Redefining intelligence support in a resource constrained environment

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The intelligence community must embrace technology and an organizational restructuring to provide more accurate, effective, and efficient intelligence while reducing its resource footprint. With the establishment of permanent intelligence fusion centers stateside, reporters, analysts, linguists and watch officers can focus their energy on training a more professional, capable force while providing increasingly complex and sophisticated analysis to support operators on the ground.

Introduction

The intelligence community (IC) must embrace technology and an organizational restructuring to provide more accurate, effective, and efficient intelligence while reducing its resource footprint. The Department of Defense (DoD) faces drastic reductions in equipment and manning in the wake of an increasingly unstable global economic downturn and must reduce spending by nearly $178 billion over the next five years alone[i]. Additionally, the recent report on intelligence in Afghanistan by Major General Flynn[ii] is a stark reminder the IC isn't doing enough to provide the right kind of intelligence to the war fighter. In order to achieve both a reduction in cost and a refocus on providing the right kind of intelligence support, the IC must adopt radical new changes to become more effective and efficient while consuming fewer resources. These changes include the establishment of consolidated intelligence fusion centers; a reduction in the number of intelligence professionals deployed to combat zones; and a leveraging of information systems to manage intelligence collection, processing, reporting, and analysis. By adopting a reach-back model wherein consolidated intelligence fusion centers provide the majority of intelligence support to forward elements, the IC can

improve intelligence capability, reduce costs, and accomplish 'more with less' than the current model.

The Intelligence Fusion Center of yesterday and tomorrow

The Marine Corps introduced the concept of the Tactical Fusion Center (TFC) during Operation Iraqi Freedom[iii] (OIF) that brought together intelligence professionals in a variety of disciplines under a single roof to provide the Marine Expeditionary Force (MEF) with all-source intelligence support. While the capabilities of the TFC were far reaching, the logistics support required to maintain this large footprint was not a small undertaking. Both the Marine Radio and Intelligence Battalions deployed with hundreds of individuals required to support their efforts - many of whom were not intelligence professionals themselves. Electronic maintenance, communications, logistics, administration, and motor transportation were among the many supporting elements required to support the needs of the TFC to function overseas. A majority of these individuals consumed information and material resources to support their efforts as well. Resource constraints and bandwidth limitations in forward outposts are often severely strained due to the large amount of non-essential and routine traffic pushed over the networks. Reducing the number of individuals using these networks in bandwidth constrained environments and transferring this demand to CONUS networks can significantly reduce the information bottlenecks that occur today. Additionally, a reduction in numbers of individuals deployed will also lead to a reduction in costs. Once these forces are reduced at the forward presence, they can continue to provide support while operating in combined intelligence fusion centers. Rather than deploy linguists,

analysts, report writers, and watch officers and the logistics burden that accompanies them to a large outpost in a forward environment, these same individuals will now work in permanent intelligence fusion centers providing the same level of intelligence processing, analysis, and dissemination stateside.

Intelligence units require a high amount of connectivity and access to network resources to accomplish their mission. Information is often collected and transmitted using various networks and the reporting processes, tracking and sharing are all done using these same networks. With the capabilities of these information systems, physical proximity means less now than it has before. An interconnected network of networks has replaced the limitations once posed by line-of-site communication systems. Relying on a constellation of satellite and terrestrial communications systems, analysts located in the United States can watch real-time video of intelligence, surveillance, and reconnaissance (ISR) platforms and receive field reports, as they are collected. This information can in turn be processed, analyzed, and disseminated to operators in the field in a matter of minutes. With this ability to transfer information quickly from the point of capture to an analyst and back, the need to deploy thousands of individuals to a combat zone occupying large outposts is unnecessary.

Many problems such as occupational proficiency, strained family life, and lack of training affect intelligence support. Nearly every one of these problems can be attributed to the high deployment rates for soldiers, sailors, Marines, and airmen. While the majority of the operating forces experience much higher deployment to home station ratios, the intelligence occupational fields (at least in the Marine Corps) often experience ratios close to 1:1[iv]. In other words, personnel are deployed as often as they are home

causing enormous strain on family life for these individuals. In addition to strained personal lives, units have difficulty providing their individuals with adequate training given the limited number of days spent in CONUS. Language proficiency for linguists trained in languages other than those spoken in target area of operations (AOR) have experienced difficulties with promotion due to their inability to work on their target languages given the deployment cycle. Basic intelligence analysts are often not well prepared to conduct meaningful analysis and often resort to the 'sports, news, and weather' presentations that merely discuss events and offer opinions as to why these events occurred with little empirical support for their arguments. If we can reduce the number of these individuals that must deploy, it is logical to presume that our ability to train these individuals and retain the quality needed to solve complex problems will improve. Our intelligence professionals can focus on their target environments in the course of their daily work and occupational proficiency will increase. The removal of the pre-deployment training process will reduce the number of hours devoted to non-intelligence focused activities. In other words, our intelligence professionals will spend more time doing intelligence work and less time focusing on non-essential work.

Analytic support from Monterey to Kandahar

In order to demonstrate that this model is not merely theoretical, the following section will discuss the implementation of an information collection tool used by Operational Detachment Alpha (ODA) teams in Afghanistan during the fall of 2010 and the support provide by the Common Operational Research Environment (CORE) lab at NPS in Monterey, California. By using an inexpensive, unclassified, open-source information system developed at the NPS, the lab demonstrated the ability to support

complex, tactical operations in remote villages thousands of miles away to include sociocultural analysis support to forward operators using free and open-source technology.

From August to November 2010, the Field Information Support Tool (FIST) was employed in Afghanistan in support of the Village Stability Platform (VSP). FIST was used as a means to expose operators to a more comprehensive analytic methodology for analyzing the complex, sociocultural environment in Afghanistan and demonstrate the capabilities of technology developed at the NPS. During this prototype employment of FIST, the Village Stability Operations (VSO) teams collected hundreds of unique reports, conducted analysis on a variety of metrics, and produced a number of analytical products focused on the sociocultural landscape in southern Afghanistan. In addition to their own organic collection and analysis, the teams used a web-based information repository to share their data. The combined dataset included over 421 unique collection reports containing several hundred individuals, organizations, locations and relational ties embedded therein. These reports were obtained using a framework specifically developed and tailored for the VSO mission in which the collection of relational information on business, kinship, organizational, personal, and tribal affiliations in addition to obtaining standard demographic data formed the preponderance of data collection.

Once the VSO data was collected, the CORE lab analyzed the dataset using geospatial, temporal, and using social network analysis in order to provide a coherent, logical, and useful analytic product based on empirical data while working in a laboratory in California. This analysis yielded results that confirmed the understanding of the

operational environment forward, but also provided unique insights not previously discovered by the units on the ground. The following section details how this analysis was conducted to demonstrate the ability to conduct reach back analysis and build products to support even small, tactical level units.

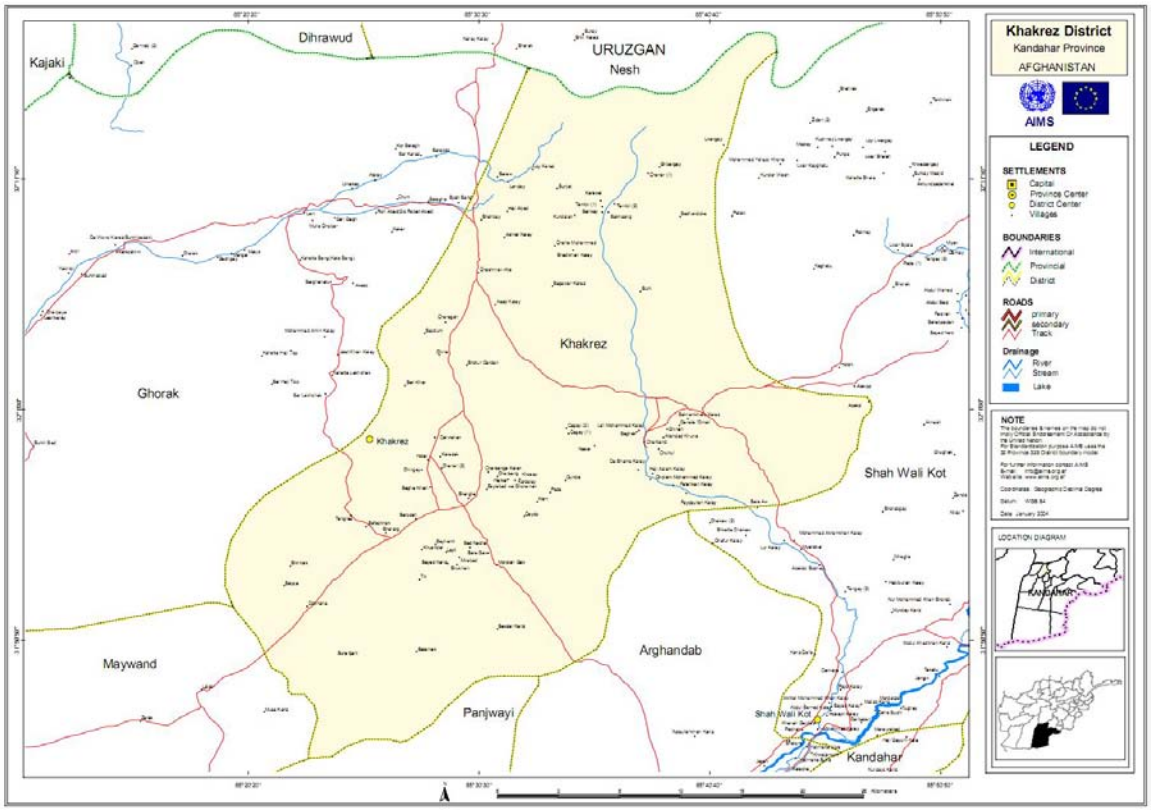

Figure 1 - Map of the Khazrek District

Source: *Afghanistan Information Management Services*

The analysis of the Khazrek district begins by taking a look at the district geospatially (see Figure 1) and then focusing on some of the high level observations that can be made about the data collected in the area. During the collection, interviewers recorded the location of the interview, asked about the location of the individuals' home

and their place of work. By recording these locations geospatially, we can use tools such as Google Fusion Tables to quickly display the resident's location on satellite imagery in Khazrek.

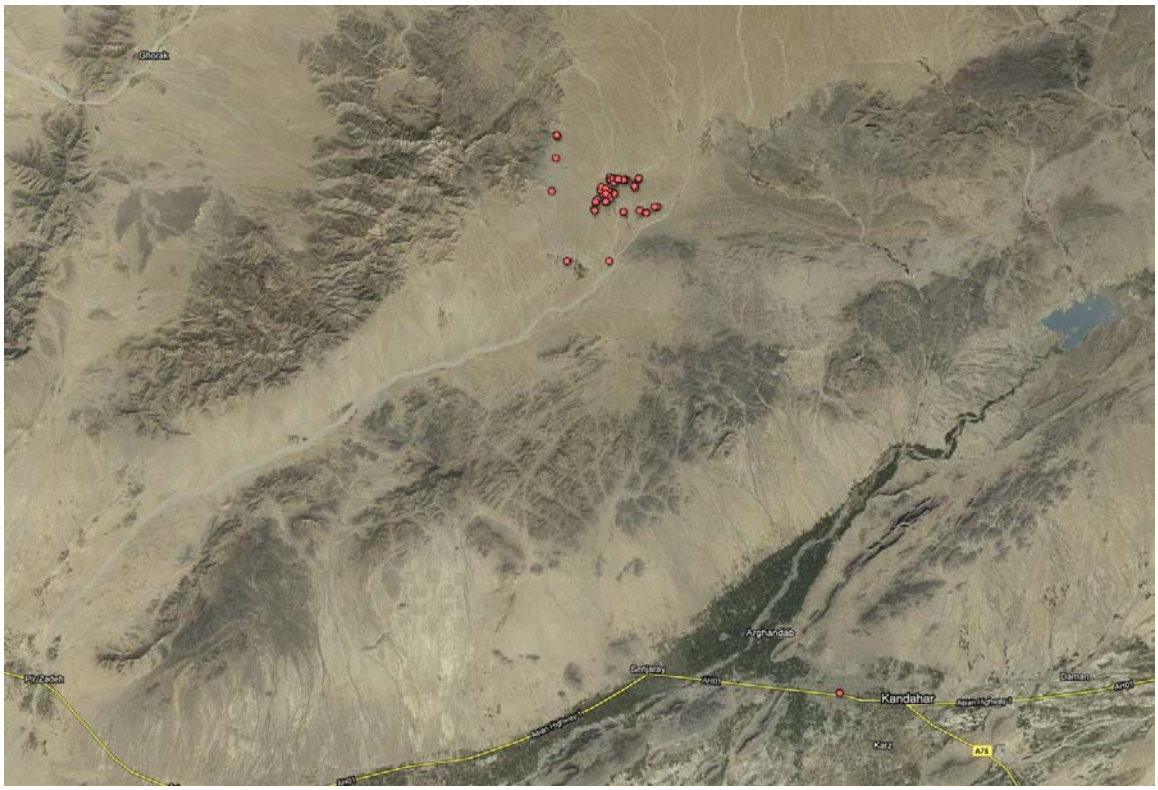

Figure 2 - Map showing the location of residents interviewed in the Khakrez District

After becoming oriented geospatially with the location of the district and the individuals interviewed (Figure 2), we continue to focus on general demographics in the area. Table 1 shows the breakdown of the occupations of the individuals in the district as a percentage of the total interviews. This table was built using the occupation data field collected from the VSO teams.

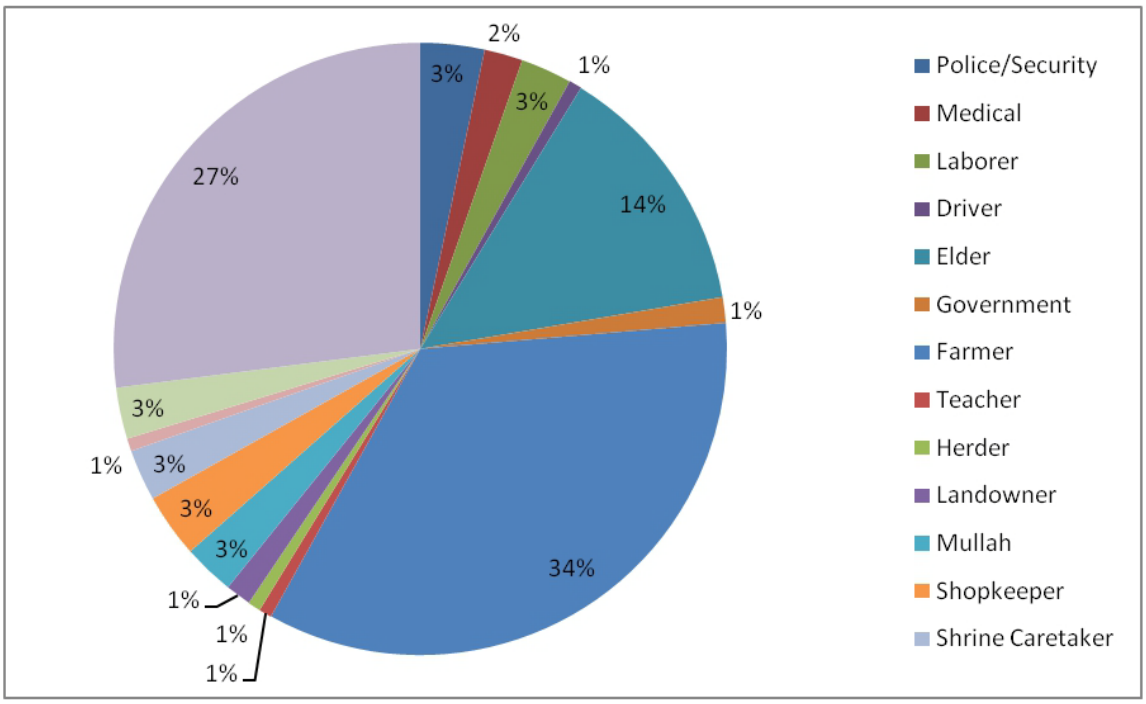

Table 1 - Occupation breakdown of Khazrek District

Of note, more than one third of the population held agricultural jobs suggesting that any efforts focused on agrarian matters would be of interest to a significant majority of the district. From general demographic breakdown, we continue to look at the organizational structure of the district as seen in Figure 3. The red nodes correspond to individuals and the green blocks are organizations. While there are other organizations in Khazrek, isolates (nodes with no ties to the network) and dyads were removed to clean up the visualization.

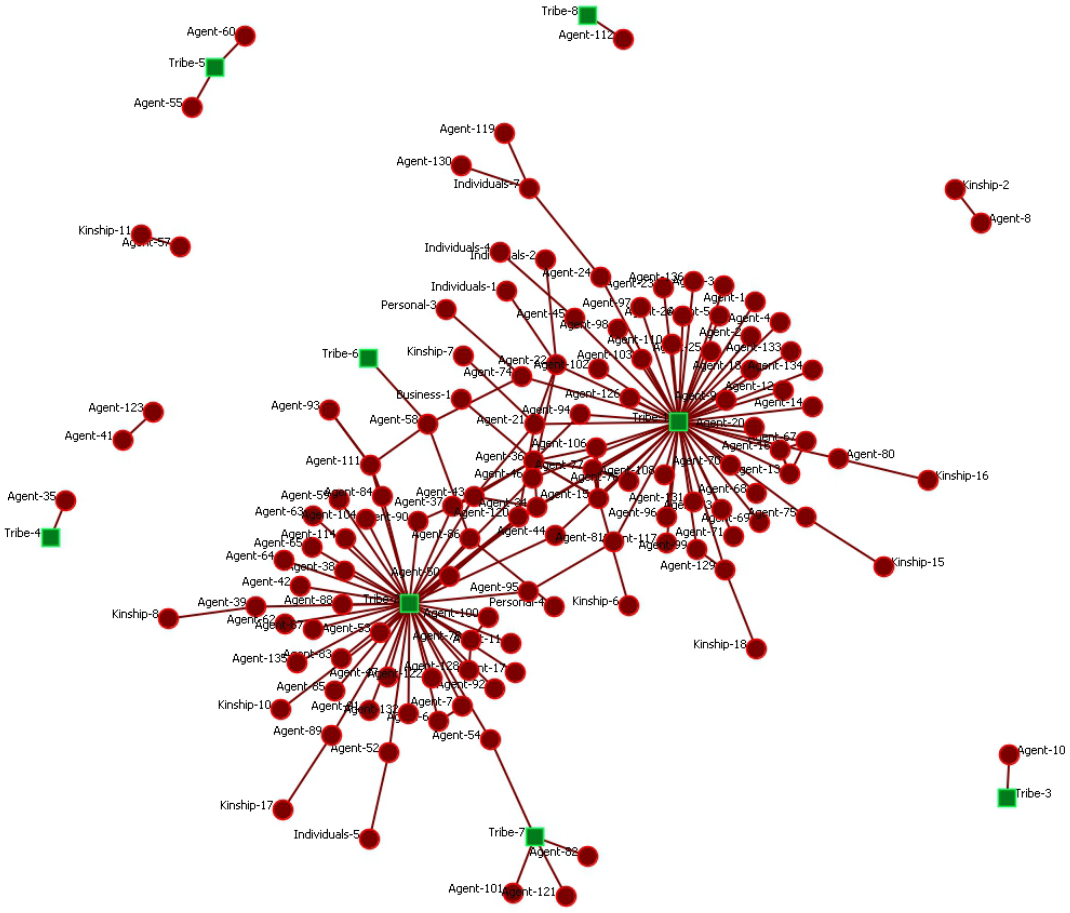

Figure 3 - Khazrek District Organizations Sociogram

From the organizational sociogram, we focus more specifically on the tribal affiliation network in Khazrek. Figure 4 is the tribal affiliation sociogram and Table 2 shows the breakdown of the dataset in terms of tribes in the area with individuals once again being represented by red circles and tribes by green squares.

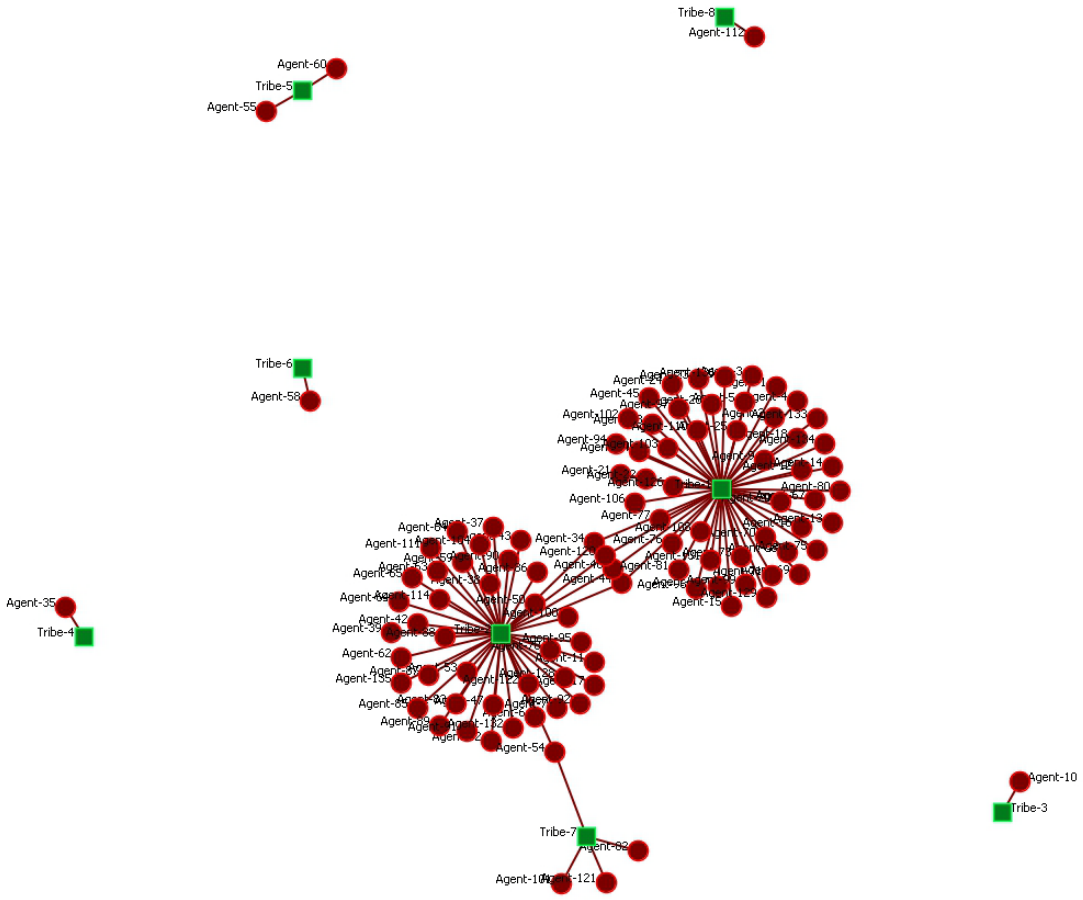

Figure 4 - Tribal Affiliation Network in Khazrek

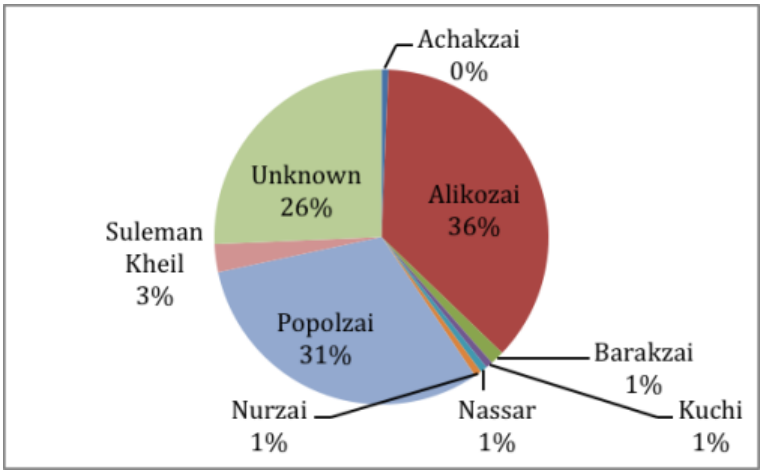

Table 2 - Tribal Composition in the Khazrek District

Now that we have looked at the Khazrek dataset with broad-brush strokes, we now focus more specifically on the common linkages between the two dominant tribes – the Popalzai and Alikozai.

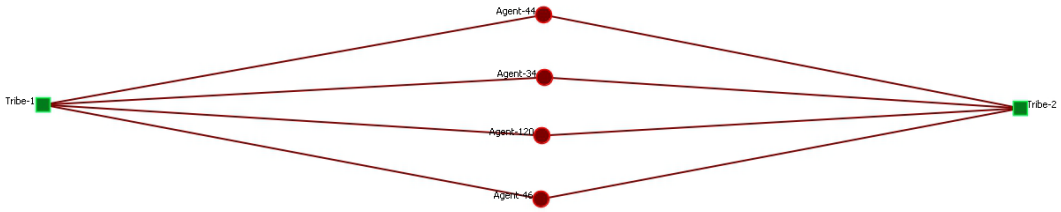

Figure 5 - Common Linkages between Tribes

The four individuals highlighted in Figure 5 (made anonymous for purposes of this discussion) could prove useful, as they represent the ties common between both tribes in the area (from the data collected). These individuals serve as bridges between the two tribes that could serve as a means of improving communication or cooperation between the groups. Conversely, focusing on the same persons and reducing or eliminating the ties between the groups could sever ties. As the purpose of the VSO is to improve the security and livelihood in the area, the former is practice of interest.

After focusing on the organizational level data, we turned our attention to the individual level networks and analyzed a combination of personal, kinship, and business ties. For this network, isolates and pendant nodes were recursively hidden that yielded the sociogram seen in Figure 6.

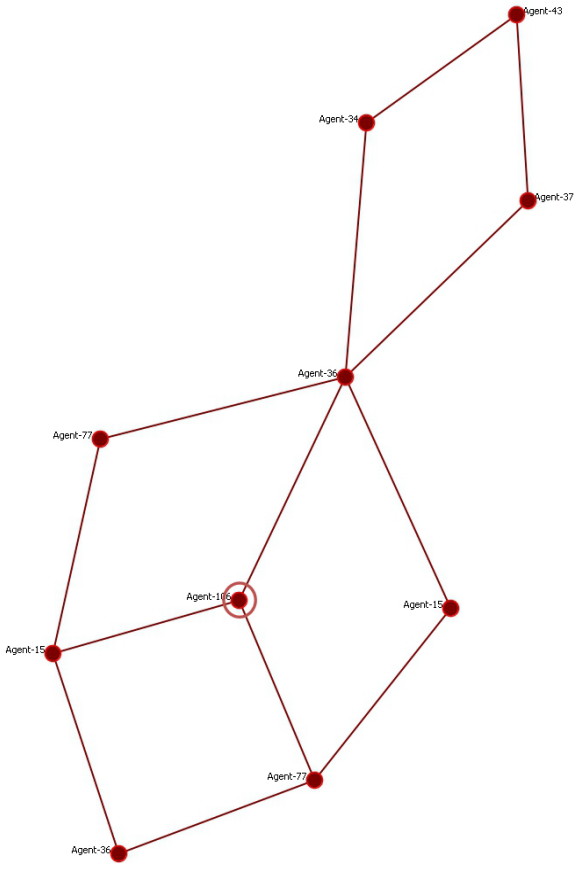

Figure 6 - Individual Level Network Analysis

Interestingly, the procedures performed during the analysis brought to light the same network of Agent 106 and his role in the Khazrek District. The VSO team identified and focused their analysis on Agent 106 based on the identification from the detachment commander in Khazrek. In our analysis, we identified the same individual based on his unique position between two Mullahs and position in the network. Being able to identify key individuals like Agent 106 without prior knowledge of the village is critical in understanding and developing various strategies and lines of operation.

The above analysis demonstrates that it is not only feasible to conduct reach back analytic support, but it also demonstrates that insights normally thought to only be available at the forward edge can be observed from thousands of miles away with no prior knowledge of the operating environment.

Conclusion

Technology is readily available (in fact, a large amount of it is free to use) that can aid in transforming how we provide intelligence support from the strategic to the tactical level. The ability to transfer large amounts of information throughout the operating environment enables the IC to adopt a new construct wherein support is provided remotely with greater consistency at a reduction in cost. By standing up permanent intelligence fusion centers stateside, the ability to conduct long-term intelligence support will not be jeopardized by a decreasing budget and reduction of force structure. Soldiers, sailors, Marines, and airmen can spend more time at home, improve occupational proficiency, and continue to provide the support needed for the Long War ahead. Rather than exhaust our limited supply of highly specialized individuals over the next decade, we should instead focus on how we can maximize the output and quality of support while minimizing risk.

Captain Carrick Longley is a U.S. Marine Corps Intelligence Officer. He submitted this paper while attending the Naval Postgraduate School for a Master of Science in Information Warfare Systems Engineering and working towards completing his Joint Professional Military Education Phase I at the Naval War College Distance Education Program. He is currently assigned to the Naval Postgraduate School where he is pursuing a Doctorate in Information Sciences.

[i] Gopal Ratnam, "*Gates Proposes Troop Cuts, $78 Billion Budget Decrease*" *Bloomberg Businessweek*. Jan. 6, 2011 (http://www.businessweek.com/news/2011-01-06/gates-proposes-troop-cuts-78-billion-budget-decrease.html).

[ii] Major General Michael T. Flynn, Captain Matt Pottinger, Paul D. Batchelor, *Fixing Intel: A blueprint for making intelligence relevant in Afghanistan.* *(*http://www.cnas.org/files/documents/publications/AfghanIntel_Flynn_Jan2010_code507_voices.pdf).

[iii] Lieutenant Colonel Timothy Oliver, "*A Blueprint for Success." Marine Corps Gazette* (http://www.mca-marines.org/gazette/article/marine-corps-intelligence-operations-anbar).

[iv] Hope Hodge, "*Marines look to improve deployment-to-dwell ratios*." *Jdnews*. Apr. 30, 2010 (http://www.jdnews.com/articles/ratios-77803-increase-amid.html).