

New Tools Can Make Intelligence Collection More Responsive to Time-Sensitive Targets

In recent conflicts, the U.S. Air Force has faced challenges dealing with fleeting targets such as individual terrorists that expose themselves to detection and attack for short periods of time—as brief as a few minutes. Rapid response to these targets requires an intelligence, surveillance, and reconnaissance (ISR) system that has the right sensors at the right locations to detect and track such targets or that can quickly redirect sensors from their original collection assignments when important new targets appear. The challenge is further complicated by the limited number of ISR assets (including aircraft and satellites) that may be available and the high demand for information needed to support combat operations and strategic objectives. A key portion of this rapid response is a tool to enable quick, informed decisions about retasking.

Under the current ISR planning and execution process, the Joint Task Force collection manager creates a prioritized list of collection tasks that integrates intelligence needs from various commanders; the air, land, and maritime components; and other users. However, there is no structured framework for quantifying and communicating how a given task satisfies the requests or how important it is compared with other tasks. The lack of a transparent, systematic framework makes ad hoc changes more difficult because intelligence officers may not know the relative importance of the tasks that are being traded off when new, time-sensitive targets emerge.

RAND Project AIR FORCE (PAF) proposes three related frameworks that can help make the ISR planning and execution process better able to handle time-sensitive targets:

- A **“strategies-to-tasks” framework** provides a written linkage between strategic objectives (e.g., “protect U.S. forces”), operational objectives (e.g., “monitor WMD [weapons of mass destruction] activities”), and operational tasks (e.g., “observe suspected storage sites”). Operational tasks are associated with the use of specific sensors (e.g., ground moving target indicator to monitor traffic around a site or electro-optical and infrared sensors to identify movement of chemical weapons). This hierarchical framework makes it possible to trace specific collection tasks back to the commander’s intent for better decisionmaking and more efficient use of ISR assets.
- A **utility framework** quantifies the relative importance of each operational objective and task within the strategies-to-tasks framework. This approach provides more insight than a simple prioritized list of tasks and allows intelligence officers to make better decisions when time-sensitive targets emerge.
- A **probability framework** accounts for such factors as weather and enemy concealment, which can affect the chances of making a successful collection. This framework allows planners and operators to assign and reassign ISR assets based on their *expected* utility, rather than simply the importance of the collection.

These new, more-capable frameworks will allow ISR planners and operators to make better use of limited intelligence capabilities on rapidly changing battlefields in the future. ■

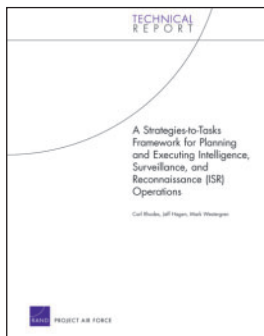
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