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Related Categories: Military Innovation; Science and Technology; Resource Security; SPACE; NASA; China; Russia

SOCOM SIMPLIFYING DATA DIGESTION...

The professionals of U.S. Special Operations Command today are forced to review and analyze massive amounts of data in preparing assessments and planning operations. That data is scattered in numerous places - from hard copy files to databases - making its timely incorporation into military planning difficult. SOCOM is now moving toward a solution, however. According to James Smith, SOCOM's Acquisition Executive, the Pentagon is investing in "Mission Command," an emulation software which will display multiple data streams onto one pane of glass, thereby harmonizing maps, overlays and other data critical for informed mission planning. The plan is for Mission Command to roll out in fiscal year 2022. (C4ISRnet, May 31, 2020)

...AS THE AIR FORCE WEAPONIZES CARGO PLANES

The U.S. Air Force predicts that potential future conflicts with major military powers like China and Russia will necessitate significant aerial firepower. In several years' time, the USAF may be able to rely on the new B-21 *Raider* to clandestinely launch batteries of cruise missiles during a conflict - but that capability isn't mature yet. However, there is an inexpensive option that can be utilized immediately, and without purchasing a single new plane.

Specifically, the C-130J *Super Hercules* and C-17 *Globemaster III* transport planes are now under consideration for use as mobile missile carriers capable of significantly amplifying firepower in combat. Under the plan, a pallet of long-range cruise missiles would be loaded into the makeshift bomber and released from the back of the aircraft several hundred miles from the conflict zone, allowing the planes to remain out of missile and interceptor range. Once the pallet is released, the cruise missiles deploy and fly downrange to destroy their targets. The practice is not entirely new; the Air Force has been weaponizing cargo planes since the Vietnam War, with conversion kits affixing guns to the planes and outfitting some with missiles. However, in this instance, no permanent structured conversion is necessary, so after their initial combat mission the cargo planes could immediately return to their conventional transport roles. (*Popular Mechanics*, June 1, 2020)

ANOTHER LASER PROGRAM TO TAKE FLIGHT

The Pentagon has flirted with the idea of airborne lasers for decades, recently basing a fiber laser on a fighter jet (See *Defense Technology Monitor* no. 25). Now, the DoD is developing laser technology for a larger craft. The Air Force Special Operations Command expects a laser weapon demonstration on the AC-130J *Ghostrider* to take place in 2022. The U.S. Air Force's prized gunship will be modified to add a 60-kilowatt high energy laser, which will be used to clandestinely disarm and disable adversary weapon and sensor systems. (C4ISRnet, June 9, 2020)

A SOLUTION TO "SPACE JUNK"

Space appears to be a great unbounded expanse, but the area transited by Earth's satellites is actually fairly limited, and becoming increasingly cluttered. The space debris orbiting Earth is potentially lethal to satellites and other valuable systems, and - if left unaddressed - may eventually preclude future launches. Russian engineers, however, are working on a solution. Russian space startup Start Rocket is using crowdsourced funding to develop a "foam debris catcher" satellite that is designed to remove some of the "space junk." The plan is to deploy several units that spray and saturate old defunct satellites with a polymeric foam which would then harden and change the aerodynamic profile of the satellite. According to John L. Crassidis of the State University of New York, the foam "works on the well-known process of increasing a debris surface area in order to increase its drag, and thus make it re-enter the Earth's atmosphere and burn up faster." The company is now gearing up for a multiphase test of the foam spraying satellites in order to determine the foam's effectiveness. The first such trial is scheduled to take place in 2021. (*Forbes*, June 16, 2020)