



Career Education At Westwood College Of Technology

Westwood campuses in southern California, Denver, Chicago, and Fort Worth offer fast-track career education in Co...

with [Laurel Miller-Daly](#) Your Guide to one of [hundreds of sites](#)

Search bar with "in this topic" and "GO" button

[Free Newsletter](#) Get the latest and greatest info from our Guides.

Subjects

Military Web3D/VR (Part 2): A conversation with Don Brutzman

Military organizations are very involved in VR and Web3D these days, especially the US military. In last weeks article we looked at how the military is using Web3D and VR for training and simulation. This week we look military reconnaissance, telepresence and recruitment to see how Web3D and VR are being used in the military.

More of this Feature

- [Military Web3D/VR \(Part 1\)](#)
- [Military Links](#)

- [Tutorials](#)
- [Glossary](#)
- [VRMLPad 2.0 Review](#)
- [Using Universal Media](#)
- [Six Hot Content Ideas for Web3D Worlds](#)

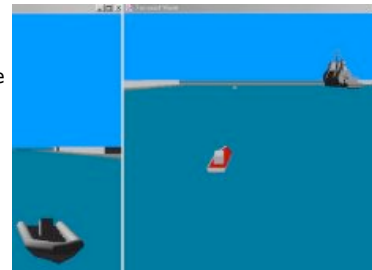
Elsewhere on the Web

- [Advanced Biomedical Technologies \(Darpa\)](#)
- [Predator Q&A](#)
- [The Telemedicine and Advanced Technology Research Center \(TATRC\)](#)
- [Sandi's BioSIMER](#)
- [America's Army Game](#)

- [Web3D/i3D](#)
- [Web3D Technologies](#)
- [Web3D Worlds](#)
- [Wireless Web3D](#)
- [Art](#)
- [3D Graphics](#)
- [Virtual Reality](#)
- [Augmented Reality](#)
- [Tutorials](#)
- [3D Games](#)
- [CAD](#)
- [Medical](#)
- [Science](#)
- [Military](#)
- [Education](#)
- [AI and Alife](#)
- [3D GUIs](#)
- [Other Technologies](#)
- [Publications](#)
- [Events](#)
- [Humor](#)

Reconnaissance

3D and VR are already being used by the military for reconnaissance. According to Don Brutzman, "One of the most interesting and exciting things happening lately is turning op orders (operations orders) into more than just a Word document. Some of our recent students (at the Naval Postgraduate School) have shown that if you take those op orders and encode them into XML you have a structured document. You have tag elements in there so you know how to look up the who and the where and what you're supposed to do.



"Not only is (this new document) compatible with just about all systems, but we have shown you can auto-generate virtual environments directly from these documents. Guys are going into a dangerous situation. What if they could actually visualize where they were going? It could save lives." (Note: An example of this technology was shown during the [Web3D Showcase](#) by James Harney from the Naval Postgraduate School. The example showed a scenario on the "Uss Cole Terrorist Attack" that Harney is in the process of developing for his thesis.)

James Harney's 3D scenario on the "Uss Cole Terrorist Attack".

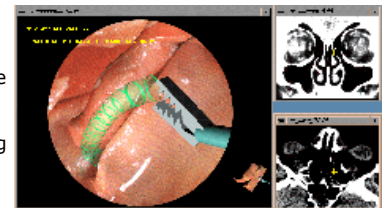
Remote control vehicles and drones are also being put to use for reconnaissance. Remote technologies are being used to provide-up-to-the-minute reconnaissance in war zones. During the war in Afghanistan, the Pentagon used both un-manned surveillance aircraft (Predators) and ground-deployed robots for surveillance. The Predators were also used successfully by the CIA to deploy armed missiles in the war zone.

James Harney's 3D scenario on the "Uss Cole Terrorist Attack".

Telemedicine and teleoperation

The US military has a problem with training medics. The goal of the Department of Defense (DoD) is to have trained medics ready at all times in the event of a conflict. Gunshot wounds can be observed in some inter-city hospitals (though allowing medics to practice in these places is usually prohibited for legal reasons), but most medics never see or treat shrapnel or land mine wounds until they are actually in a war zone. The DoD is also interested in developing methods of also using telepresence to allow doctors the ability to perform teleoperations from remote, safe locations far from the front.

To help meet these challenges, the DoD has been working with industry and academic partners for more than a decade to harness the potential of telemedicine. Between 1993 and 2000, DoD committed approximately \$500 million to fund more than 200 telemedicine-related research projects.



The DoD is developing tools for teleoperations.

This money has been well spent. For instance, Sandia Labs has created two training applications for medics. The first one is called MediSim and is used to train medics for casualty care on the battlefield. The second, BioSimMER, is a virtual trainer on how to respond to biological agents used in terrorist attacks.

And SRI has created teleoperation systems by combining recent advances in stereo imaging, telerobotics, sensory devices, video and telecommunications. The telepresence system provides surgeons with the full sensory experience of conventional hands-on surgery. Auditory, visual and tactile sensations, including the force of pressure felt while making an incision, are communicated directly to the surgeon performing the operation without distortion or delay.

The benefits of developing telepresence surgery technology are immense. The new technology provided surgeons with tools that perform a wider range of minimally invasive procedures with much greater ease and at reduced overall cost. Telepresence technology will also bring great benefit to the field of microsurgery, where it will enhance surgeons' skills by dramatically improving their precision and dexterity in delicate and complex procedures.

Recruitment

Subject Library

All articles on this topic

Stay up-to-date!

Subscribe to our newsletter.

Enter Email



Advertising

- > [Free Credit Report](#)
- > [Free Psychics](#)

Because of their focus on new ways of waging war virtually, the military is also very interested in recruiting video game players to control all of their new virtual reality tools.

So it makes perfect sense that The MOVES Institute has devised a Web3D game to use for recruitment, public relations and even training. Called "America's Army: Operations", it is a squad-based multi-player game that has received a lot of attention for many reasons, not the least of which is that it is a well made game that is fun to play. The game was one of the major hits at the E3 game conference last spring, and those hardened gamers are a tough crowd to please.

The game is available free to download and free to play, but anyone can also receive a free CD of the game just by wandering into their neighborhood Army Recruitment Office. The game CD includes special missions not available online, which is a strong inducement for many of America's Army's over 600,000 registered players to pay their recruitment office a visit.



"America's Army" is a game created by the US Army.

The Army has also found an added PR bonus in the game. Some America's Army players are not located in the US and so are not suitable for recruitment, but the hours spent playing this game can't help but influence the way the players in other countries view the US Army.

The game includes an amazing amount of realism and attention paid to recreating the way things happen in the Army. New game 'recruits' attend basic training and are given standard issue weapons and equipment that they have to learn about. All of this leads neatly into the virtual training aspect of the game. True Army recruits who have played they game will not be nearly so 'raw' as recruits have been in the past and will be much more ready for life in the Army.

The game does include a lot of killing of bad guys and has a new twist on team verses team game play. The Army doesn't want anyone playing as the bad guys (in this case terrorists, of course) or shooting at US soldiers. So both teams that enter the playing field see themselves as the Army and see the other team as the terrorists, something that is only possible in a virtual game. This insures that the Army's values are intact, while still allowing team vs team game play on the Web.

This is only the first of two planned recruitment games being devised by the Moves Institute but considering the popularity of America's Army, there may be many more in the works soon.

Military organizations seem poised to continue to push the envelope with regard to VR and Web3D with plans already in place to expand the use of drones, VR training, Web3D recruitment, as well as virtual reconnaissance and simulation. Anyone interested in the future of virtual reality would do well to keep an eye on where the military is going in VR and Web3D.

[Email this page!](#)

[Career Education At Westwood College Of Technology](#)

Westwood campuses in southern California, Denver, Chicago, and Fort Worth offer fast-track career education in Computer Networking, Graphic Design, CAD, Programming and other high-demand fields.

<http://www.westwoodcollege.com/> (Cost to Advertiser: \$0.22)

[Virtual Realities - Virtual Reality Products !!!](#)

Shop for Virtual Reality Products here! head mounted displays, data gloves, force-feedback devices, 3D controllers, simulators, gaming chairs...

<http://www.vrealities.com/> (Cost to Advertiser: \$0.21)

[Buy a Link Now!](#)

□

Explore More on the About Network!

Related Sites

[Animation](#)
[Focus on Java](#)
[Focus on JavaScript](#)
[Graphics Software](#)
[HTML/XML](#)

Eggs Made Easy

Hungry for breakfast? Busy Cooks Guide Linda Larsen explains how to make lots of delicious egg recipes.

Afterlife Experiment

Paranormal Guide Stephen Wagner looks at one scientist's efforts to prove the existence of life after death.

Election in Court

Supreme Court ruling could change face of the Senate. U.S. Government Guide Robert Longley reports.

Search About

 About International:

[About Us](#) | [Advertise on This Site](#) | [User Agreement](#) | [Privacy Policy](#) | [Kids' Privacy Policy](#) | [Help](#)

Copyright © 2002 About, Inc. About and About.com are registered trademarks of About, Inc. The About logo is a trademark of About, Inc. All rights reserved.