

Draft

A Compendium of Wargaming Terms
(Updated 7 July 2015)

Compiler
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Introduction

The Wargaming Community uses many terms that have multiple definitions or meanings different from common usage, reflecting the variety of ways the art of wargaming is practiced. Unfortunately there is no single agreed-upon set of wargaming terms, therefore; this compendium is an unofficial collection that attempts to collect and post as broad a variety of terms and definitions as possible. Its purpose is to inform rather than impose.

Comments, Additions, and Suggestions are requested and welcome. Please send to:
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The opinions contained in this document are those of the author alone, they do not reflect official policy of the Wargaming Division, the USMC, or the U.S. Government.

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1½-sided game: A 1½-sided game also includes one player cell, with the opposition furnished by a control group, but with scenario injects developed during game execution, versus prescribed, to force the players to wrestle with specific decisions related to game objectives.¹

Abstraction:

- Key concept in wargames whereby complex procedures in an historical event are much simplified in a wargame of the same event.²
- The process of selecting the essential aspects of a simulation to be represented in a model or simulation while excluding those aspects that are not relevant to the purpose of the model or simulation. The set of elements produced by this process.³

Action Officer: (note: also known as Game Director)

- The government representative assigned responsibility for the development and execution of a wargame.
- The wargamer assigned responsibility for the development and execution of a wargame.⁴

Adjudication: The act of determining the outcome of a game move.⁵ Resolving disputes or controversies before an impartial judge. This term describes the procedure to resolve the outcome of interactions between sides in a wargame. A wargame controller or umpire acts as the impartial judge. The term assessment is often used interchangeably with adjudication.⁶

There are three kinds of adjudication:

- **Free adjudication:** The results of interactions are determined by the adjudicators in accordance with their professional judgment and experience.⁷ Note: The opposing sides reaching a consensus on the likely outcome of a non-kinetic interaction or engagement is a useful adjudication method in an open or mixed open/closed wargame format.
- **Rigid adjudication:** The results of interactions are determined according to predetermined rules, data, and procedures⁸ (See Combat Models and Combat Results Table)
- **Semi-free adjudication:** Interactions are evaluated by the rigid method, but the outcomes can be modified or overruled by the lead adjudicator.⁹

Administration Brief:^{10 11} The brief presenting important administrative details of the wargame. The topics that an admin brief should consider are:

¹ Shawn Burns, ed. *War Gamers' Handbook A Guide for Professional War Gamers*. U.S. Naval War College, Newport, R.I.

² James Dunnigan, *The Technical Terms Used in Wargaming*, Accessed 6 March 2014, <http://www.strategypage.com/wargames-handbook/chapter/2-c-term.aspx>.

³ DoD Modeling and Simulation Glossary. Accessed June 17, 2015. www.msco.mil/MSGLoassary.html

⁴ Wargaming Division, Marine Corps Warfighting Lab, *Standard Operating Procedures (SOP)*, August 2005

⁵ CADRE, Air Force Wargaming Institute, *Glossary of AFWI Wargaming Terms*, Handbook for Wargame Controllers

⁶ **Note:** Adjudication is an alternative to the term Battle Damage Assessment (BDA) because BDA in wargaming has traditionally focused on the purely kinetic or physical damage aspects of warfare and ignores the non-kinetic factors dealing with knowledge, deception, situational awareness, information warfare, morale, public opinion, etc.

⁷ Francis J. McHugh, "Fundamentals of War Gaming," 3rd Ed, March 1966.

⁸ McHugh

⁹ McHugh

¹⁰ Burns

¹¹ WGD SOP

- The wargame schedule
- Physical and information security policies
- Policies on personal electronic devices (e.g. Cameras, cell phones, PDA's, memory sticks, laptops etc.)
- Public Affairs
- Policies on attribution / nonattribution
- Social events
- Internet access
- Emergency contact procedures and personal message handling
- A map showing:
 - the player cell locations
 - admin and security offices
 - vending machines, eateries and rest rooms
 - Emergency evacuation information
 - Parking locations and regulations

Aggregated Force: A single symbol, model, or force which represents a real-world force composed of two or more units.¹²

Alpha Test: The proof of concept event that tests the validity of the game design against the objectives prior to expending significant effort to refine the design before development. This occurs during design phase.¹³

Alternative futures game: Another game approach presents players with an activity performed using several different scenarios. With different alternative futures proposed, the players try to discern key indicators that would identify which future might be developing. Results of players' responses are compared across scenarios.¹⁴

Analysis:

- The methodical investigation of an issue or problem through the detailed study of its parts.¹⁵
- Qualitative Analysis: a subjective assessment of the value of decisions made or actions taken by the players. ^x
- The process of increasing understanding of complex subjects through a number of methods, principally by breaking a subject into constituent parts.¹⁶ (See Adjudication, Assessment)
- The systematic, thoughtful, and rigorous employment of the scientific method to examine a problem, scenario, or issue in order to gain insights into relationships between constituent components, understand underlying principles, or answer a specific set of pre-identified questions.¹⁷

¹² Burns

¹³ Burns

¹⁴ Burns

¹⁵ *Marine Corps Order 3070, Marine Corps Wargaming Program, DRAFT June 1991*

¹⁶ Matthew Caffrey, "Glossary/Definitions of Wargame Related Acronyms and Words." *Connections Wargaming*. Accessed 19 June 2015. <http://www.kentaurus.com/www.connections-wargaming.com/Definitions.html>.

¹⁷ M&S Glossary

Analytical Wargame:

- A wargame conducted for the purpose of deriving information which may be used to assist military commanders and executives in reaching decisions.¹⁸
- Analytical Wargaming is the act of competitive, contextualized decision-making within pre-defined constraints for the purpose of gaining insight into complex, adaptive, interactive, and cognitive systems.¹⁹

Areas of Interest: (also called Topics of Interest) Minor objectives concerning specific areas or issues the sponsor or stakeholders would like for players to deal with during wargame play. Accomplishing Areas of Interest are not critical to success of wargame; however, Areas of Interest are included in the wargame design if practical. Areas of Interest should be reviewed by the CAP plan and if possible included in the questionnaire and offline cell discussion. ^x

Assessment: A qualitative judgment about something based on an understanding of the situation.²⁰

Assumptions:²¹

- The act of taking for granted.²²
- A supposition on the current situation or a presupposition on the future course of events, either or both assumed to be true in the absence of positive proof, necessary to enable the commander in the process of planning to complete an estimate of the situation and make a decision on the course of action.²³
- An often unstated belief about some aspect of the wargame design, wargame results, conflict, the players, and/or the conditions under which the conflict occurs.²⁴
- Caveats that keep the game focused on game objectives, ideally to prevent a game from becoming distracted by tangential issues. For example, a game assumption could be that Country Green remains neutral during a conflict between Country Orange and Country Blue.²⁵

(See Wargame Assumptions)

Assistant CAP Team Leader: The assistant to the CAP Team Leader. The Assistant's primary duty is to ensure that all relevant materials, briefs, and data are collected and preserved. Also performs other duties as directed by the CAP Team Leader.²⁶ (See Capture, Assessment and Production)

¹⁸ McHugh

¹⁹ Jon Compton, "Toward an Epistemology of Wargaming – A Drunkard's Walk" (PowerPoint Presentation, Military Operational Research Society, Wargaming Community of Practice Brown Bag Lecture Series), March 19, 2015.

²⁰ Note: Wargaming Division, Quantico generally uses this term to describe the process of examining the data collected during the game to produce the game report. The term assessment is preferred over analysis because wargames are not scientific experiments that can be reproduced; therefore any numerical or quantitative results of the game must be considered valid only within the context of the game.

²¹ Note: To be appropriate, an assumption must be valid (i.e. most likely true). Assumptions can be stated or unstated (i.e. assumed). The unstated assumptions in both planning and gaming are usually the ones that cause the most trouble. A wargame for a plan, a concept, CONOPS, or a course of action, should identify and determine the validity of their assumptions.

²² *The American Heritage College Dictionary*, 4th Ed.

²³ *Department of Defense Dictionary*, JP 1-02

²⁴ Joseph M. Saur, Senior Research Scientist, Georgia Tech, Quantico Field Office.

²⁵ Burns

²⁶ WGD SOP

Battle Book: A multi-media wargame report on CDROM or DVD with a compilation of wargame related materials, including interviews, reference materials, briefings, reports etc. The content will vary depending on the wargame objectives and audience.

Note: Used by Wargaming Division, Quantico.

Battle Damage Assessment: The timely and accurate estimate of damage resulting from the application of military force ---. Battle damage assessment is composed of physical damage assessment, functional damage assessment and target system assessment.²⁷ (See Adjudication)

Beta Test: The first full integration of the developed game in its entirety, including game people, processes and technology. The beta test occurs at the end of the testing phase.²⁸

Black Swan:

- The black swan theory is a metaphor that describes an event that comes as a surprise, has a major effect, and is often inappropriately rationalized after the fact with the benefit of hindsight.²⁹
- A “Black Swan” is an event that cannot be predicted not because it is rare, but because it is so mundane. It is not the event that matters, but the system state in which the event occurs. Risk is exponentially amplified by the complexity of the system. The more complex the system, the more likely it is that a perfectly mundane event will catastrophically collapse the system. What we fail to predict about a black swan is not the event, but rather the risk associated with the complexity of the system itself. This is a type of problem to which wargaming as a method is suited.³⁰

Blue Cell: The team (or player) representing the “friendly” side in a wargame. They are opposed by the Red or Grey team.³¹

Board Game:

- A game played on a board such as chess.
- A manual naval war game also called Board *Maneuver* employing a game board to represent the area of operations.³²

Branches and Sequels: In planning (and especially in spelling out wargame moves) branches & sequels are the “If this, then that” or “after this, then that” steps of the plan (or move.)³³

Break Points: The casualty levels at which units would cease to function or break and run.³⁴

²⁷ JP 1-02.

²⁸ Burns

²⁹ "Black swan theory," *Wikipedia, The Free Encyclopedia*, accessed June 20, 2015, https://en.wikipedia.org/w/index.php?title=Black_swan_theory&oldid=667424368.

³⁰ Compton

³¹ *AFWI Wargaming Terms*

³² McHugh.

³³ *AFWI Wargaming Terms*.

³⁴ Caffrey

Briefs: Several types of briefs are presenting in the course of a wargame.^{35 36}

- **Administration Brief:**^{37 38} The brief presenting important administrative details of the wargame. The topics that an admin brief should consider are:
 - The wargame schedule
 - Physical and information security policies
 - Policies on personal electronic devices (e.g. Cameras, cell phones, PDA's, memory sticks, laptops etc.)
 - Public Affairs,
 - Policies on attribution / nonattribution
 - Social events
 - Internet access
 - Emergency contact procedures and personal message handling
 - A map showing:
 - the player cell locations
 - admin and security offices
 - vending machines, eateries and rest rooms
 - Emergency evacuation information
 - Parking locations and regulations
- **Executive Brief:** A game summary, often fifteen pages of PowerPoint slides, presented to a game sponsor, flag officer or senior government executive presenting results of the game relative to the game objectives.³⁹
- **General Situation Brief:** The brief on the situation at wargame start given to all players. It contains the "Road to War / Crisis" and the immediate circumstances at wargame start. Usually given at the end of the wargame brief but before the players break into their individual cells.⁴⁰⁴¹ The brief generally follows the SMEAC format (Situation, Mission, Execution, Admin and Logistics, and Command and Signal).
- **Information Briefs:** Briefs to the wargame participants containing information needed for wargame play⁴².
- **In-Briefs:** Briefings to the players at the beginning of a move, especially at wargame start.
- **Out-Briefs:**
 - The briefs presented by the players that discuss what they did and why during a move or the wargame.⁴³
 - The briefs created and presented by the players at the end of a move or end of game play.⁴⁴
- **Special Situation Brief or Cell update brief:** The brief given to the players on a specific side or in a specific cell. It contains the information representing the specific viewpoint and situation of that cell and the specific functions and tasks of that cell. Given at the beginning of a move or

³⁵ WGD SOP

³⁶ Burns

³⁷ Burns

³⁸ WGD SOP

³⁹ Burns

⁴⁰ Burns

⁴¹ WGD SOP

⁴² Burns

⁴³ Burns

⁴⁴ Burns

when circumstances dictate.^{45 46} Suggest following the SMEAC format (Situation, Mission, Execution, Administration and Logistics, Command and Signal).

- **Wargame:** The brief on the objectives, structure, organization, schedule and procedures of the wargame. This brief is normally given at the end of the information briefs. The wargame brief may include the general situation brief.⁴⁷
- **Design Brief:** The brief on the objectives, structure, organization, schedule and procedures of the wargame. This brief is normally given at the end of the information briefs. The wargame brief may include the general situation brief.⁴⁸

Capture, Assessment, and Production Plan (CAP Plan): The plan describes the process, by which the desired data from the wargame is identified, captured, assessed, synthesized and published.⁴⁹

Capture, Assessment, and Production Team (CAP Team): The team executing the CAP Plan.

CAP Team Observer / Recorder: A CAP Team member, who observes and records data from specific cells or activities in a wargame. Also called “Note Taker” or “Rapporteur.”

CAP Team Leader: The person assigned to supervise the CAP team. Also normally responsible to the Action Officer for CAP Plan development and wargame report production.

Cell:

- A group of wargame participants organized to accomplish an assigned purpose.⁵⁰
- The space to which the cell participants are assigned.⁵¹

Cell Leader: The senior player or a player specifically picked to lead the cell. The Cell Leader is responsible for ensuring that the cell completes the required tasks on time.⁵² The Cell Leader determines who will give the cell outbriefs. Note: Used when Facilitators are not used. Using tasker slides and posting move mechanics in the cell help the Cell Leaders keep things on track without the training and orientation provided to Facilitators. (See Taskers and Game or Move Mechanics)

Cell Scribe: A designated player who prepares the required outputs. Must be able to use PowerPoint, MS Word, Excel, etc.⁵³

Chance Device: A device used to simulate an event which may or may not happen, but which has a known probability of happening. Common chance devices are regular dice, 20-sided (icosahedron) dice, and tables of random numbers.⁵⁴ (See Monte Carlo Technique)

⁴⁵ Burns

⁴⁶ WGD SOP

⁴⁷ WGD SOP

⁴⁸ Burns

⁴⁹ WGD SOP

⁵⁰ Burns

⁵¹ Burns

⁵² WGD SOP

⁵³ WGD SOP

⁵⁴ McHugh.

Chart Game or Chart Maneuver: A manual naval war game implying a chart (or map) to represent the area of operations. Formerly, another name for a strategic naval war game.⁵⁵

Closed Wargame:

- Wargames where the “fog of war” limits what the players know of the total situation depending on their “cell”. In closed wargames Wargame Control determines what the players should logically see and know about the real situation using the “Three Map” method. Poker is an example of a closed wargame.⁵⁶
- A game in which players receive the accounts and kinds of information and intelligence of friendly and enemy forces that they would normally receive in a similar real-world situation. Most war games are closed games.⁵⁷

Colors or Cell Identification: Opposing sides and their allies in a wargame are normally assigned specific colors to reduce confusion. Red and Blue are the two basic opposing sides in a two-sided wargame. Green usually represents: civilians, the environment, neutral third parties, or an ally of Blue or the host nation (See Green Cell). Orange is normally an ally of Red. Yellow is used for the Non-Governmental Organizations (NGO’s) and Private Volunteer Organizations (PVO’s).cell. Other primary colors maybe assigned as necessary. White has multiple definitions.^{58 59} (See White Cell)

Combat Model: Used to describe the process of attrition during a force-on-force engagement. These can be mechanistic, deterministic, stochastic, or some combination of all three. ^x

Combat Strength: A numerical rating of the unit's ability to attack and defend. This rating is expressed in terms of combat strength points. In some games a unit has one combat strength value to be used both for attacking and defending. In other games the units have two combat strengths, an attack strength for attacking and a defense strength for defending. These strengths are calculated on the basis of the raw fire-power of the units and modified by qualitative factors such as training, leadership, organizational effectiveness and experience. Calculating these combat strengths is one of the more interesting aspects of game research and design.⁶⁰

Combat Results: Once the die is rolled and the CRT consulted, the actual results of the combat will be quite specific.⁶¹

Combat Results Table (CRT): (See Adjudication: Rigid Adjudication) A Probability Table that shows the possible results of all combats allowed within a particular game. The greater the ratio of attacker to defender strength, the higher the chance of success. Because so many things can go wrong during the combat itself, a die or other random-number generator is used to determine the actual result. These tables are usually calculated based on what information is available on actual historical losses.⁶²

⁵⁵ McHugh

⁵⁶ WGD SOP

⁵⁷ McHugh

⁵⁸ **Note:** Prussian Army Chief of Staff Helmut von Moltke the Elder originated the use of Blue as friendly and Red is hostile in wargaming. When Russia and China adopted modern wargaming they chose their national color of Red as friendly reversing the colors.

⁵⁹ Glossary of AFWI Wargaming Terms

⁶⁰ Dunnigan

⁶¹ Dunnigan

⁶² Dunnigan

Command Post Exercise (CPX): An exercise in which the forces are simulated, involving the commander, the staff, and communications within and between headquarters.⁶³

Conflict Situation: One in which two or more individuals, organizations, nations, or allies are competing for the same goal or have opposing objectives.⁶⁴

Control Cell: The person or group of persons designated to monitor and direct game execution to meet the game objectives also called game control. The Control Cell is directly responsible to the Game Director / Action Officer or Deputy Director. The Control Cell includes the Moderators, Facilitators and Umpires. (See White Cell and Controller / Observer).⁶⁵

Controller: A member of the control cell, usually means a person or persons assisting the Game Director in directing and supervising the game.⁶⁶

Customer: The persons, agencies or organizations that should be informed of the game and its results and those who may have a use for the game products.⁶⁷

Data: A representation of facts, concepts, or instructions in a formalized manner suitable for communication, interpretation, or processing by humans or by automatic means.⁶⁸

Data Collection and Analysis Plan (DCAP): The plan describing the process, by which the desired data from the wargame is identified, captured, assessed, and published.⁶⁹

Data Collection and Analysis Team (DCAT Team): The team executing the DCAP Plan⁷⁰.

Deputy Game Director / Deputy Action Officer: Appointed in a Title Ten, major, or complex games. The Deputy Director is responsible to the Game Director for the supervision and execution of the game.^x

Deductive game: In contrast, deductive games begin with general game ideas to be tested, followed by observations collected during the game to support or refute the initial game hypothesis. This type of gaming is used later in the concept development process, after the concept is more fully developed. This is used during course of action (COA) analysis or to test a plan prior to execution. This approach may be used with other war game events noted in this section.⁷¹

Deterministic Model: A model in which the results are determined through known relationships among the states and events and in which a given input will always produce the same output; for example, a model depicting a known chemical reaction. Contrast with: Stochastic Model.⁷²

⁶³ JP 1-02

⁶⁴ McHugh

⁶⁵ WGD SOP

⁶⁶ WGD SOP

⁶⁷ WGD SOP

⁶⁸ M&S Glossary

⁶⁹ Burns

⁷⁰ Burns

⁷¹ Burns

⁷² M&S Glossary

Deterministic Combat Model: One based on a mathematical formula; once all the variables have been entered, there can only be one result. The Lanchester Linear and Squared Laws, first published in 1914, are the progenitors of most deterministic models in use today. ^x

Director:

- The individual responsible for a war game and its critique. Also known as the controller and in early Naval War College games, as the arbitrator.⁷³
- The director is responsible for the planning, execution, and critique of the game.⁷⁴

Educational Game: A game conducted to provide military commanders or executives with decision-making experience, and to familiarize them with the operations and problems involved.⁷⁵

Executive Brief: A game summary, often fifteen pages of PowerPoint slides, presented to a game sponsor, flag officer or senior government executive presenting results of the game relative to the game objectives.⁷⁶

Exercise: A military maneuver or simulated wartime operation involving planning, preparation, and execution. It is carried out for the purpose of training and evaluation.⁷⁷

Experiment: A test under controlled conditions that is made to demonstrate a known truth, examine the validity of a hypothesis, or determine the efficacy of something previously untried.⁷⁸

Facilitator:

- Works for the White Cell (Game Control), guides discussion in the cell, ensures that the cells accomplish their game objectives, provides and link between the cells and the White Cell, relaying guidance and questions, and ensuring that the cells stay on track, provides insights and assessment to the CAP Team.⁷⁹
- Control team member who assists the moderator or cell leader and coordinates the necessary administrative and technical support for the cell. This term has caused confusion, since many people expect the facilitator to actually run the cell.⁸⁰

Field exercise: An exercise conducted in the field under simulated war conditions in which troops and armament of one side are actually present, while those of the other side may be imaginary or in outline.⁸¹

Fog of War: The uncertainty of friendly, adversary and environmental conditions experienced by leaders in armed conflict.⁸²

Friction: The propensity of unexpected delays to occur during armed conflicts.⁸³

⁷³ McHugh

⁷⁴ Glossary of AFWI Wargaming Terms

⁷⁵ McHugh

⁷⁶ Burns

⁷⁷ DoD Dictionary

⁷⁸ The American Heritage College Dictionary, 4th Ed

⁷⁹ Howard Key, "Expeditionary Warrior 2015 Wargame Facilitator Guide 150213", February 2015

⁸⁰ Burns

⁸¹ JP 1-02

⁸² Caffrey. Connections Glossary

Front End: “that portion of a computer wargame seen by the student players.”⁸⁴

Game Assumptions: Specific things or issues that are fixed and will or will not be gamed. Used to keep the game focused on the objectives and when necessary to avoid known showstoppers.⁸⁵

Game Board:

- A deck (floor) divided into squares and used to represent an area of operations in a manual naval war game. The squares facilitate the plotting and recording of the movements of naval units. The game board is also known as a maneuver board.⁸⁶
- An array of squares or hexagons used to represent an area of operations, or employed as an overlay to a map of chart which depicts the area of operations.⁸⁷

Game Brief: (See Wargame Brief)

Game Control: (See Control Cell)

Game Designer / Team: The person or team responsible for designing the game.

Game Director: The Wargamer responsible for supervising and executing the wargame.^{88 89} (See Director, Action Officer)

Game Facilities: Where the game will be played. The facilities limit the game size, complexity, classification, and schedule.⁹⁰ Note: Also called “Venue”

Game Layout: A diagram or map showing the game facilities, and physical location of the game cells, rooms and organizations.^{91 92}

Game or Move Mechanics: The sequence of actions or steps taken by the players or sides to carry out their moves and how they interact with each other during the sequence. (See Time & Move Convention)

Game Path:

- A diagram of the game process from beginning to end.⁹³
- A predetermined path, prescribed events, or a decision tree the players must follow

⁸³ Caffrey. Connections Glossary

⁸⁴ **Note:** This term could apply to non-computer wargames where significant portions of the game are hidden from the players.

⁸⁵ WGD SOP

⁸⁶ McHugh

⁸⁷ McHugh

⁸⁸ WGD SOP

⁸⁹ Burns

⁹⁰ WGD SOP

⁹¹ Burns

⁹² WGD SOP

⁹³ WGD SOP

Game Purpose: (See Purpose) A short paragraph clearly stating the reason for the game and what it intends to accomplish.⁹⁴

Game Objectives:

- A short list of specified tasks that the game is expected to accomplish. The objectives are the measures of game success. They are the drivers of the game design, data collection and game execution.⁹⁵
- A short list of specified tasks, approved by the sponsor, that the game is expected to accomplish.⁹⁶

Game Schedule: A day-by-day or hour-by-hour schedule of game events.⁹⁷⁹⁸

Game Structure: A wire diagram showing the game organization and the relationships between the cells.⁹⁹

Game Theory:

- A mathematical theory which, under certain conditions can be employed to determine the optimal strategy or course of action to pursue in a conflict situation.¹⁰⁰
- The study of situations involving competing interests, modeled in terms of the strategies, probabilities, actions, gains, and losses of opposing players in a game.¹⁰¹

Game Validation: The final rehearsal and check of the game and game materials for consistency and playability.¹⁰²

General Situation Brief: The brief on the situation at wargame start given to all players. It contains the “Road to War / Crisis” and the immediate circumstances at wargame start. Usually given at the end of the wargame brief but before the players break into their individual cells.^{103 104} The brief generally follows the SMEAC format (Situation, Mission, Execution, Admin and Logistics, and Command and Signal).

Geographic Requirements: The kinds of physical environment needed for the game. This includes the types of terrain, hydrography, weather, climate and season of year. More than any other element chosen in the game design; the geographic requirements set the boundaries of what can and cannot be gamed. This can be a real problem when a game customer insists on a pre-existing scenario or specific geographic location that is not compatible with game objectives, or the type of operation, or the size and type of forces. The action officer must be prepared to show the sponsor the conflicts and make recommendations changing/modifying the pre-existing scenario or modifying the game purpose and objectives.¹⁰⁵

⁹⁴ WGD SOP

⁹⁵ WGD SOP

⁹⁶ Burns

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⁹⁸ WGD SOP

⁹⁹ WGD SOP

¹⁰⁰ McHugh

¹⁰¹ M&S Glossary

¹⁰² War Gaming Department, Naval War College, Newport, RI, *WAR GAMING DEPARTMENT INSTRUCTION 5400.1*, 1 Aug 1986

¹⁰³ Burns

¹⁰⁴ WGD SOP

¹⁰⁵ WGD SOP

Green Cell:

- Green usually represents: civilians, the environment, neutral third parties, or an ally of Blue or the host nation. (See Yellow Cell) ^x
- In Course of Action (COA) Wargaming the Green Cell represents civilians and the environment. ¹⁰⁶ (See Yellow Cell)

Gold Cell: The Command Cell which provided guidance and cell coordination in the Title Ten Expeditionary Warrior Wargame in February 2015. ¹⁰⁷

Good Idea Cutoff Date: The date beyond which major changes to the game design will no longer be made.

Ground Truth:

- The actual status of units played in a game. In an open game all players are given the ground truth. In a closed game the Control Cell maintains ground truth and communicates a limited and possibly distorted view of ground truth to the different sides playing in the game. ¹⁰⁸ (See Three Map Problem)
- The actual facts of a situation, without errors introduced by sensors or human perceptions and judgement. ¹⁰⁹

Hex: A single hexagon in a hexagonal grid. ¹¹⁰

Hex Grid: The hexagonal pattern laid over a map to facilitate unit movement, measuring distance, and providing location of units. ¹¹¹

Hex Side: One of the six sides of the hexagon. Sometimes rivers, ridge lines, fortifications or some other feature run along the hex side. This means the gamer must pay attention to the differences in types of hex sides as well as different hexes. ¹¹²

Hex Number: In many games, a four-digit number that describes the row the hex is in (first two digits) and the hex in that row (second two digits). It is printed in the hex. It was developed by Arnold Hendricks (while he was working for wargame publisher SPI in the early 1970s) and later released to the public domain for any game publisher who wanted to use it (many do). A variant of the older letter-number hex identification system. ¹¹³

Higher Authority: Designated Controllers, who act as commands and organizations outside of game play and they make decisions and provide policy guidance to the players as required to maintain game play and keep the game focused on the objectives. Higher Authority is normally part of Control and is

¹⁰⁶ Marine Corps Warfighting Publication (MCWP) 5-1, *Marine Corps Planning Process*, Appendix F, Wargaming: 24 August 2010, F-2

¹⁰⁷ Howard Key

¹⁰⁸ WGD SOP

¹⁰⁹ M&S Glossary

¹¹⁰ Dunnigan

¹¹¹ Dunnigan

¹¹² Dunnigan

¹¹³ Dunnigan

used by the Game Director to direct game play; however, some games may require the cell to be part of the game play instead of game control. (Also called Higher Headquarters (HHQ), National Command Authority, etc.)^x

Hotwash: “the act of reviewing any operations (in particular, a wargame). A hotwash is so named because it occurs as quickly as possible after the conclusion of the move or game (while it’s still “hot”).¹¹⁴

Note: In large or complex games, the Game Director and game staff, often conduct a hotwash at the end of each day.

Hybrid or Mixed Format Game: A game that has both open and closed components.¹¹⁵ (See Three Map Problem)

In-Briefs: Briefings to the players at the beginning of a move, especially at wargame start.¹¹⁶

Inductive game: Inductive games begin without a pregame concept. With inductive games, the concept is discerned after analyzing game data for patterns. This type of gaming is used early in the concept development process, and makes use of open-ended brainstorming styles during the event.¹¹⁷

Information Briefs: Briefs to the wargame participants containing information needed for wargame play¹¹⁸.

Initiative:

- As in real life, this is the ability of one side to act first. Usually each side has a probability of moving first (or second, if that is preferable) and this probability often changes with success and failure on the battlefield. An initiative rule often gets quite complex, as one would expect from as complex an item as initiative.¹¹⁹
- The ability of any player or side to make the first decision to act or wait in a move, turn or step. For example, Blue has already planned and decided to close with and attack Red. Red now has the initiative to decide how and when to react. If Blue decides not to change the attack plan, Red retains the initiative. This is a variation on the Action, Reaction Counter-Action steps in a turn of Course of Action Wargaming where Blue usually takes the initial action step. ^{x (use a simple gaming process?)}

Initiative Rolls: A system of dice rolls and associated results tables, or cards used to force behaviors that are historically plausible.¹²⁰

Injects: See MSEL’s

Intel Play: Those portions of a game concerning intelligence. Typically handled by an RFI Cell. Some games may also have an NRO (National Reconnaissance Office) Cell or controller.¹²¹

¹¹⁴ Glossary of AFWI Wargaming Terms

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¹²¹ Glossary of AFWI Wargaming Terms

Kriegsspiel (Kriegspiel):

- German for wargame. As modern wargames originated in Prussia early wargames used around the world were often called Kriegspiels.¹²²
- War play or war game.¹²³

Level of Abstraction: The level of detail presented in the scenario, order of battle, game play, and the size and scale of the maps. This must match up with the Level of Conflict.^x

Level(s) of Conflict:

- The range of the echelons of military command which are represented by the players in a war game. Also, the lowest echelon of command which is represented by players.¹²⁴
- **Grand strategy:** military strategy at the level of movement and use of an entire state or empire's resources, with the focus being on a war (or series of wars) usually over a long period of time. Individual units, even armies, may not be represented; instead, attention is given to theaters of operation. All of the resources of the nations involved may be mobilized as part of a long-term struggle. This simulation almost always involves political, economic, and military conflict. At the most extreme end of this is the branch of strategy games in which the player assumes the role of an entire nation-state's government where *not* conducting war is a possibility. *Axis and Allies*, *Risk*, and *Empires in Arms* are examples of this type of wargame.¹²⁵
- **Strategic:** military units are typically division, corps, or army-sized, rated by raw strength. At this scale, economic production and diplomacy are significant. This subgenre will often make use of all branches with the whole force of the engaging nations, covering entire wars or long campaigns.¹²⁶
- **Operational:** common units are battalion to divisional size, carrying a value based on their overall strengths and weaknesses. Weather and logistics are significant factors, although a single army is the largest player-controlled element in most cases. Other branches of military force are more or less abstracted, having a mere campaign generally span the session of play.¹²⁷
- **Tactical:** units range from individual vehicles and squads to platoons or companies, and are measured by the types and ranges of individual weaponry. A solitary force, others occasionally intervening, will usually cover the single battle or part of a large battle to be simulated. Examples of this kind of game are *Memoir '44*, and *Dust Warfare*.¹²⁸
- **Skirmish:** represented by individual soldiers, units may have tracked wounding and ammunition count. A game is composed of a small firefight, introducing the "man-to-man" scale; the first of this type in the modern era of board wargames include *Patrol* and *Sniper!* Early role-playing games were derived from skirmish wargames, and many are still played as such.¹²⁹

¹²² Caffrey Connections Glossary

¹²³ McHugh

¹²⁴ McHugh

¹²⁵ Wikipedia contributors, "Wargaming," *Wikipedia, The Free Encyclopedia*, Accessed April 8, 2015. <http://en.wikipedia.org/w/index.php?title=Wargaming&oldid=654844437>.

¹²⁶ "Wargaming," *Wikipedia*,

¹²⁷ "Wargaming," *Wikipedia*,

¹²⁸ "Wargaming," *Wikipedia*,

¹²⁹ "Wargaming," *Wikipedia*,

Live Simulation: A simulation involving real people operating real systems.¹³⁰

Live Wargame: A wargame that involves the actual maneuver of forces, i.e. Red Flag.¹³¹

Live-Virtual-Constructive Wargame: One in which mixes live players with either constructive (computer generated by a game engine such as OneSAF) or virtual (live players in computerized trainers), or both, in such a way that the live players, when looking at their C2 systems, are unable to distinguish between player types.¹³²

Main Event: The term applied to the primary wargame to avoid confusion with other smaller wargames or wargaming workshops in the design and development cycle leading up to the primary wargame. ^x

Management Game: A simulation game in which participants seek to achieve a specified management objective given pre-established resources and constraints; for example, a simulation in which participants make decisions designed to maximize profit in a given business situation and a computer determines the results of those decisions.¹³³

Manual Games: (also known as board, table-top, or miniatures games)

- Games where physical objects represent the units and the environment and the players manually move the game pieces. (See Combat Results Table, Hex Grid)
- A game in which the forces are represented by models, pins, pieces or symbols, and the participants move them about by hand on a chart, map, board or terrain model which represents the area of operations.¹³⁴

Mechanistic Combat Model: One that involves the mechanical removal of forces on a one-for-one basis until some pre-determined level or ratio is reached. Used by H.G. Wells in his 1914 book, “Little Wars”.¹³⁵

Miniatures Wargame: Type of wargame played on a 3d model of terrain with 3d representations of the engaged forces.¹³⁶

Model:

- Proportional representation of reality.¹³⁷
- A physical, mathematical, or otherwise logical representation of a system, entity, phenomenon, or process.¹³⁸

Modeling and Simulation (M&S):

¹³⁰ M&S Glossary

¹³¹ Caffrey Connections Glossary

¹³² Caffrey Glossary

¹³³ M&S Glossary

¹³⁴ McHugh

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¹³⁶ Caffrey Connections Glossary

¹³⁷ Caffrey Connections Glossary

¹³⁸ M&S Glossary

- The discipline that comprises the development and/or use of models and simulations.¹³⁹
- The use of models, including emulators, prototypes, simulators, and stimulators, either statically or over time, to develop data as a basis for making managerial or technical decisions.¹⁴⁰

Moderator: Control team member in a player cell who keeps the players on task.¹⁴¹

Monte Carlo Technique: The use of a chance device to determine the outcomes of chance events, or to approximate a probability distribution that is difficult or impossible to compute.¹⁴²

Morale: In manual or recreational gaming, the tendency to “fight to the last man” is countered by morale rules. For board games, a two-sided token may be used: one side indicates the combat power of the unit when at full-strength, while the flip side indicates a “shaken” or “reduced strength” status. For miniatures games, most rules include either percentages of remaining troops, or specific events that would trigger a “morale roll.” As with other dice-based adjudication applications, the table of effects is (theoretically) based on an analysis of actual results from the conflict in question.¹⁴³

Move 0 (Zero): A game move used to train or familiarize the game staff and players with new or complex procedures or concepts or both. When used Move 0 is always the first move.^x

Move-Step: A design consideration where predetermined time periods are selected for game play, following which game time is advance to another predetermined time period. Move-steps permit time jumps to focus on specific aspects of an unfolding scenario related to game objectives.¹⁴⁴

MSEL (Master Scenario Event Lists):

- Chronological listing of scripted events that generate activity in specific functional areas in support of exercise or wargame objectives. In a functional exercise or a one sided wargame, the MSEL drive the play. In a full-scale exercise or two or more sided wargame, the MESL supplements and influences the direction of play when necessary. MESL’s come in two formats:
 - Short MSEL – lists the inject, delivery time, short description, responsible controller, and receiving player.
 - Long MSEL – detailed description, exact quotes and formats for inject, and description of expected action.

MSEL injects require careful planning and coordination and should not be made up on the spot without consulting the game designers and then only when absolutely necessary.¹⁴⁵

- A chronological list that supplements the exercise scenario with event synopses; expected participant responses; capabilities, tasks, and objectives to be addressed; and responsible personnel. It includes specific scenario events (or injects) that prompt players to implement the plans, policies, and procedures that require testing during the exercise, as identified in the capabilities-based planning process. It also records the methods that will be used to provide the injects. (i.e., phone call, facsimile, radio call, e-mail).¹⁴⁶

¹³⁹ M&S Glossary

¹⁴⁰ M&S Glossary

¹⁴¹ WGD SOP

¹⁴² McHugh

¹⁴³ Dunnigan

¹⁴⁴ Burns

¹⁴⁵ LtCol Mark Stanovich, USMC, Wargaming Division Reservist / Professional Civilian Wargamer

¹⁴⁶ M&S Glossary

Multisided game: Games may be designed with several competing cells. These games are referred to as multisided, or by the actual number of sides (e.g., “three-sided”).¹⁴⁷

Nature of the Conflict: The type and intensity of the conflict. The type of conflict can be diplomatic, commercial, ideological, criminal, civil, military, or a combination of all or any of these. The intensity of the conflict can range from peace to inter-galactic war. ^x

Nature of the Opposition: The type and nature of the opposition is determined by the overall context of the game. The opposition can be from the challenges of time, distance, terrain, disaster and resources vs. the mission or from recalcitrant humans or a combination thereof. The intensity of the opposition can range from the passive resistance of a difficult environment or population to a fully hostile engagement with equipped and trained diplomats, advocates, and soldiers. ^x

Number of Sides: The number of sides in a game is determined by the nature of the conflict and the nature of the opposition being gamed and the number of independent entities who can make decisions and take independent action that influence the direction of the game. Games can have 1 side, 1 ½ sides, 2 sides or more. The number of sides does not always equal the number of cells.

- A one sided game is like solitaire. The opposition is provided by the situation, the MESL injects, or the results of a pre-gamed operation. The purpose of this game does not require a live, thinking opponent.
- A one and a half sided game has an embedded “Red” player or team. Red plays the “Devil’s Advocate” presenting arguments or obstacles to Blue’s plans. This method represents a situation where Red’s ability to oppose Blue is limited or it is less that the opposition presented by the other factors such as time, distance or terrain.
- Two sided games are the basic Red vs. Blue setup.
- Multi-sided games are when many different entries are competing to achieve their goals, and they can make decisions that impact game play.
- Each side is normally assigned a color. (See colors) In games with many sides it is easier to give them names instead of colors.

Objective: The purpose for which an activity is to be conducted.¹⁴⁸ (See game objectives)

Observer: A non-player, who is allowed to observe, but not play in the game.^x

Open Game:

- Games where everything is visible to all players. Chess and Checkers are open games.
- A game in which all players receive or have access to all information and intelligence of the actions of all friendly and enemy forces. Usually played in one room and on a single map or chart.¹⁴⁹

Operational Gaming: “The application of gaming techniques to non-military situation. Also used to describe the simulation of both military and non-military operations.” This is a term developed and used at the Navy War College Wargaming Division in Newport, RI.¹⁵⁰

¹⁴⁷ Burns

¹⁴⁸ Caffrey Connections Glossary

¹⁴⁹ McHugh

¹⁵⁰ McHugh

Orange Cell: Orange is normally an ally of Red¹⁵¹, or a 2nd independent opposition element.

Order of Battle: The make-up of a player's forces in terms of types of units and the number of each type available.¹⁵²

Order of Battle Sheets: (Board or Manual Games) A printed form with the game units displayed along with boxes to check off the declining strength of the units as they suffer combat (or non-combat) losses.¹⁵³

Out-Briefs:

- The briefs presented by the players that discuss what they did and why during a move or the wargame.¹⁵⁴
- The briefs created and presented by the players at the end of a move or end of game play.¹⁵⁵

Parameter: A value such as a hit probability, a detection range, an ammunition allowance, etc., that remains constant for the play of a game, but that may be varied from play to play as desired.¹⁵⁶

Participant: Anyone who is participating in the game includes players, administrative, support and control personnel.¹⁵⁷

Policy Wargame: Wargames played typically at the strategic level that are designed not to gain insight into a specific situation but to help explore broad policies.¹⁵⁸

Player:

- Those participants specifically appointed to play the game.¹⁵⁹
- A participant in a war game who is not a member of the control group, and who plays the role of a real-world commander of a staff officer of a military unit or units.¹⁶⁰
- A participant in a war game who is not a member of the control group.¹⁶¹

Playability: The relative ease with which a wargame can be conducted. Wargames with low playability take a relatively long time to learn how to use and are cumbersome in execution. Wargames with good playability are quick and easy to learn and have initiatively obvious and convenient methods of execution.¹⁶²

¹⁵¹ WGD SOP

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¹⁵⁸ Caffrey Connections Glossary

¹⁵⁹ WGD SOP

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¹⁶² Caffrey Connections Glossary

Player Requirements: The rank, knowledge or experience required of the players and other game participants. This is determined by the type and level of operation and the degree of role-playing¹⁶³

Plenary:

- Fully attended by all qualified member.¹⁶⁴
- The plenary session is a meeting attended or viewed by all game participants.

Probability: The probability of the occurrence of an event is the ratio of the number of equally likely ways in which the event can happen to the total number of equally likely ways in which the event can and cannot happen.¹⁶⁵

Problem Statement: A concise description of the issues that need to be addressed by the Wargame Design Team and the wargame.^x

Professional Military Judgement (PMJ): The results of interactions are adjudicated based on the professional military judgement and experience of the adjudicators. (See Umpiring, Free)^x

Purpose: (See Game Purpose.) The overarching reason for which the game is planned, played and designed to answer the sponsor's problem statement.¹⁶⁶

Rapporteur:

- A person appointed by an organization to report on the proceedings of its meetings¹⁶⁷
- A member of the CAP team, who collects and assesses the data and helps prepare the game reports.

Realism: The degree to which a model, simulation or wargame matches the real world entity of interest. A one foot square map of the world can be realistic as long as all elements are correct/in scale.¹⁶⁸

Real-Time: A real time wargame is one in which one minute of game time takes place during one minute of actual time. Flight simulators/air combat wargames typically run in real time. The term is also sometimes applied to any wargame that runs continually even if one minute of game time represents one century of real time.¹⁶⁹

Red Cell / Players / Team:

- The cell, team, or players acting as the opposition or hostile forces.
- The team (or players) representing the "enemy." In some games (notably ACES-Pegasus Canada) student players play both sides of the game: in this case, one side is usually referred to as "grey" vice "red."¹⁷⁰

¹⁶³ WGD SOP

¹⁶⁴ American Heritage Dictionary

¹⁶⁵ McHugh

¹⁶⁶ Burns

¹⁶⁷ *Oxford Dictionaries*, s.v. "rapporteur." accessed June 21, 2015, http://www.oxforddictionaries.com/us/definition/american_english/rapporteur

¹⁶⁸ Caffrey Connections Glossary

¹⁶⁹ Caffrey Connections Glossary

¹⁷⁰ Glossary of AFWI Wargaming Terms

Research Question: Questions derived from the game objectives and Wargame Sponsor that are used to focus wargame design and development. ^x

RFI (Request for Information): A player generated question of an intelligence nature. ¹⁷¹

RFI Cell: A cell or team composed of subject matter experts, the scenario writers, intelligence officers and game control personnel to address RFI's ¹⁷².

Road to War / Crisis: The created history that transitions from a real point in history to the start point of the game scenario. This “history” provides context, essential details and plausibility to the scenario. This is the first part of the scenario presented, but it is usually the last part of the scenario finished.

Role Playing:

- The degree of role-playing required of the players, if any. Role-playing is whether or not the players are restricted to perform the duties of assigned game billets or are they free to participate according to their experience and knowledge. ¹⁷³ Training wargames and games examining the functioning of staffs, HQ's, or teams usually require strict role playing.
- Players are assigned the duties of a specific game billet; e.g., president, chief of staff. This is contrasted with player role performance based upon one's experience and knowledge. ¹⁷⁴
- In historical miniatures gaming, the thickness of the ruleset often reflects the intention of the rule writer to restrict the players, and to limit their actions to those that the writer feels would have been appropriate to the time and place of the conflict. ¹⁷⁵

Scale: As the size of the force represented by the token or counter gets larger, the map and time scales of the game change as well, so that a one-hex move by a company will cover, say, 500 yards, and take 15 minutes, whereas the same move by an army might cover 100 miles, and take a week. In miniatures gaming, there is a similar tendency to use the same formation (usually between 16-36 figures) to represent anything from an infantry company to a division, again with a corresponding adjustment to the map and time scales. (See Hex Grid) ^x

Scenario: ¹⁷⁶

- The imaginary world in which the game is played. ¹⁷⁷

¹⁷¹ Glossary of AFWI Wargaming Terms

¹⁷² **Notes:**

- The scenario writer or an expert in the artificial replication of the world otherwise known as the scenario must be a part of the RFI cell to avoid conflicts between real world facts and the artificialities developed as part of the scenario.
- WGD Quantico has occasionally used the RFI cell to pass “open source information” or “warnings & indicators” between sides during the planning phases of closed games to prevent accidental engagements that never should have happened or missed engagements that should have happened. This either involves RFI umpires going between opposing cells or the umpires in a cell determining and passing on to Control and the RFI cell those early actions taken that would be seen by other cells.

¹⁷³ WGD SOP

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¹⁷⁶ **Note:** The scenario must be plausible, reasonable and support the wargame purpose and objectives. It sets the boundaries of the game and determines what can and cannot be played.

¹⁷⁷ WGD SOP

- A chronological listing of pre-planned situations, events, messages, etc., to be generated by the control group in order to confront the players with situations requiring decision during the play of a one-sided game.¹⁷⁸
- A description of the conflict situation. Also known as the general situation.¹⁷⁹
- An identification of the major systems/players that must be represented by the simulation, a conceptual description of the capabilities, behavior, and relationships (interactions) between these major system/player over time, and a specification of relevant environmental conditions (e.g., terrain, atmospherics). Initial and termination conditions are also provided.¹⁸⁰
- An account or synopsis of a projected course of action or events, with a focus on the strategic level of warfare. Scenarios include information such as threat and friendly politico-military contexts and backgrounds, assumptions, constraints, limitations, strategic objectives, and other planning considerations. A scenario is intended to represent a plausible challenge and may not reflect the most likely events.¹⁸¹
- A narrative description of the setting in which the strategic, military, political, economic and social environment is established and the physical geography is set forth. It may be hypothetical, real or a combination of both.¹⁸²

Scenario planning game: Another war gaming technique involves gathering players to explore a problem in the context of a specific scenario.¹⁸³

Seminar: A meeting for the exchange of ideas, a conference.¹⁸⁴

Seminar Wargame:

- A wargame using the seminar format in the majority of its game cells.
- Opposing players discuss the sequence of moves and countermoves likely to be made in a given situation and agree on interactions likely to occur. The control team adjudicates the results of those interactions and reports back to the players. The process is repeated for each of the “moves” in the game. Seminar games often use moves of various lengths of periods of the war at different levels of detail.¹⁸⁵
- ...are often used in situations where complex, incompletely understood interactions are being evaluated.¹⁸⁶

Senior Mentor: Generally a retired flag or general officer, ambassador, senior government official, etc. who has the requisite experience relevant to the game. This person provides critical analysis, assessment, mentoring or guidance as required for the game.¹⁸⁷

¹⁷⁸ McHugh

¹⁷⁹ McHugh

¹⁸⁰ M&S Glossary

¹⁸¹ *Department of Defense Directive 8260.05, Support for Strategic Analysis (SSA)*, 7 July 2011

¹⁸² *Marine Corps Order*

¹⁸³ Burns

¹⁸⁴ American Heritage Dictionary

¹⁸⁵ *Marine Corps Order 3070*

¹⁸⁶ David O Ross, *Investigating the Fundamentals of the Third Generation Wargame: Wargaming, a Course for Future Development.*” Agency # AFRL-RI-RS-TR-2008-68 AFRL/RISB, 525 Brooks Rd., Rome NY 13441

¹⁸⁷ WGD SOP

Showstopper: An unexpected situation where one side or the other cannot continue the game to its designed conclusion. A showstopper may result from unexpected game play or may indicate a systemic problem and must be investigated. The Senior Controller and the CAP Team Leader must be notified immediately. The details and circumstances of the showstopper are fully recorded. If game play must continue, all sides agree upon a reasonable alternative to the showstopper and game play is resumed. Showstoppers are important findings in any wargame. They must be carefully studied. Arbitrary dismissal or glossing over of showstoppers can threaten the integrity of the game; result in bad press; or worse lead to major military defeats in the real world.¹⁸⁸ (See Black Swan)

Sides of a Game: See “Number of Sides”

Simulations:

- Model acted on over time.¹⁸⁹
- A method for implementing a model over time.¹⁹⁰

Single-sided game: A single- or one-sided game includes one player cell, with the opposition furnished by a control group that presents scripted scenario injects.¹⁹¹

Size and Type of Forces required: The forces and equipment needed for game play. The type of operation and the level of conflict determine the forces and equipment needed to play the game. This also includes the size of the smallest maneuver unit being played or the degree of detail of the orders of battle and tables of equipment.¹⁹² At the grand strategic level, the basic units are the nations and non-state organizations that play at the international level. In a strategic level game, the basic maneuver elements could be armies or divisions. In tactical level games, the basic maneuver elements could be regiments, platoons, squads or individual troops. Unconventional, irregular, or civilian organizations are defined by their size, capabilities, and scope of influence. The degree of detail used in describing the forces and equipment is the basic tool that the game designer uses to keep the game at the appropriate level.¹⁹³

Space Play: Those portions of a wargame concerning space operations & maintenance (moving a satellite, launching new or backup satellites, re-rolling satellites), or anti-satellite operations (shooting down satellites, jamming up- or down-links, destroying ground stations).¹⁹⁴

Special Situation Brief or Cell update brief: The in-brief given to the players on a specific side or in a specific cell. It contains the information representing the specific viewpoint and situation of that cell and the specific functions and tasks of that cell. Given at the beginning of a move or when circumstances dictate.¹⁹⁵ ¹⁹⁶ Suggest following the SMEAC format (Situation, Mission, Execution, Administration and Logistics, Command and Signal).

¹⁸⁸ WGD SOP

¹⁸⁹ Caffrey

¹⁹⁰ M&S Glossary

¹⁹¹ Burns

¹⁹² WGD SOP

¹⁹³ WGD SOP

¹⁹⁴ Glossary of AFWI Wargaming Terms

¹⁹⁵ Burns

¹⁹⁶ WGD SOP

Stochastic Model: A model in which the results are determined by using one or more random variables to represent uncertainty about a process or in which a given input will produce an output according to some statistical distribution. Contrast with: Deterministic Model.¹⁹⁷

Sponsor:

- The senior officer or official under whose authority the game is being conducted. The Sponsor is the ultimate authority on major game designs and decisions.¹⁹⁸
- The senior officer or official of the command / organization who has requested the game. Normally the sponsor is the approval authority on major game purpose, objectives, research questions, and design.¹⁹⁹

Sponsor's Representative: The action officer representing the sponsor in discussions with the WGD game team. Able to approve routine decisions concerning game objectives, design, development, and execution.²⁰⁰

Stakeholders: Persons or organizations who may have an interest in the wargame.^x

Stochastic Model: A model in which the results are determined by using one or more random variables to represent uncertainty about a process or in which a given input will produce an output according to some statistical distribution. Contrast with: Deterministic Model.²⁰¹

Stochastic Combat Model: One based on the use of random variables to represent uncertainty in the attrition process, or where a given input will produce an output according to some statistical distribution. Typically results are a graph representing the range and probability of all possible results.^x

Strategic Issues Cell (SIC): A seminar group composed of high ranking players and experts selected to address issues from the CAP plan and issues raised in the game that will not be addressed by game play. The SIC works for the Control Cell. It is different from the **Higher Authority (HA) Cell** because it does not directly influence game play.²⁰² Also called **Senior Advisory Cell (SAC)**

Sub-Objective: Subordinate Objectives are those things that must be accomplished to meet a Wargame Objective.²⁰³

Subject Matter Experts: Participants who are experts on subjects related to the wargame.²⁰⁴

Support Cell/Team: Security, technical and administrative personnel needed to support the wargame.²⁰⁵

Support Cell/Team Leader: The person responsible to the Action Officer for the development and execution of the wargame support plan.²⁰⁶

¹⁹⁷ M&S Glossary

¹⁹⁸ WGD SOP

¹⁹⁹ Burns

²⁰⁰ Burns

²⁰¹ M&S Glossary

²⁰² WGD SOP

²⁰³ Howard Key

²⁰⁴ WGD SOP

²⁰⁵ WGD SOP

²⁰⁶ WGD SOP

Table Top Exercise: Wargames: Simulation wargames depicting an armed conflict.²⁰⁷

Taskers: Used in seminar wargames instead of detailed move sheets. For each move, the players are given a set of “taskers,” usually in the form of preformatted briefing slides or specific questions. These “Taskers” are closely tied to the wargame analysis or assessment plan, are derived by “Mission Analysis” of the wargame purpose and objectives. An example of a tasker in a medical wargame follows:

Move Three

- **Taskers:** (Answer each tasker on a separate slide that includes the Move # and your cell #)

Given the results of Move Two:

- What Changes are you going to make to your Medical CONOPS?
- What resources must be shifted, and who will decide?
- What are the Locations of Medical Support Ashore?
 - Who controls them, Security, CSS, and Crowd Control?
- Casualty Transport: Who does it, How, and to Where?
- SEP Manning, Corpsman, litter carriers, and escorts?

Technology Game: Wargame designed not to gain insight into a specific situation but to help explore a spectrum of technology options. For example, in a Technology Wargame one Blue team may be equipped with stealthy aircraft while a second Blue team is equipped with advanced electronic warfare capabilities.²⁰⁸

Terrain: (In board or hex map wargames) The wargame map may look like a normal map in many cases, but in all cases it is actually a collection of hexagon-shaped cells, each hexagon containing a precise type of terrain. Each hex has a dominant physical characteristic which has a precise effect; upon movement and/or combat of the units entering it. These kinds of terrain are more specific in tactical wargames and more general in strategic wargames. For example, in a tactical wargame you would have hexes representing woods, swamp, sand or clear (open) areas. Operational level wargames (10-50 kilometers per hex) would have rough terrain and forest and mixed (rough ground and forest) terrain. Strategic wargames (50 plus kilometers per hex) would have two or three kinds of rough terrain and impassable terrain, etc. Rivers and streams usually run along the hexsides to make it unambiguous as to which side of the river a unit is on.²⁰⁹

Terrain Effects Chart: This is an important element of any (Board or Hex Map) wargame, which shows the effect on movement and combat for units entering the different types of terrain in the wargame. Movement is usually affected by a variable number of movement points required to enter the different kinds of terrain. Combat is usually affected through increasing difficulty for the attacker attacking the defender in more favorable (for the defender) terrain. That is, the defender might be able to double his strength in certain types of terrain or even triple or quadruple it or, conversely, he might simply be able to shift on the Combat Results Table from a 3 to 1 to a 2 to 1.²¹⁰

Three Map Problem: In a closed wargame, Wargame Control must maintain three maps; the Ground Truth, the Red Situation Map and the Blue Situation Map. The Ground Truth Map show all forces in

²⁰⁷ Caffrey

²⁰⁸ Caffrey Connections Glossary

²⁰⁹ Dunnigan

²¹⁰ Dunnigan

their actual position and actual status. The Red and Blue Situation maps, shows the situational awareness of each side as determined by Control, which replicates the “Fog of War.”²¹¹

Timeframe and Duration: The year or years in which the scenario is played and how much time is covered during the scenario.²¹²

Time & Move Convention: How time is handled in the wargame and what are the conventions and procedures followed in each move. Time is handled: continuously, in steps, by phases, or by events.²¹³ Usually all sides move at the same time, but they can also take turns, or the side with the initiative keeps moving until the initiative is lost.

Title Ten Wargames: Title Ten wargames are a series of major service sponsored wargames that address future capabilities in the context of Title Ten responsibilities to organize, train, and equip its forces to carry out its roles and functions as a component of national military capability²¹⁴.

Token: (also called “Counters” or “Units”) In recreational gaming, forces are represented by tokens: for board wargames, the convention is to use ½” cardboard squares, appropriately colored and labeled, to represent anything from a single soldier to complete armies. (See Scale) Tokens contain several pieces of information: graphic or picture representing the unit, its title, and two or more numbers representing offense, defense and movement factors. ^x

Toolboxes: Hard copy or electronic notebooks containing one-page descriptions of systems and major end items used in the wargame.²¹⁵

Topics of Interest: (also called Areas of Interest) Minor objectives concerning specific areas or issues the sponsor or stakeholders would like for players to deal with during wargame play. Accomplishing Topics of Interest are not critical to success of wargame; however; Topics of Interest are included in the wargame design if practical. Topics of Interest should be reviewed by the CAP plan and if possible included in the questionnaire and offline cell discussion.²¹⁶

Trusted Agents:

- Players who have privileged information provided by Control that is to be revealed only under specific circumstances.²¹⁷
- Players who have privileged information that is necessary to advance game play and objectives.²¹⁸

Turn-based: A turn based wargame is one in which Blue and Red can only effect the progress of the wargame at discreet times. Ideally a wargame should allow player turns at the same interval as real world decision cycles. Strategic and operational wargames typically turn-based.²¹⁹

²¹¹ WGD SOP

²¹² WGD SOP

²¹³ WGD SOP

²¹⁴ USMC Title X (Ten) and External Wargame Management and Coordination CG MCCDC message dtg 131300Z Mar 01. **Note:** “X” replaced with “Ten” and wargame changed to one word to reflect current practices.

²¹⁵ WGD SOP

²¹⁶ WGD SOP

²¹⁷ WGD SOP

²¹⁸ Burns

²¹⁹ Caffrey Connections Glossary

Two-sided game: As contrasted with a 1½-sided game, two-sided games involve two separate, competing player cells. The two sides play by rules that vary from restrictive to entirely free play. Player decisions from each cell are adjudicated, with results presented to the players and used to inform subsequent game play.²²⁰

Type(s) of Operation: The type or types of operations to be wargamed. For example, in a wargame examining the impact of the individual squad radio on urban operations a single tactical level urban operation was adequate. However, a wargame to refine the concept of employment of the MV-22, three types of operations covering low, medium and high intensity combat and respectively involving small, medium and large combat units (MEU, MEB, MEF) where needed. In the final MV-22 wargame design, three different scenarios were wargamed simultaneously by three sets of friendly and hostile cells.²²¹

Umpire:

- Controller who enforces the rules and procedures and judges the outcomes of combat,²²²
- A member of the control group who performs one or more of the following duties: monitors player actions, evaluates interactions, [and] provides intelligence to players.²²³

Umpiring, Free: The results of interactions are determined by the umpires in accordance with their professional judgement and experience.²²⁴ (Also known as professional military judgement)

Umpiring, Semi-Rigid: Interactions are evaluated by the rigid method, but the outcomes can be modified or overruled by the umpires. The term is also used when certain specified interactions are evaluated by rigid umpiring; other interactions, by free umpiring. Also called free-rigid.²²⁵

Umpiring, Rigid: The results of interactions are determined by umpires, simulation equipment, or computers in accordance with predetermined rules, data and procedures.²²⁶

Unit: A common term (along with the term "counter") for a playing piece that represents a military organization. Military units on the ground come in the following sizes:

Ground Units / Levels of Play²²⁷

- *Single soldier*
- *Fire team* of three to six men
- *Squad* of eight to 16 men (there are usually two [three] fire teams per squad)
- *Platoon* of 30 to 60 men (three squads)
- *Company* of three or four platoons (100 to 300 men)
- *Battalion* of three or four companies (400 to 1,200 men)
- *Regiment or brigade* of three or four battalions (1,200 to 5,000 men). The main difference between a regiment and a brigade is that a brigade is often a bit larger than a regiment and capable of operating independently, while a regiment is normally part of a division.

²²⁰ Burns

²²¹ WGD SOP

²²² WGD SOP

²²³ McHugh

²²⁴ McHugh

²²⁵ McHugh

²²⁶ McHugh

²²⁷ Dunnigan

- *Division*. Three or four regiments or brigades comprise a division (6,000 to 20,000 men)
- *Corps*. Two to four or more divisions are a corps of 20,000 to 70,000 men).
- *Army*. Two or more corps constitute an army (50,000 to 250,000 men).
- *Army Group*. Two or more armies are an army group.

Naval Units / Levels of Play²²⁸

- Fleet
- Task Force, Task Group
- Warfare Coordinator
- Ship CO

Vignette: A brief descriptive sketch of a situation. A mini-scenario confined to a very specific and limited situation. A vignette can be a subset of a larger scenario.²²⁹

Wargame: This term has many different definitions, uses and is spelled two different ways; wargame and war game.

- War game — A simulation, by whatever means, of a military operation involving two or more opposing forces using rules, data, and procedures designed to depict an actual or assumed real life situation.²³⁰
- A wargame is a model or simulation of war conducted without maneuvering actual forces and with a sequence of events that affects and is affected by-decisions of the players.²³¹
- Adversarial by nature, wargaming is a representation of military activities, using rules, data, and procedures, not involving actual military forces, and in which the flow of events is affected by, and in turn affects, decisions made during the course of those events by players acting for all actors, factions, factors and frictions relevant to those military activities.²³²
- War game.*n* —1. A simulation of a military operation. 2 A simulation of a proposed plan of action or strategy to test its validity. – war'-game' v²³³
- A simulated battle or campaign to test military concept or use. Conducted in conference by officers acting as opposing staffs.²³⁴
- A two-sided umpired training maneuver with actual elements of armed forces participating.²³⁵
- War game— simulation, in accordance with predetermined rules, data, and procedures, of selected aspects of a conflict situation.²³⁶
- Wargame: Method wherein the human intellect uses a synthetic construct that replicates a conflict and requires decisions for resolution in order to consider a real problem.²³⁷

²²⁸ WGD Instruction 5400.1

²²⁹ WGD SOP

²³⁰ *DoD Dictionary JP 1-02* (term no longer included in edition amended through 10 Aug 2014)) Note: This now deleted definition was broad enough to cover field exercises, experiments, wargames etc., and was not very useful from the viewpoint of wargame design.

²³¹ Perla

²³² Webber

²³³ The American Heritage Collage Dictionary

²³⁴ Caffrey Connections Glossary

²³⁵ Caffrey Connections Glossary

²³⁶ McHugh

²³⁷ William J. Lademan, Ph.D., Director Wargaming Division, Marine Corps Warfighting Laboratory

- A game is a simulation of operations that often involves two or more teams, usually in a competitive environment, using rules, data, and procedures designed to depict an actual or posited real-life situation. Participants may discover synergistic approaches.²³⁸
- A game is “any contest (play) among adversaries (players) operating under constraints (rules) for an objective (winning, victory or pay-off)”²³⁹

Comment: Is it wargame or war game? It can be both; it is a matter of the style picked by an organization. Both words can be a noun or a verb.

Wargame / Design Brief: The brief on the objectives, structure, organization, schedule and procedures of the wargame. This brief is normally given at the end of the information briefs. The wargame brief may include the general situation brief.^{240 241}

Wargaming:

- A step-by-step process of action, reaction, and counteraction for visualizing the execution of each friendly course of action in relation to adversary courses of action and reactions. It explores the possible branches and sequels to the primary plan resulting in a final plan and decision points for critical actions.²⁴²
- A process which replicates a situation of competition or conflict in which the opposing players make decisions based on knowledge of their own situation and intentions, as well as information (usually incomplete) regarding their opponent’s situation, intentions, and prior decisions. It involves human participation throughout, the interaction of two or more opposing forces, and is guided by predetermined rules, data, and procedures.²⁴³
- War gaming is a tool for exploring decision-making possibilities in an environment with incomplete and imperfect information.²⁴⁴
- Wargaming is the artificial replication of a situation of competition or conflict. It involves human participation throughout, and revolves around the interaction of two or more opposing forces guided by predetermined objectives, rules, data, and procedures designed to depict an actual or assumed real world situation.²⁴⁵
- Wargaming – simulated operation involving people, rules, data, and procedures to depict and actual or hypothetical situation.²⁴⁶

White Cell: This term has many different definitions and uses.

- An Exercise Control Cell. ^x

²³⁸ Scott D. Simpkins, “A Gaming Taxonomy.pptx.” October 10, 2006

²³⁹ Clark Abt, “Games for Learning” (1968), quoted in Henry Ellington, Eric Addinall, & Fred Percival: *A Handbook of Game Design* (London: Kagan Page Limited, 1986), 9

²⁴⁰ WGD SOP

²⁴¹ Burns

²⁴² MCRP 5-12C US Marine Corps Marine Corps Supplement to the Department of Defense Dictionary of Military and Associated Terms

²⁴³ MCO 3070.

²⁴⁴ William J.,

²⁴⁵ *Command Brief*, USMC Wargaming and Assessment Center, 1990

²⁴⁶ Marine Corps Wargaming and Analysis Center (MCWAC), *Organizational and Informational Briefing*, September 1993

- The wargame staff representing key entities unable to participate, but whose input is critical to wargame play. Commonly used by Home Land Security in their exercises and wargames.
- A Wargame Control Cell.^x
- Typically the assessment/adjudication team, but may play higher HQs or management²⁴⁷
- The group of people running the technical side of the wargame.²⁴⁸
- An aggregate of several cells including the Control Cell, the CAP Team, the Subject Matter Experts, and the Support Cell. Allows wargame staffers to wear multiple hats when space and people are limited.^x
- A permanent standing section of joint and training commands that plans and directs exercises and wargames.^x

Workshop: Workshops involve subject matter experts (SMEs) gathered to discuss a problem. Workshops have a narrow, discrete focus, and often serve as an input to follow-on WGD events.²⁴⁹

Yellow Cell: The cell containing NGO's and PVO's. This term used by United Kingdom and European wargamers. Placing the NGO's and PVO's in the Yellow Cell instead of the Green Cell gives the wargame designer a lot more flexibility and reduces the possibility of confusion with so many entities labeled "Green."^x (See Green Cell)

²⁴⁷ Caffrey Connections Glossary

²⁴⁸ Glossary of AFWI Wargaming Terms

²⁴⁹ Burns

Unofficial Acronyms, Terms, and Quotes

Useful for Grognards (See Grognards)

BOGSAT (A bunch of guys and gals sitting around a table.):

- A disparaging term used to describe seminar style gaming, implying that nothing worthwhile can be accomplished.

GIGO:

- Garbage In Garbage Out
- Garbage In Gospel Out (Because the computer said so!)

Grognard: Not a technical term as such, but a term you'll hear in wargaming. It refers to experienced or dedicated wargamers. The term was originally used as a nickname for members of Napoleons Old Guard. The term is French and means, literally, "grumbler." It reflects the attitude of the veteran troops who knew what was really going on but couldn't do much about it. So they grumbled, and so do most wargame grognards.²⁵⁰

MEGO: My eyes glaze over. Indications and warnings that the presentation is boring!

IGOUGO: When players alternate taking turns.²⁵¹

²⁵⁰ Dunnigan

²⁵¹ Joseph M. Saur, Email, 30 June 2015

Quotes on War and Wargaming

“[War is a] game of chess where the board has a million squares and the pieces consist of a dozen Kings and Queens, a thousand Knights, and so many pawns that no one can exactly count them.”

*Sir Ian Hamilton: The Soul and Body of an Army, xi 1921*²⁵²

“The conduct of war resembles the workings of an intricate machine with tremendous frictions, so that combinations which are easily planned on paper can be executed only with effort.”

*Clausewitz: Principles of War, 1812*²⁵³

“A tedious war game is the grave of interest”

General Albert Karl Friedrich Wilhelm von Boguslawski (1834-1905)²⁵⁴

“Objectives first; scenario last!”²⁵⁵

Mr. Frank Jordan, Director and Deputy Director, Marine Corps Wargame Division

“Blue must not be guaranteed victory!”²⁵⁶

Col Gary Anderson USMC, Director, Marine Corps Warfighting Laboratory

“...wargames depict men as if they were blocks of wood, they are not blocks of wood but human beings who are seized by fear and sustained by leadership.” William Tecumseh Sherman, US Army Chief of Staff^{257 258}

²⁵² Heintz

²⁵³ Heintz

²⁵⁴ Vego, Milan. “German War Gaming.” *Naval War College Review, Autumn 2012, Vol 65, No. 4*

²⁵⁵ Guidance given to game designers that the scenario was not to be completed until after the objectives and associated game design were finished, insuring that the scenario(s) supported the wargame objectives.

²⁵⁶ Guidance for creating the Culebra 98 Scenario, several Blue Teams lost when wargaming this scenario forcing them to start over and discovering many important issues.

²⁵⁷ Caffrey, Matthew. *History of Wargames: Toward a History Based Doctrine for Wargaming*. Dated 6 January 2000.

²⁵⁸ **Note:** Sherman was objecting to the Rigid Kriegsspiel type wargame being proposed by Maj W. R. Livermore depicting only attrition based warfare where units always fought to the last man. This quote is usually condensed to: “Men are not blocks of wood!”

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