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**NON-INTERFERENCE-BASED TASKING AS A MODEL FOR TACTICAL ISR INTEGRATION WITH STRATEGIC  
COLLECTION PRIORITIES**

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Submitted in fulfillment of the requirements for

**AIR UNIVERSITY ADVANCED RESEARCH PROGRAM**

**NEXT GENERATION INTELLIGENCE, SURVEILLANCE, AND RECONNAISSANCE**

In part of

**SQUADRON OFFICER SCHOOL**

**IN RESIDENCE**

**CLASS 21F**

**AIR UNIVERSITY**

**MAXWELL AIR FORCE BASE**

**September 2021**

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## **Abstract**

The Global War on Terror (GWOT) has been waged with the help of the most robust and technologically advanced Intelligence, Surveillance, and Reconnaissance (ISR) force the United States has ever assembled. These tactical assets are typically employed through a tactical lens, with little connectivity to strategic collection priorities. The little direct connection to strategic collection priorities that does exist – “non-interference-based taskings”, or NIB’s - is not robust enough to efficiently conduct ISR in a Great Power Competition (GPC) fight. The current NIB method is a case study in ingenuity and maximization of limited resources, but there are weaknesses and blind spots preventing said method from meeting the needs of ISR operators and stakeholders: namely, the lack of a front-end interface, the lack of filtration and customization, and the absence of meaningful feedback. The addition of a basic graphic user interface and customizable routing and sensor filtration options, coupled with a focus on feedback and follow-up, are solutions to these three respective weaknesses. These improvements, if implemented, could dramatically improve the efficiency and effectiveness of American ISR in a GPC fight, for both the operator and the stakeholder. In time, a bolstered NIB tasking method can serve as a model for better integration between tactical airborne ISR and the strategic collection plan. Ultimately, it is the author’s position that American ISR needs an efficient information-sharing system fed by aggregated target databases from any allied stakeholder, in a movement toward unit-agnostic, problem-centric collection.

## **Introduction**

The American ISR (Intelligence, Surveillance, and Reconnaissance) force is well practiced in COIN (counterinsurgency) operations. OPCON (operational control) of each tactical airborne ISR asset is delegated through the GFMAP (Global Force Management Allocation Plan) and DEPOD (deployment order) process, usually to a targeting-oriented task force of one kind or another, and each asset is owned and tasked by that unit for the duration of the delegated sortie<sup>1</sup>. This machinery is self-contained and perfected for counter-VEO (violent extremist organization) targeting with a mind toward kinetic finishes, but it presents an issue of scope. Each of the units perform a planning and targeting cycle hyper-focused on their own target decks, which enables a war filled with stovepipes to occur entirely below the strategic level of American warfare policy. These stovepipes are only escaped momentarily by so-called “non-interference-based” tasks, or NIB’s; an almost reluctant agreement by the delegated unit to allow their tasked asset to surveil a strategic collection priority in passing during transit to and from their intended target. A NIB may be performed as a favor to other task forces in some cases, or by an aircrew’s own volition in other cases. An enhanced NIB process can better integrate America’s tactical ISR assets with synergized strategic effects, instead of just tactical kills.

### **Non-interference-based Targeting in the COIN Fight**

An innovative but under-developed system exists to connect the airborne ISR operator with strategic-level national collection priorities. Developed through a collaboration between the NGA (National Geospatial Intelligence Agency) and the Air Force’s DCGS (Distributed Common Ground System) weapon system, the premise is quite simple.

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<sup>1</sup> Nobriga 2017

To begin using the current system, an airborne ISR operator determines a ten-digit MGRS (Military Grid Reference System) coordinate from which to begin a transit route, and a ten-digit MGRS coordinate at which the transit will terminate. Using specific formatting and syntax, these coordinates are passed through an instant messaging client at appropriate classification. A scripted algorithm then draws a straight line between the two points, projects a several-mile buffer around the resulting vector, and most importantly, cross-references the buffered area with a list of strategic collection priorities. After several minutes, the algorithm returns a list of ten-digit MGRS coordinates which correspond to strategic collection priorities falling within the planned transit route. Upon successful completion of the tasking, the NIB algorithm timestamps the ISR feed when the field of view contains the NIB targets in question and forwards the relevant footage to an intelligence analyst for PED (processing, exploitation, and dissemination).

Once the PED process has taken place, decision makers can access and manipulate the resulting intelligence to inform strategy and policy. These analysts, military leaders who consume the intelligence, and policy makers who determine intelligence priorities are all participants in the process. In Intelligence Community Directive Number 204 in 2007, The DNI (Director of National Intelligence) identified the NIPF (National Intelligence Priorities Framework) as the DNI's "sole mechanism for establishing national intelligence priorities<sup>2</sup>" Thus, it is these priorities that drive strategic-level targets of interest for the DoD and IC (Intelligence Community). While each joint task force and sub-task force may employ their own divergent targeting scheme, it is the targets nominated by the IC that populate the NIPF. Such targets can be distributed to ISR operators as NIB taskings.

### **Shortcomings of the Current Non-interference-based Targeting Methodology**

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<sup>2</sup> McConnell 2007

The current methodology for distributing NIB taskings and, by extension, satisfying National Defense Strategy collection objectives, is not robust enough to support intelligence collections in a GPC war. Still in its infancy, this methodology does not adequately meet the needs of the operator, analyst, or customer, limiting utilization of NIB taskings as a force multiplier. There are at least three shortfalls limiting the current methodology's effectiveness.

First, because there is no actual interface – only a chat client – there is no mechanism to plan for a transit route that is anything other than a straight line from Point A to Point B (almost never the case). The second order effect of this is a more labor-intensive task for the aircrew, as they must break their planned transit into multiple legs for multiple NIB submissions.

Another shortfall is the lack of interaction with the NIB algorithm necessary to further filter Essential Elements of Information (EEI's) based on type of sensor required to satisfy a given NIB request. Currently ISR operators do not have access to sensor requirements, leaving them to guess whether the custodian of the task desires Day TV (DTV), Infrared (IR), or another type of sensor entirely. While the algorithm filters available NIB taskings for each request based on the requestor's specific standard sensor loadout, these are subject to change. The lack of specificity and refinement capability also means that analysts will inevitably receive considerable footage for review that is focused on the wrong aspects of a target, and/or using unhelpful sensors.

Third, the current NIB methodology provides little to no feedback to the operator regarding success or failure of collection efforts. Less feedback translates to less buy-in from the operators, making it hard to incentivize non-required targets. Stakeholders face a similar challenge; once the collection has been processed, exploited, and disseminated, it may disappear into the black hole of IC data ingestion. In fact, Lt Col Derek Rachel noted in his 2020 Air War College Paper that "Often, data exists that can solve a CCDR's requirements but is not distributed to warfighters in a methodical, timely

manner or in a useable format for the end user<sup>3</sup>.” Satisfied EEI’s are not tracked in a meaningful, reportable way, let alone follow-on actions enabled by the collection (strikes, raids, etc). Recent interviews with Air Force intelligence analysts suggest that two of their biggest challenges are lack of clear connection between their work and the larger problem set, and frequent performance of work they later learned was “unintentionally duplicative”<sup>4</sup>.

This imperfect system can be improved by addressing the above issues, and it will advance American ISR overall. However, these improvements only apply to NIB taskings – currently one of precious few threads directly connecting America’s tactical ISR assets to its strategic collection priorities. In the GPC fight of the future, this may not be enough. A conflict with a near peer will require unprecedented efficiency of collection; an efficiency not easily attainable through the current RSTA (Reconnaissance, Surveillance, and Target Acquisition) Annex cycle of dividing assets among task forces for the duration of a sortie<sup>5</sup>. Such a fight will likely require more conventional warfare than COIN has in the past twenty years, and strategic-level targets (centers of industry, air surveillance radars, etc.) will once again enter the lexicon of the tactical ISR practitioner. Targets reaching this level of strategic importance to the nation are traditionally surveilled by National Technical Means, overhead satellites, and high altitude strategic ISR aircraft. A 2016 RAND study noted that “the pace of future conflicts could stress needs for foundational intelligence and challenge readiness to conduct analysis<sup>6</sup>.” A strategic-target-rich environment in a GPC fight will overwhelm these traditional channels, and near-constant supplemental support from tactical ISR assets will be required, likely as soon as a permissive environment is achieved. When this occurs, close integration of tactical assets with strategic collection priorities will be paramount, and NIB taskings should only be the beginning of the conversation.

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<sup>3</sup> Rachel 2020

<sup>4</sup> Alkire, et al. 2016

<sup>5</sup> Curtis E. LeMay Center for Doctrine Development and Education 2019

<sup>6</sup> Alkire, et al. 2016

## Non-interference-based Targeting in a GPC Fight

Improving the NIB tasking experience can serve as a model for a revolution in how American military leaders think about and frame employment of tactical ISR assets. The payoff, manifested as an increased quantity of strategic targets surveilled and analyzed in a shorter amount of time (and with fewer resources expended), will demonstrate the efficacy of integrating tactical ISR assets with strategic collection plans. There are three improvements that can effectively address the current NIB method's limitations.

The first improvement recommended is the development of a web-based interface; a front-end space for interaction with the operator and stakeholder both. Instead of the current chat-based algorithm drawing a straight line between two points to model a planned transit, the new graphic user interface should allow the operator to map their *actual* intended route of travel. Additionally, the size of the buffer within which targets are selected should be adjustable. This will reduce workload on the operator and generate a higher rate of EEI's satisfied due to a more accurate representation of the route of flight.

Second, filtering of targets should be available based on the type of sensor best suited for the specific EEI's. Access to well-defined EEI's will allow the operator freedom as the subject matter expert to select the optimal sensor pairing. Consider, for example, that the IC seeks to learn the color of a vehicle located at a compound, but a sortie is being flown at night. In this case, allowing tasks which are suited for DTV to be filtered out from results will minimize resources wasted. In the same vein, allowing operators access to the actual EEI's instead of just coordinates will further bolster efficiency.

Finally, feedback needs to be implemented in a meaningful way, for both the operator and the stakeholder. Was the desired information obtained? Is follow-up required? Were more questions generated by the intelligence gathered? Did the intelligence gathered enable a strike or raid? This type

of feedback has never been necessary for ISR to perform collection, but within the purely voluntary structure of NIB collection, evidence of success and payoff provide incentive for operators and their units. Feedback will also increase job satisfaction and provide opportunities for process improvements.

Executing these changes will create a NIB tasking instrument that stands up better to the demands of a GPC fight. No longer will America be able to afford the inefficiencies incurred by direct overflight of targets by tactical ISR operators with no knowledge of the target's existence. Better integration of tactical airborne ISR assets with strategic collection priorities can build this core competency.

In due course, the lessons learned from this improved NIB format should cause DoD and IC leaders to consider a format overhaul of wartime ISR. A needs-based approach to ISR is not new; in fact, as early as 2017, Nicholas Nobriga argued that American ISR could benefit from either a "Chairman's Controlled Activity" or a "functionally aligned command" with inherent authority to coordinate with geographic commands<sup>7</sup>. A move such as Nobriga suggests would surely enable tactical ISR employment more in step with a strategic collection plan. The finer details of any such major muscle movement are outside the scope of this paper, but a revitalized NIB process will give the ISR enterprise a taste of how it could look. As America was reminded during the 2011 response to Libya's civil war, modern conventional warfare requires certain skills that "might have atrophied over the course of the past intense focus on [irregular warfare]<sup>8</sup>." The COIN fight's model of task force centric ISR and the resulting independent kinetic fires do not add up to strategic success on their own. The force multiplier is a unified purpose and plan designed for complementary effects, and that will be doubly true in a conflict with a peer whose capabilities match our own.

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<sup>7</sup> Nobriga 2017

<sup>8</sup> Alkire, et al. 2016



## Conclusion

NIB tasking is an important evolution of American ISR because it recognizes the main hurdle to effective collection: stove piping inadvertently induced by prioritization and distribution of targets to units and assets with a tactical focus. The current NIB tasking method acknowledges the problem and offers an imperfect fix. By making improvements to the processes connecting the ISR operator with the stakeholder and in turn with strategic collection priorities, NIB taskings can bypass these stovepipes, more effectively preparing the battlefield in a GPC conflict. Though more robust feedback channels, incentive will be generated, lessons will be learned, and process improvements can be implemented. Eventually, the NIB tasking model can help the IC and DoD better understand how to approach collection hurdles through the lens of unit-agnostic, problem-centric solutions.

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