Pros and Cons of Augmented Reality in the Military

The potential uses of Augmented Reality (AR) in the military can bring some significant advantages to a country’s military. However, there can be many cons associated with AR and its usage. A term often referred to in combat is the “fog of war,” a term which describes the uncertainty of a soldier’s situational awareness. Situational awareness is defined as how much a person knows of their surroundings and the events currently taking place. By using AR to display information to a soldier in a Heads-Up-Display (HUD), they will have increased situational awareness which can help alleviate the fog of war effect. However, the con to this is that displaying too much information can lead to the opposite of what is intended.

Another advantage that comes with using AR is its use with dismounted warfighters. These grounded soldiers often cannot distinguish physical objects hidden from view, but AR can change that. Using a head-mounted display to create a HUD that can be used to display these hidden objects. Although, using this display can severely limit a soldier's peripheral vision. To counteract this, development has been done a see-through display. The downside to the see-through display is that it requires a fair amount of brightness on screen to be used outside, which requires more energy.

Finally, using AR for training can yield benefits that come with cost. AR gives the power to render objects not in the real world for a trainee, for example, enemy forces. The downside is that the system is limited by the rendering power of the computer. For true immersion, the system would need to know the light of the surrounding environment to properly render enemies. Also, the system must be able to properly recognize obstacles that a human would not be able to pass through, otherwise enemy force would run through walls. Despite all this, AR training offers a powerful new way for soldiers to practice in physical environments.