

Wargaming with Command Professional Edition

A near-term tool to support wargames on littoral warfare

by Staff, MCWL Wargaming Division

“Essential to charting our course in an era of strategic fluidity and rapid change will be the effective integration of professional wargaming in force design, education, and training.”

**—Gen David H. Berger,
38th Commandant of the Marine Corps**

In his *Commandant’s Planning Guidance*, Gen Berger repeatedly underscored the criticality of wargaming in force design, training, and education. His wargaming “call to arms” placed significant emphasis on the Marine Corps Warfighting Laboratory’s (MCWL) vanguard role as the key “vehicle for change.” To support the Commandant’s intent, MCWL identified a wargaming tool capable of simulating modern warfare and producing quantitative data to support *Force Design* analysis. That tool is the commercial-off-the-shelf computer wargame called *Command: Professional Edition (PE)*.

Since January 2020, the MCWL has used *Command PE* to support the Ender’s Shadow iterative series of wargames to test and evaluate the Expeditionary Advanced Base Operations (EABO) concept and the proposed Marine Corps *Force Design*. Most recently, *Command PE* was leveraged during the Naval Services Game 2020 to support

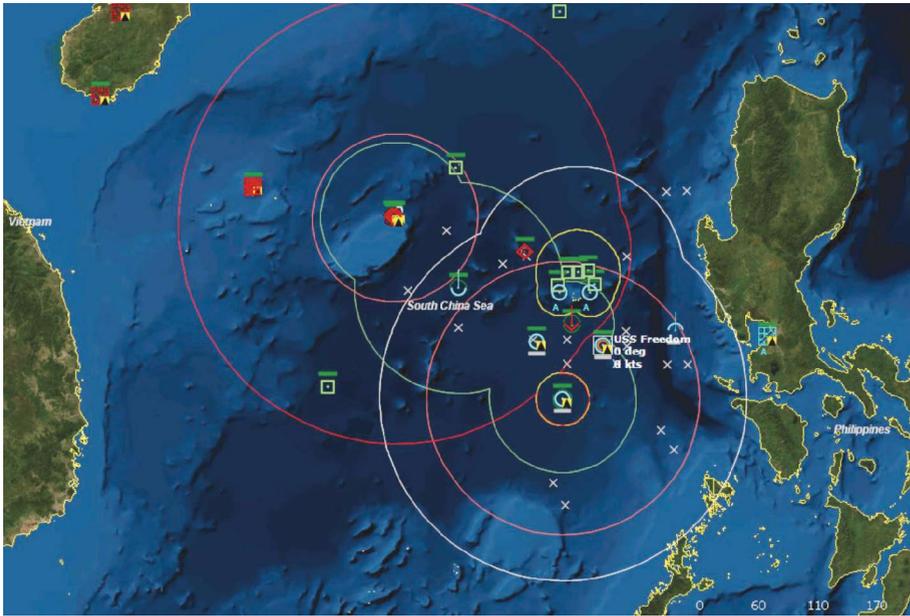
exploration of the integrated fleet command and control (C2) required to fight the fleet effectively. In Fiscal Year (FY) 21, *Command PE* will continue to be used to support wargames focused on concepts and force design challenges.

Command PE, commonly referred to as *Command*, is a commercial simulation of modern air, naval, and ground combat published by Matrix Games and Warfare Sims. One of the biggest strengths of *Command PE* is its ability to rapidly customize its open source database of platforms, sensors, weapons, and ground formations. It also offers an extensive array of analytic, after action, and visualization capabilities as well as simulation federation possibilities. With support from the Air Force Research Lab, which has used *Command PE* for several years, MCWL Wargaming Division adapted some of the *Command PE* database’s parametric data to the secret level to enhance the wargame’s accuracy and credibility. This remains a work in progress,

and efforts are underway to establish a Joint Community of Practice to further enhance the database with information from across the Services. In FY21, MCWL plans to continue to implement *Command PE* to better test and evaluate future nascent capabilities in the context of emerging naval and joint concepts.

The purpose for using *Command PE* is multi-fold. First, it adds a modeling and simulation (M&S) capability to the wargaming tool kit. Rapid scenario customization allows different excursions and vignettes to be easily explored. During a wargame, *Command PE* applies rigor in adjudication while enabling player immersion and decision making. Each action undertaken during the game and their associated effects are logged, thereby capturing quantitative data outputs to support analysis during and after the game. Ultimately, *Command PE* elicits the human decision making associated with nascent concepts and capabilities—the key output of any wargame—while delivering a body of data that can support quantitative analysis.

The base version of *Command PE* is single player only. In a typical professional wargame using *Command PE*, Blue and Red player cells develop their plans, which are then input into the scenario by a trained operator. The scenario is then run in accelerated time while players watch the battle unfold on the common tactical picture and make decisions as needed, which the operator applies.



Command PE tactical picture. (Photo provided by Wargaming Division.)

Given the rapidity of decision making, especially in larger scenarios, this single point of input methodology can slow game play—as pausing the game clock becomes more frequent while the operator applies new orders. To enable

simultaneous input of orders across multiple cells, MCWL via the support of Marine Corps Systems Command, contracted with Matrix Games to develop a multiplayer version of *Command PE*. This was completed during FY20. The

Command PE will ensure MCWL is postured in the near term with an adaptive wargaming capability that can support Force Design efforts in advance of the future Wargaming Center's family of software tools programmed for IOC in FY24.



Command PE market research conducted in 2019 (Epsom, UK). (Photo provided by the Wargaming Division.)

new multiplayer version enhances the utility of the game to support multi-cell, force-on-force wargame events at the task force, task group, and task unit levels.

Command PE, like other M&S tools, has certain limitations. The current version of the software is suboptimal when wargaming ground centric operations. Further, since *Command PE* is a commercial product, complete transparency of adjudication algorithms is not possible for proprietary reasons. *Command PE* is a battle simulator not a campaign simulator. It is optimized for exploring battles and engagements spanning 12- to 48-hour time periods, and it does not automatically execute operational-level logistics functions such as replenishing airfields with ammunition and fuel.

To further enhance *Command PE's* capabilities, MCWL, with the support of Marine Corps Systems Command Integration Division, is executing a Defense Technical Information Center development contract with Matrix Games. This multi-phased contract effort will improve data analytic capabilities, create an advanced mission planning tool to support more detailed strike planning, and enhance cruise missile behaviors and employment options. In addition, the contract seeks to develop advanced technology capabilities, such as loitering munitions and drone swarms; enhance ground unit behaviors and employment; strengthen amphibious operations; and improve logistics functions with a cargo mod to enable tracking of individual plane and ship cargos. This development effort, once fully funded, will span the next two years.

Additionally, MCWL plans to expand *Command PE* usage to the FMF. The capabilities associated with *Command PE* can be leveraged to enhance FMF planning, experimentation, and battle staff training.

All of these upcoming improvements will ensure MCWL has a near-term M&S wargaming capability to support continued force design wargames in advance of the future Wargaming Center capability that is currently in the prototyping phase of development with initial operating capability set for FY24.



MCWL wargame setup with Command PE for the Ender's Shadow Wargame in August 2020.
(Photo provided by the Wargaming Division.)

In an era of dynamic change and operational fluidity, *Command PE* has potential to enhance wargaming across the Marine Corps with a set of capabilities ideal for scenarios focused on littoral naval operations. Its capabilities enhance wargaming across multiple use cases, including force design, FMF plans, battle staff training, and professional military education.



MajGen Harold W. Chase Prize Essay Contest

Boldness earns rewards...

The annual MajGen Harold W. Chase Prize Essay Contest invites articles that challenge conventional wisdom by proposing change to a current Marine Corps directive, policy, custom, or practice. To qualify, entries must propose and argue for a new and better way of “doing business” in the Marine Corps. Authors must have strength in their convictions and be prepared for criticism from those who would defend the status quo. That is why the prizes are called Boldness and Daring Awards.

Prizes include \$3,000 and an engraved plaque for first place, \$1,500 and an engraved plaque for second place, and \$500 for honorable mention. All entries are eligible for publication.

* Instructions *

The contest is open to all Marines on active duty and to members of the Marine Corps Reserve. Electronically submitted entries are preferred. Attach the entry as a file and send to gazette@mca-marines.org. A cover page should be included, identifying the manuscript as a Chase Prize Essay Contest entry and including the title of the essay and the author's name. Repeat the title on the first page, but the author's name should not appear anywhere but on the cover page. Manuscripts are accepted, but please include a disk in Microsoft Word format with the manuscript. The *Gazette* Editorial Advisory Panel will judge the contest and notify all entrants as to the outcome shortly thereafter. Multiple entries are allowed; however, only one entry will receive an award.

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