



441 G St. N.W.
Washington, DC 20548

January 13, 2014

Congressional Committees

Space Acquisitions: Assessment of Overhead Persistent Infrared Technology Report

The Overhead Persistent Infrared (OPIR) mission area is supported by organizations within the Department of Defense (DOD) and intelligence community (IC) to ensure that missile threats are detected and reported to decision makers. The current Space Based Infrared System (SBIRS) and legacy Defense Support Program (DSP) satellites support the OPIR mission in four areas: missile warning, missile defense, technical intelligence, and battlespace awareness. Over the past several years, DOD, through the Air Force's Space and Missile Systems Center (SMC), has conducted research and development efforts to improve technologies to better address the OPIR mission area. Until recently, for example, the Air Force's Commercially Hosted Infrared Payload (CHIRP) demonstration sensor, employing wide field-of-view staring technology, collected OPIR data and provided insight into the applicability of this technology for the OPIR mission area.¹

The National Defense Authorization Act for Fiscal Year 2013 (NDAA), signed into law on January 2, 2013, required, among other things, that the Secretary of Defense, in consultation with the Director of National Intelligence, submit a report on OPIR technology to the congressional defense committees no later than 180 days after the enactment of the act.² The report was to identify DOD and IC's OPIR technology requirements; describe the strategy, plan and budget for current and next generation OPIR systems; and identify opportunities for further cooperation between the DOD and IC communities. DOD provided this report to the congressional defense committees on October 11, 2013.

Additionally, the act mandated that GAO assess the comprehensiveness of the DOD OPIR technology report not later than 90 days after the date on which the Secretary of Defense submits DOD's report. To meet the requirements of the mandate, we assessed the extent to which the report (1) was comprehensive, fully supported, and sufficiently detailed; and (2) contained limitations that may have affected the quality of the report. Due to the classification level of the DOD OPIR report, we are issuing this unclassified report to formally meet the mandated reporting requirement; we have offered to brief the defense committees on the classified details of our findings.

To assess the comprehensiveness of the information contained in the DOD OPIR report, we reviewed the information contained in the report, we interviewed people who had direct involvement in the report, and discussed the report's findings and methodology with them. We also reviewed and compared the 1996 SBIRS Operational Requirements Document, the 2002 SBIRS Operational Requirements Document, and 2010 Initial Capabilities Document for OPIR Enterprise to the requirements outlined in the OPIR report for completeness. We reviewed related and supporting studies, such as the 2012 Joint OPIR Integrated Space Trade (JOIST)

¹ Launched on September 21, 2011, the Commercially Hosted Payload was decommissioned on December 6, 2013, after about 27 months of operations.

² Pub. L. No. 112-239, § 915.

study which was co-led by the Executive Agent for Space and the National Geospatial-Intelligence Agency (NGA), the 2010 OPIR Architecture Study – Phase I, and the 2010 Joint OPIR Ground (JOG) study. In addition, for the JOIST and JOG study, on which a fair amount of the OPIR report is based, we discussed the report's methodology, findings, and data sources with the report's project leader and several study participants.

To identify other important issues with potential bearing on current and future OPIR acquisitions, we interviewed DOD, IC, and National Geospatial-Intelligence Agency officials involved in OPIR matters. We reviewed other relevant government and industry reports to assess the extent to which DOD's report contained limitations that affected the quality of the report. In addition, we obtained and examined information related to SBIRS Operational Requirements Document updates, OPIR resiliency capabilities, and the latest functional availability report on DSP and SBIRS constellations availability to support strategic and theater missile warning. We reviewed the 2011 OPIR Space and System Concept Characterization Technical Description which describes the trades performed and potential OPIR space architecture concepts for the 2017 to 2030 time frame, in addition to the 2011 fifteen-year defense space systems investment strategy; analyzed historical requirements documents; and interviewed DOD and intelligence community officials. In the course of this work, we interviewed DOD officials from the Office of the Under Secretary of Defense for Acquisition, Technology and Logistics; Joint Staff; Cost Assessment and Program Evaluation office; Air Force Space Command; Air Force Space and Missile Systems Center; Air Force Research Laboratory; Sandia National Laboratories; as well as, the Office of the Director of National Intelligence and National Geospatial-Intelligence Agency.

We conducted this performance audit from March 2013 through January 2014 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our objectives.

Results

On October 11, 2013, DOD submitted to the congressional defense committees the OPIR Technology report. Upon reviewing the report, we determined that the OPIR report was comprehensive and appropriately identified its limitations. In particular, DOD, in consultation with the IC, provided a description of (1) the plan and budget for current and next generation OPIR systems and (2) OPIR technology requirements. The report elaborated on current cooperative efforts between the DOD and IC communities and identified potential future opportunities for further cooperation. Further details remain classified.

Agency Comments

We obtained oral comments from DOD on the contents of our classified briefing and on the contents of this report to congressional committees.

We are sending copies of this report to the appropriate congressional committees, the Secretary of Defense, and the Under Secretary of Defense for Acquisition, Technology, and Logistics. This report will also be available at no charge on our website at <http://www.gao.gov>. Should you or your staff have questions concerning this report, please contact me at (202) 512-4841 or at chaplains@gao.gov.

Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. Key contributors to this report were Art Gallegos, Assistant Director; Maricela Cherveney; Brenna Guarneros; Kenneth Patton; and, Jay Tallon.

A handwritten signature in black ink, consisting of several overlapping loops and a long horizontal stroke at the end.

Cristina Chaplain, Director
Acquisition and Sourcing Management

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