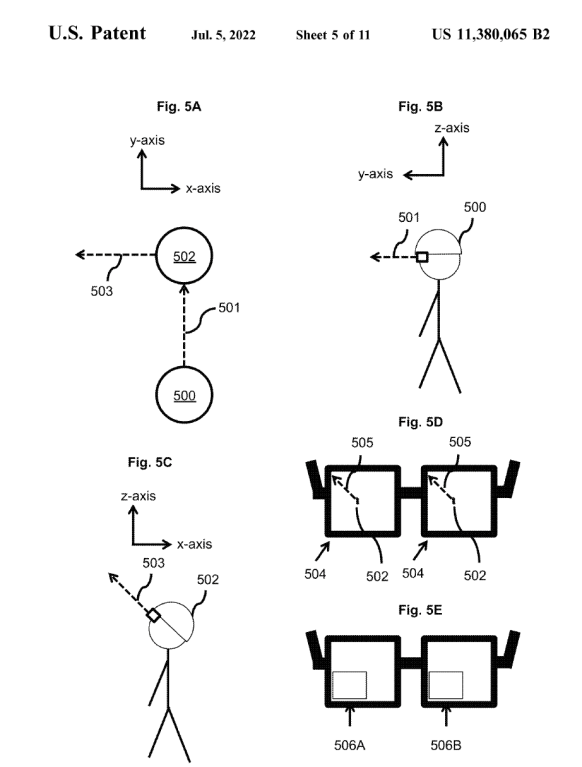
A Sixth Major Improvement to the Integrated Visual Augmentation System

To instantly boost a squad leader's knowledge of his squad



To instantly boost a Squad leader's knowledge of his squad

ORLANDO, FL, USA, July 19, 2023 /EINPresswire.com/ -- One can infer the general direction of where a Soldier is looking by analyzing the Soldier's body position and head position. However, it is difficult to infer the exact spot where the Soldier is looking. For example, a squad leader seeing a fellow Soldier's head position facing the North would not necessarily have knowledge of which northern target (of 3 different northern targets) the Soldier is looking at. Imagine the difficulty of being a squad leader of eight other Soldiers and trying to track what each Soldier is looking at. It is even a problem for a team leader controlling three other Soldiers.

The Integrated Visual Augmentation System (IVAS) is a 3D head display unit worn by the Soldier, which provides tactical mixed reality to improve situational awareness for soldiers in combat. The words "Visual Augmentation" in the Integrated Visual Augmentation System (IVAS) are at the heart of TPMI's patented technology.

In US Patent 11,380,065, TPMI has furthered its eye tracking technology to specifically solve this problem of "what precisely is your fellow Soldier looking at?". TPMI's patented technology performs an analysis of an image of a physical scene obtained from a sensor system on a head display unit, performs segmentation of the image into discrete structures corresponding to physical items in the scene and determines based on its eye tracking technology which discrete structure a Soldier is viewing. This is a game changer for the squad leader.

Not only does TPMI's '065 patented technology show the viewing angle of each Soldier in the squad, it pinpoints the specific physical object each Soldier is looking at. Using this technology, the squad leader will no longer have to track head orientations of eight other Soldiers. The

squad leader will have information where each Soldier is looking on the same screen thus boosting a squad leader's knowledge of his Soldiers. This way the squad leader can properly distribute the fire of the members of the squad.

Moreover, in training TPMI's '065 patent enables the generation of valuable metrics on both the individual Soldier and the whole squad including (1) time to detect each target, (2) number of targets identified, (3) time to engage targets and (4) percentage of time each target was visually tracked. These metrics can be tracked over time during training and the squads collective engagement capability thereby improved – better ready for combat!

When implemented on a Soldier's mixed reality headset (e.g., the IVAS), TPMI's '065 patented technology will yield improved situational awareness of the squad leader yielding a more effective fighting force. The bottom line is the IVAS can be improved by integrating technology in the '065 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.

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