A Military Field and Training Game Developer Corps

A Thought Proposal

By Marc Prensky

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[1071 words]

"Can do."
– The Seabees' (unofficial) motto

We all remember the "Fighting Seabees" (CB = Construction Battalion). They are famous for getting it done fast, from quickly building big permanent installations to solving thorny battlefield engineering problems on the fly, helping us both to win wars and do "civic actions" including building of schools and infrastructure.

As the use of commercial and specialized games pervades all aspects of the military – from Recruiting, to Readiness, to Rehearsal, to Resupply, and even the "Real Thing," (i.e. real time strategy and tactics), it may be time for the military to have a game-building capability of its own.

What has gotten me thinking along these lines is the confluence of a number of factors.

1. The relevance of games, and the games language for engaging and teaching the "Digital Natives" who now comprise most of our armed forces.

2. The relevance of gameplay for strategy, tactics and learning.

3. The often-heard complaints about the high cost of game development.

4. Recent experiments in rapid game prototyping.

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There is no doubt that the decision making structures, artificial intelligence (AI), language, and metaphors that have emerged from the gaming community over the past 20 years are among the most sophisticated ever developed, often paralleling that of the military's most advanced systems of command and control. At the same time, with the military's increasingly sophisticated technical equipment and smart weapons, the battlefield is becoming similar to games in many of its interface and operational aspects. One positive aspect of this is that our incoming warfighters are increasingly "pre-trained" in both screen language, data manipulation, situational awareness and specific content by having played commercial video games.

In addition, the use of games in command situations – a long tradition in the military – has, with the invention of the computer, taken on may new aspects. One of the most important, along with the ability to handle large numbers of variables, is speed: the ability to be at or close to "real-time." As commanders are increasingly trained on and familiar with these technologies, there will be a greater demand to employ them "just-in-time" to rehearse or even help conduct actual battle scenarios.

The technology to create such custom, on-the-spot modifications is now largely in place, with commercial games increasingly including toolsets to build "mods" to suit particular situations. However there will always be situations in which the existing games do not fit the conditions well enough and there is a need to create new games or game engines.

In terms of cost, electronic game development, which began as a "garage" operation, has moved in the commercial sector to the point where games often cost $10-15 million to create. Military games, with all their required specifications can cost even more. It is important to realize, however, that the major part of these budgets are devoted not to creating the "gameplay" – the decision-making and competitive parts of the games that the military really needs – but rather to the "eye candy" of increasingly lifelike graphics. While eye candy is important for some things, most game designers will tell you that it is the "gameplay" that really makes the difference in holding players' attention and getting them to compete until they win.

How quickly can on-the-fly gameplay be created? As part of an experimental game workshop at the Computer Game Developer's Conference in March 2002, various teams of top-notch game developers were put to work over a weekend to each develop a new game, all using a particular "engine," also quickly developed for the occasion. The engine did highly sophisticated terrain mapping and allowed up to one million sprites (a huge number – they wrote special code to pull sprites down from every available game on the Web). The results of the one weekend's work were extraordinary both in the sophistication of the ideas and the brilliance of their execution. I have no doubt that had their objectives been military, rather than fun, the work that they produced in a weekend's time would have been extraordinarily useful in many areas. And with experience, training and tools, the development time for temporary "training games" and situational "battle games" could be made even shorter.

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What this presents, I think, that there is an enormous opportunity for the military to create a mutually beneficial situation for themselves and game developers – an in-house military game development corps. What might such a unit look like? Who would lead it? Who would participate?

Interestingly, there are increasing numbers within the existing officer corps with experience in various aspects of high-end game design. And they are well-supplemented by the DoD civilian community. (I am putting together this database as part of a Navy SBIC). Such officers, supplemented by the expertise of top commercial game designers as needed, would have the vision and experience to see exactly where rapid game development will be the most helpful to the military's varying objectives.

There should be no problem in finding recruits. Today, "game designer" has replaced "film director" on the list of what smart, creative kids want to be. If "game designer/developer" were a military recruiting specialty, I would think there would be many who would compete for it, especially if it meant access to all the latest technology. The computer game skills training programs for such recruits already exist, and can be quite rigorous, as exemplified by the curriculum Nintendo has established in its "DigiPen" schools.

The games the military has used up until now have been either modifications of commercial games or custom games created by contractors. Most, if not all, have attempted to use full, commercial-level "eye candy." It is interesting to speculate on whether other projects of key use to the military could be built more quickly and less expensively by an in-house unit. Certainly that unit would be able to build useful games "on-the-fly" for wartime situations better than any other group. And by building up over time a reusable in-house database of relevant SCORM-compliant military graphics, even the eye candy could be added relatively quickly and cheaply.

Could it be time for the Gamebees?

Respectfully submitted,

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