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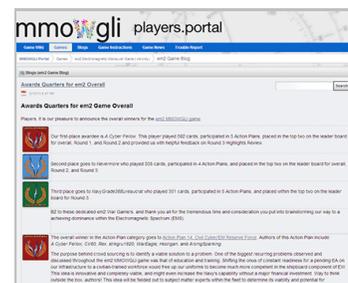
Play the Game, Change the Game

Crowdsourcing to solve some of the Navy's toughest problems

By Heather Rutherford - April-June 2013



mmowgli players portal screenshot.



mmowgli players portal awards screenshot.

The Massive Multiplayer Online War Game Leveraging the Internet (MMOWGLI) is an online game designed to crowdsource ideas and strategies that may provide insight into some of the Navy's toughest problems.

With the help of multimedia and Web 2.0 technology, the joint effort between the Office of Naval Research (ONR), the Naval Postgraduate School (NPS) and the Institute for the Future creates an environment where players are asked to share new ideas and collaborate with others to earn innovation points and win the game. The platform is designed to support large numbers of distributed global players working together on idea generation and action planning, with an eye toward surfacing innovative outlier strategies.

MMOWGLI can be used for virtually any topic. Previous MMOWGLI games focused on Somali piracy, energy and business innovation. The most recent game was sponsored by the Navy Warfare Development Command's (NWDC) Navy Center for Innovation and explored electromagnetic maneuver (em2).

Electromagnetic Maneuver Massive Multiplayer Online War Game Leveraging the Internet — or em2 MMOWGLI — was played in three one-week phases:

- Move 1: "Know the EM Environment: Understanding EM Energy";
- Move 2: "Be Agile: C2 in the EM Environment"; and
- Move 3: "Change Our Paradigm: Consideration for EM Capabilities Employment."

With today's budget constraints, MMOWGLI makes good economical sense. "This is a great way to reach a lot of people and save money," said Rebecca Law, a MMOWGLI subject matter expert based at NPS.

em2 MMOWGLI had more than 625 players from across the globe.

While the first games were open to a more general audience, access to em2 MMOWGLI was limited to holders of a .mil address. Players could sign up, register, and log in from the MMOWGLI players' portal page using screen names of their choice so they could remain anonymous, if desired.

According to Steve Rowe, director of NWDC's innovation campaign division, players were able to join the game during any phase.

The em2 MMOWGLI was also the first time that this unclassified game system was coupled with a NWDC-hosted SIPRNET discussion site to allow for full discussions of some pressing electronic warfare and cyber issues at the appropriate level of classification.

Playing a MMOWGLI game is not unlike solving a puzzle in a group setting; players provide input, seek out the best ideas and brainstorm to reach a collaborative solution. Seed cards were planted at the beginning of each phase to spark ideas without bias, which allowed players the opportunity to think freely.

Using questions on the seed cards as prompts, players entered their ideas, which displayed on virtual sticky notes called idea cards. Depending on the game, ideas were geared toward either innovation (future ideas) or defense (status quo).

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Because MMOWGLI's developers sought to create an environment that has similar aspects to social networking, players' idea card responses were limited to 140 characters (just like Twitter). Despite that, players had a lot to say: more than 5,600 idea cards were generated during em2 MMOWGLI.

Players received points based on their input and could also receive exclusive icons and badges if they reached special achievements such as playing cards in every category – which sometimes stoked the fires of competition.

For the most part, MMOWGLI players appeared to take the game seriously — and they wanted recognition. "There are times when it's about getting points out there and getting on the leaderboard," Law said. "But based on the 41 action plans the players collaboratively generated, they were clearly focused on helping the Navy move electronic warfare forward."

While the game essentially drove itself, em2 MMOWGLI was moderated — presided over by behind-the-scenes game masters on both the East and West coasts of the United States. Not only did the game masters monitor game play for potential technical issues, they also interacted with the players by "liking" players' ideas to link related concepts or illuminate specific areas of interest. If a game master clicked a player's card, that player received extra points.

Idea generation is key to the success of the war game. As Law said, "Good ideas naturally float to the top."

Those good ideas eventually led to actionable items, which in turn were incorporated into action plans addressing the 5 W's — who, what, when, where and why. Action plans were generated in two ways; from game masters, who could ask for an action plan development, or by players, who could request action plans. Players also had the ability to vote on action plans to propel the best plans forward.

Although traditional action plans are text-based, players were welcome to embellish their plans using images, charts — and even videos. For example, rather than filling out a form, a player might record a video and post it on YouTube. While it may seem unusual to "watch" an action plan, using this sort of technology is in keeping with the Navy's initiative to appeal to the younger generation.

At the end of the game, winning players received the honor of being recognized on the MMOWGLI players portal for their input; namely, number of cards played, participation in action plans, and helpful feedback.

At press time, NWDC was still conducting detailed analysis of the thousands of ideas discussed in em2 MMOWGLI to identify recommendations for em2 capabilities development, and for future crowdsourcing events on this and other topics. The most interesting crowd-generated themes that have emerged so far include:

- The need to aggressively train to, and be prepared to operate with agility in, an environment where our command and control (C2) and communications systems are threatened.
- Enhancing EW and cyber training from accession onward, including curricula at NPS, the Naval War College and the U.S. Naval Academy, and improved troubleshooting training in "A" School to reduce distance support reach-back requirements.
- Innovative ideas for engagement with the civilian sector, such as a DoD surge capability through a cyber/EM reserve "militia" force and a program in which civilians could volunteer to donate bandwidth and spectrum for military operations.
- Changes in doctrine, tactics and equipment to reduce reliance on vulnerable networks and communications paths. This discussion included some "back to the future" ideas like using lights for ship-to-ship signaling and use of pre-GPS navigation systems. Another "retro" suggestion was a renewed emphasis on emissions control (EMCON) and min-RAD (minimizing radiation signals) practices during the Cold War.

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For More Information

MMOWGLI Players Portal: <https://portal.mmowgli.nps.edu/welcome>

Navy Warfare Development Command: <https://www.nwdc.navy.mil/>

Navy Center for Innovation: <https://www.nwdc.navy.mil/ncoi/default.aspx>

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