

A Seventh Major Improvement to the Integrated Visual Augmentation System

To utilize TPMI's pseudo-GPS system to maximize lethality in Urban warfare

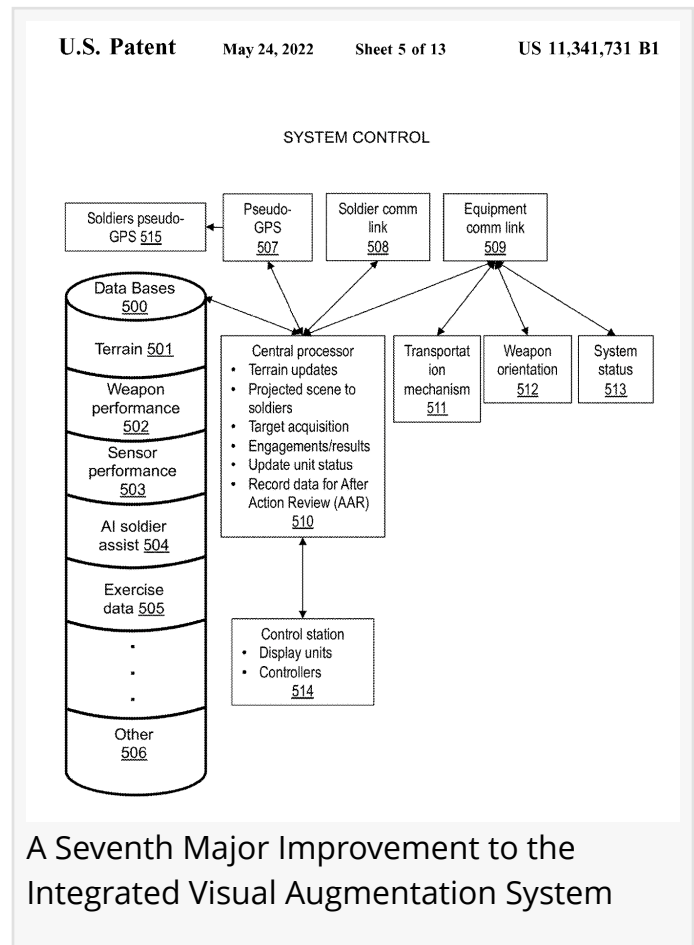
ORLANDO, FL, USA, July 21, 2023

/EINPresswire.com/ -- Tactical hand signals play an important role in combat. Soldiers are trained in established hand gestures to indicate a variety of messages, such as "come here", "message received", "halt", "enter, "cover me", and "suspect".

Urban warfare poses a unique set of challenges. A squad entering a building can face snipers, booby traps, rubble and more. Consider a squad leader given the task of "clear the building". Coordinating forces is critical in timing a surprise invasion into a room filled with armed enemies.

How can efforts be coordinated between 9 Soldiers in a squad dispersed over 5 different rooms and different floors of a 2 story building? As the squad disperses, line of sight is lost and achieving coordinated force movement becomes exceptionally complicated. If there is no line of sight, tactical hand gestures are useless.

In US Patent 11,341,731, [TPMI](#) developed advancement in head display unit technology to be used in conjunction with a pseudo-GPS system. The pseudo-GPS system, comprised of a set of transceivers with signal strength specifically dialed in to account for attenuation of various building materials, can be set up by a set of drones on the outside of the building before Soldiers enter. In accordance with the '731 patent, a first Soldier's head display unit would receive pings from the set of transceivers at a first timing, which is computed to yield a precise position within the building. Similarly, a second Soldier's head display unit would receive the same pings, but at a different timing and the second head display unit's unique position is computed. TPMI's technology works even when there is no line of sight between Soldiers. If the [IVAS](#) system is



enhanced with TPMI's technology, precision coordination amongst Soldiers in a squad will yield a more lethal force.

Even without line of sight, dispersed Soldiers would be able to synchronize a surprise invasion into the room filled with armed enemies. This is because the IVAS system, upgraded with '731 patented technology, would be able to localize Soldiers within an unknown building using a generated 3D map. Soldiers would be equipped with data that matters -- real-time, accurate, spatial map of each Soldier's position within the unknown building -- and importantly, a coordinated strike can be achieved.

In addition to providing a more lethal force, the '731 patented technology would improve Soldier survivability. Anytime armed friendly and enemy forces are mixed throughout a complex building, there will be some risk of friendly fire. However, with TPMI's technology, a Soldier will be able to clear a hallway with many doors with foreknowledge of where each friendly is located. Since the location of Soldiers is known, based on the '731 patented technology, the upgraded IVAS could display a blue dotted life-sized virtual Soldier overlayed on each actual Soldier. The Soldier looking down the hallway will have visual foreknowledge of his fellow Soldier before he enters the hallway and the risk of friendly fire could be cut.

When implemented on the IVAS, TPMI's '731 patented technology will yield improved situational awareness, will improve survivability and will increase soldier lethality. The bottom line is the IVAS can be improved by integrating technology in the '731 patent. TPMI aims to work with PEO Soldier to integrate this novel technology into the IVAS.

About the author: Dr. Robert Douglas is a West Point graduate who: fought as an Infantryman in Vietnam with US units and a Vietnam recon company; worked in a combat development agency; studied nuclear war in the Joint Chiefs of Staff; patrolled in the desert for the UN in the Middle East with Russian war planners; and developed a system to assist Air Force space exercises. After leaving the service he spent over three decades in the defense industry rising from manager to vice president working programs ranging from sensors and missiles for Air Force aircraft to rubbing shoulders with Army scientists; to Army helicopters and combat vehicles as well as rapid target acquisition (RTA), night vision goggles and helmets sights.

Dr. Robert Douglas

TPMI, LLC

[email us here](#)

This press release can be viewed online at: <https://www.einpresswire.com/article/645400100>

EIN Presswire's priority is source transparency. We do not allow opaque clients, and our editors try to be careful about weeding out false and misleading content. As a user, if you see something we have missed, please do bring it to our attention. Your help is welcome. EIN Presswire, Everyone's Internet News Presswire™, tries to define some of the boundaries that are reasonable in today's world. Please see our Editorial Guidelines for more information.

