

## **AIR FORCE RADAR PLAN IMPERILS TROOPS**

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*What's wrong with this picture?* The Air Force plans to spend over a hundred billion dollars to buy 2,000 new fighters, but it can't find the money to upgrade a handful of radar planes with better technology for tracking insurgents. Even though it has already spent a billion dollars to develop the new technology it now says it can't afford to install. And even though warfighters in Iraq have identified an urgent operational need for the new capability.

What's wrong with the picture is that the Air Force is in such a budgetary bind over replacement of its decrepit cold war aircraft fleet that it is being forced to make bad choices -- choices that put the lives of soldiers at risk to save modest amounts of money. The program in question is the Joint Surveillance and Target Attack Radar System, or JSTARS. It consists of 17 old Boeing 707 airframes equipped with radars that can track moving ground targets and snap pictures even through clouds.

The planes need new engines, but their airframes -- the fuselage, wings and so on -- are basically sound. They can fly for another 40 years if maintained correctly. In fact, their mission-capable rate is high compared with other types of military aircraft. But the surveillance system carried on the planes was conceived in the 1980s, and although it has revolutionized warfighting it is so dated that suppliers of key parts are beginning to disappear.

Air Force planners saw this problem coming a long time ago. In December 2000 a plan was funded to adapt the radar technology being developed for future fighters so it could provide a replacement for the JSTARS radar. Not just a new radar, but one with much greater capability -- pictures with ten times better resolution, ground tracking capabilities for a more diverse collection of targets, and a capacity to do both missions simultaneously. It could also track stealthy cruise missiles.

About \$1.3 billion has been spent on versions of the new radar to be carried on both manned aircraft and the Global Hawk unmanned aircraft. It is called the Multi-Platform Radar Technology Insertion Program, or MP-RTIP. The technology works, and it could greatly improve the ability of U.S. forces to track ground vehicles, whether they are fast-moving tanks or aged Toyotas getting into position for a suicide attack.

Both the target tracks and the pictures of a vehicle can be transmitted instantaneously to forces on the ground. But the Air Force says it only has money to install the new technology on unmanned aircraft, not on the bigger JSTARS. Unfortunately, the quality of target tracks and pictures is proportional to the size of the radar's antenna, so there are many objects that can't be seen by the small antenna on the unmanned aircraft that could be seen by the much bigger antenna on a JSTARS plane.

The Air Force has nebulous plans for someday installing MP-RTIP or a similar radar on a manned aircraft. But that won't happen for a long time, and meanwhile the supplier base for the existing JSTARS radar is beginning to atrophy. The bigger, more capable version of MP-RTIP will disappear this summer unless money is included in the 2008 supplemental appropriation for the Iraq war. Which means a lot of soldiers whose lives are going to be on the line in this or a future war could be deprived of life-saving reconnaissance about the threats they face from an increasingly elusive adversary.