

Event and Exercise Design



U.S. Marine Corps

Limited Dissemination Control: None

PCN 144 000325 00

UNITED STATES MARINE CORPS

27 January 2023

FOREWORD

Marine Corps Reference Publication (MCRP) 7-20A.2, *Event and Exercise Design*, provides guidance for Marine leaders and trainers on how to create standards-based unit training events and exercises. This publication reinforces the comprehensive Systems Approach to Training and Education highlighted in Marine Corps Tactical Publication (MCTP) 7-20A, *Unit Training Guide*. It also complements unit training management roles and responsibilities introduced in MCRP 7-20A.1, *Training Plan Design*, and provides planning considerations for events within the unit training plan.

Training events and exercises represent the implementation of the unit training plan. Trainers and leaders create events and exercises as opportunities for Marines and units to learn, perform, and be tested according to the published standards. Leaders must seek opportunities to train their Marines and units to achieve the greatest gains in individual and unit proficiency within time, money, and resource constraints. These constraints make it necessary for leaders at all levels to seek out, integrate, and employ cost-effective training opportunities, such as simulations and simulators, into their unit training programs.

This publication is for unit training leaders (officers, staff noncommissioned officers, and noncommissioned officers) at the battalion/squadron level throughout the Fleet Marine Forces. However, the philosophy contained herein can be applied by all leaders, regardless of the size of their unit. This publication reflects the methodology and techniques developed to improve the Marine Corps' overall training effort. It may also be used as a reference for instruction to train leaders how to conduct training and to evaluate unit training design and management.

In conjunction with MCTP 7-20A, MCRP 7-20A.2 and the associated family of MCRPs cancel MCTP 8-10A, *Unit Training Management Guide*, dated 25 November 1996, erratum dated 2 May 2016, and change 1, dated 4 April 2018; and MCTP 8-10B, *How to Conduct Training*, dated 10 August 2005, erratum dated 2 May 2016, and change 1, dated 4 April 2018.

Reviewed and approved this date.



ERIC R. QUEHL
Colonel, U.S. Marine Corps
Director, Policy and Standards Division, Training and Education Command

Publication Control Number: 144 000325 00

Limited Dissemination Control: None

Table of Contents

Chapter 1. A Designer's Mindset

Intent	1-1
Introduction to Training Event or Exercise Design	1-2
Training Events	1-2
Training Exercises	1-2
The Principles of Design.....	1-4
Have a Clear and Transparent Method	1-4
Interaction With Planning.....	1-4
The Operational Process	1-4
Decision-Making Process.....	1-5
Interaction with the Operational Environment	1-5

Chapter 2. A Deliberate Approach

Design Teams	2-1
Planning Team	2-1
Design Team	2-1
Event or Exercise Life Cycle and the Systems Approach to Training and Education Process ...	2-2
Planning Milestones.....	2-3
Design Milestones.....	2-3

Chapter 3. The Analyze Phase

Analyze Phase Milestones	3-1
Concept Development Conference	3-1
Pre-Initial Planning Conference Working Group.....	3-1
Initial Planning Conference	3-1
Post-Initial Planning Conference Meeting.....	3-1
Draft the Scope and Parameters.....	3-2
Scope.....	3-2
Parameters.....	3-2
Training and Readiness Manual Worksheet	3-3
Main Training and Readiness Event list.....	3-3
Chained Training and Readiness Event List.....	3-4
Grouped Training and Readiness Event List	3-4
Suitability of Simulation/Simulators	3-4

Define the Problem 3-5
Draft the Blueprint 3-6
 Blueprint Narrative 3-6
 Blueprint Graphic 3-7
 Scenario Events List 3-7
 Blueprint Timeline 3-7
Scenario Event Resource List 3-8
Analyze Phase Transition 3-8

Chapter 4. The Design Phase

Design Phase Milestones 4-1
 Pre-Mid-Planning Conference Working Group 4-1
 Mid-Planning Conference 4-1
 Post-Mid-Planning Conference Meeting 4-1
Keys to Design 4-2
 Operational Process 4-2
 Training and Readiness Events 4-2
 Stimulation 4-2
Design the Scenario 4-2
 The Operating Environment 4-3
 The General Situation 4-4
Design the Storyline 4-5
 Descriptive Information 4-5
 Scenario Event Stimulation 4-6
 Production Requirements 4-9
Design the Support and Enabler Resource Plan 4-9
Design Phase Transition 4-10

Chapter 5. The Develop Phase

Develop Phase Milestones 5-1
 Pre-Final Planning Conference Working Group 5-1
 Final Planning Conference 5-1
 Post-Final Planning Conference Meeting 5-2
 Commander’s Confirmation Brief 5-2
Develop Scenario Event Stimulus 5-2
 Method of Injecting Stimulus 5-2
 Draft the Stimulus Product 5-3
Aggregate a Master Scenario Event List 5-4
 Common List Elements 5-4

Develop a Control Plan..... 5-5
 Control Element Functions 5-5
 Control Tasks 5-6
Develop Phase Transition 5-6

Chapter 6. Implement and Evaluate

Implement 6-1
Evaluate 6-2

Abbreviations and Acronyms

References and Related Publications

CHAPTER 1.

A DESIGNER'S MINDSET

INTENT

Marine Corps Reference Publication (MCRP) 7-20A.2, *Event and Exercise Design*, emphasizes the importance of leveraging the Systems Approach to Training and Education (SATE) model for systematic design of training events and exercises to achieve training plan-directed objectives in an effective and efficient manner. Training events and exercises provide progressive and repeated opportunities to gain and learn from experience. Leaders at all levels must understand how to design holistic training events and exercises to enhance unit-level training proficiency. This publication reinforces the comprehensive training approach highlighted in Marine Corps Tactical Publication (MCTP) 7-20A, *Unit Training Guide*, and complements other reference publications identified in Figure 1-1.

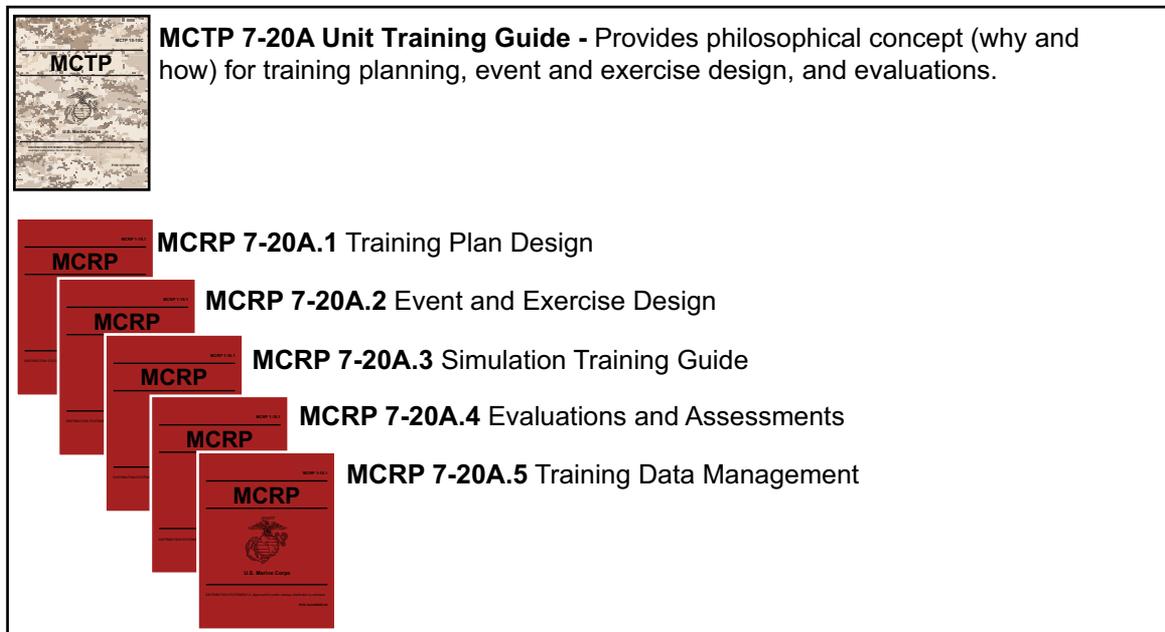


Figure 1-1. Training Publications Hierarchy.

Chapter 1 lays the foundation for the effective training event and exercise design. This chapter defines training events and exercises through their associated characteristics. It introduces principles that guide training designers in developing all types of training events and exercises. It concludes by establishing a common design lexicon utilized throughout the rest of the publication.

INTRODUCTION TO TRAINING EVENT OR EXERCISE DESIGN

I spent 30 years getting ready for that decision that took 30 seconds!

General James Mattis, USMC

Training is instruction, applied events, and exercises conducted for the purpose of attaining or retaining knowledge, skills, and attitudes (KSAs) required to accomplish military tasks. It is executed as a purposeful sequence of related individual or collective training events to achieve training objectives and outcomes that support the commander's training plan and contribute to unit readiness and combat effectiveness. While the design process is fundamentally the same for both forms of instruction, leaders must know if they are designing training as an event or an exercise.

Training Events

Training events are significant training occurrences that are identified, planned, and utilized as components of a unit's training plan. Training events must be clearly defined and measurable activities or actions (i.e., training and readiness [T&R] tasks) that require individual or organized team performance to accomplish a specific mission or function. Training events are drawn from the Marine Corps T&R manuals and mission requirements. To balance compounding training requirements with limited time, money, and resources, each training event should be designed to accomplish specific training requirements and T&R tasks. Two types of common training events are:

Individual Training Events. An individual training event (ITE) is a T&R event that clearly defines a measurable action accomplished by an individual. An ITE provides the necessary details to design and develop individual learning products, and it provides the framework for sustaining and evaluating individual KSAs to support collective tasks. Individual training events related to combat operations should be conducted under conditions simulated or executed as closely as possible to those that the individual may encounter in combat.

Collective Training Events. A collective training event (CTE) is a T&R event that clearly defines discrete and measurable activity or action accomplished by an organized team or unit, such as an MV-22 aircrew, a rifle squad, or an artillery fire direction center. Collective tasks are derived from unit missions or higher-level collective tasks in which an organization must be proficient in order to accomplish a portion of its wartime mission(s). Collective training events prescribe the standards to which a group must perform under actual operating conditions. Subject to constraints, collective training should be conducted under conditions and rates of activity closely approximating those that the cohesive unit being trained may encounter in combat.

Training Exercises

Training exercises are military maneuvers or simulated wartime operations conducted by military units for the purpose of demonstrating and evaluating KSAs. Training evaluations involve planning, preparation, and execution to accomplish a task or mission. They are generally composed of either sequenced or simultaneous training events, reinforcing and sustaining proficiency in individual and collective skills within units. They additionally provide training on collective events drawn from Marine Corps T&R manuals. Common types of training exercises follow.

Field Training Exercise. A field training exercise is an exercise conducted under simulated combat conditions in the field. They are master scenario event list (MSEL), scenario-, or free play-driven

exercises. They are meant to exercise multiple warfighting functions simultaneously under battlefield conditions. They provide opportunities to practice core and assigned mission-essential tasks (MET). Defining characteristics of a field training exercise are—

- A live training force (but may also include constructive and virtual training elements).
- Use of field training areas, exercise range areas, and allocated airspace or virtual space.
- An exercise force that can range in size from a company to an entire Marine expeditionary force.

Command Post Exercise. A command post exercise (CPX) is a MSEL- and/or simulation-driven exercise involving the unit commander, staff, and tactical communication systems in a command post setting. A CPX requires communication with higher-echelon command, adjacent, and subordinate elements. It is effective for training staffs, command posts, and communication unit command and control (C2) processes above the company level and is conducted to train subordinate leaders and staff members at all echelons to:

- Function as effective teams and build cohesion.
- Conduct knowledge management and information management.
- Implement command and control.
- Execute command post battle drills.

Combined-Arms Live-Fire Exercise. A combined arms live fire exercise (CALFEX) is a resource-intensive exercise in which units employ organic and supporting weapon systems to fix, fight, maneuver on, or destroy a notional enemy. It is typically scenario-driven in an established operational environment (OE) and executed under simulated battlefield conditions. A CALFEX is conducted to develop proficiency in effective and safe integration of live-fire combined arms and maneuver. These exercises often incorporate a multitude of units and supporting arms in the same event, require large live-fire range area and airspace requirements.

Fire Support Coordination Exercise. Compared to a CALFEX, a fire support coordination exercise is a reduced-scale exercise that may be conducted at the team, platoon, company, and battalion levels. It is conducted to develop and hone critical staff and unit leader proficiency in key skills and competencies, many of which are closely linked with C2, targeting, and fire support coordination. A fire support coordination exercise will incorporate integration of multiple supporting arms such as indirect fires and aviation, but with fires-specific training objectives that are narrower in scope than a CALFEX.

Mission Rehearsal Exercise. A mission rehearsal exercise is an exercise in which participating units have a known or expected real-world mission in a known geographic combatant command's area of responsibility. The exercise is specifically designed to replicate the conditions and problems the exercise force will encounter during the actual operation. It is MSEL- or scenario-driven and typically conducted as a culminating event prior to deployment. A mission rehearsal exercise is characterized by the following:

- A scenario built around known adversary tactics, techniques, and procedures from a specific theater of operation.
- Extensive use of observer controllers, training specialists, subject matter experts (SMEs), and scripted aggressors.
- Incorporating equipment that the training audience is expected to employ in operations.

THE PRINCIPLES OF DESIGN

Leaders must draw upon logic, imagination, intuition, and systematic reasoning to explore the possible end states in order to create outcomes that achieve specified readiness objectives. They must follow the principles of design:

- Have a clear and transparent method.
- Interact with planning efforts.
- Understand the operations process.
- Understand the decision-making process.
- Understand how the training audience will interact with the OE.

Have a Clear and Transparent Method

The goal of design is to create a framework for training activities resulting in the training audience achieving its desired end state for operational readiness and combat effectiveness. The designer must consider all available resources to maximize the unit's limited time and money. Training designers work with unit planners and SMEs to develop common understanding of training objectives and transform collective tasks into real-world behaviors and instructions, activities, or situations that individuals and units will experience during an event or exercise.

Interaction With Planning

Because decisions and outputs of the planning process will inform and shape design activities, event and exercise designers must be involved in all planning activities throughout the event and exercise life cycle.

Planning. Marine Corps Doctrinal Publication (MCDP) 5, *Planning*, defines planning as, “The art and science of envisioning a desired future and laying out effective ways of bringing it about.” The desired end state of an event or exercise is for the training audience to achieve proficiency in the T&R tasks being trained, and for the unit to progress toward its operational readiness objectives. Event and exercise planning is the process of developing a set of synchronized activities between the training audience and training support activities to achieve the end state.

Designing. Marine Corps Warfighting Publication (MCWP) 5-10, *Marine Corps Planning Process*, describes the purpose of design as “group dialogue and critical thinking to understand complex problems and develop a framework for solving them.” Event and exercise design focuses on determining the overall outcomes of training. These outcomes determine specific training objectives that the training audience must accomplish, which in turn determine what the audience is going to do during the event or exercise.

The Operation Process

Designers must understand the basic C2 framework within the unit they are training in order to better understand how to replicate combat conditions and present the necessary stimuli to initiate event or exercise actions and to challenge the training audience.

Decision-Making Process

The decision-making process describes how individuals and units identify and solve problems. Designers must understand what defines an appropriate problem for their training audience and how that problem will be observed, oriented on, and solved within the context of the scenario. This will enable the designer to construct events and exercises that best facilitate the execution of training objectives.

Interaction with the Operational Environment

In order to design an effective scenario, designers must have a basic understanding of how individuals and units will engage with the OE. The purpose of establishing a scenario and OE is to set the conditions by which the training audience interacts with training event stimuli.

Problem Complexity. Problem complexity can range from simple to complex and be used to help determine training objectives and outcomes. A simple problem focuses training objectives on behavioral outcomes with measurable training audience performance. Solving a simple problem will typically involve executing a T&R task to provide a known solution to a known problem. A complex problem focuses training objectives on problem solving for which there may be multiple or unknown solutions. Solving a complex problem will typically involve constructive problem solving and critical thinking.

Environment Structure. Environment structure helps designers frame the scale of a training event or exercise and can range from well-structured to loosely structured. A well-structured environment focuses on narrow training objectives with expected outcomes. The environment consists of certainty with limited need for adaptability. It will typically lead the training audience to do a specific task a known way. A loosely structured environment is characterized by uncertainty and requires training audience adaptability, creativity, and constructive problem solving. Training objectives in a loosely structured environment will typically be broader and unit actions may result in unexpected outcomes.

CHAPTER 2.

A DELIBERATE APPROACH

Chapter 2 establishes a deliberate approach to the development of events and exercises. Event and exercise development involves a planning effort and a design effort. Planners and designers are appointed by and responsible to the commander; however, planning and design are not mutually exclusive activities. Planning guides, directs, and focuses design actions; design activities provide essential information to planning milestones. This relationship leads to the creation of a common aggregated plan of actions and milestones (POA&M), enabling planners and designers to synchronize efforts along a shared timeline. This deliberate approach to planning and design is essential for synchronizing information and actions across lines of effort.

DESIGN TEAMS

Whenever possible, commanders should establish an event or exercise design team. This team works adjacent to the planning team to develop events or exercises. Depending on unit size and staff available, part or all of the design team may perform both planning and design functions.

Planning Team

The planning team is the main architect in planning the execution. The unit commander designates the planning team, which may include the executive officer or operations officer with representatives from each functional area and participating subordinate units. Planners conduct staff actions necessary to move, support, and sustain forces during an event or exercise. The planning team determines how an event or exercise will be conducted.

Design Team

The design team is the main architect in design. The unit commander designates the design team, which may include the unit training officer with representatives from each functional area and participating subordinate unit. The design team collaborates with applicable external exercise planning and support agencies knowledgeable in the METs and T&R standards to be trained. Designers perform actions associated with designing and developing the tactical play and “problem” of an event or exercise. Design teams determine what an event or exercise will look like.

The makeup and responsibilities of design teams change based on the echelon of the unit conducting training and the anticipated staff participation within the event or exercise. External personnel may augment design efforts as SMEs. Subject matter experts bring specialized military occupational specialties, equipment capabilities, or tactics, techniques, and procedures knowledge

to enhance the unit training during the event or exercise. Subject matter expert requirements must be identified and requested as early as possible during the *analyze* phase to ensure necessary coordination occurs for their participation.

EVENT OR EXERCISE LIFE CYCLE AND THE SYSTEMS APPROACH TO TRAINING AND EDUCATION PROCESS

The event or exercise life cycle shown in Figure 2-1 describes the entire process of initiating, planning, designing, executing, and evaluating events or exercises. All events and exercises have a life cycle, but not all will have the same milestones.

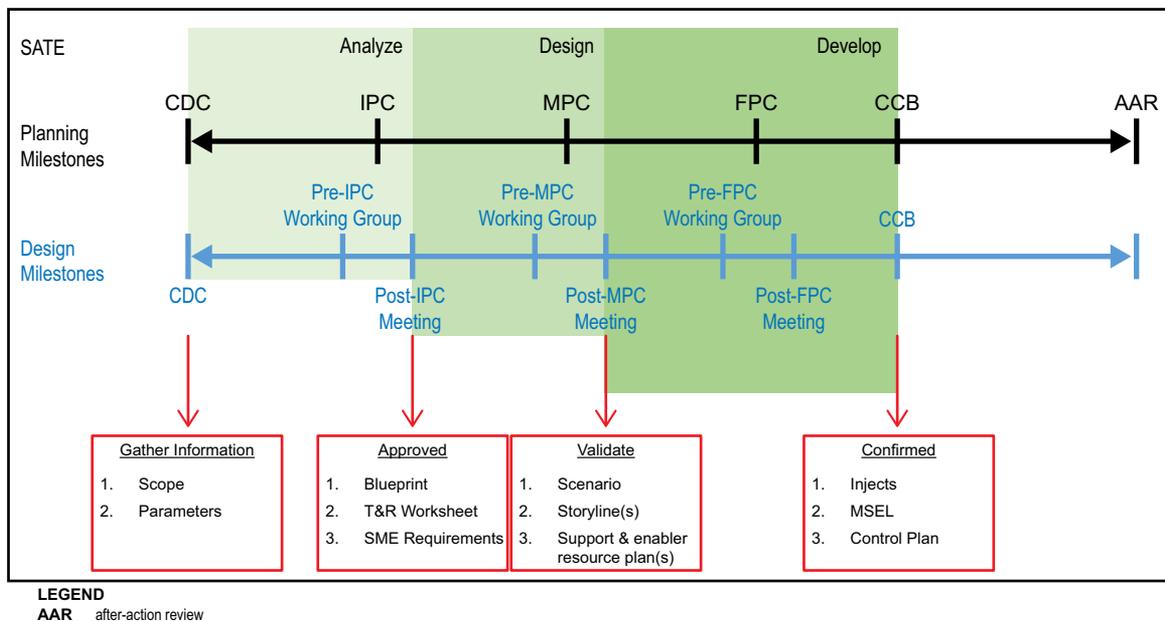


Figure 2-1. Event or Exercise Life Cycle Example.

The SATE process provides leaders with a model to create and execute events and exercises. It enables Marines and units to attain and sustain MET proficiency. The SATE process simplifies and standardizes the development of events and exercises into manageable subsets. As mentioned in MCTP 7-20A, the SATE process is composed of five distinct phases. However, only the first three phases apply to the development of events or exercises. Each phase serves a distinct function with associated key milestones. These milestones are synchronized on a POA&M.

The application of a deliberate approach ensures unity of effort between planners and designers in designing and preparing to execute training events and exercises. Additionally, this approach assists with the consolidation of a singular POA&M ensuring synchronization of planning and design efforts.

Planning Milestones

Per MCDP 5, planning is the act of envisioning and determining effective ways of achieving a desired end state through the integration of decisions and actions. Common planning milestones are—

- Concept development conference (CDC).
- Initial planning conference (IPC).
- Mid-planning conference (MPC).
- Final planning conference (FPC).
- Commander's confirmation brief (CCB).

Design Milestones

As described in MCWP 5-10, designers develop collective understanding of the problem and determine a framework for solving them. Design milestones bring together unit training planners and subject matter experts on the design team for dialogue and critical thinking to define the current and desired end states, understand T&R tasks required to progress to the desired end state, and determine the actions necessary to elicit the necessary training actions. Event and exercise designers analyze training objectives and transform collective tasks and desired real-world behaviors into instruction, activities, or situations that individuals and units will “experience” during an event or exercise. Design milestones will vary in name and purpose based on the unit level of the training audience, the specific exercise being planned, and the training support enablers and resources involved. Common design milestones are—

- Pre-IPC working group.
- Post-IPC meeting.
- Pre-MPC working group.
- Post-MPC meeting.
- Pre-FPC working group.
- Post-FPC meeting.

CHAPTER 3.

THE ANALYZE PHASE

Chapter 3 expands upon the SATE model *analyze* phase in MCTP 7-20A. It introduces the concepts of an event or exercise scope and parameters and provides descriptions and examples of T&R worksheet and event or exercise blueprints as tools to aid planners and designers in organizing and documenting their planning and design efforts. It outlines inputs, processes, and outputs associated with analyzing an event or exercise. This chapter concludes with explaining the transition from the *analyze* to the *design* phase.

ANALYZE PHASE MILESTONES

The purpose of the *analyze* phase is to define the parameters of the event or exercise. The design team must have a firm understanding of the event or exercise scope and parameters. Informational requirements necessary to complete this phase are ascertained during the initial meetings between the design team and exercise director. The exercise director, designated by the commander, validates *analyze* phase outputs prior to transitioning to the next SATE phase. The *analyze* phase milestones are as follows.

Concept Development Conference

The CDC is the first milestone for both designers and planners. It serves as the initiating directive for events and exercises. The key objective of the CDC is to define and develop the scope and parameters of the event or exercise. The CDC marks the beginning of the SATE process and the *analyze* phase.

Pre-Initial Planning Conference Working Group

The pre-IPC working group is the second milestone in the *analyze* phase. Designers refine the scope and parameters and construct a blueprint for approval.

Initial Planning Conference

The IPC is generally the third milestone during the *analyze* phase. The scope, parameters, and blueprint are finalized at the IPC. These outputs ensure the planner and designer agree on the construct of the event or exercise.

Post-Initial Planning Conference Meeting

The post IPC meeting is the final milestone in the *analyze* phase and generally marks the transition from the *analyze* phase to the *design* phase. This meeting is held after the IPC between the planners and designers to approve all *analyze* phase products.

DRAFT THE SCOPE AND PARAMETERS

During the *analyze* phase, the designer collaborates with and receives guidance from the exercise director (if applicable) of the event or exercise and staff planners to determine the scope and parameters.

Scope

The scope refers to the information that defines the subject matter of the event or exercise. It should focus on how the training audience desires to act in response to specific problems. This information is often found within the unit's training plan. At a minimum, the following information should be identified when drafting the scope of an event or exercise:

Training Audience. The primary participant and recipient of training. This may range from individuals to task organized units at any echelon.

Training Goal. A narrative expressing commander's intent, key actions, events, and outcomes that define successful completion of the event or exercise.

Operational Theme. The dominant major operation that frames the event or exercise.

Training Objectives. Echelon-appropriate T&R events that correspond to the actions the training audience wants to conduct during the event or exercise.

Parameters

Parameters outline specific constraints and restraints. These variables help establish the characteristics of the event or exercise. They allow the designer to properly build the framework of an event or exercise and should include the following information:

Conditions. The environmental, situational, behavioral, and physical constraints or variables in which a unit, system, or individual is expected to operate and may affect performance; or the cues and indicators to which they must respond. Event or exercise conditions are informed by T&R conditions. The commander may modify conditions based on the unit's assigned mission.

Execution Timeline. The start and end dates of the event or exercise. An execution timeline helps determine the amount of time available to design the event or exercise. The available amount of planning time will shape the complexity of the design plan.

Resource Integration. Desired utilization of support and enabler-enhancing resources necessary to create holistic learning environments. The designer must be aware of resource availability, capability, and the exercise director's intent for usage to determine the resource requirements and appropriately account for their integration.

The Operating Environment. Joint Publication (JP) 3-0, *Joint Operations*, defines the operational environment as "a composite of conditions, circumstances, and influences (operational variables) that affect the employment of capabilities and bear on the commander's decisions." The exercise director determines the OE requirements based on recommendations from the designer.

Type of Threat Force. The type of threat the event or exercise is executed against accounts for both tactical employment considerations and equipment capabilities. The threat force may be conventional, unconventional, or a hybrid of the two. The designer must also be aware of the equipment type against which the exercise director intends the unit to operate.

TRAINING AND READINESS MANUAL WORKSHEET

The T&R worksheet is a tool to assist designers with analyzing and documenting associated T&R events. It identifies—

- Main T&R events echeloned appropriately and aligned with the training objectives.
- Subordinate and adjacent T&R events that are associated with (subsequently referred to as chained) the main T&R event.
- Grouping of main and chained T&R events to specific actions (events).

A T&R worksheet consists of several elements of information, which are gathered through the analysis of applicable T&R manuals. The following are the T&R worksheet components.

Main Training and Readiness Event list

A list of main T&R events that are directly aligned to the training objectives. The designer interprets training objectives, references the unit training plan, and researches applicable T&R manuals to annotate aligned events as main T&R events. This list becomes the basis from which chained and grouped T&R event lists are developed (see Figure 3-1).

Main Training and Readiness event list				
Event #	Event Code	Event	SIM	System
Event 1	INF-C2-7001	Conduct Command and Control (C2)	Yes	MTWS
Event 2	INF-FSPT-7001	Conduct Fire Support	Yes	MTWS
Event 5	INF-LOG-7001	Conduct Tactical Logistics	Yes	MTWS
Event 1	INF-INT-7001	Conduct Intelligence Functions	Yes	MTWS
Event 1	INF-C2-6001	Conduct Command and Control (2)	No	
Event 2	INF-FSPT-6002	Conduct Fire Support Planning	Yes	CACCTUS
Event 2	INF-FSPT-6002	Conduct Fire Support Coordination	Yes	CACCTUS
Event 1	INF-INT-6001	Conduct Intelligence Functions	No	
Event 5	INF-LOG-6001	Conduct Tactical Logistics	No	
Event 3	INF-MAN-6001	Conduct an Attack	Yes	I-TESS
Event 6	INF-MAN-6006	Conduct an Area Defense	Yes	CACCTUS
Event 5	LOG-OPS-6001	Conduct Logistics Operations		
Event 5	LOG-TRAN-5004	Conduct Air Delivery Operations		
Event 5	ACAD-4009	(S) Air Assault Operations		
Event 3	ACAD-3411	Air Assault Operations		

LEGEND

- CACCTUS** Combined Arms Command and Control Training Upgrade System
MTWS MAGTF Tactical Warfare Simulator
I-TESS Instrumented Tactical Engagement Simulation System

Figure 3-1. Main Training and Readiness Event List Example.

Chained Training and Readiness Event List

A list of supporting T&R events to a main T&R event. The designer analyzes each main T&R event and documents supporting T&R events. This action is called chaining T&R events (see Figure 3-2).

Chained Training and Readiness event list		
Chained To	Event Code	Event
INF-INT-6001	INF-INT-5001	Conduct Information Collections
INF-LOG-6001	INF-LOG-5001	Conduct Tactical Logistics
INF-MAN-6001	INF-0317-5001	Conduct Sniper Control Center (SCC) Function
INF-MAN-6001	INF-0317-5002	Conduct Scout Sniper Platoon Operations
INF-MAN-6001	INF-ANTI-5001	Provide Fires
INF-MAN-6001	INF-MAN-5001	Conduct an Attack
INF-MAN-6001	INF-MAN-5014	Establish a Support by Fire Position
INF-MAN-6001	INF-MGUN-5001	Provide Fires
INF-MAN-6001	INF-MORT-5001	Provide Fires
INF-MAN-6001	INF-MAN-5010	Conduct Linkup
INF-LOG-6001	LOG-TRAN-3013	Support Air Delivery Operations
INF-LOG-6001	LOG-TRAN-3014	Provide Airlift Support to Air Delivery
INF-MAN-6006	INF-MAN-5006	Conduct an Area Defense
INF-MAN-6006	INF-MGUN-5001	Provide Fires
INF-MAN-6006	INF-MORT-5001	Provide Fires
ACAD-3411	ACAD-3410	Planning Products
ACAD-3411	ACAD-3412	Air Assault Key Players

Figure 3-2. Chained Training and Readiness Event List Example.

Grouped Training and Readiness Event List

An aggregated list of T&R events organized into categories based on the key event they support. The designer researches the condition and performance steps or event components and groups all similar T&R events. Grouped T&R events are aligned to a key action within an event, or a key event within an exercise (see Figure 3-3).

Suitability of Simulation/Simulators

A list of T&R events that can be conducted using simulators and the name of the simulator that should be utilized. Community T&R manuals identify which T&R events must, should, or may be conducted using simulations or simulators. This helps units identify possible support and enabler resources for use during the event or exercise. It also enables units to achieve realistic individual and collective training in resource-constrained environments. MCRP 7-20A.3, *Simulation Training Guide*, provides coordination resources and explains how to enhance unit-level training through simulations.

Grouped Training and Readiness Event List	
Event #1	Command and Control of Air Assault and Fires
INF-C2-7001	Conduct Command and Control (C2)
INF-INT-7001	Conduct Intelligence Functions
INF-C2-6001	Conduct Command and Control (C2)
INF-INT-6001	Conduct Intelligence Functions
INF-INT-5001	Conduct Information Collections
INF-0317-5001	Conduct Sniper Control Center (SCC) Functions
INF-0317-5002	Conduct Scout Sniper Platoon Operations
Event #2	Offensive Fire Support (Shaping Fires)
INF-FSPT-7001	Conduct Fire Support
INF-FSPT-6001	Conduct Fire Support Planning
INF-FSPT-6002	Conduct Fire Support Coordination
INF-MORT-5001	Provide Fires
Event #3	Air Assault
INF-C2-7001	Conduct Command and Control (C2)
INF-INT-7001	Conduct Intelligence Functions
INF-C2-6001	Conduct Command and Control (C2)
INF-INT-6001	Conduct Intelligence Functions
INF-INT-5001	Conduct Information Collections
INF-MAN-5010	Conduct Linkup
ACAD-3410	Planning Products
ACAD-3412	Air Assault Key Players

Figure 3-3. Grouped Training and Readiness Event List Example.

DEFINE THE PROBLEM

A problem is described in MCDP-5 as “the difference between our current situation and the desired outcome.” The difference can be caused by factors in the OE that must be overcome or mitigated in order to accomplish the associated task and achieve the desired end state. Each scenario event must have at least one scenario problem. Events with more problems have greater complexity.

Scenario problem design is both analytical and creative. Designers are only bound by realism and relevance. The three primary sources for problems a training audience may encounter are—

- *The enemy*. The most common source for designing and presenting problems to the training audience.
- *The operational environment*. This is the second-most common source for event or exercise problems and challenges.
- *Friendly forces*. Friendly force actions, activities, decisions, and systems can be an effective source of problems and challenges for the training audience.

DRAFT THE BLUEPRINT

The blueprint is a tool that assists the designer in capturing the narrative, graphic, timeline, and a list of scenario events that comprise the event or exercise. The blueprint parallels the training audience course of action graphic and narrative, explaining how the event or exercise will be constructed to facilitate the scheme of maneuver and desired training objectives. It clearly defines the ideal behaviors and actions the designer will attempt to stimulate and conditions that direct the exercise force planning. The blueprint also enables the designer to share the conceptual progression of all planned training events, known as the game path, with the exercise director and receive approval (see Figure 3-4).

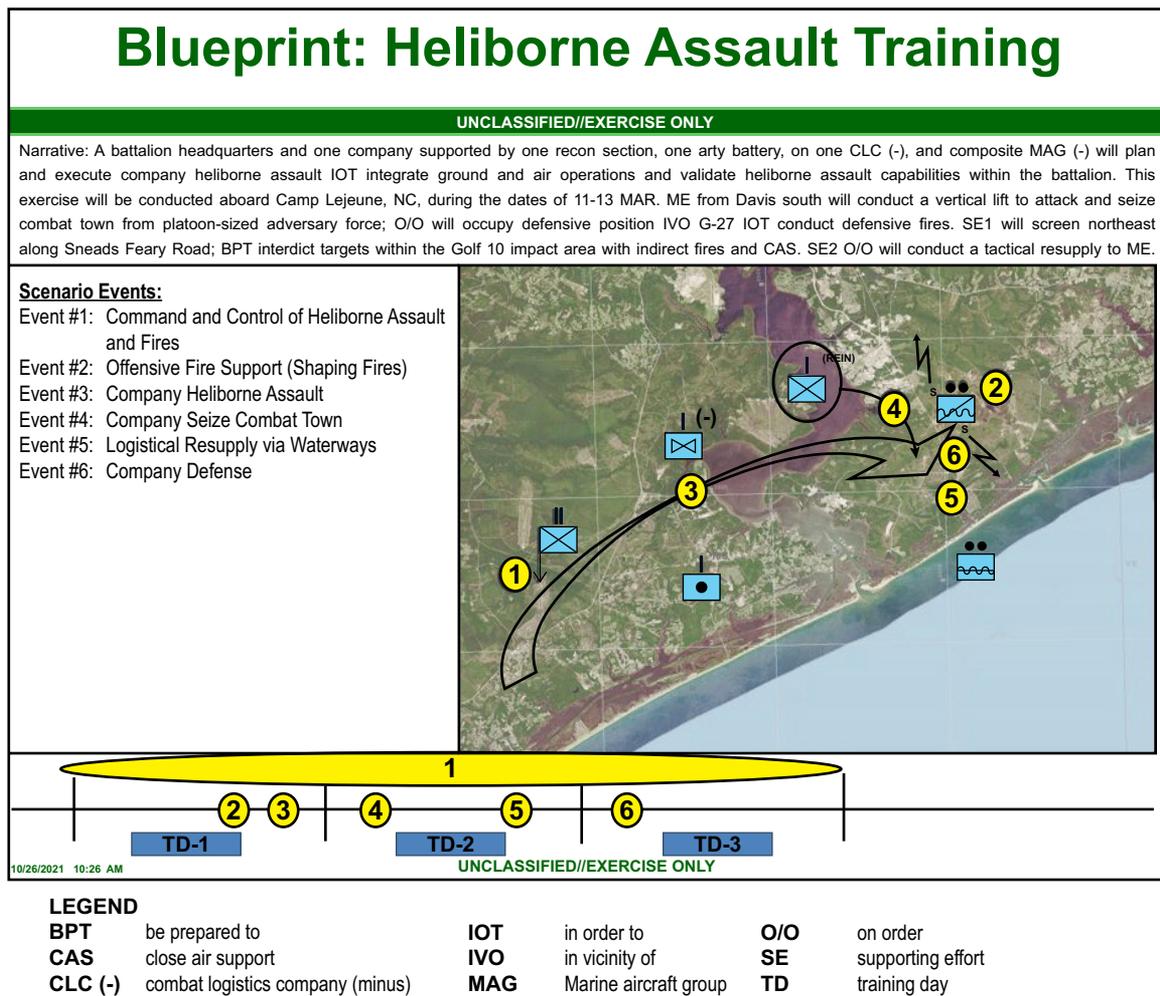


Figure 3-4. Blueprint Example.

Blueprint Narrative

The blueprint narrative is a written chronicle of the event or exercise. It depicts the training audience’s problem and expected actions. The designer uses elements of the scope and parameters to describe the desired sequence of event or exercise actions.

Blueprint Graphic

The blueprint graphic is a visual depiction of the event or exercise scheme of maneuver, tactical tasks, and location of scenario events. The designer uses a map of the event or exercise area with operational graphics to depict the desired location and sequence of scenario events and how they relate to time and space.

Scenario Events List

Scenario events are incidents or experiences that are intended to force the training audience to decide and act, enabling resulting behaviors to be observed and measured for the purpose of achieving a specific training objective. They are always developed to enable the accomplishment of established training objectives. The scenario events list developed in the blueprint will be aggregated into the MSEL.

Scenario Event List Development. The designer analyzes the T&R worksheet to identify and document scenario events. The events should stimulate the training audience to decide and act. The designer may begin to formulate scenario events by establishing the activity to be performed and who in the training audience will perform it. A good starting point is to identify and define the scenario event objectives.

Scenario Event Objective. The scenario event objectives define the purpose of the event in terms of the desired action and its objective. All scenario events should have an objective that is clearly identified. Scenario event objectives are usually expressed as—

- A group of multiple T&R events with similar conditions and standards that the scenario event is supporting.
- A single T&R event that the scenario event is supporting.
- A group of T&R event components.
- A T&R event component.

The designer then determines if a scenario event can be developed that leads to the T&R events being accomplished. This is done by determining whether introduction of stimulation will trigger the training audience to act in such a manner that all relevant aspects of the T&R event can be observed and measured.

Blueprint Timeline

The blueprint timeline is a diagram that outlines the sequence and timing of scenario events. This allows the designer to graphically depict both the interrelation of events to one another and instances where multiple iterations of an action are required. To develop the blueprint timeline, the designer determines the order and logical sequence in which scenario events will occur. The designer then annotates this sequence along a timeline.

SCENARIO EVENT RESOURCE LIST

All home station training locations have support and enabler resources that are intended to—

- Enhance realism of conditions.
- Provide user feedback.
- Support scenario event stimulation.

The designer analyzes each scenario event to identify the optimal support and enabler resources to enhance the event or exercise. An aggregated list of support and enabler resources is compiled for future use during the *design* phase (see Figure 3-5).

Resource coordinator billets are located at each training support center (TSC) site to assist with support and enabler resource integration into events and exercise. Leaders may contact their local TSCs for assistance.

ANALYZE PHASE TRANSITION

Before the designer can transition to the conceptual design of events and exercises, the blueprint, T&R worksheet, and SME requirements must be approved by the exercise director. This approval process begins at the IPC when the documents are discussed and modified as needed. The final approval is ideally achieved during the post-IPC meeting. Once approved, the documents become the basis for future design and development of products.

Scenario Event Resource List					
Support or Enabler	Scenario Event	Enhance Realism	Feedback	Stimulate action	Notes
VBS-3	Event # 1	X		X	Simulate full motion video feed from UAS
ITESS	Event # 4		X	X	FoF for assault on Combat Town
BFX	Event # 4	X			
Role Players	Event # 4	X		X	Non combatants on Battlefield

LEGEND

- | | | | |
|--------------|--|------------|--------------------------|
| BFX | battlefield special effects | UAS | unmanned aircraft system |
| FOF | force-on-force | VBS | virtual battle space |
| ITESS | Instrumented Tactical Engagement Simulation System | | |

Figure 3-5. Scenario Event Resource List.

CHAPTER 4.

THE DESIGN PHASE

Chapter 4 expands upon the SATE model *design* phase in MCTP 7-20A. The problem set is created and woven into the scenario during the *design* phase. This chapter introduces the concepts of designing a learning environment, the situation, storylines, and plans. It outlines the inputs, processes, and outputs associated with designing training events and exercises. This chapter concludes with explaining the transition process from the *design* phase to the *develop* phase of the SATE process.

DESIGN PHASE MILESTONES

The purpose of the *design* phase is to conceptualize the execution of the event or exercise. Design activities provide the framework and drive the detailed development actions that occur in the *develop* phase. These actions closely parallel conceptual planning. Most work within this phase is conducted in small working groups, organized and led by the designer. This phase begins with the post-IPC meeting and is completed with the post-MPC meeting. The *design* phase milestones follow.

Pre-Mid-Planning Conference Working Group

The pre-MPC working group is the first milestone in the *design* phase. This working group is held by designers to compile the design products developed during specialized cells and sub-working groups throughout the *design* phase.

Mid-Planning Conference

The MPC is the second milestone in the *design* phase. Storylines and other critical design inputs are refined at the MPC. The outputs of the MPC ensure planners and designers agree on the game path and activities individuals and units will experience during the event or exercise.

Post-Mid-Planning Conference Meeting

The post MPC meeting is the final milestone in the *design* phase and marks the transition from the design to the *develop* phases. This meeting is held after the MPC between the planners and designers for the purpose of validating design products.

KEYS TO DESIGN

Designers must envision relevant problems and anticipate corresponding actions and reactions to conceptualize an event or exercise. This creativity requires designers to have an advanced understanding of the following concepts as the keys to design.

Operational Process

Understanding the training audience's operational process allows the designer to—

- Identify relevant indications and warnings of potential actions.
- Anticipate how information will be received, processed, and acted upon.
- Predict the most likely action to be chosen based on the stimulus presented.

Training and Readiness Events

Understanding the conditions and T&R event performance steps or event components allows the designer to—

- Construct the conditions for the specific scenario.
- Draft and sequence critical actions and sub-events.
- Focus training to the desired, observable outcomes.

Stimulation

Understanding the concept of event stimulation through the use of all live, virtual, and constructive entities allows the designer to—

- Account for actions.
- Identify scripting requirements.
- Identify shortfalls.

DESIGN THE SCENARIO

According to MCWP 5-10, effective decision-making requires both situational understanding to recognize the essence of a given problem and the creative ability to devise practical solutions. For this purpose, the scenario focuses on providing varying degrees of fidelity and resolution to the training audience. It creates an operational environment and constructed situation that are relevant to the scale and scope of the event or exercise being designed.

The scenario places the training audience into a desired tactical setting prior to starting the event or exercise. Additionally, scenarios are utilized to guide control element personnel so that training progresses according to predetermined plans.

The scenario is a compilation of products that sets the initial conditions and timeline of events imposed on the training audience. Within the scenario, the training audience is presented with problems, completes tasks, and makes decisions to achieve training objectives. Although the resolution of a scenario can vary greatly, it always addresses the operational environment and general situation.

Events are usually scenario-supported whereas exercises are often scenario-driven.

- *Scenario-supported.* In a scenario-supported event, the scenario provides a realistic backdrop for the unit to accomplish its primary goal but does not drive the outcome. For example, a unit is able to practice the mechanics of an amphibious assault without a scenario; however, a realistic scenario provides context for the actions and sets tasks parameters.
- *Scenario-driven.* In a scenario-driven exercise, the scenario drives unit decision-making and accomplishment of its outcomes. The scenario design prompts the actions of the training audience.

The Operating Environment

The designer must define the operational environment in relation to the event or exercise. The definition of the operational environment states or describes the operational variables that frame an event or exercise. This provides top-down awareness, flexibility, and continuity in exercises to enable decision-making. It provides contextual background in events to shape and force anticipated actions. Defining the operational environment plays a major role in the Marine Corps Planning Process and a commander's decision-making cycle.

The construction of an operational environment may range from a simple situation paragraph to a complex country fact book, depending on the training objectives. It provides all information pertaining to all relevant aspects of the operational environment (e.g., political, military, economic, social, information, and infrastructure [also called PMESII] systems).

Political. The political variable describes the distribution of responsibility and power at all levels of governance, formally constituted authorities, as well as informal political powers. The political variable includes influential political groups and the collective attitude of the population toward the United States.

Military. The military variable explores the military and paramilitary capabilities of all relevant actors (enemy, friendly, and neutral) in a given operational environment. This includes nonmilitary armed and unarmed combatants. The military variable focuses on giving the designer the ability to design appropriate opposing force (OPFOR) units for full spectrum operations.

Economic. The economic variable encompasses individual and group behaviors related to producing, distributing, and consuming resources. Specific factors impacting behavior may include economic diversity and employment opportunities within an operational environment. Other factors include black market or underground economies, which are alternative structures indicating weaknesses in the mainstream economy. Such factors influence people's decisions to alter or support the existing order. These decisions, if unresolved through legitimate political means, can lead to conflict.

Social. The social variable describes the cultural, religious, and ethnic makeup within an operational environment and the beliefs, values, customs, and behaviors of society members. Societies consist of many structured and overlapping groups and institutions, each with relative statuses and roles that support, enable, and provide opportunity to achieve personal or community expectations. Important characteristics of a social system include population demographics, migration trends, and diversity of religious and ethnic groups. Understanding these complex interrelationships in a society is vital for successful military missions.

Information. The information variable describes the nature, scope, characteristics, and effects of individuals, organizations, and systems that collect, process, disseminate, or act on information. Information involves the access, use, manipulation, distribution, and reliance on information technology systems, both civilian and military, by an entity (state or non-state). Understanding whatever communication infrastructure exists in an operational environment is important because it ultimately controls the flow of information to the population and military and/or paramilitary forces, as well as influences local and international audiences. Communication availability can act as a leveling function with regard to mitigating military technical advantages to a surprising extent. Military units must understand and engage in the information environment in order to achieve their objectives.

Infrastructure. The infrastructure variable accounts for the basic facilities, services, and installations a community or society needs to function. The degradation or destruction of infrastructure will affect the entire operational environment, particularly the political, military, economic, social, and information variables. This variable also reflects the infrastructure sophistication of an operational environment.

Physical Environment. The physical environment variable includes the geography and man-made structures as well as the climate and weather in the area of operations. Depending on the type of exercise, these conditions may be real, notional, or a combination of both.

Time. The time variable describes the timing and duration of activities, events, or conditions that occur, exist, or continue within an operational environment, as well as how the timing and duration are perceived by various actors in the operational environment. Various aspects of time and the perceptions of them can affect and influence military operations (friendly and enemy) within an operational environment. They can affect the reasons for conducting an operation, time available to complete a mission, duration of an operation, and how commanders employ forces to achieve conditions of the desired end state. Different groups of people may perceive the concept of time in different ways. The perceptions and experiences of time are among the most central aspects of how groups function and interact. In a military context, time orientation affects decision cycles, planning horizons, and tempo of operations.

The General Situation

The general situation is an initial set of conditions and timeline of significant events imposed on the training audience to achieve the training objectives. It gives the training audience the background information typically available in a combat situation, including events leading up to the point of execution and information necessary to place the training audience in the tactical setting.

The general situation, often called the “road to war” or “road to crisis,” is information that provides the training event or exercise start data necessary to place the training audience within the appropriate conditions to execute specific training objectives. This is typically a narrative utilizing the operational environment as contextual background.

DESIGN THE STORYLINE

At their core, storylines are design tools used to construct and sequence scenario event stimulation (e.g., scripts, OPFOR guidance, forcing functions etc.), often called injects. They document scenario event problems through a series of observable indications and warnings meant to drive the training audience to decide and act in a predictable manner.

A storyline generally consists of three sections:

- Descriptive information.
- Event stimulation.
- Production requirements.

Descriptive Information

Descriptive information is the first section of a storyline. It is the information that describes the storyline and to supports the aggregation of a MSEL during the *development* phase (see example thread descriptive information in Figure 4-1). Examples of descriptive information follow.

Thread Begin/Thread End. The date and time the first and last injects are introduced.

Purpose. A description of why a storyline is being designed. It outlines the main reason for the storyline. It is associated with achieving a main training action or event.

Description. A narrative describing how the storyline will be implemented. It outlines the sequence of injects and actions being conducted. The description ends with a statement of the expected action on the part of the training audience.

Method of Implementation. A list of inject platforms required to introduce each inject to the training audience.

Required Coordination. A list of who and what needs to be coordinated to construct and implement each inject.

Target Audience(s). Units or individuals that will perform actions in response to the storyline.

Assumptions. A list of presumed circumstances that must be confirmed as being true in order for the storyline to be effective.

Storyline: Heliborne Assault, Recon Screening (RS-01)

- **Thread Begin:** NET 0700 11 Mar 21
- **Thread End:** NLT 1700 13 Mar 21
- **Purpose:**
 - Enable BN FSCC to coordinate and deconflict fires
 - Enable Recon Section to control fires
 - Enable Arty Btry and MAG to provide fires
- **Description:** High value targets are painted to recon teams within the G-10 impact area for prosecution
- **Coordination Requirements:**
 - **Scenario:** Enemy force laydown within G-10
 - **Response cells:** EIC I&W of enemy movement south IVO MOUT Town
 - **Scripted Actions:** Target paints for anti-air weapon, radar, IDF, and reinforcing mech force
 - **Opposing Force:** N/A
- **Method of Implementation:**
 - MSEL-direct reports
 - EIC response cell
 - Controller paints on target banks in G-10
- **Target Audience:**
 - Battalion FSCC
 - Recon Section
 - Arty Battery
 - Section Fix Wing
 - Section Rotary Wing

LEGEND

ARTY	artillery	IDF	indirect fire	MOUT	military operations on urbanized terrain
BN	battalion	I&W	indications and warnings	N/A	not applicable
Btry	battery	IVO	in the vicinity of	NET	no earlier than
EIC	exercise intelligence center	MAG	Marine aviation group	NLT	no later than
FSCC	fire support coordination center				

Figure 4-1. Storyline Descriptive Information Example.

Scenario Event Stimulation

The second section of the storyline focuses on identifying and sequencing stimulation. Scenario event stimulation is any data, information, or scripted action designed to be introduced to the training audience for one of the following reasons:

- *Executing scenario events.* Stimulation is designed and presented for the purpose of causing the training audience to decide and act so that resulting behaviors can be observed and measured in a manner that will accomplish training objectives.
- *Managing the game path.* The game path is the continuous, orderly progression of all planned training events.
- *Shaping the operational environment.* Stimulation builds context, knowledge, or awareness within the training audience. It may not be intended to initiate a particular action.

Stimulation can be presented to the training audience via a response cell, simulation event, or as an action taken by a separate enabler (e.g., OPFOR, green force, civilians on battlefield, or a separate enabling event) to initiate or shape an event.

Stimulation Identification. Scenario events generally require multiple types and forms of stimuli to elicit a single action or behavior on the part of the training audience. The first step in completing the second section of a storyline is identifying each stimulating event (see Figure 4-2).

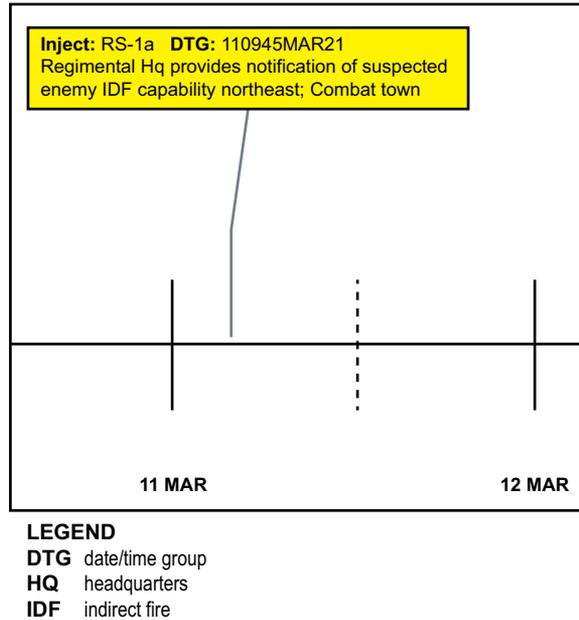


Figure 4-2. Stimulating Event Example.

A technique often used to identify stimulus for a scenario event is to ask the question, “What type(s) of stimulation would the training audience need to receive to act in a manner that would allow a behavior that is described in the scenario event objective to be observable?”

Once the stimulus is identified, the designer considers the scenario and operational environment to ensure the training audience will perceive the stimulus as being logical. Stimulus presented to the training audience must originate from somewhere. Marine Corps Reference Publication 7-20A.3, *Simulations Training Guide*, describes the following sources of training event and exercise stimulation:

- **Live Actions.** Live action applies to individual Marines or units in the training audience using their actual equipment in real-world conditions responding to guided, unscripted reactions of training enablers. Live actions are guided by the restraints and constraints of the scenario and the controlling agency.
- **Virtual Simulation.** Virtual simulation involves individual Marines or units training with simulated elements of the operational environment or their organizational equipment (virtual entities). For example, in a flight simulator or the indoor simulated marksmanship trainer, Marines interact with replications of their actual equipment, which produces effects within a virtual flight or rifle range. Virtual simulation includes either deliberate or dynamic scripted actions. Deliberate scripting applies to development of preplanned actions executed in accordance with the MSEL. Dynamic scripting applies to rapid development of unplanned actions executed in accordance with control element guidance.

- **Constructive Simulation.** Constructive simulations create entire units, staffs, or capabilities so a training audience can train as if they were interacting with real units and/or support capabilities against and OPFOR through a simulation. For example, a CPX may involve live Marines or facilitators acting as response cells to simulate subordinate units and taking actions within a deliberately and dynamically scripted scenario. Constructive entities or training systems generate data that is presented to the training audience to elicit decisions and actions that can be evaluated against T&R standards.

Stimulation Sequencing. The order in which stimulation is presented to the training audience has an important role in ensuring the training audience decides and acts toward a specific behavior. For this reason, the second step in completing this section of a storyline is to chain or sequence related stimulation. This is accomplished by using a fishbone diagram (see Figure 4-3) to both identify the basic information about and the sequence in which each associated inject should be presented to the training audience.

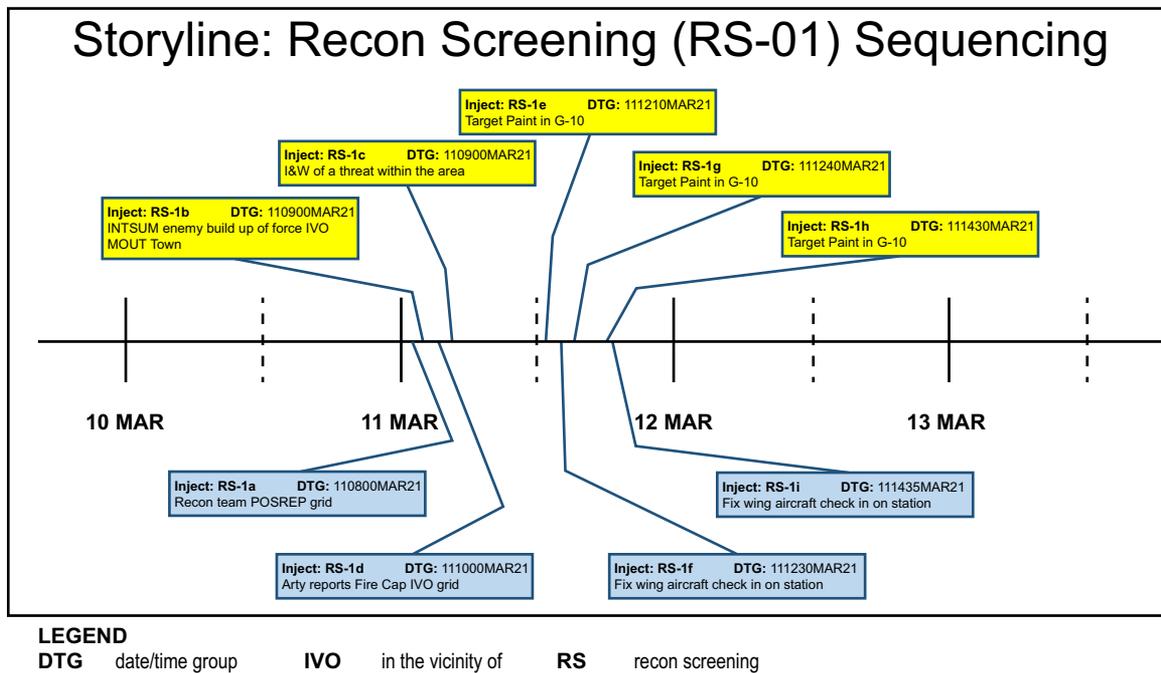


Figure 4-3. Stimulation Sequence Example.

The diagram should include—

- An inject number.
- A date/time group the inject should be introduced.
- A description of the inject or actions.
- A description of the training audience’s expected actions.

Production Requirements

The stimulation development requirements list is the third section of a storyline. This list associates stimulations depicted on the timeline with individuals or working groups to develop them during the next phase of the SATE process. See Figure 4-4 for an example.

DESIGN THE SUPPORT AND ENABLER RESOURCE PLAN

Designing the integration of support and enabler resources into the scenario events is an integral part of the *design* phase. The purpose of this plan is to ensure designers, planners, and support and enabler personnel have a common understanding of expectations, schedules, restraints, and constraints. This plan is typically developed and presented in the same manner as the blueprint.

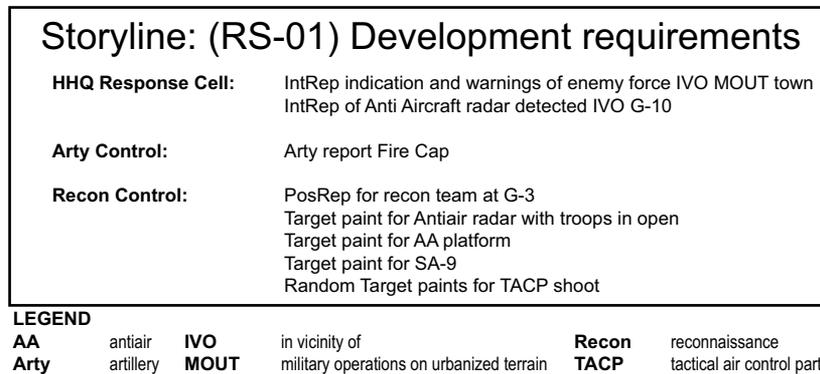


Figure 4-4. Production Requirements Example.

DESIGN PHASE TRANSITION

Before the designer can transition to the detailed development of events and exercises, the scenario and storylines must be approved by the exercise director. This approval process begins at the MPC when the documents are discussed and modified as needed. The final approval is ideally achieved during the post-MPC meeting.

CHAPTER 5.

THE DEVELOP PHASE

Chapter 5 addresses the *develop* phase of the SATE model. This chapter expands upon the introduction of the SATE and *develop* phase in MCTP 7-20A. It introduces the concepts of stimulation drafting, stimulation construction, MSEL aggregation, and control plan development. It outlines the inputs, processes, and outputs associated with developing training events or exercises. This phase concludes with transition implementation.

DEVELOP PHASE MILESTONES

The primary purpose of the *develop* phase is to produce the stimuli that the training audience will receive within the framework of the scenario. A secondary purpose is to construct controlling guides that ensure that the products developed are implemented in the optimal manner to achieve the desired ends. Designers utilize products carried forward from the *design* phase to generate stimulus, MSEL, and control plans. This phase begins with the conduct of the post-MPC meeting and ends when development products are confirmed at the post-FPC meeting. The *design* phase milestones are as follows.

Pre-Final Planning Conference Working Group

The pre-FPC working group is the first milestone in the *develop* phase. This working group is held by designers for the purpose of developing and refining documents produced during specialized cells and sub-working groups during the *develop* phase.

Final Planning Conference

The FPC is generally the second milestone in the *develop* phase. The FPC provides a final opportunity to have key personnel review and confirm the event or exercise development is complete. The focus should be on plans and preparations of the training audience rather than exercise management. However, the designer should receive confirmation on—

- Support plans.
- Control plans.
- MSEL.
- Event support documents.

Post-Final Planning Conference Meeting

The post-FPC meeting is the third milestone in the *develop* phase. This meeting provides a final opportunity for the designers to resolve any outstanding design issues. The purpose of this meeting is to confirm final changes or additions to—

- Support plans.
- Control plans.
- MSEL.
- Event support documents.

Commander's Confirmation Brief

The CCB marks the completion of the *develop* phase. The purpose of the CCB is to inform the commander that the unit is ready to execute the event or exercise. The confirmation brief will address—

- Support plans.
- Key events (usually, by day).
- Issues or concerns.

At the conclusion of the CCB the designer transitions to a tactical exercise control group (TECG) support role, typically as an event officer-in-charge (OIC) or, for exercises, as the tactical exercise commander or MSEL manager.

DEVELOP SCENARIO EVENT STIMULUS

A major activity of the *develop* phase is the final development of identified stimulation or event support products. Designers use storylines to call out required stimuli, identify the method of injection, and develop the context of the stimulus.

Method of Injecting Stimulus

The method of injecting stimulus refers to the mechanism by which stimulation is presented to the training audience. The method to inject stimulus is as important as the stimulus itself, and can have a tremendous effect on how the training audience responds. The two questions that must be answered when developing the method of injecting stimulus are “who will introduce or inject the stimulus?” and “what format does the stimulus take?”

Who will introduce or inject the stimulus? This question directly relates to the particular live, virtual, or constructive entities within the event or exercise that will initiate an inject. This may be a sub-element of the training audience or a response cell virtually acting as a higher, adjacent, or supporting individual or organization. Common stimulus implementers are—

- Response cells (e.g., higher, adjacent, or subordinate element).
- Intelligence coordination cell.

- OPFOR.
- Role players.
- Observer controllers.
- Virtual platform simulated small unmanned aircraft system full-motion video.
- Constructive simulation engagement outcomes.

What is the format of the stimulus? This question directly relates to the use of resources that are supporting the event of exercise. Common stimulus formats are—

- Orders (e.g., warning or fragmentation orders, tasking instructions).
- Support requests (e.g., aviation, fires, logistics, casualty evacuation requests).
- Intelligence reports and products (e.g., intelligence reports or summaries, battle damage assessments).
- Logistic reports (e.g., logistical status, ammunition/munitions, medical status reports).
- Operational reports (e.g., position reports, situation reports, operations reports, spot reports).
- Administrative communication (e.g., requests for information, response to requests for information, news articles).
- OPFOR actions (e.g., controlled live OPFOR guides).
- Data produced by constructive simulation system.

Draft the Stimulus Product

This action is commonly referred to as scripting. The designer may require assistance from SMEs or designated working groups to ensure the stimulation designed accurately depicts information intended to elicit a specific response.

The designer must first identify the category of the stimulation. The following categories of stimulation are a starting point for designers to use.

Data. Data is the representation of facts, concepts, or instructions in a formalized manner suitable for communications, interpretation, or processing by humans or automated means. Data generally requires additional processing by the training audience to determine its meaning or purpose.

Information. Information represents knowledge gained from investigation, study, or analysis. It is often described as data endowed with meaning and purpose.

Friendly Forces. The actions or inaction of higher, adjacent, or subordinate friendly forces can be used to create stimulation for the training audience.

Enemy Forces. The action or inaction of enemy forces have a potent stimulating effect on the training audiences.

The Environment. Environmental forces (e.g., weather, terrain, fire, flood) can serve as straightforward forms of stimulation to the training audience.

AGGREGATE A MASTER SCENARIO EVENT LIST

During drafting of the blueprint, the design team identifies necessary scenario event stimuli to achieve each training objective. The MSEL is a consolidation of all scenario event stimuli in a specific sequence to ensure all training objectives are accomplished. It contains stimuli designed to maintain the game path and prevent unintended tangents. The MSEL is an execution tool that documents essential elements of scenario events (see Figure 5-1). It is the primary device for game path management.

Common List Elements

While there is no standardized format for a MSEL, there are common elements found on most MSELs. These elements allow control personnel and implementers to quickly and accurately manage the presentation of scenario events and other stimulus to the training audience.

Line Number. Injects are numbered after they are aggregated on a MSEL and sequenced in order of delivery date and time. The number is identified as the MSEL line number and is utilized to identify MSEL inject lines.

Date and Time. The date and time an inject is meant to be introduced into the scenario. This is transferred to the MSEL from the storyline.

Storyline Name. The storyline that the inject was designed to support. This is transferred to the MSEL from the storyline.

Scenario Event Identifier. The scenario event the inject was designed to support. This is transferred to the MSEL from the storyline.

Inject Number. With the scenario event identifier, inject number identifies the sequence of specific scenario event injects. This is transferred to the MSEL from the storyline.

Description. A brief synopsis of the inject.

Target Audience. Identifies who within the training audience should decide and act on the inject.

Inject Platform. Identifies who or what will first report or observe the inject.

Remarks. Any special comments or remarks the control element should be aware of when introducing the inject. It often provides supporting information to prepare for RFIs or dynamic development.

Line #	DDT	TTTT	MM	YY	Storyline	Event	Inject	Description	T/A	I/P	Method	Control Zone	Remarks

LEGEND
DDT date and time

Figure 5-1. Master Scenario Event List.

DEVELOP A CONTROL PLAN

Although all events and exercises have control functions that must occur within them, the size and capability of the control element will vary based on the type of event or exercise and the size of the training audience. Training events may only have an OIC, range safety officer, and a corpsman with a safety vehicle. Training exercises may have a complex manning document with a robust TCEG.

Regardless of the size and scope of training, the control plan identifies the overall structure of the control element and billet requirements for the event/exercise support manning document. It identifies the roles and responsibilities of key personnel and establishes the agencies that report directly to the exercise director during the execution.

The control plan will establish responsibilities and authorities granted to specific individuals assigned to the TCEG. Establishing processes and procedures for implementing, controlling, and communicating across the control element will be included in the control plan. The control plan will also identify all requirements necessary to establish the learning environment and control the event or exercise (e.g., personnel, equipment, facilities, and supporting enablers).

Because the size and capability of the control element can vary significantly based on the type of event or exercise and the size of the training audience, this publication focuses on three core control element functions and will discuss the considerations for developing a control plan that can execute these functions effectively.

Control Element Functions

While control elements (e.g., exercise control or site controllers) often have numerous tasks to perform, all control organizations must execute the following three core functions:

Model the Learning Environment. Modeling the learning environment is the act of logically representing the conditions in which ITEs and CTEs will be performed. This requires the control element to safely replicate the environment and conditions associated with the competition continuum. The learning environment should be learner-centric and adaptable. It should also provide tangible feedback and repetition to the training audience. Establishing and maintaining the designed learning environment is a core control element function.

Manage the Presentation of Stimulation. Managing the presentation of stimulation to the training audience refers to control element actions taken to ensure continuous, orderly progression of all planned scenario events and stimuli during an event or exercise. It is often referred to as MSEL or game path management. The decision to present scenario events or stimulation to the training audience must be made or approved by a single individual within the control element. The individual making these decisions must have a clear understanding of—

- The current operational environment status.
- The training audience's perception of the current situation.
- Training objectives yet to be accomplished and the planned course to achieve them.

If the training audience is deviating from the intended game path, the control element develops dynamically scripted stimulus to correct the deviation. The MSEL is the principal execution tool to manage the presentation of stimulus to the training audience during execution.

Observe and Measure Behavior. The purpose of training events and exercises is to present opportunities for a training audience to perform tasks and experience situations they will likely encounter in operations. It is essential that decisions made by the training audience and resulting actions are observed and measured during execution. Failure to observe, measure, and compare training audience behaviors against published standards diminishes the value of training and results in lost opportunities to improve readiness.

Control Tasks

- Manage the conduct of scenario events in accordance with the training schedule.
- Manage the execution of the MSEL.
- Manage risk and ensure training audience safety.
- Stimulate and influence the training audience to take actions that align with the training objectives.
- Coordinate and direct the training audience evaluation.
- Adjudicate the outcome of engagements between friendly and enemy forces.
- Coordinate the activities of the OPFOR.
- Manage response cells.
- Inform the exercise director of significant events, incidents, issues, and training audience future intentions.
- Coordinate, direct, and control support and enabler resource employment.
- Coordinate with and control all external activities that are participating in or supporting the event or exercise.

DEVELOP PHASE TRANSITION

Injects, MSEL, and control plans must receive final approval from the exercise director before the designer transitions to implementing events and exercises. The designer should also conduct a transition brief with the tactical exercise commander or OIC. The approval process begins at the FPC when the documents are discussed and modified as needed and final approval is ideally achieved during the CCB.

CHAPTER 6.

IMPLEMENT AND EVALUATE

To this point, this publication has described planning for training. The planning phases (analyze, design, and develop) set the foundation for the training to be conducted and for individual Marines and the unit to achieve the desired levels of readiness. This preparation requires significant time, energy, and coordination from and between the unit and external agencies to ensure the training effectively and efficiently prepares the unit to achieve its readiness benchmarks. The *implement* and *evaluate* phases put these well-crafted plans into action.

IMPLEMENT

The CCB marks the transition from planning phases (analyze, design, and develop) to execution of the training event or exercise. The exercise designer transitions to a support role in the TECG. The planning cell transitions to executing support plans, specifically in staging resources and personnel.

Unit leaders ensure their Marines are prepared to execute the training. Marines receive safety briefs, are familiarized with unit SOPs, and conduct drills. Leaders brief their Marines on the training to ensure the Marines understand what will occur and what is expected of them. Before this briefing, unit leaders and training leaders must be proficient in and thoroughly understand the tasks expected of the unit, and be prepared to lead the Marines through their execution. Before beginning a training event or exercise, Marines should understand the training purpose and conditions, applicable tasks and standards, and the anticipated or desired outcome of the training. Briefs should also include a general concept of operations, equipment and gear requirements, resources for individual pre-execution preparation, and any logistical or administrative constraints.

Event or exercise execution involves providing the training to the participants and evaluating performance relative to the training objectives. The event or exercise is conducted in accordance with the schedule, including staff exercises, unit exercises, field training exercises, drills, and individual training. Trainers and leaders brief Marines prior to conducting individual drills, or at prior to the start of each day for unit exercise. As necessary, the unit may conduct wargames or rehearsals to validate their planning. Debriefs are conducted immediately following execution of drills or at the end of each day during unit exercises. Both briefs and debriefs should focus on the desired standards for the event or period discussed. As required, the unit remediates training to correct deficiencies.

EVALUATE

As stated in MCTP 7-20A, “Evaluation is a continuous process that occurs at all echelons and during every phase of training.” It is conducted throughout planning and all phases of the SATE process, and ensures event and exercise plans are shaped by and lead to the accomplishment of T&R standards and mission requirements. Training evaluation should consider all aspects of planning and executing training, as well as achieving desired training outcomes in comparison to T&R standards and mission requirements.

As explained in detail in MCRP 7-20A.4, *Evaluations and Assessments*, evaluation is the process by which individual Marines and units receive feedback about their performance during the training event or exercise. Their performance is compared to the prescribed standards within applicable T&R manuals. Informal and formal feedback processes, such as hot washes and after-action reviews, facilitate the evaluators providing timely evaluation data to Marines and the unit. Immediate feedback through event debriefs between the evaluators, unit training leaders, and Marines executing the training tasks is critical to the learning development of individual Marines and the unit. Marines expected to lead and evaluate unit training must be prepared to provide quality feedback by understanding the unit mission, being proficient in the tasks to be performed, and being confident in their ability to coach and mentor throughout the process.

Documenting training outcomes, including both the conduct of training and performance evaluations, is critical to the progression of individual Marines and the unit, as explained in MCRP 7-20A.5, *Training Data Management*. Performance evaluation checklists and after action reviews are common formal methods for recording training outcomes and lessons learned throughout the training continuum. Units also record their planning by creating support plans, letters of instruction, confirmation briefs, and risk assessments. As training progresses, units return to these documents to identify causes of training gaps or deficiencies, draw upon best practices, and improve their future unit training management practices. The unit commander uses the total picture of evaluation feedback, event documentation, and personal observations to assess the unit’s readiness and the effectiveness of the training.

GLOSSARY

Abbreviations and Acronyms

C2	command and control
CPX	command post exercise
CTE	collective training event
ELC	exercise life cycle
ISMT	indoor simulated marksmanship trainer
ITE	individual training event
KSA	knowledge, skills, and attitude
MCDP	Marine Corps doctrinal publication
MCRP	Marine Corps reference publication
MCTP	Marine Corps tactical publication
MCWP	Marine Corps warfighting publication
MET	mission-essential task
MOS	military occupational specialty
MPC	mid-planning conference
OE	operational environment
OIC	officer-in-charge
OPFOR	opposing force
POA&M	plan of actions and milestones
SME	subject matter expert
T&R	training and readiness

The following acronyms pertain to processes and entities specific to this publication series.

CALFEX	combined arms live fire exercise
CCB	commander's confirmation brief
CDC	concept development conference
FPC	final planning conference
IPC	initial planning conference
MPC	mid-planning conference
MSEL	master scenario event list
SATE	Systems Approach to Training and Education
TECG	tactical exercise control group
TSC	training support center

REFERENCES AND RELATED PUBLICATIONS

Joint Issuances

DOD Dictionary of Military and Associated Terms

JP 3-0 Joint Operations

Other Instructions

Navy/Marine Corps Departmental Publications (NAVMCs)

1553.1 Marine Corps Instructional Systems Design/Systems Approach to Training and Education Handbook

Marine Corps Publications

Marine Corps Supplement to the DOD Dictionary of Military and Associated Terms

Marine Corps Doctrinal Publications (MCDPs)

1 Warfighting

5 Planning

Marine Corps Warfighting Publication (MCWP)

5-10 Marine Corps Planning Process

Marine Corps Tactical Publication (MCTP)

7-20A Unit Training Guide

Marine Corps Reference Publications (MCRPs)

2-10B.1 Intelligence Preparation of the Battlefield/Battlespace

7-20A.1 Unit Training Guide

7-20A.3 Marine Corps Simulation Training Guide

7-20A.4 Evaluations and Assessments

7-20A.5 Training Data Management

Marine Corps Orders (MCOs)

1553.3 Unit Training Management Program

3501.1 Marine Corps Combat Readiness Evaluation (MCCRE)

5100.29 Marine Corps Safety Management System

A non-cost copy of this document is available at:

<https://www.marines.mil/News/Publications/MCPEL/>

Copyright Information

This document is a work of the United States Government and the text is in the public domain in the United States. Subject to the following stipulation, it may be distributed and copied:

- Copyrights to graphics and rights to trademarks/Service marks included in this document are reserved by original copyright or trademark/Service mark holders or their assignees, and are used here under a license to the Government and/or other permission.
- The use or appearance of United States Marine Corps publications on a non-Federal Government website does not imply or constitute Marine Corps endorsement of the distribution service.

