

The year is 2050, more than 30 years into our future. The technological and resultant strategic, operational, and tactical changes to normal Air Force operations are immense. Before beginning training, each airman receives an intra-ocular and under-the-skin implants in their forearms giving them built-in biometric authentication systems that allow for high levels of authentication and a heads-up display making training, mission execution, and communication more effective while revolutionizing how each are done the same that personal computers and the internet have done in the past 30 years.

Because of the technological space race in private industry, space launch costs are so dramatically reduced that GPS systems are now able to cover all points of the globe with quadruple redundancy, now with accuracy down to the cubic micrometer. Spy satellites now cover all operational areas with constant surveillance to sub-centimeter resolution from low, medium, and high earth orbit, as well as heliosynchronous orbits allowing for substantial depth perception with satellite imagery.

Advances in hypersonic jet travel allow for rapidly deploying ground troops from the Continental United States to anywhere in the world in under three hours, revolutionizing troop and supply movements. Additionally, because of technological advancements in mitigating the shockwaves of sonic booms, the resultant sound signature is no more significant than that of a standard C-5 Galaxy. Sixth generation fighters use new jet engines and aerodynamic designs allowing for an efficient and wide combat flight envelope from 80 knots for anti-drone warfare with integrated laser weaponry to Mach 6 for rapid movement and air-to-air fighting. Because of enemy advances in stealth and radar technology, beyond-visual-range engagements are the norm, but within-visual-range engagements still happen, though with fighters routinely exceeding projectile speeds, lasers have replaced gatling guns when short-range missiles are insufficient.

Lasers see extensive deployment on all military bases, high-value structures, and military vehicles to defend against expansive drone attacks from enemy combatants. Homemade suicide-drone swarms are the new improvised explosive (IED) of this era and devastating without proper defenses. Additionally, integrated targeting and laser attack systems allow for defense against air-to-air, air-to-surface, surface-to-air, and short and medium range surface-to-surface missiles.

While sixth generation fighters still see use, unmanned aerial vehicles now account for more than half of all combat operations. Some are now fully autonomous for highly specific targets using GPS, facial and building recognition, inertial guidance systems, laser-designation, and radar systems for positive target identification. Artificial intelligence (AI) now sees extensive usage to replace certain mundane jobs like certain aspects of maintenance, food services, accounting, and so forth in addition and is quickly working up to high-enough levels to be used for air traffic control, gate security, and more.

Because of intense dependency on cyber-based operational systems, cyber-security is extremely important for not only those charged with maintaining our cyber-systems, but all airmen. A basic level of cyber-security training and regular cyber-security briefings are as important as those on operational and communication security. On the other side of the coin, we also have a dedicated major command specifically for cyber-operations to deny our enemies the ability to use their systems or have the opportunity to attack ours. Cyber Command is based in a purpose-built bunker similar to that of Cheyenne Mountain located in a strategically chosen location in the western-half of the continental United States with ample power supplies, little tornado risk, low flooding risk, and low earthquake risk.