out sufficient time during amber cycle training to conduct Table V or VI for one or another cohort, amber cycle will usually entail C2TTs I through IV.
- Red cycle units are the primary organizations that execute higher headquarters directed support taskings. Units in this cycle still conduct training, but training focuses primarily on individual tasks, weapon proficiency and self-development opportunities. Section/cell leaders (particularly NCOs) should look for opportunities to conduct hip pocket training of Table I through IV tasks during red cycle.

- Training Events. Commanders design and schedule training events focused on achieving the desired proficiency levels in their prioritized tasks. Commanders define the training objectives for each training event by clearly identifying the tasks, conditions and standards as well the expected outcome. The command and control functional CATS assist commanders in overlaying their C2TT objectives on scheduled training events. For some units, their unit CATS have incorporated the C2TT into training events to provide the commander recommendations for when to conduct each training table.
- Utilize the "crawl-walk-run" method. Commanders sequence training events from relatively simple to increasingly more complex and dynamic. This methodology is embodied in the C2TT.
- Allocate the necessary training time and resources to enable subordinate organizations to train to standard. Section, cell, and command post leaders all need time to train their elements to proficiency on C2TT I-IV separately. As addressed earlier, many Soldiers find themselves part of multiple cohorts, so units must plan distinct training time for each of C2TT I-IV separately.
- Training Environments. Commanders recognize that conducting all training events in a live environment is impractical and not always possible, particularly as the Army moves to the ReARMM. There are three training environments— live, virtual, and constructive.
  - Live training is executed in field conditions using tactical equipment involving real people operating real systems.
  - Virtual training is executed using computer-generated simulators (gaming is a subset of the virtual training environment).
  - Constructive training uses computer models and simulations to exercise command and staff functions.
  - Command and control training at battalion and brigade echelons typically happens in a live or constructive environment.
  - At division echelon and above, command and control training most often occurs in a constructive environment.

3-5. To begin long range planning, the commander will also determine what operational environment (a DATE OE or one based on an upcoming real-world mission) should be the backdrop for the unit's MET proficiency and C2 training. This should be the same OE in which the unit's external evaluation will be conducted.

3-6. The commander determines which METs to train based on current and projected training proficiency, MET proficiency required by higher headquarters guidance, and their own judgment. Similarly, the commander begins long range training planning for command and control with an assessment of the four training audiences that make up the Soldiers of the command and control system. Based on such factors has their own observations; those of his staff leaders and subordinate commanders; time and personnel turnover in the headquarters since the unit's last C2 Validation Exercise (Table X), the commander will determine at which of Tables I through IV each training audience will begin training, and provides that guidance to the staff.

3-7. When developing COAs for the unit training plan, staff planners link training strategies to training plans by identifying and planning training events. Training events are the building blocks that are the

foundation of a COA. During COA development, commanders and staffs broadly assess the number, type, and duration of training events that a unit may require to train the METs to proficiency.

3-8. Staff training planners use commander's guidance for implementing the C2TT when developing courses of action for the unit training plan and calendar to overlay when each of the training audiences will conduct each table during proposed training events, and recommend training objectives for the selected C2TT tasks for those events. For example, training objectives for the event at which the unit will conduct Table VI certification should include achieving proficiency on each of the tasks in every cohort's Table VI. For some units the C2TT have been built into the CATS with recommendations for which events include specific C2TT (see next paragraph for an example). Training planners for other units may have to use the echelon-appropriate functional CATS to make that determination themselves.

3-9. Table 3-1 on page 3-4 shows how the C2TT have been built into the division CATS to correspond to specific events already in the division CATS. It shows the division CATS task selection numbers (bold text) that correspond to each C2TT (Tables I through V for the commander have no associated TS). Since all four training cohorts train tables VII through X together, those tables are combined into one task selection each in the CATS. On the bottom row it describes which training event in the CATS each training table is programmed against. If a commander develops a UTP that doesn't fully align with the division CATS, the staff will have to reprogram the C2TT task selections against other events on the UTP.

Table 3-1 Division C2TT to CATS Event Crosswalk

Table	CATS Task Set	Commander	Staff	Command Post	Digital Crew	Training Event
I		Establish Organizational Business Rules; Develop Training Strategy	Organize and Acclimate Staff to the Organization **71-C2-7471**	Conduct Pre-combat Inspection **71-C2-7371**	Execute Basic Command and Control Information System Operations **71-C2-7171**	**Class**
II		Establish the Training Environment	Develop Military Decision Making Process Skills **71-C2-7472**	Identify Command Post Characteristics **71-C2-7372**	Integrate Command Post Systems **71-C2-7172**	**Class**
III		Frame the Operation	Establish Staff/Cell Processes and Integrate Warfighting Functions **71-C2-7473**	Establish Command Post Infrastructure **71-C2-7373**	Develop the Common Operational Picture **71-C2-7173**	**STAFFEX**
IV		Prepare the Headquarters for Operations	Synchronize Command Post Operations **71-C2-7474**	Conduct Command Post Survivability and Sustainability **71-C2-7374**	Synchronize Operations **71-C2-7174**	
V		Drive the Operations Process	Conduct the Operations Process **71-C2-7475**	Rehearse Command Post Operations **71-C2-7375**	Conduct Command and Control System Rehearsal **71-C2-7175**	**CPX 1**
VI		Assess and Certify the Headquarters **71-C2-7276**	Conduct Staff Certification **71-C2-7476**	Conduct Command Post Certification **71-C2-7376**	Digital Crew Certification **71-C2-7176**	**CPX 2**
VIII	**71-C2-7477**	Direct Command and Control System Integration	Integrate the Command and Control System	Conduct Command Post Operations	Integrate the Command and Control System	**STAFFEX**
VIII	**71-C2-7478**	Command Forces and Control Operations	Synchronize Operations with Unified Action Partners	Sustain Command Post Operations	Synchronize Operations with Unified Action Partners	
IX	**71-C2-7479**	Command and Control Validation Exercise Rehearsal				**CPX 3**
X	**71-C2-7480**	Command and Control Validation Exercise				**WFX**

CATS combined arms training strategy **CPX** command post exercise
STAFFEX staff exercise **WFX** warfighter exercise

3-10. One important consideration for incorporating C2TT into events is the higher headquarters' multi-echelon training events in which the unit must participate. These events provide great opportunity for C2 interactions between commanders and staffs at different echelons that meet the conditions for many C2 T&EO training objectives. For example, when a battalion is tasked to perform as a response cell for a brigade

CPX, there are still opportunities to improve command and control training proficiency as parts of the staff, command post, and digital crew operate from inside the mission training complex.

3-11. Staff planners begin determining the resources they need for establishing the OE conditions required for each training event based on the conditions statements of the T&EOs listed in the training objectives for each event.

PLANNING EVENTS WITH COMMAND AND CONTROL TRAINING OBJECTIVES

3-12. Training planners begin planning training events well in advance of each event. How far in advance planning begins is driven by SOP, timelines for submitting resource requests, commander's guidance, and other factors.

3-13. The leader assigned as the primary planner for a training event reviews the initial training objectives for the event from the UTP as part of mission analysis and confers with the commander for additional training guidance. The planner should make note of which C2 training objectives (tasks from the C2TT indicated on the UTP for that event). The planner refines training objectives with additional details based on the guidance from the commander.

3-14. For most events on the UTP, there is a corresponding Event Details page in the unit's CATS that indicates (among other things) the resources required to execute the event. As training planners begin to resource training they should include resource requirements for conducting C2TT in conjunction with each training event as they laid out in the UTP during long range planning. The planner uses T&EOs to identify other supporting collective and individual tasks that support higher collective tasks. Once planners identify these tasks, they determine all prerequisite tasks on which the unit must train prior to executing the event. CATS help identify training gates for the event being planned.

3-15. The command training guidance identifies the operational environment to replicate in the training environment as discussed above. Together with the conditions statement and the objective task evaluation criteria matrix of T&EOs for tasks being trained during the event will indicate what resources the planner should be scheduling in the appropriate training environment, including role players, type of observation, types of terrain, and enemy forces. The Army's Training and Doctrine Command has made a number of operational environment and opposing forces (OPFOR) resources available to training planners to assist them in analyzing decisive action training environments and determining resources to replicate a DATE OE on the Army Training Network website, here: https://atn.army.mil/tradoc-g2. See FM 7-0 for more on the objective task evaluation criteria matrix.

3-16. During the planning phase, the planner verifies the training venue (as live, virtual, or constructive) and locks in required resources. They reconnoiter the training site to ensure the unit can achieve the training objectives within the venue. For command and control training, there may be multiple training locations for a given training event, such as a Mission Training Complex (MTC) for response cells replicating subordinate forces, and multiple field sites for the unit's command posts to set up and move between. Planners visualize the training event by drawing an event sketch and detailing how the unit will execute the training. They write a list of actions to meet training objectives. They consider the time available to train versus the number of possible iterations to attain proficiency. This visualization serves as the concept for executing the training event. Once planners develop a sketch and visualize the concept from start to end and the commander approves it, then additional resourcing for the event can begin.

MID-RANGE PLANNING

3-17. The mid-range planning horizon focuses on pre-execution planning for each training event identified in the UTP. All training events are planned and executed following the Army operations process (plan, prepare, execute, and assess). During the mid-range planning horizon, training meetings and quarterly or yearly training briefings provide venues for the commander and unit leaders to meet periodically to ensure training event planning, resourcing, and coordination stay on track.

3-18. Advance resource planning and coordination are essential to the successful execution of training events and are the key focus of mid-range planning. Mid-range planning events such as installation training resourcing conferences are key events for training planners. Without planning for the right resources available at the right point in time, meaningful and effective training will not occur and valuable training time will be lost. Conditions paragraphs and objective training evaluation criteria matrices of the T&EOs for the training objectives for each training event provide valuable insight into the resources training planners must synchronize during mid-range planning.

3-19. Commanders and their training planners must understand the planning timelines for training resources such as ammunition, ranges, and MTC support and ensure that requests for those resources are made an appropriate time in advance of each training event. Local SOPs will determine which resources must be requested during mid-range planning versus those requested during short-range planning.

SHORT-RANGE PLANNING

3-20. As the date of training execution approaches, planners and leaders continue to monitor and coordinate actions and activities to ensure success of each training event. These final preparations ensure that proper coordination and resourcing has been conducted and also ensures that units are prepared to conduct training as planned. For Regular Army units the short-range planning horizon is six weeks prior to training execution. For Reserve Component units, this is ninety days from training execution.

3-21. Active units use the T-week construct for final planning and preparation for training events beginning six weeks before a training event, while Reserve Component units will typically use a monthly short range panning construct beginning 90 days prior to an event. Unit SOP will dictate when such planning activities as publishing detailed training schedules, ordering Class I, or finalizing a command post exercise (CPX) master scenario events list (MSEL) should be completed.

3-22. As a key part of final training event preparations, commanders aggressively protect approved and scheduled training from subsequent changes and unprogrammed training distracters. Failure to protect training can easily derail the unit's ability to execute effective and meaningful training. It also creates an atmosphere in which leaders and Soldiers lose confidence in the unit's leadership. When the chain of command fails to lock in and protect training, Soldiers perceive that training is not a priority. Training schedules are written orders and provide predictability by locking in approved training weeks (and months for Reserve Component units) before training begins.

3-23. For command and control training, a key resource to coordinate during short-range planning is the higher headquarters operation order that sets the stage for the unit to conduct the tactical event (usually one or more METs) that is the primary focus of the training event. Depending on the echelon and complexity of the training, this order will usually be issued in advance of the start of the training event so that the unit and its subordinates may conduct planning and issue their own orders before or at the start of the event. Even though this command and control activity may begin before the event, the commander should ensure the planning process and order produced are assessed or evaluated as well.

SECTION II – PREPARING COMMAND AND CONTROL TRAINING

TRAINING AND VALIDATING LEADERS

3-24. The Army develops leaders as part of every training event and ensures all training is led by trained and certified leaders. Commanders ensure they have developed and trained their subordinate leaders to enter the training events they will lead at higher levels of proficiency than the training audience. This requires higher commanders to prioritize the development and training of their leaders and to never allow an untrained leader to lead Soldiers in training. For command and control training, this principle applies typically to principle staff officers and their senior NCOs, battle captains, operations sergeants major, COP managers, and digital master gunners. It may also involve other leaders listed in the "Leaders" statement of the standards paragraph of the T&EOs to be trained.

3-25. One method to match the development of leaders to training units involves the "crawl-walk-run" methodology. Effective units that enter collective events at the crawl level have unit leaders at the walk level

of competence before executing the event, or units at the walk level have leaders at the run level. Leader training requirements are established in the command and control training tables using individual task T&EOs and leader performance measures in collective task T&EOs. The COS/XO, command sergeant major (CSM), and other senior staff leaders assist the commander in certifying that staff leaders are prepared to lead command and control training.

SETTING THE REQUIRED CONDITIONS

3-26. Preparing for training involves those activities performed prior to training to improve the unit's abilities to train effectively and consist primarily of preexecution checks and rehearsals.

PREEXECUTION CHECKS

3-27. Preparing for training also includes preexecution checks. Preexecution checks are the informal coordination measures conducted prior to conducting training events and must not be confused with precombat checks. Some informal coordination measures for command and control training might include checking that—

- Reviewing training objective T&EOs to ensure the conditions are set to achieve the desired training outcome according to T&EO conditions statements and objective task evaluation criteria matrices.
- The OPFOR (whether live or simulated in a CPX by the MTC) is prepared to execute the proper OPFOR tasks
- That the MTC is prepared (physical, manning, and network aspects) to properly replicate simulated mission partners (any mix of subordinate, supporting, supported, higher, or flank units, or other partners)
- Training areas for command posts to displace are coordinated with range control.
- TADSS are deployed and operational.
- Review the MSEL for the event for completeness and that responsible parties know which events they are responsible for initiating.
- External Evaluators are proficient in the tasks they are expected to evaluate during a unit EXEVAL.

TRAINING EVENT REHEARSALS

3-28. Rehearsals are critical to the execution of any plan whether for operations or training. Preparing for training includes having units rehearse anticipated actions during the training event. All those involved in the training event conduct rehearsals to ensure understanding, synchronization, and preparation of tactical actions. Leaders supervise rehearsals to ensure that those responsible for the training are prepared to conduct efficient, organized, and effective performance-oriented training. Rehearsals provide a means of ensuring units synchronize and execute actions to standard during training.

3-29. For live or constructive training events with command and control training objectives, training rehearsals should include rehearsal of the means by which the exercise control group will provide stimulation for MSEL events. Such means could include the use of role player interaction with the commander or staff, simulations stimulating mission command systems, or virtually replicated subordinate units reporting via tactical communications.

3-30. The OPFOR – whether live or virtual – also rehearses its plan before executing the training event. The OPFOR rehearsal ensures this force understands its plan and can effectively stimulate quality training using doctrinally correct OPFOR countertasks (or tactics, techniques, and procedures (TTP) used by an actual enemy or opponent for units preparing for a specific deployment).

3-31. Likewise, the unit conducts a communications rehearsal for those trainers controlling the event, separate from the communications rehearsal for those participating in it. The communications rehearsal is important to ensure the scenario events are executed per the event timeline, and also for safety purposes.

3-32. Rehearsals are essential for an effective and realistic training experience.

SECTION III – EXECUTING COMMAND AND CONTROL TRAINING

3-33. Effective command and control training occurs following detailed and coordinated planning and preparation. The command and control training tables provide an approach such that each training event aims to ensure that—in a building block manner—training objectives and training proficiencies are met. During each training event, a tactical scenario—replicating the actual or anticipated operational environment with supporting opposing force elements—drives the actions of the unit. As the tactical scenario unfolds, the unit focuses on training objectives. As the training event progresses, evaluators positioned to best observe the execution of staff, command post, and digital crew tasks record unit performance. Observers, leaders, and commanders conduct after action reviews during training events to provide participants valuable feedback to improve or sustain performance rather than letting a Soldier, section, cell, or command post keep making the same mistakes, thereby reinforcing poor performance.

3-34. Tasks and drills are rarely performed to standard on the first attempt. During a training event, units perform multiple iterations of tasks to ensure that they can reliably perform the task to the proficiency rating required by the end of the event. Leaders allocate time and other resources for retraining of individual and collective tasks in their training plans, which allows participants to implement corrective action quickly. Ideally, units should complete retraining at the earliest opportunity if not immediately after they attempt the task. In some cases, units may need to restart an event before moving to the next training event.

3-35. Performing multiple iterations of a task already performed to standard can be made more difficult and challenging by changing the task's conditions and leadership (having the second in command execute the task as the primary leader). Additional difficulties and challenges help build a more confident and capable unit. A unit that can perform a task under increasingly complex conditions and in more iterations comes closer to attaining task mastery. For this reason, command and control training planners develop MSEL injects to confront commanders and their battle staff with increasingly complicated variations of task execution. This mastery or proficiency also aids in building a deeper pool of leaders who are more adept at performing in varying positions and under increasingly stressful conditions and situations.

SECTION I-IV – ASSESSING COMMAND ANDCONTROL TRAINING

EVALUATING TASK PROFICIENCY

3-36. An assessment is determination of the progress toward accomplishing a task, creating a condition, or achieving an objective (JP 3-0). Commanders determine training readiness using evaluations and assessments. Evaluations are based on the performance of tasks measured against an established standard under a given set of conditions. Evaluations are recorded using T&EOs for collective and individual tasks. Users access T&EOs on The Army Training Network (ATN), via their CATS on the Army Training Management System (ATMS), and the Central Army Registry (CAR). These websites are the Army's only sources that provide the prescribed training tasks, conditions, and standards for all Army individual and collective tasks, and drills.

3-37. Leaders establish the conditions established in task T&EOs prior to executing training as described in above discussions of planning and preparing training. When training Soldiers to perform individual tasks, trainers use the "Performance Steps" section of the T&EO to provide the soldier detailed step-by-step instruction and practice. When evaluating performance of individual tasks, leaders use the "Performance Measures" section of the T&EO to determine whether the Soldier performed those steps essential to successful task execution.

3-38. Commanders and other leaders assess MET, SCT, and other collective task proficiency similarly, but the performance steps and measures for collective tasks are the same. They should pay particularly close attention to execution of steps in the T&EO that are marked as 'leader' and/or 'critical' measures of successful collective task execution. When assessing training proficiency to determine and report unit readiness, external evaluators use the standard statement, performance measures, and the objective training evaluation criteria matrix to record and report their observations of unit training. This external evaluation of task performance forms the basis for the commander's determination of MET proficiency for training readiness reporting.

AFTER ACTION REVIEWS

3-39. Observers, leaders, and commanders conduct after action reviews during and after training events to provide participants valuable feedback to improve or sustain performance.

3-40. An after action review (AAR) is a guided analysis of an organization's performance, conducted at appropriate times during and at the conclusion of a training event or operation with the objective of improving future performance. It includes a facilitator, event participants, and other observers (FM 7-0). The AAR is a professional discussion that requires the active participation of those being trained. AARs enable units or Soldiers to discover for themselves what happened and then develop a plan for improving performance. Leaders know and enforce standards for collective and individual tasks. Task standards are performance measures found in the respective T&EOs.

3-41. AARs may be formal or informal. Informal AARs led by an observer, evaluator, or leader from outside the center or cell are often referred to as a 'hot wash' or 'green book AAR', and have the same overarching goal of a formal AAR – to identify how to improve execution of assigned tasks.

3-42. Leaders and evaluators integrate after action reviews into the conduct of the command and control training tables at every opportunity. When conducting the individual skills development in the earliest tables, supervisors review performance with Soldiers as they complete individual tasks. Later, section, cell, and command post leaders conduct after action reviews after complete tasks, drills, or entire tables. For example, a battle captain in a brigade TAC may lead an AAR with the Soldiers in the COIC after they conduct an iteration of the drill React to Jamming or Suspected Communications Compromise (71-BDE-D7176).

3-43. Commanders conduct AARs at the conclusion of conducting the Table VI event for the staff, command posts, and digital crew as part of their process for certifying those training audiences as being prepared to move on to collective C2 system training in Table VII. Likewise, the senior external evaluator facilitates an AAR at the conclusion of the Table X event to validate that the command and control system is prepared to support the commander in LSCO.

RETRAINING

3-44. Evaluation or assessment can lead to a determination that a Soldier or unit has not reached the desired level of proficiency on one or more tasks. Immediately, if time allows, or as soon as possible at a later date, the Soldier or unit should re-train the task under the conditions required for proficiency. When immediate retraining is not possible, commanders should ensure retraining opportunities are programmed into the UTP.

Building Digital Lethality

In 2016 the 1st Infantry Division (1ID) used the Command and Control Training Tables (C2TT) for the Digital Crew to develop a 'digital gunnery' program that led to a drastic increase in the unit's ability to support the commander's exercise of command and control. The plan received strong command emphasis and fostered an environment that encouraged continuous and integrated digital systems use in training to prepare for operations. They integrated the conduct of the Training Tables into the training events leading up to the division's Warfighter Exercise (WFX).

While the division emphasized the use of command and control information systems in daily operations to normalize their use by their staff and system operators, the leadership recognized this practice did not translate to the integration of all systems and data into a commander-centric common operational picture in tactical training and operations. 1ID was not alone in this predicament, and U.S. Army Forces Command (FORSCOM) had issued guidance for units to develop training programs to train individual operator skills, integration proficiency, and information system and staff integration, and to conduct a validation exercise to affirm that training.

The division's knowledge management (KM) section took the lead to implement the FORSCOM guidance using the C2TT described in TC 6-0.1 as the basis for their digital gunnery program. They selected MCDMG candidates and coordinated for them to attend the MCDMG course prior to the start of Table I training. They trained 23 MCDMGs for the division headquarters, 4 per brigade, and 2 per battalion. They also worked with the Fort Riley Mission Training Complex (MTC) to develop an integration module to include in the basic CPOF operator's course. Graduates of these courses were then 'battle rostered' by the KM section so there would be constant coverage of trained MCDMGs and system operators on both day and night shifts in each division CP.

Having set the conditions for training, the KM section and DMGs began executing the C2TT. They conducted Table I as a stand-alone event at the MTC, and then integrated the conduct of the other tables into other training events. They conducted Table IV at their CPX 2, Table V during orders production for CPX 3, Table VI at the CPX 3 communications exercise (COMEX), Tables VII and VIII during CPX 3 itself, Table IX during the WFX mini-exercise, and Table X during the WFX.

Despite battle-rostering the MCDMGs and system operators, the division suffered some personnel turnover during the year leading up to the WFX and again afterwards. They combated this challenge to maintaining proficiency by using the lower tables to train individual skills for new operators and leaders that were not primary operators but still had to use CPOF on occasion. This integration training minimized the negative effects of 'churn' on digital proficiency.

Executing the Digital Training Tables in conjunction with simulated tactical training enabled the division to refine and ingrain the 1ID SOPs, employ digital systems in the execution of battle drills, and establish broad knowledge management expertise. Conducting multi-echelon training of the digital crews enabled the division main CP to transfer aspects of control of operations to its TAC, support area CP, and Division Artillery CP while the main displaced to another location with little degradation to the control of division operations or to the digital COP. By broadening digital system expertise, the division reduced its reliance on contractor field service representatives to maintain command and control network capability.

Command and control network and information system proficiency led to effective virtual working groups, timely execution of a branch plan to seize the initiative, and informed senior leader decision making.
The emphasis on executing the Training Tables leading to command and control proficiency prior to the WFX enabled the division to focus on killing the enemy instead of fighting itself.

ASSESSING THE CONDUCT OF COMMAND AND CONTROL TRAINING

3-45. As with any operation, commanders are responsible for assessing the conduct of training events. Typically for training events this assessment consists of determining in a formal or informal AAR what was supposed to happen, what actually happened, what went right or wrong, and how to sustain the right and correct the wrong. Some of the questions used to aid in assessing the conduct of C2 training are:

- Did we establish the required conditions?
  - Did we establish the OE directed by the commander?
  - Did the OPFOR execute counter tasks to standard?
  - Did MESL event live, simulated, or stimulated injects adequately provide the stimulus the unit needed to execute tasks to standard?
- Did the communications structure adequately support the training unit, exercise control group, and the constructive training environment?
- Were the right Soldiers and Leaders present for training?
- Were tasks that require execution at night for the desired proficiency level actually performed at night?
- Was training adequately resourced?

3-46. It is insufficient merely to identify sustains/improves, though. Part of the assessment process is commanders assigning responsibility to enact them in unit training SOPs so improvements take root in the unit's training management process.

Appendix A

Command and Control Training Strategy for the Institutional Domain

This appendix provides training support for the institutional domain as well as the role of professional military education and functional training.

TRAINING SUPPORT STRATEGY FOR THE INSTITUTIONAL DOMAIN

A-1. The institutional training domain includes Army centers/schools that provide initial training and subsequent functional and professional military education and training for Soldiers, military leaders, and Army Civilians. Army schools ensure Soldiers, leaders, and Army Civilians can perform critical tasks to prescribed standards throughout their careers, and support units on a continuous basis. Army schools help instill the Army Profession, the Army Ethic, and character development of Army professionals. The institutional training domain also provides training support products, information, and materials needed by individuals for self-development and by unit leaders in the operational training domain to accomplish training and mission rehearsal/assessment.

A-2. Training the command and control warfighting function in the institutions is conducted along two lines of effort: in Professional Military Education (PME) and (2) for functional training. This appendix discusses the desired outcomes of both lines of effort.

PROFESSIONAL MILITARY EDUCATION

A-3. Proficiency in command and control and mission command is achieved within PME through both individual and shared learning throughout a cohort's career life cycle. The input at each level of progression, increasing with the cohort operational experience, is the individual officer, warrant officer, or NCO. Critical to training Soldiers is the use of the Army Learning Areas (ALAs) related to mission command and the command and the control warfighting function. Specifically, these are:

- Demonstrate proficiency in the principles of mission command
- Demonstrate proficiency in the elements of command and control
- Demonstrate proficiency in command and control warfighting function tasks and system to integrate elements of combat power.
- Demonstrate proficiency in the fundamentals of the operations process to enable leaders to understand, visualize, describe, direct, lead and assess operations
- Demonstrate proficiency in critical and creative thinking

A-4. While individual schools and centers apply judgment in achieving these ALAs, the overarching intent is to allow the graduates of these a level of proficiency described for officers and warrant officers in paragraph A-5, and for enlisted Soldiers and noncommissioned officers in paragraph A-6.

A-5. For officers and warrant officers. The desired level of proficiency should enable them to plan, prepare, execute and assess collective C2 crawl-level training for the assignment they will most likely find themselves in after graduation.

- The commissioned officer and warrant officer begin training during pre-commissioning programs and the Basic Officer Leader and Warrant Officer Basic Courses. There, PME primarily focuses on the company echelon and below C2 individual critical tasks where troop leading procedures is the focus. The output is an officer able to exercise C2 within the platoon and apply the mission command principles up to the company level.

- Officer cohorts will continue to receive C2 training at each sequential primary Military Education Level. Each follow on PME will broaden an officer's understanding and education, enabling that officer to exercise C2 and apply mission command principles at the next higher echelon (for example, Captains Career Course and the Warrant Officer Advanced Course enable company through battalion command and control.). At increasing levels, the focus progresses from troop leading procedures to the military decision-making process, the rapid decision-making and synchronization process, and Army design methodology.

A-6. For Enlisted Soldiers and Noncommissioned Officers:

- The enlisted soldier begins to understand the mission command principles training during basic training where teamwork and disciplined initiative are stressed.
- The noncommissioned officer begins his professional military education at the Basic Leader Course, which primarily focuses at the team/squad and below C2 individual critical tasks and troop leading procedures. The output is an NCO able to apply the mission command principles within the team/squad. The desired level of proficiency should enable them to plan, prepare, execute and assess individual and crew-level C2 crawl-level training for the assignment they will most likely find themselves in after graduation.
- Each successive PME course will broaden an NCO's understanding and education and enable that NCO to apply the mission command principles at the next higher echelon (for example, the Advanced Leader Course enables command and control from squad through company level) and be able to plan, prepare, execute and assess individual and crew-level C2 crawl-level training for the assignment they will most likely find themselves in after graduation.

FUNCTIONAL TRAINING

A-7. Institutional army centers, COEs, and schools conduct information system operator and system integration training at mission simulation centers (MSC), either as part of military occupational specialty (MOS) qualification courses or as stand-alone courses, for the systems for which they are the proponent. The Army provides several mission command functional courses for leaders in the mission command system as well. Soldiers can enroll in the courses described below by searching the Army Training Requirements and Resources System here: https://www.atrrscoursecatalog.com/login.html.

MISSION COMMAND DIGITAL MASTER GUNNER COURSE

A-8. The Mission Command Center of Excellence conducts the Mission Command Digital Master Gunner (MCDMG) course to qualify digital master gunners to integrate command and control information systems. The critical input is operational Soldiers from appropriate cohorts and duty positions, with experience in the conduct of the Operations Process and Command Post operations, receiving MCDMG training and returning back to operational units. The MCDMG Course utilizes C2 information system critical individual and collective tasks to shape the program of instruction. The output of the MCDMG is a trained subject matter expert that can configure, operate, maintain, and coordinate the connectivity of C2 information systems to generate a digital common operational picture and become the commander's primary assistant in training the digital crew at home station to achieve unit proficiency in accordance with TC 6-0.1, "Mission Command Information System Integration Training and Qualification: Digital Crews".

A-9. This responsibility includes creating and maintaining the individual critical task list for Army Skill Identifier (ASI) 5C and the program of instruction and lesson plans for the course, to include updating courseware as needed to maintain currency as systems and software are upgraded.

SIGNAL DIGITAL MASTER GUNNER COURSE

A-10. The Army Signal School conducts the Signal Digital Master Gunner (SDMG) course to qualify digital master gunners to be their commander's subject matter expert on the operations, maintenance, integration, and training of the Local Area Network (LAN), Battle Command Common Services (BCCS) and information systems. The critical input is operational signal Soldiers from appropriate cohorts and duty positions, tasked with providing the command post network infrastructure, receiving SDMG training, and returning back to operational units. The SDMG course utilizes BCCS critical individual tasks to shape the

program of instruction. The output of the SDMG is a trained subject matter expert that can configure, operate, and maintain, the servers and network hardware critical to the C2 network. This responsibility includes creating and maintaining the individual critical task list, the program of instruction, and lesson plans for the course, to include updating courseware as needed to maintain currency as network systems and software are upgraded

ARMY KNOWLEDGE MANAGEMENT COURSE

A-11. The Army Knowledge Management Proponent conducts the Knowledge Management Qualification Course. The course focuses on teaching students to use the KM process to assess, design, develop, pilot, and implement solutions to fix knowledge and performance gaps within their units. Graduates will return to their units and facilitate organizational improvement through enhancing shared understanding, learning, and decision-making in support of command and control. This responsibility includes creating and maintaining the individual critical task list for ASI 1E and the program of instruction and lesson plans for the course, to include updating courseware as needed to maintain currency as available KM tools are updated or replaced.

BATTLE STAFF NONCOMMISSIONED OFFICER COURSE

A-12. The United States Army Sergeants Major Academy conducts the Battle Staff Noncommissioned Officer (BSNCO) Course that educates sergeants through sergeants major to serve as BSNCOs at battalion and higher level staff positions. It provides selected noncommissioned officers with the tools necessary to learn specific staff duties and become familiar with the duties of other staff sections. It provides technical and tactical curriculum that is relevant to missions, duties, and responsibilities assigned to battle staff members in battalion and brigade-level units. The course focuses on learning the military decision-making process and command post tasks and functions for the NCO.

A-13. This responsibility includes creating and maintaining the individual critical task list for ASI 2S and the program of instruction and lesson plans for the course, to include updating courseware as needed.

OTHER RESPONSIBILITIES

A-14. Mission Command Arts and Sciences Program (MCASP) is responsible for resourcing command and control networks and systems, instructors, and network technicians to support training and education in the Army's centers, COEs and schools.

A-15. Army schools and centers of excellence that have proponency for C2 systems provide instructor certification requirements; develop training scenarios and interactive multimedia instruction materials; provide operator critical task lists and training support packages; and assist operational Army units with individual system skill sustainment training through distributed learning, doctrine, and tactics training (DTT), and mobile training teams.

A-16. Material developers produce training support packages for new equipment training for command and control equipment and systems, and for delta training when substantial changes drive a requirement to train instructors on the changes (a significant update to software for Command Post of the Future (CPOF)) added.

Appendix B

Command and Control Training Strategy for the Operational Domain

This appendix addresses the command and control training strategy that units undertake while at home station, or elsewhere.

B-1. Command and Control Training Strategy for the Operational Domain includes training activities organizations undertake while at home station, at maneuver combat training centers, during joint exercises, at mobilization centers, and while operationally deployed. It includes assignments to organizations in the operating or generating force. Soldiers joining units after receiving institutional training and education are inputs into the operational domain. Generally, cohort members arrive in the operational domain after completing PME and/or functional training that address MC individual and collective tasks for their next appropriate grade and echelon of assignment. The output from the operational training and experience is individuals who have mastered the individual and collective MC skills at echelon and are prepared to learn MC tasks and skills at the next echelon, and units prepared to command and control large scale ground combat operations as part of the joint force.

B-2. The training strategy for collective command and control training proficiency for active Army units is to conduct the command and control training tables as described in chapters one through three of this training circular to achieve command and control proficiency prior to conducting a combat training center (CTC) rotation or mission rehearsal exercise (MRX). The unit then refines its expertise at the CTC or MRX while executing the tasks associated with C2 Table X (Validation) during the conduct of its mission. The unit periodically executes selected C2TT as directed by the commander to maintain C2 proficiency during its ready year or deployment.

B-3. The training strategy for Reserve Component units is to conduct C2 Tables I through IV in early Preparation Years (PY). All units should conduct Tables V and VI (Certification) in their final PY. Units attending a CTC during their final PY should strive to conduct Table VI Certification in the year prior, and conduct at least Table IX (Validation Rehearsal) prior to deploying for the CTC rotation. Units mobilized during their ready year will conduct through Table X (Validation) during mobilization training. As with their AC counterparts, RC units will periodically conduct Tables selected by their commanders to maintain the directed level of proficiency during their ready year.

B-4. The training strategy for the network and command and control information systems in the operational domain includes the following elements:

- All components employ Mission Command Digital Master Gunners (MCDMG), Signal DMGs, and Functional Area 57 Modeling and Simulation Officers, as trainers for operators of the network and its information systems.
- Mission training complexes support operational Army unit operator training, delta training (training required when there are software or other system changes), and system integration training; and support the employment of command and control networks in CPXs.
- The Mission Command Training Support Program provides funding for MTCs and TRADOC Mission Simulation Centers (MSCs) for Simulation/Stimulation and Games For Training (GFT) personnel and support.
- Material developers produce training support packages for new equipment training for command and control equipment and systems, and for delta training when substantial changes drive a requirement to train Soldiers on the changes.

Appendix C

Command and Control Training Strategy for the Self Development Domain

Self-development bridges the gaps between the operational and institutional domains and sets the conditions for continuous leaning and growth. Soldiers and Army Civilian personnel engage in self-development to improve their capabilities for current and future positions. It consists of planned, goal-oriented learning that reinforces and expands the depth and breadth of an individual's knowledge base, self-awareness, situational awareness, and professional knowledge and understanding. It complements institutional and operational learning, enhances professional competence, and meets personal objectives. Soldiers and Army Civilians use this domain to fill any skills and knowledge gaps. Structured, guided, and individualized self-development programs supplement training, education, and experiences gained in both schools and unit assignments.

Introduction to the Army Chief of Staff Professional Reading List

"A course of personal study and contemplation is an essential component for the individual development of every Army professional. Each of us faces busy schedules every day and finding time to read and think is a recurring challenge. But even as we train our units and physically condition our bodies, we must improve our minds through reading and critical thinking.

"Our Army operates in a complex strategic environment that demands each of us improve our knowledge of not only military affairs, but economics, politics, and international affairs. We must know how to train for new types of missions, how to deploy forces rapidly to distant regions around the world, and how to pursue innovation and change while preserving the Army's core capabilities in an era of fiscal constraint."

General Mark A. Milley, Chief of Staff, Army

C-1. Self-development is an individual's responsibility but it is important for leaders to set conditions and support self-development. Leaders need to be actively involved in developing themselves and each other. Development happens through study and practice.

C-2. Commanders are also expected to guide and encourage subordinates in their self-development, fostering life-long learners with the cognitive and behavioral attributes to fight and win by achieving intellectual overmatch against all adversaries.

C-3. Leaders at all ranks can support others' self-development through mentorship, the exchange of professional development information, discoveries, and opinions. Performance counseling and assessments are key contributions for cohort members to identify needs in the self-development domain.

C-4. Self-development can also include individual study, research, professional reading, self-assessment, web-based training courses, interactive media, and simulations. The results of self-development are leaders who effectively fill gaps.

C-5. Self-development for command and control skills, knowledge, and attributes follows the four broad steps laid out in FM 6-22; assess strengths and determine developmental needs, set goals with milestones,

conduct self-enhanced learning, and apply the principles of learning in action. "The Army Handbook for Self-Development" further details

C-6. Soldiers should engage in all three types of self-development:

- Structured Self-Development.
- Guided Self-Development.
- Personal Self-Development.

C-7. Structured Self-Development is required learning that continues throughout your career and that is closely linked to and synchronized with classroom and on-the-job learning. It can include MOS-specific training and education, ASI producing training, and duty-specific training (Battalion Motor Officer Course), and professional development courses.

C-8. Guided self-development is recommended, but optional, learning that will help keep you prepared for changing technical, functional, and leadership responsibilities throughout your career. Examples of guided self-development include recommended readings such as the following:

- CMH Pub 105-1-1, Army Chief of Staff's Professional Reading List (https://history.army.mil/html/books/105/105-1-1/index.html).
- Training Circular 7-22.7, The Noncommissioned Officer Guide.
- Army Training Requirements and Resources System (ATRRS) (https://www.atrrscoursecatalog.com/login.html).
- Joint Knowledge Online (JKO) course catalog (https://jko.jten.mil).
- Defense Acquisition University (DAU) (https://www.dau.edu).
- Center for the Army Profession and Leadership (CAPL) website (https://capl.army.mil). This site includes multimedia interactive instruction, virtual simulators, training support packages and case studies in leadership and mission command.

C-9. Personal self-development is self-initiated learning where you define the objective, pace, and process. Soldiers and Leaders should use the Army Handbook for Self Development to guide their personal self-development journey (https://usacac.army.mil/sites/default/files/documents/cal/SDev_Handbook20.pdf). The guide describes the four iterative steps to use to engage in all three types of self-development:

- Recognizing strengths and weaknesses.
- Setting or confirming self-development direction.
- Making the most of learning opportunities.
- Measuring progress and continuing to move forward.

C-10. C-10.The first step of the manual helps the reader answer the questions "What are you good at?" and "What are you not good at?" by giving tools to:

- Collect results of formal assessments.
- Gathering feedback from others.
- Performing a self-exam.
- Identifying strengths and weaknesses.

C-11. The second step helps the reader identify their personal and professional goals based on their roles and responsibilities and the needs of the Army. It provides tools for setting a self-development direction and establishing milestones to keep on track.

C-12. The third step is to learn effectively. This section provides effective learning methods, general learning principles, and principles for specific types of learning, among other tools. To engage in effective learning, the manual encourages the reader to:

- Be motivated and persistent.
- Make the most of all learning opportunities.
- Use effective learning methods.
- Practice deep processing.
- Learn effectively from books.

C-13. The final step is to execute the self-development plan while making assessments and course corrections as required to achieve goals.

Appendix D

Training System Support Strategy for Command and Control Training

This appendix describes the strategy for the training support system to provide commanders the resources they need to train their command and control system. It describes the command and control aspects of the training support system, training materials available to commanders, and key people that support training the C2 system.

TRAINING SUPPORT SYSTEM ELEMENTS

D-1. The Army training domains and training support systems (TSSs) comprise a system of systems that prepares RA / RC Soldiers, Army Civilians, leaders, and organizations to conduct Unified Land Operations (AR 350-1). The Training Support System enables the Army's three domains – operational, institutional and self-development. The Army delivers relevant live, virtual/gaming, and constructive (LVC), training enablers through the Army's TSS products, services, and facilities to create training conditions that realistically portray the operational environment and enable METL based operational training strategies.

SYSTEM TRAINING CONCEPT AND STRATEGY DEVELOPMENT

D-2. This training circular serves as the training concept and strategy for command and control at echelons battalion through corps, and for Army headquarters designated to serve in a joint role (JTF, JFLCC, etc.). The remaining TC 6-0 series manuals and the functional command and control CATS fulfill the proponent responsibility for a detailed training plan for command and control training at each echelon.

INTEGRATED TRAINING ENVIRONMENT

D-3. The Army's Integrated Training Environment (ITE) links selected training aids, devices, simulators and simulations (TADSS); infrastructure; command and control systems; knowledge management systems; and a training scenario framework. The ITE helps prepare Soldiers for full spectrum operations by approximating operational environment (OE) conditions in the three training domains: operational, institutional and self-development. The ITE will help leaders, trainers, and educators close training and educational gaps better than separate live, virtual or constructive training environments.

D-4. Live/Virtual/Constructive-Integrating Architecture (LVC-IA) is a network-centric linkage that collects, retrieves and exchanges data among live instrumentation, virtual simulators, and constructive simulations and army mission command information systems. This architecture provides the common protocols, specifications, standards, and interfaces that help standardize common components and tools required for interoperability of components for simulations/stimulation of unit mission command information systems for command post exercises and operator training.

D-5. The Live, Virtual & Constructive Integrating Training Environment (LVC-ITE) provides commanders with the ability to expand their training environment and increase the size of the training audience during home station training at the Brigade. With its ability to provide a seamless Common Operational Picture (COP) to systems, LVC-ITE provides increased realism for the commander, staff and system operators. It uses a variety of technology and processes to allow Soldiers, leaders and units to plan, prepare, execute and assess training while capitalizing on training resources from all three domains to meet readiness requirements and facilitate a persistent learning capability.

D-6. The Synthetic Training Environment (STE). The STE is in development to become a Soldier-centric training environment that optimizes human performance. It converges the Virtual, Constructive, and Gaming

environments into a single-synthetic environment. The STE will interact with and augment live training; the primary training approach for the Army. This concept will allow the Army to provide a single STE that delivers a training service to the point of need. The STE provides a common training simulation for the Operational, Institutional, and Self-Development domains across all echelons. The STE supports train as you fight, commander-driven, unit mission-oriented Decisive Action training in support of Unified Land Operations.

D-7. Joint Land Component Constructive Training Capability (JLCCTC), a component of the LVC-ITE, is a constructive software modeling and simulation capability that contributes to the Joint training functional concept and the Army training mission area by providing the appropriate levels of fidelity to support both Army and Joint training requirements. JLCCTC supports Army Title X training for Commanders & their staffs in Decisive Action to include offensive, defensive, stability, and civil support operations at MTCs, the CTCs, TRADOC facilities, and other locations worldwide. Provides a composable federation configurable to any combination of models & simulations, as required by training exercise intent/design and supports unit collective & combined arms training in order to meet command and control training proficiency for battalion through JTF echelons as part of the progressive readiness strategy.

D-8. The Common Battle Command Simulation Equipment (CBCSE) program provides up-to-date hardware & software licenses and periodic "Refresh" of equipment to ensure that the JLCCTC remains relevant and capable of supporting Mission Command Training and Exercises at the Combat Training Centers and 37 Mission Training Complex (MTC) locations worldwide.

D-9. Warfighter Simulation (WARSIM), a component of JLCCTC, provides a single simulation system to train for the full spectrum of mission operations in asymmetric warfare. It depicts all levels of conflict, from stability and support operations, to mid/high intensity battlefield operations, to major theater of war. WARSIM allows commanders and staff to train as they will fight, through direct simulation of their organic command and control network and information systems in an operational environment. It provides the commander to lead the staff through operations process while executing a tactical operation. It is designed for use by interagency, multinational, tactical, and operational commanders and their battle staffs from battalion through theater level.

TRAINING AIDS, DEVICES, SIMULATORS, AND SIMULATIONS

D-10. Training aids are Instructional aides to enable trainers to conduct and sustain task-based training in lieu of using extensive printed material or equipment. One example is graphic training aid (GTA) 11-01-007, "Send a Radio Message", which could be used when training command post radio operators.

D-11. Training Devices are three-dimensional objects and associated computer software developed, fabricated, stand alone, embedded and appended, and procured specifically for improving the learning process. They are categorized as either system or nonsystem devices.

D-12. Training simulators are devices, computer programs, or systems that perform simulation. For training, they are devices that duplicate the essential features of a task situation and provide for direct practice.

D-13. Training simulations are computer-based constructive training models to support collective command and control training requirements. They may be devices, computer programs, or systems that perform simulation. Command and control training is frequently conducted using simulation to stimulate the command and control system by providing a tactical situation for commanders, staffs, and command posts in which to conduct operations. They also can stimulate mission command systems for digital crew training. Examples of Army training simulation systems include Division Exercise Training and Review System (DXTRS).

D-14. DXTRS is a low-overhead simulation that can provide stimulation of CPOF, CPCE, and JCR/JBCP COP. It is used in both the operational and institutional domains as a tool to support training and education of planning and execution of operations. In the operational domain it supports exercises such as STAFFEX, TEWT, sergeant's time training, individual/operator training, collective training, and mission rehearsals for all components at the unit or at mission training complexes. In the educational domain it is used to support PME and functional training and education.

TRAINING INFORMATION INFRASTRUCTURE

D-15. The Training Information Infrastructure Program provides the hardware, software, and communications systems, conforming to both Joint and Army architectures and standards that enable the development, storage, retrieval, delivery, and management of training information for use by individuals, units, and institutions worldwide. Training Information Infrastructure consists of two major components—Army Training Information System and point of delivery systems for distributed learning. Some of the training information systems used by the operational and institutional Army to plan, prepare, execute, assess, and record the results of training include:

D-16. Digital Training Management System (DTMS) is the Army system of record to facilitate planning, recording and assessing training. It provides streamlined access to the individual tasks, collective task training and evaluation outlines (T&EO), Headquarters, Department of the Army (HQDA) standard METL, and CATS that form the building blocks for unit training and achieving readiness. Army commanders us DTMS to update and maintain their unit's MET assessments, in order to officially record their objective assessments of training readiness. DTMS transfers this unit data to the Defense Readiness Reporting System-Army (DRRS-A) to support readiness reporting in Net Unit Status Report (NetUSR).

D-17. Army Training Network (ATN) (https://atn.army.mil) provides users at every level the most up-to-date doctrine, requirements, tasks and tools to support commanders and their Soldiers in the planning, preparation, execution, and assessment of training. the ATN serves as the 'one-stop-shop' for Unit Training Management (UTM), home station training enablers, leader development, specific training resources, training doctrine & publications, centers of excellence and proponents, HQDA Command Training Guidance and other training related resources. It provides Combined Arms Training Strategy (CATS) and Mission Essential Task List (METL) viewers which pull unit-specific data via multiple search criteria, a DTMS Quick Reference Guide, a task search which allows the user to filter by individual, collective, and six other criteria, and a complete redesign/reorganization of the DTMS Knowledge Base.

D-18. Central Army Registry (CAR) is a registry of training products and links that is accessible worldwide on the internet. It provides a search capability, as well as the ability to add items to a rucksack or to add a tag to an item. It is a single access point to Army training resources, such as field manuals, training support packages, individual and collective tasks, drills, courseware and more. It is accessible from any computer or from mobile devices using applications available from (https://atiam.train.army.mil/catalog/dashboard).

D-19. TRADOC's G-2 Operational Environment Enterprise is a website designed to provide training and education exercise planners a variety of tools to help them plan and prepare training. There are videos available on the page to introduce users to the following tools and their use (https://oe.tradoc.army.mil):

- Exercise Support Application (https://oedata.army.mil/esa/) serves the Army training community by providing access to previously executed exercise content. Planners are able to find exercise products, download exercise material for reuse, and request additional support from the G27. Unit training planners can browse or search the archive to find an exercise that matches their operational environment (DATE Europe), event type (CPX), and unit type (civil affairs battalion) upon which to base their own training plan.
- Information Operations Network (ION) (https://oedata.army.mil/ion-browser) provides an isolated and immersive environment which emulates social media and digital domains. Content is unique to each unit exercise and accessed via the web allowing the training audience access to the social media environment specific to their scenario during the exercise.
- Virtual OPFOR Academy (VOA) (https://odin.tradoc.army.mil/VOA) provides users the information, tools, and resources to learn, apply, and replicate OPFOR counter-tasks to achieve unit training objectives within a collective training environment by exposing users to OPFOR tasks, conditions, and standards. The tasks presented on VOA are OPFOR Tasks in support of Combined Arms Training Strategy events. Commanders and training planners can use the OPFOR Academy to train their designated opposing force in the doctrinal enemy countertasks to ensure that the actions of the OPFOR are consistent with what trainees will expect based on their intelligence preparation of the battlespace.
- Operational Environment Data Integration Network (ODIN) (https://odin.tradoc.army.mil/) digitizes and links together Worldwide Equipment Guide (WEG), the TC 7-100 OPFOR series

manuals, the DATE Knowledge Base, and DATE Force Structures. It is a one-stop-shop, authoritative resource that features an intuitive user interface as well as machine-readable outputs for the modeling and simulations community to create a doctrinally sound opposing force for exercises.

- G2 Operational Environment Center (OEC) (https://tbr.army.mil/index.html) delivers complex Operational Environments (OE) by leveraging real world data, information, and knowledge in order to enable learning across Training, Education, and Leader Development domains
- Intelligence, Surveillance and Reconnaissance (ISR) Staff Integration Trainer (ISIT) provides staffs/students an easy-to-use, distributed learning opportunity to train and improve their proficiency in ISR planning at the BCT and below level, through an interactive web-based simulation. To access the site, establish a MilGaming account (https://milgaming.army.mil).
- Operational Environment Games (https://oegames.tradoc.army.mil/) has gaming-based training applications including the Observed Fire Trainer application that simulates the Call for Fire (CFF) mission, and the Land Navigation application that is designed to test and reinforce land navigation skills.

D-20. Army Training Requirements and Resource System (ATRRS) is an automated support tool that establishes Army training requirements, determines training programs, manages class schedules, allocates class quotas, makes seat reservations, and records student attendance. Soldiers and commanders use the system to, among other things, schedule command and control related professional development courses such as the Mission Command Digital Master Gunner Course.

D-21. Army Training Information System (ATIS) is an emerging, fully automated, centralized system providing a common operational picture (COP) for all Army component Soldiers, Leaders, and Civilians to plan, prepare, execute, and assess training. ATIS will provide a COP for the Army training and education community through integration of authoritative data distributed across five enterprise capabilities. ATIS will, by FY 24, fully integrate and synchronize existing and evolving training information system capabilities and future requirements by reducing redundant systems & databases and facilitating easier, faster access to training information. Current systems such as DTMS will be superseded by ATIS functions.

D-22. The Joint Staff J-7 has compiled training resources that will assist Army units designated to perform a joint headquarters role through the conversion to a joint headquarters. It includes standard procedures, joint task outlines (similar to Army T&EOs), handbooks, and other resources to help commanders prepare their headquarters for their new role. (https://jdeis.js.mil/jdeis/jel/jtfguide/JFHQT_Mainpage.html) .

TRAINING FACILITIES AND LAND CAPABILITIES

D-23. Command and control training requires austere training areas for commanders and their subordinate headquarters unit commanders to train to emplace their command posts, displace them to new locations, and react to all forms of contact at CP locations. Training land/facilities should enable the command to use pyrotechnics, practice terrain and electromagnetic masking, and encounter civilian role-players, among other common command and control training challenges.

D-24. Mission Training Complexes (MTC) are the focal point of command and control network and systems training support for commanders. Mission Training Complexes provide the following support to commanders to support command and control training:

- Operator, leader, staff section, staff, integrated command post and multi-echelon system training support with exercise/training support (planning, design, coordination and delivery) to commanders.
- Robust Live, Virtual, Constructive, and Gaming (LVC-G) capability to support individual and collective training.
- Training classrooms equipped with the functional and common systems/servers, necessary for command and control networks and system training enablers and constructive SIM/STIM systems to provide a realistic COP and designed to train operators and/or leaders to understand the vertical and horizontal integration required to share critical information.
- A Reconfigurable Tactical Operations Center (RTOC) equipped with those primary systems to support battalion and higher level staff training.

- Assistance in providing staff integration training.
- Higher, Adjacent, Lower, Supporting and Supported (HALSS) work cells for exercise support.
- Network connectivity of training enablers (field training areas, ranges, other MTCs, CTCs, deployed forces, COEs/schools).
- Trainers/instructors, certified by the MTC Director, to support individual and collective training.
- System delta training.

D-25. Most MTCs provide support on a regional basis using a hub and spoke concept, though some operate in a stand-alone mode. Hubs are an n installation or training activity which acts as a regional center of gravity for individual and collective training. It is a center of gravity for individual and collective command and control networks and systems training where training throughput and spoke support requires a large amount of training staff, training support systems and training infrastructure (facilities, connectivity, etc.). It provides a focal point for large scale SIM/STIM support, operator instruction for low density systems and centralized contract management for the hub and all associated spokes. Hubs:

- Provide SMEs and multi-functional staff to support hub individual system and collective staff/CP training requirements.
- Provide SMEs with expertise relating to command and control networks and systems training, simulations and training infrastructure.
- Dispatch MTTs to augment spokes in areas of low density systems training, support surge capabilities for command and control networks and systems training, and integration of newly fielded training enablers.
- Provide assistance with technical integration of simulations as required to support exercises at spoke locations.
- Assist commanders with development of training strategies.
- Support not only their spokes, but can also support other MTCs as required.

D-26. Spokes are an appropriately scaled command and control training capabilities and infrastructure which rely on the hubs for low-density individual system training support, higher fidelity simulation support, and larger scale/higher complexity exercises. Spokes have adequate SIM/STIM, system training and technical support to meet tenant unit day-to-day individual or collective training needs, but must coordinate with hubs for resources and technical support. Generally the spokes have organizational or geographical relationships with their hub that facilitate the association. Spokes:

- Provide subject matter experts and multi-functional staff who support spoke individual and collective training requirements.
- Have adequate training networks/systems, virtual and constructive simulations/stimulators to meet local installation units' day-to-day individual and collective training needs.
- Can support other spokes.
- May reach to hubs for resources and technical support for special training events such as Mission Rehearsal Exercises (MRXs).
- Rely on their associated hub for coordinating or providing low-density individual and collective systems training support.

D-27. A stand-alone MTC is an installation or training activity which acts as a command-based center of gravity for command and control networks and systems individual and collective training. It is a center of gravity for individual and collective training where training throughput requires a large amount of training service staff, training support systems and training infrastructure (facilities, connectivity, and etcetera). It provides a focal point for simulations, stimulations, and instruction for a majority of systems. Stand-alones are authorized training resources similar to a Spoke. Stand-alones:

- Have subject matter experts and multi-functional staff who support individual and collective training requirements.
- Have adequate training systems, virtual and constructive simulations/stimulators to meet local installation units' day-to-day individual and collective training needs.
- Conduct low-density individual and collective systems training support.

- Are responsible for informing their installation leadership on requirements, operational issues and funding.

D-28. .Mission Simulation Centers (MSCs) are simulation centers that support institutional training at TRADOC and other schools and centers of excellence (COE). Each COE/school that provides command and control networks and systems training for specific courses as identified in programs of instruction (POI) will be supported by a MSC or other SIM/STIM capability.

COMBAT TRAINING CENTER (CTC) PROGRAM

D-29. The Army's CTC Program is the cornerstone of an integrated strategy that builds trained and proficient, combat-ready units and leaders to conduct operations as part of the joint force. CTCs provide a crucible experience for units and leaders training in a complex and highly realistic decisive action training environment (DATE) designed to replicate combat by stressing every warfighting function with operations against tough, freethinking, realistic, hybrid threats under the most difficult conditions possible. The CTCs will accelerate a return to standards-based training and the pace of the Army's transition to unified land operations (ULO) by challenging units and leaders to adapt to battlefield conditions, and by enhancing lethality and our ability to operate with our unified action partners and special operations forces (SOFs) across the range of military operations. The end state will be units and leaders prepared to deploy worldwide. The CTC program consists of the following:

D-30. The Mission Command Training Program (MCTP) is the Army's premier deployable CTC for implementing, observing, coaching, and facilitating collective training opportunities and leadership experiences for Commanders and staffs to plan, prepare, fight, and win during Large Scale Combat Operations. The MCTP designs and executes multi-echelon, multi-component Warfighter Exercises (WFX) that provide expeditionary-focused, realistic, demanding training, and leader development opportunities in decisive action scenarios to commanders and their staffs based on the unit's training objectives. The WFX program is the Chief of Staff of the Army's (CSA) exercise program and a significant training event within the Sustainable Readiness Process. The MCTP provides Highly Qualified Experts-Senior Mentors (HQE-SM) and Observer Coach/Trainers (OC/T) during a WFX exercise

D-31. The Maneuver Combat Training Centers at the Joint Multinational Readiness Center (JMRC) (1st bullet below); Joint Readiness Training Center (JRTC) and NTC (2nd bullet) provide live force-on-force maneuver and live fire training events for BCTs, their subordinate battalions and other selected units. Additionally, the maneuver combat training centers execute a Leader Training Program (LTP) to provide collective training for commanders and staffs within the BCTs and rotational support elements. The LTP develops full spectrum military decision-making process (MDMP) skills oriented on the tasks and conditions unique to the unit's designated mission.

- The Joint Multinational Readiness Center (JMRC) — a subordinate organization of the 7th Army Training Command (7ATC), provides training for Multi-Domain Operations (MDO) in a Joint and multinational environment to US, NATO, and partnered nation forces up to the brigade level. Training occurs in an extended live, virtual, and constructive decisive action training environment, enhanced by an exportable training capability in order to prepare current and future brigade combat teams to dominate in the conduct of multi-domain operations. Simultaneously, JMRC supports the US Army Europe theater security cooperation plan through military-to-military engagements and participation in NATO and Army Europe exercise programs.
- The Joint Readiness Training Center (JRTC) at Fort Polk, LA, trains Army BCTs by conducting force-on-force and live fire training in a joint scenario across the range of conflict using an LVC training model as portrayed by a professional OPFOR and controlled by an expert and experienced operations group. Training occurs under tough, realistic, combat-like conditions across a wide range of likely tactical operations and MREs capable of full integration into higher level exercises and scenarios

- National Training Center (NTC) at Fort Irwin, California, trains Army BCTs by conducting force-on-force and live fire training in a joint scenario across the range of conflict using an LVC training model as portrayed by a professional OPFOR and controlled by an expert and experienced operations group. Training occurs under tough, realistic, combat-like conditions across a wide

range of likely tactical operations and mission rehearsal exercises (MREs) capable of full integration into higher level exercises and scenarios.

CTC INTERFACE

D-32. CTC interface is the continuous, cyclical interaction between CTCs, centers and schools. The CTCs immerse units and Soldiers in relevant training scenarios and realistic conditions to replicate the projected OE. CTC feedback and observations ensure that those developing Army training and learning products receive important data used to improve Army proficiency.

D-33. The command and control related CTC interface includes a semi-annual Command and Control CTC Forum hosted by the MCCoE at which the senior C2 observer controllers from the operations groups of MCTP and the maneuver CTCs discuss trends, lessons learned, and ways in which the training support system can enable command and control training for Army units at home station and at the CTCs.

Glossary

This glossary provides a cumulative listing of acronyms and abbreviations that are identified within this publication.

SECTION I – ACRONYMS AND ABBREVIATIONS

AAR	after action reviews
ADM	Army design methodology
ALA	army learning areas
ASI	additional skill identifier
ATIS	Army training information system
BCT	brigade combat team
BDE	brigade
C2	command and control
C2TT	command and control training tables
CATS	combined armys training strategies
COE	center of excellence
COP	common operational picture
COS	chief of staff
CP	command post
CPCE	command post computing environment
CPOF	command post of the future
CPX	command post exercise
CSA	Chief of Staff of the Army
CSM	command sergeant major
CTC	combat training center
DATE	decisive action training environment
DRRS-A	defense readiness reporting system-Army
DTMS	digital training management system
EXEVAL	external evaluation
FM	field manual
FY	fiscal year
GLO	general learning outcomes
HALSS	higher, adjacent, lower, supporting and supported
HQDA	Headquarters Department of the Army
HQE-SM	highly qualified experts-senior mentors
ICTL	individual critical task list
J-7	Directorate for Joint Force Development

JMRC	joint multinational readiness center
JP	joint publication
JRTC	joint readiness training center
LP	lesson plan
LTP	leader training program
LVC-G	live, virtual, constructive, gaming
MCCOE	mission command center of excellence
MCTP	mission command training program
MDMP	military decision-making process
MET	mission essential task
METL	mission essential task list
METT-TC	mission, enemy, terrain and weather, troops and support available, time, and civil considerations
MilGaming	military gaming
MOS	military occupational specialty
MRX	mission rehearsal exercise
MSC	mission simulation center
MSEL	master scenario events list
MTC	mission training complex
MTT	mobile training team
NCO	noncommissioned officer
NET	new equipment training
NetUSR	net unit status report
NTC	national training center
OC/T	observer-controller and trainer
OFS	officer foundational standards
OPFOR	opposing forces
PACE	primary, altnerate, contingency, emergency
PMESII-PT	political, military, economic, social, information, infrastructure, physical environment, and time
RDSP	rapid decision-making and synchronization process
RTOC	reconfigurable tactical operations center
S/G-3	staff operations officer
S/G-1	personnel staff officer
S/G-2	intelligence staff officer
S/G-3	operations staff officer
S/G-4	logistics staff officer
S/G-6	signal staff officer
SCT	supporting collective task
SIM/STIM	simulation and stimulation
SMCT	Soldier manual of common tasks
SME	subject matter expert

SM-TG	Soldier manual and training guide
SOP	standard operating procedure
STP	Soldier training publication
T&EO	training and evaluation outline
TACCP	tactical command post
TC	training circular
TRADOC	(Army's) training and doctrine command
TSP	training support package
U.S.	United States
UAP	unified action partners
UTP	unit training plan
VOA	virtual operational forces academy
WFX	warfighter exercise
WTSP	warfighter training support packages
XO	executive officer

SECTION II – TERMS

Army design methodology

Methodology of applying critical and creative thinking to understand, visualize, and describe problems and approaches to solving them (ADP 5-0).

assessment

The determination of the progress toward accomplishing a task, creating a condition, or achieving an objective. (JP 3-0)

command and control

The exercise of authority and direction by a properly designated commander over assigned and attached forces in the accomplishment of the mission. (JP 1)

commander's intent

A clear and concise expression of the purpose of the operation and the desired military end state that supports mission command, provides focus to the staff, and helps subordinate and supporting commanders act to achieve the commander's desired results without further orders, even when the operation does not unfold as planned. (JP 3-0)

commander's visualization

The mental process of developing situational understanding, determining a desired end state, and envisioning an operational approach by which the force will achieve that end state. (ADP 6-0)

delta training

Training required when there are software or other system changes.

evaluating

Using indicators to judge progress toward desired conditions and determining why the current degree of progress exists. (ADP 5-0)

individual critical task list

List of individual tasks that a Soldier must be able to perform to successfully accomplish their mission and duties at a specific MOS and skill level.

leadership

The activity of influencing people by providing purpose, direction, and motivation to accomplish the mission and improve the organization. (ADP 6-22)

military decision-making process

An iterative planning methodology to understand the situation and mission, develop a course of action, and produce an operation plan or order. (ADP 5-0)

large-scale combat operations

Extensive joint combat operations in terms of scope and size of forces committed, conducted as a campaign aimed at achieving operational and strategic objectives (ADP 3-0)

mission

The task, together with the purpose, that clearly indicates the action to be taken and the reason therefore. (JP 3-0)

mission command

The Army's approach to command and control that empowers subordinate decision making and decentralized execution appropriate to the situation. (ADP 6-0)

mission-essential task

A collective task on which an organization trains to be proficient in its designed capabilities or assigned mission. (FM 7-0)

mission-essential task list

A tailored group of mission-essential tasks. (FM 7-0)

multinational operations

A collective term to describe military actions conducted by forces of two or more nations, usually undertaken within the structure of a coalition or alliance. (JP 3-16)

operational environment

A composite of the conditions, circumstances, and influences that affect the employment of capabilities and bear on the decisions of the commander. (JP 3-0)

operational variables

A comprehensive set of information categories used to describe an operational environment. (ADP 1-01)

operations process

The major command and control activities performed during operations: planning, preparing, executing, and continuously assessing the operation. (ADP 5-0)

planning

The art and science of understanding a situation, envisioning a desired future, and determining effective ways to bring that future about. (ADP 5-0)

preparation

Those activities performed by units and Soldiers to improve their ability to execute an operation. (ADP 5-0)

rehearsal

A session in which the commander and staff or unit practices expected actions to improve performance during execution. (ADP 5-0)

Soldier training publication

Army-wide Doctrine and Training Literature Program (ADTLP) publication that contains critical tasks and other training information used to train Soldiers.

training and evaluation outline

A summary document that provides information on individual or collective task training objectives, resource requirements, and evaluation procedures. (FM 7-0)

training environment

An environment comprised of conditions, supporting resources, and time that enables training tasks to proficiency. (FM 7-0)

training objective

A statement that describes the desired outcome of a training activity in the unit. (FM 7-0)

unified land operations

Simultaneous execution of offense, defense, stability, and defense support of civil authorities across multiple domains to shape operational environments, prevent conflict, prevail in large-scale ground combat, and consolidate gains as part of unified action. (ADP 3-0)

unified action partners

Those military forces, governmental and nongovernmental organizations, and elements of the private sector with whom Army forces plan, coordinate, synchronize, and integrate during the conduct of operations. (ADP 3-0)

warfighter training support package

A complete, stand-alone, exportable training package that integrates all training products, resources, and materials necessary to support operating force training.

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