



**Can the Next Generation Overhead Persistent
Infrared (Next Gen OPIR) Program
Overcome an Aggressive Schedule Using
the Middle Tier of Acquisition?**

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Acquisition Research Symposium
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Today's Presentation

- Objectives and Methodology
- Background on OPIR Systems
- Next Gen OPIR Block 0 Acquisition Strategy
- Our Assessment
- Remaining Challenges
- Our Recommendations

Objectives and Methodology

The report on which this presentation is based (GAO-21-105249)

- 1) identifies the challenges Next Gen OPIR acquisition efforts face and the extent to which the Space Force is addressing them
- 2) assesses the extent to which Next Gen OPIR capabilities will address missions supported by the current system

We reviewed program documentation, acquisition strategies, Air Force and DOD acquisition guidance, and interviewed DOD officials. We assessed this information against acquisition and collaboration best practices.

Background: Legacy OPIR Systems

Since the 1970s, OPIR satellites have provided initial warning of ballistic missiles from the geosynchronous earth orbit (GEO).

Defense Support Program (first launch 1971)

- 20+ GEO satellites, some still operating today

Space Based Infrared System (first launch 2011)

- 6 GEO satellites + sensors in highly elliptical orbit
- Development challenges
- First launch delayed 9 years (from 2002 to 2011)
- Total program costs grew from \$5.6 billion to \$20.3 billion
- Underestimated ground system complexity

Background: Next Gen OPIR Block 0

Next Gen OPIR Block 0 (first launch *required* 2025)

- Intended to replace SBIRS
- Requirements validated by Joint Requirements Oversight Council
- Block 0 space segment will be 3 GEO satellites + 2 Polar satellites
- Plan to launch all 5 satellites by 2030
- Ground system will consist of mission data processing, command and control and relay ground stations
- Block 1 planning is still in development

Next Gen OPIR Block 0 Acquisition Strategy

Middle Tier of Acquisition program, rapid prototyping pathway allowed the program to

- Expedite program start
- Accelerate contract award
- Plan prototype delivery within 5 years

Sole source prime contractor selection for both GEO and Polar satellites saved time at the start of the program

Next Gen OPIR Block 0 Acquisition Strategy, cont.

Space Force intended to minimize schedule risks by

- Competing payload development
- Leveraging GEO payload for Polar mission
- Using proven spacecraft for both GEO and Polar missions
- Offering interim ground solution

Our Assessment

- Early steps provided some schedule relief
- Minimizing new development was a good strategy
- Competition between payload developers likely yielded results
- Developing new technologies is hard and takes time
- Significant technical and managerial challenges remain

Remaining Challenges

- Novel payload development
- Modified space vehicle
- Payload + vehicle integration
- Ground system development (interim ground solution)
- Space Force as lead integrator
- Ongoing Space Force stand up and other organizational realignments and reorganizations

Our Recommendations

- Recommendation #1: Space Force should provide more transparent cost and schedule risk information to congressional committees
- Recommendation #2: DOD should formalize coordination across agencies



Questions?

For additional details, please refer to GAO-21-105249
or contact Claire Buck: buckc@gao.gov, 303-572-7317



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