

ISR Support to Small Footprint CT Operations – Somalia / Yemen

Executive Summary



ISR Task Force Requirements and Analysis Division

May 2013

Overall classification of this document is
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Study Overview

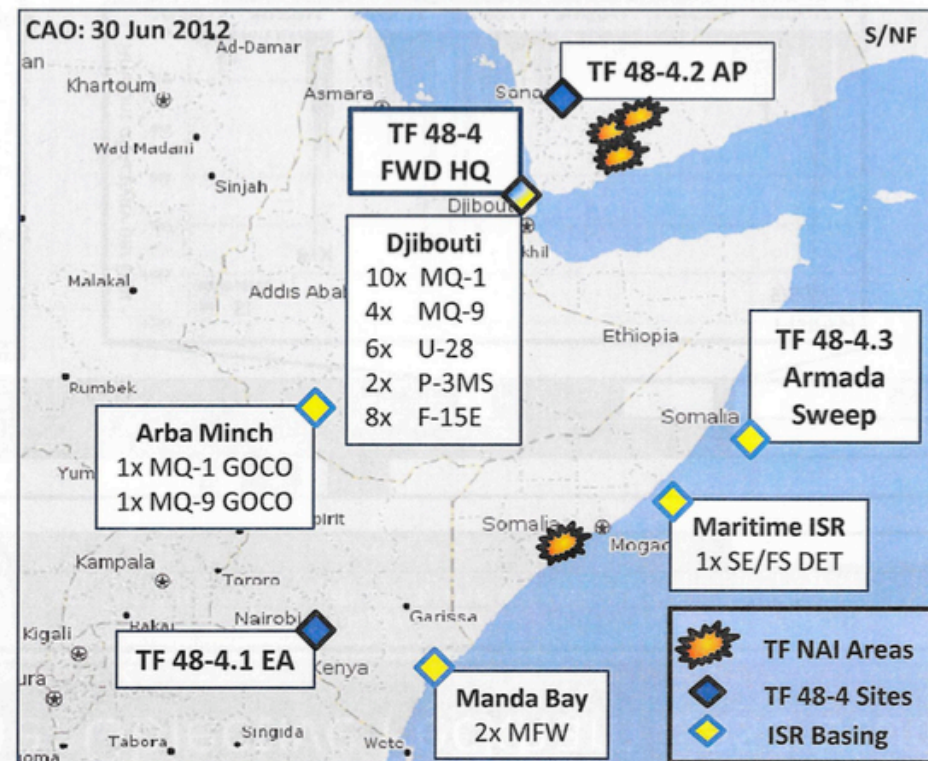
- ▶ (U) Previous studies* of Counterterrorism (CT) Kill / Capture operations in Iraq and Afghanistan have detailed the role and impact of Intelligence, Surveillance, and Reconnaissance (ISR) for those missions
 - ▶ (U) This study extends that previous analysis and reports on ISR performance and requirements for CT operations in Somalia and Yemen and should inform ISR planning and investments for potential small footprint operations elsewhere
 - ▶ (S/NF) From Jul – Oct 2012, the study team interviewed Task Force (TF) 48-4 personnel and collected extensive data on CT operations conducted from Jan 2011 – Jun 2012
 - ▶ (U) Analytic results satisfy three linked objectives:
 - Highlight key factors in smaller-footprint operating environments that have the most significant impact on ISR employment / needs
 - Identify capabilities that are most effective / critical when operating in these environments
 - Describe issues and make recommendations for resourcing and longer term investment
- ▶ **Purpose:** *Study ISR contributions to CT operations in the Horn of Africa (HOA) – East Africa and Arabian Peninsula – to inform ISR planning and investments for potential future small footprint operations*



TF 48-4 Focus and Organization

- ▶ (S/NF) TF 48-4 is organized into two main branches: East Africa (EA) in Nairobi, Kenya and Arabian Peninsula (AP) in Sana'a, Yemen
 - TF 48-4 EA and AP are further subdivided geographically into teams
 - TF 48-4 forward support element is at Camp Lemonnier, Djibouti
- ▶ (S/NF) ISR is based at three regional airfields, supplemented with sea-based Scan Eagles or MQ-8 Fire Scouts
 - Djibouti (Camp Lemonnier)*
 - Arba Minch
 - Manda Bay
- ▶ (S/NF) TF 48-4 counterterrorism operations are focused on violent extremist organizations (VEOs)
 - Al Qaida in the Arabian Peninsula
 - Al Qaida in East Africa/Al Shaabab
- ▶ (S/NF) TF 48-4 CT operations are only part of a broader whole-of-government approach to regional security / stability

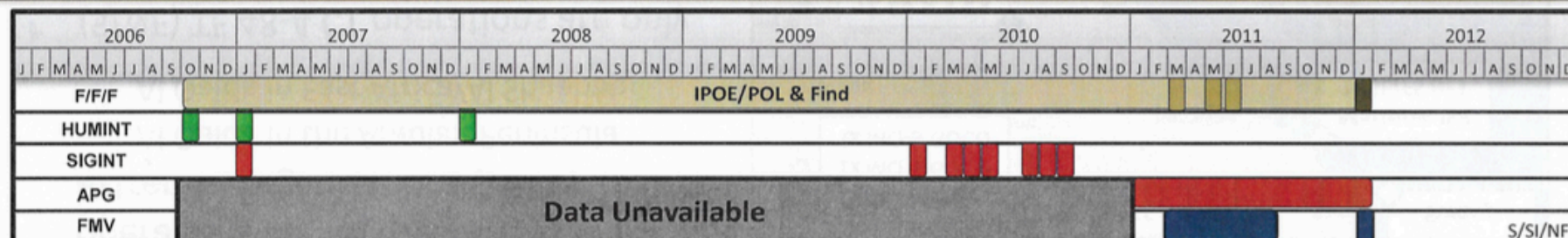
TF 48-4 Theater Footprint



* Subsequent to data collection and interviews for this study, flight operations are being shifted from Camp Lemonnier

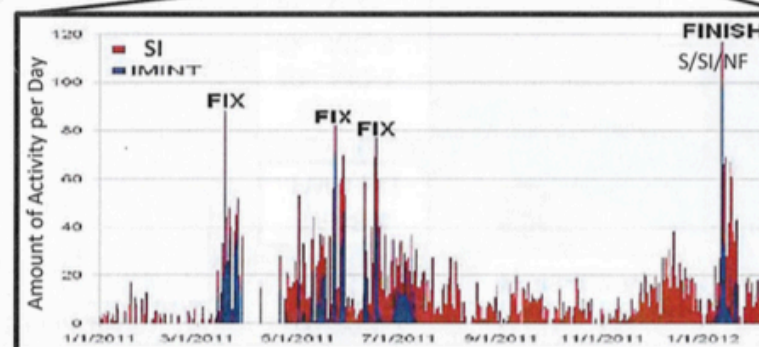


FFF Timeline: Objective Peckham Case Study



Activity	Description Summary
FIND	Intelligence collection on target to establish pattern of life
• (S/NF) 2006: OBJ Peckham attended "Bayt Al-Jinn", a specialized training program – including explosives training	
• (S/NF) 2006 - 2009: OBJ Peckham returned to the UK and provided financial support to AQ allied elements in East Africa	
• (S/NF) Oct 2009: OBJ Peckham returned to Somalia after his second attempt; Travel was coordinated by OBJ LOCKHART	
• (S/NF) Dec 2009: OBJ Peckham coordinated with Kenyan based facilitator to facilitate money, equipment, and fighters through the UK to SOM	
FIX	Target has been located for kinetic/non-kinetic engagement
• (S/NF) 23 June 2011: Strike failed	— Problems with Approval Authorities, NAVAf C2, and AC malfunction
• (S/NF) 12 January 2012: Fix during a vehicle follow – No Strike	
FINISH	Kill/Capture or neutralization of an enemy Target
• (S/NF) 21 Jan 2012: OBJ PECKHAM was eliminated via kinetic strike	
— 0359: White SUV enters CEL-012 (OBJ PECKHAM NAI)	
— 0502: Adult with heavy strides and slight limp (OBJ PECKHAM)	
— 0811: Vehicle follow begins	
— 1039: Full Register/Match (SI)	
— 1103: Strike	
— 1131: Full Reg (SI)	
— 1254: Continue to monitor the scene	

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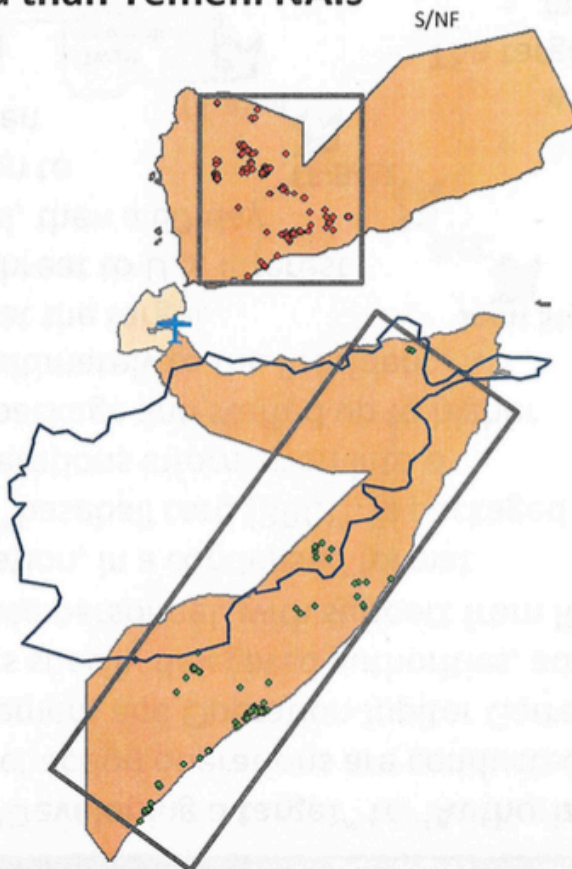
OBJ PECKHAM MOVEMENT



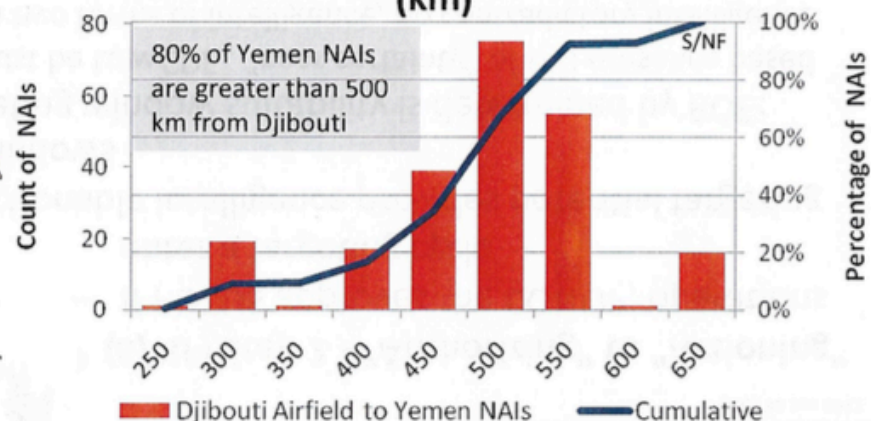
CLDJ Distances to HOA NAIs

► (S/NF) Somali NAIs are more distant and more dispersed than Yemeni NAIs

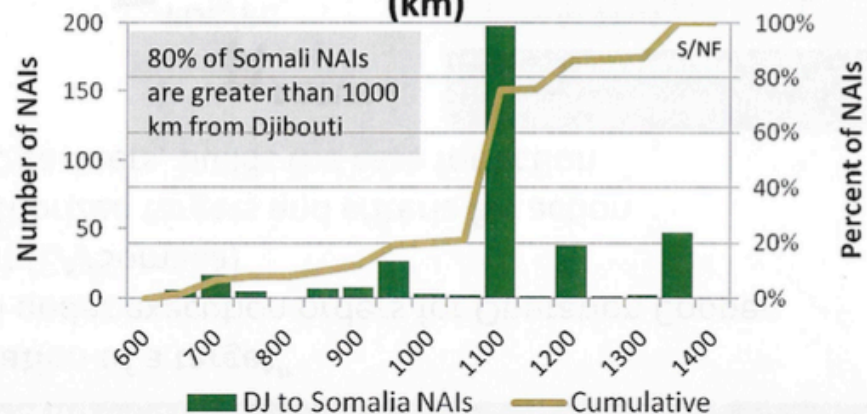
- In Yemen there are 225 NAIs with an average distance of 471 km from CLDJ
- In Somalia there are 362 NAIs with an average distance of 1065 km



Djibouti airfield to Yemen NAIs (km)



Djibouti Airfield to Somalia NAI distances (km)



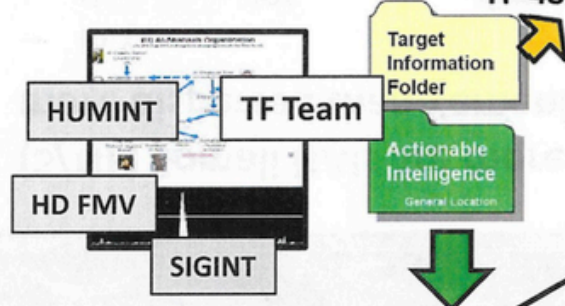
For Iraq - 80% of OBJs are within 150 km (~2 hr round-trip transit for MQ-1)
 For Afghanistan - 80% of OBJs are within 400 km (~5-6 hr round-trip transit for MQ-1)



Authorization to Use Military Force (AUMF) Operations

► (S/NF) Step 1 - "Developing a target" to "Authorization of a target"

- TF 48-4 direct action operations are conducted under execution orders for Operation Copper Dune (AP/Yemen) and Operation Jupiter Garret (EA/Somalia)
- These orders specify delegated authorities, authorized targets and criteria for action
- TF intelligence personnel, with support from IC partners, builds the case for action
- This information, in a condensed format known as a "baseball card (BBC)", is packaged with the operations information into a "CONOPS" package and staffed up to higher echelons—ultimately to the President
- If proven that the target presents a threat to U.S. interest or personnel, then a 60-day authorization to action is given

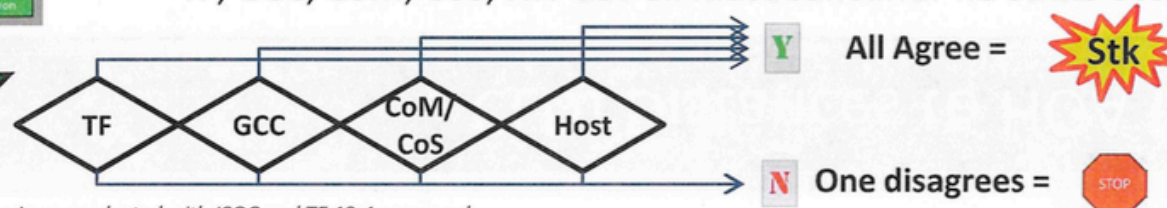


► (S/NF) Step 2 - "Authorizing" to "Actioning"

- If POTUS approves the CONOP, operations enter a targeting cycle
- Actionable intelligence provides potential targeting windows
- The targeting window suitability is determined by ROE:
 - must be Low CDE, "near certainty" of HVI presence based on two forms of intelligence, no contradictory intelligence
- TF, GCC, CoM, CoS, HN Gov all must concur or no strike occurs

Current Authorization to Action List	
Jupiter Garret (Somalia)	4
Copper Dune (Yemen)	16

CAO: 30 Jun 2012





Summary of Factors Impacting ISR Support to Ops

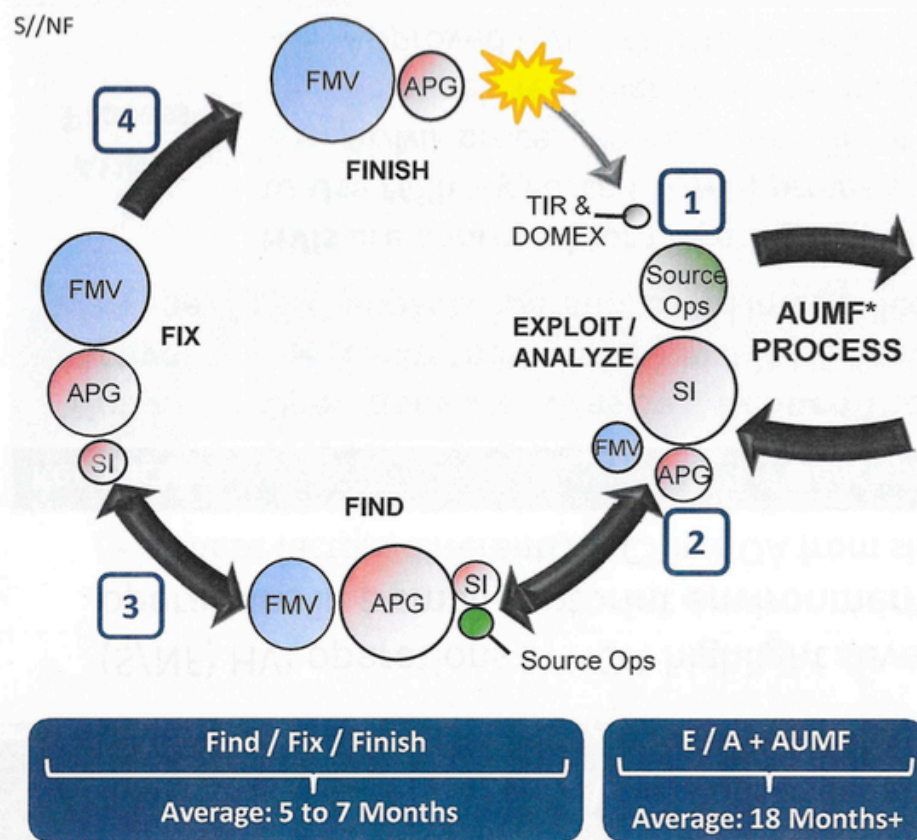
- ▶ (S/NF) HVI operations in HOA highlight several key factors impacting ISR support to CT operations in a small-footprint environment
 - These factors differentiate CT in HOA from similar operations in Afghanistan or Iraq

Key Factors	Description / Implications	S/NF
Not an Active Warzone	Operations are “Outside a Defined Theater of Active Armed Conflict” (ODTAAC) <ul style="list-style-type: none"> – Limits footprint, allowable US activities, penetration of comms networks – Impacts operations and intel collection and exploitation activities 	
AUMF Process	HVIs are approved for targeting by President of the United States under Authorization to Use Military Force (AUMF) provisions <ul style="list-style-type: none"> – AUMF process requires significant intel / ISR to justify (and maintain) approvals – Relatively few, high-level terrorists meet criteria for targeting under the provisions – Approved HVIs are usually OPSEC and RoE savvy; limits intel and finishing chances 	
Strict Pre-strike Assurances	A high level of assurance is required before a strike is approved <ul style="list-style-type: none"> – Must establish Positive Identification (PID) of HVI with “near certainty” – Only finish in a confirmed low Collateral Damage Environment (CDE) – “Near certainty” increases ISR work factor, reduces targeting opportunities 	
Tyranny of Distance	Long distances to operating areas complicate the “fixing” and “finishing” of HVIs <ul style="list-style-type: none"> – Most objectives in Yemen are ~500km away, Somalia can be over 1000 km – Long transits consume ~50% of ISR flight time and complicate strike planning 	



Challenges to HOA F3EA Operations

- ▶ (S/NF) HOA operations finish in a kill, vice capture, 75% of the time
 - US policy limits footprint and allowable US activities; capture requires capable host-nation partners
 - Kill operations significantly reduce the intelligence available from detainees and captured material
 - Impact: actioning HVIs can take months to years compared to days to weeks in Iraq/Afghanistan



- ▶ (S/NF) The study team identified four issues impacting F3EA operations
 - 1 Analysts rely on SIGINT and HUMINT that is often less relevant and less timely than “finish-derived” intel
 - 2 Limited SIGINT collection capabilities provides fewer “hand-holds” for ISR
 - 3 Sparse ISR must cover more potential leads – stretching coverage and leading to ISR “blinks” that restart the FFF cycle
 - 4 Inability to fix and finish dynamic HVIs is primarily impacted by critical shortfalls in capabilities that provide positive ID (PID) and geolocation

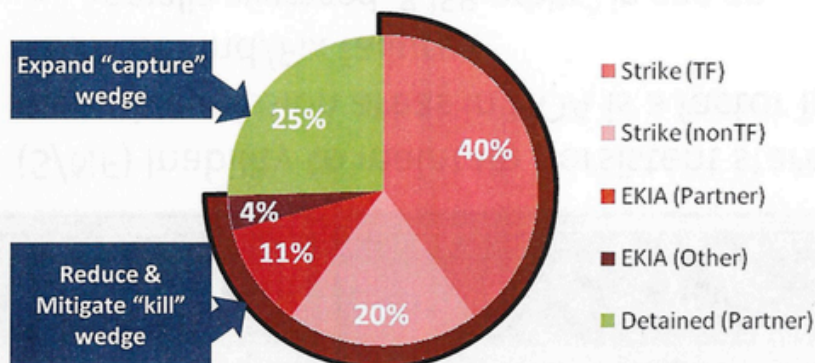


Alternatives to Traditional Exploit/Analyze

- ▶ (S/NF) Lack of intel to Exploit/Analyze and cue ISR is the most significant reason for delays in the HOA F3EA process
- ▶ (S/NF) Without DOMEX and TIRs, analysts must rely on SIGINT and HUMINT sources to develop targets
- ▶ (S/SI/NF) These are not plentiful, in part due to limited SIGINT collection capabilities
 - No “core” SIGINT access
 - Limited ground-based collection
 - Poor airborne SIGINT capabilities
- ▶ (S/NF) Improving EA requires better partnering and information sharing plus increased collection

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All Finishes - HOA 2011-12

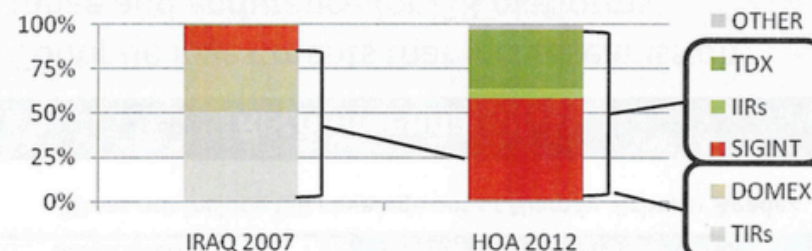


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Source: TF 48-4 SITREPs, Storyboards, Baseball Cards Jan 2011 – Aug 2012, SIGINT KL Reports Oct 2010, 2011-12; IBM Analysis

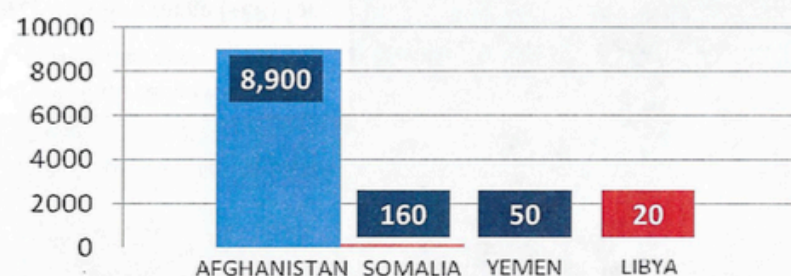
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Target Development Data Sources



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SIGINT - GSM Reports / Month



Recommendations

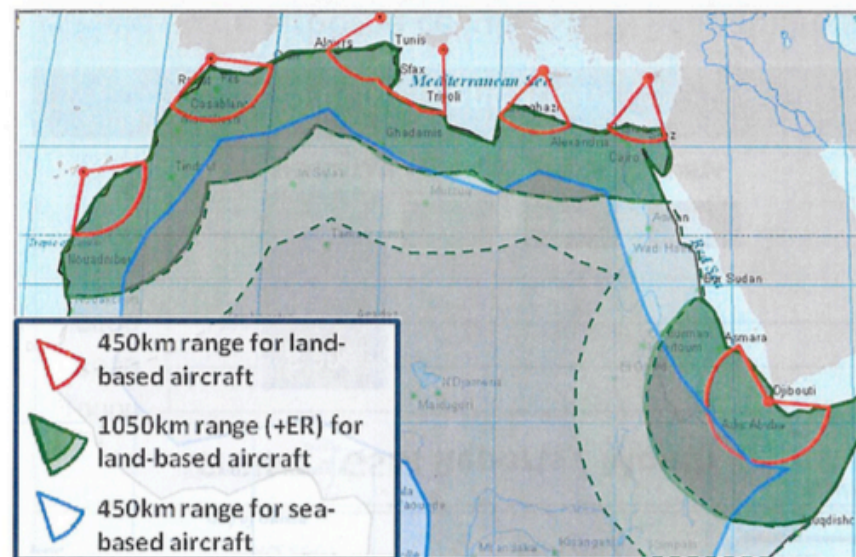
- Field more airborne cellular SIGINT capabilities to mitigate loss of DOMEX and TIRs
- Longer term, develop cyber capabilities to increase collection of digital information
- Increase capture finishes via host-nation partners for more “finish-derived” intelligence



Sufficient Capacity to Find-Fix

- ▶ (S/NF) Inability to maintain persistent stare on active mission areas in HOA is a factor in ~10% of Find/Fix failures
 - Somalia averaged .8 ISR orbits[^] in one op-area; Yemen avg'd 2.9 total over 3+ op-areas
 - In Yemen, at least one ISR orbit is moved to support finishing operations, causing coverage gaps on other HVIs
 - This “blink” re-starts the FFF process for these HVIs; a minimum of one orbit per op-area is needed to prevent this
- ▶ (S/NF) Long distances exact an orbit “tax” on ISR sorties
 - Base-to-Target distance is 450km for Yemen and over 1000km for Somalia
 - In Iraq 80% of targets were w/in 150km
 - ISR platforms spend half their flight time in transit--generating 38% fewer orbits per sortie than other theaters
- ▶ (S/NF) The issue of distance is magnified when translated to all of northern Africa

Transit Ranges from US/NATO Bases*



*Does not include ISR coverage out of Niamey, Arba, or Agadez

Recommendations

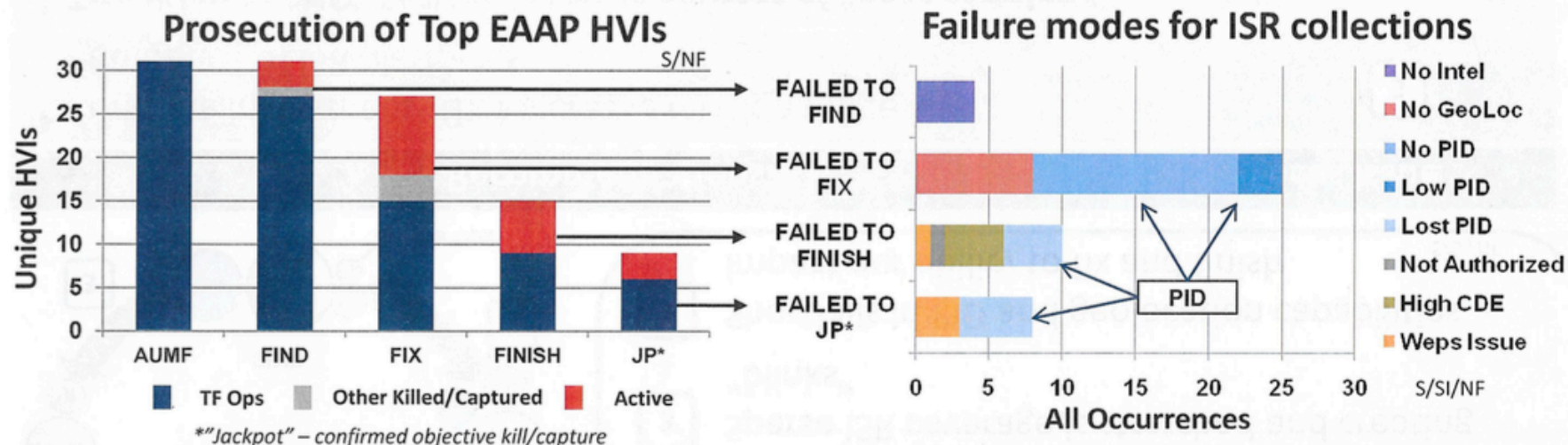
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- Continue investments that increase mission range and endurance for ISR platforms
- Consider sea-based ISR as a complement to land-based ISR and efforts for “gap-filler” bases
- Allow for greater distances in orbit calculations to provide a minimum sufficiency of ISR

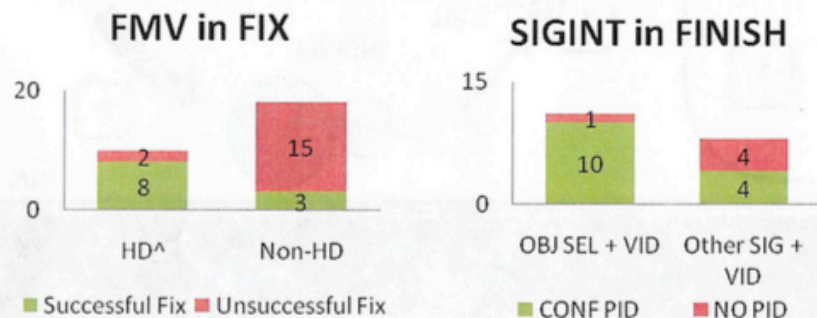


Improved Capabilities to Fix-Finish

- ▶ (S/NF) Ability to fix and finish dynamic HVIs requiring “near certainty” is primarily impacted by critical shortfalls in PID and geolocation capabilities



- ▶ (S/SI/NF) Proven PID technology: HD FMV and cellular COMINT exploitation



Recommendations

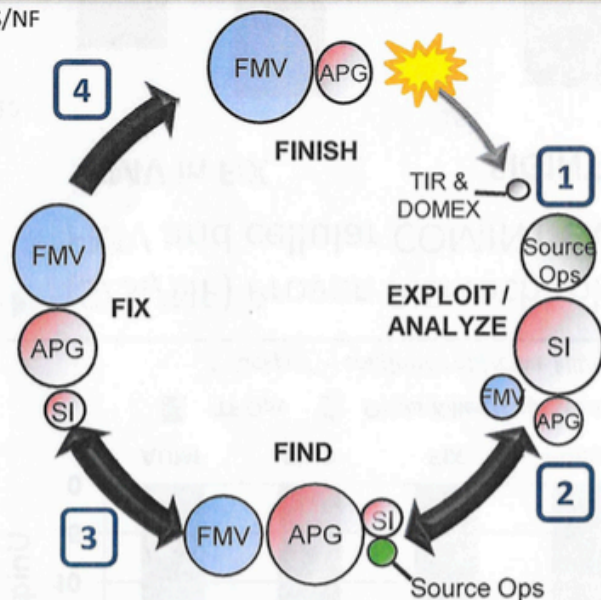
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- Provide more HD FMV and cellular COMINT collection/exploitation to improve “near certainty” PID conclusions
- Continue development of next generation APG to improve geolocation



Summary and Recommendations

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Findings

- 1 Absent “finish-derived” intel, analysts rely on SIGINT and HUMINT
- 2 Poor SIGINT collection capabilities provide few “hand-holds” for ISR
- 3 Sparse ISR coverage is stretched and creating “blinks”
- 4 Shortfalls in PID and geolocation capabilities impact our ability to fix and finish

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Key Recommendations	Focus Issue
▶ Continue investments that <u>increase mission range</u> and endurance of ISR platforms	3
▶ <u>Transition to “HD” FMV</u> to increase sources of “near certainty” PID conclusions	4
▶ <u>Field improved air layer cellular SIGINT</u> capabilities to mitigate loss of DOMEX and TIRs and improve Fix-Finish performance	1 2 4

- ▶ (S/NF) **Other recommendations:** Increase partnership, develop cyber, provide sufficient and balanced ISR mix