

Serious simulations upskill defence and police personnel

May 27 2016, by Blair Price, Sciencenetwork Wa



Titan uniquely covers all domains of land, sea, air and space warfighting and is consequently unmatched for joint training activities. Credit: Calytrix Technologies

Simulating World War Three scenarios to train military personnel are within the grasp of Perth-based Calytrix Technologies thanks to their virtual simulation technology platform Titan Vanguard CX.

Built using the Outerra world rendering engine, more like an interactive Google Earth than a typical video game engine, Calytrix hopes Titan can become the benchmark in simulation software.

They hope Titan will be utilised by the defence industry in a similar vein to how Windows is the dominant operating system for PC computers.

The US Army aims to consolidate the bulk of its simulation needs to a unified platform and military clients are already using Titan ahead of its official launch expected mid-year.

Titan uniquely covers all domains of land, sea, air and space warfighting and is consequently unmatched for joint training activities.

For example, it allows virtual front line infantry to request air strikes and naval gun fire within a shared simulation system which was previously not possible.

Titan is also being used for marshalling exercises and a range of gunnery training—based on military grade [virtual reality headsets](#) that almost double the resolution output of the recently released Oculus Rift.

Titan will launch with nearly 2000 pre-built models for military and civilian scenarios—meaning that almost every kind of munition, armoured vehicle, aircraft and ship can make an appearance along with a broad range of infantry and emergency response personnel types.



Titan could be applied to emergency services to aid police and fire authorities.
Credit: Calytrix Technologies

How they behave can be modified in real time through JavaScript by the end user and there are even models for RPG-wielding Islamic State fighters and the International Space Station.

"Developing complex urban missions, global WWII scenarios and even nuclear conflict is possible in Titan," Calytrix CEO Shawn Parr says.

"In the case of nuclear weapons we simply treat these as special weapon types with very large blast radiuses, increased destructive patterns and lingering bio-hazard characteristics.

"Large scale deployment of troops is beyond our current simulation engine but this is going to be supported in time and is ideally suited to

the global nature and cross domain capabilities of Titan."

They are planning to create complex scenarios like invading a country which requires coordinating millions of entities.

Titan already allows commanders to watch operations from space and zoom down to a ground level to control each soldier and tank in 3D.

As Titan starts to simulate whole cities and crowd modelling behaviour it could be applied to emergency services to aid police and fire authorities.

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