

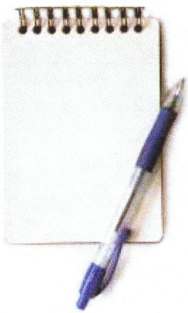
A small, stylized lighthouse icon with a red and white striped tower and a black lantern room, positioned to the left of the word "LIGHTHOUSE".

LIGHTHOUSE

Illuminating social networks to help navigate the human terrain

PROBLEM

Detailed information regarding a population's composition, *social structure*, and physical terrain are required to develop effective operations and shape policy, **yet we have no effective structure** for collecting, processing, analyzing and sharing this kind of information.



SOLUTION

Lighthouse is the application of commercial-off-the-shelf and open-source technology and analytic methodologies developed in the Common Operational Research Environment to help solve complex problems.

Designed by operators for operators.

From data collection to analysis

- Enable data collected on the ground to be relevant, useful, and *structured*
- Provide a framework for collecting *relationships*
- Harness automated information systems to provide the data transformation

Reduce the amount of time and work from the point of capture to the analyst

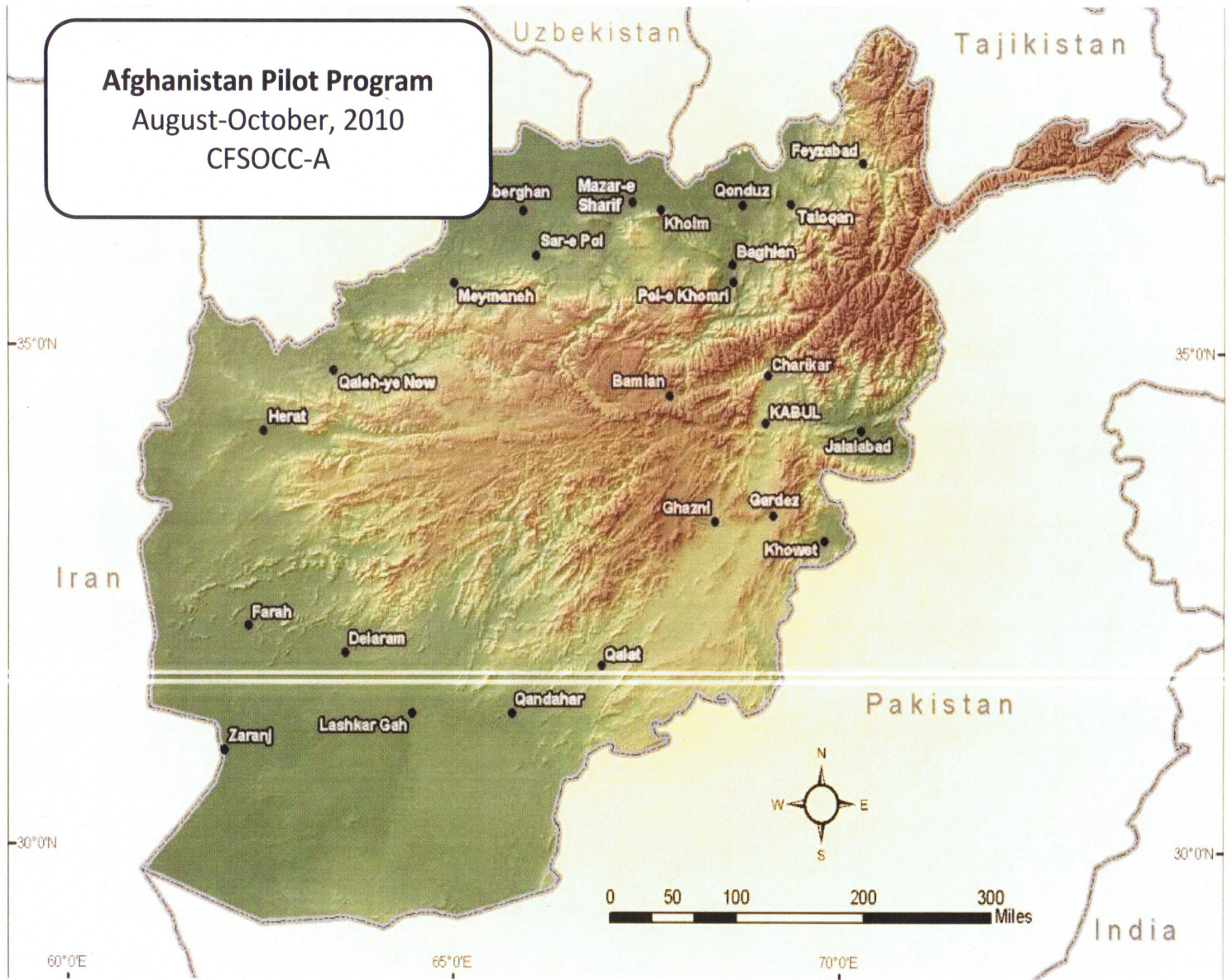
System Overview



The top part of the image shows a screenshot of a web application interface titled "Civilian Engagement". It features a table with columns for "Form ID", "Form Name", "Form Type", "Form Status", "Form Date", "Form Location", "Form State", "Form County", "Form City", and "Form Choice". The table contains several rows of data, including form IDs like "6418-473-0000" and "1747-042299".

The bottom part of the image is a diagram titled "Analytical Tools Supporting CORE Lab Methodology". It shows a central vertical line with arrows pointing to various software tools: ArcGIS, Microsoft Virtual Earth, Quantum GIS, Google Earth, UCI, Pack, *ORA, and Palantir.

Afghanistan Pilot Program
August-October, 2010
CFSOCC-A



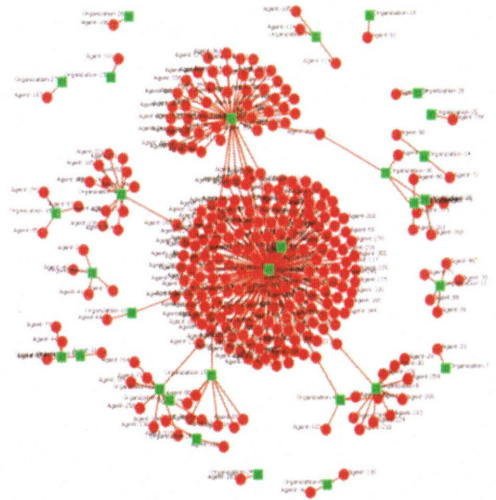
Afghanistan pilot implementation

- ~ 90 day collection effort
- 3 villages
- 8 phones
- Support to village stability operations (VSO)

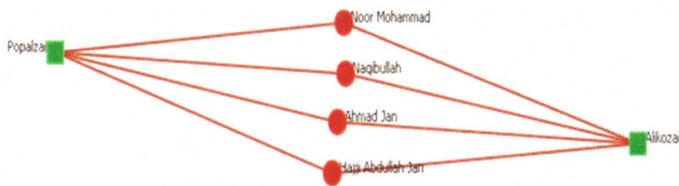
Determine applicability and utility of the CORE lab methodology



Understanding Tribal Networks



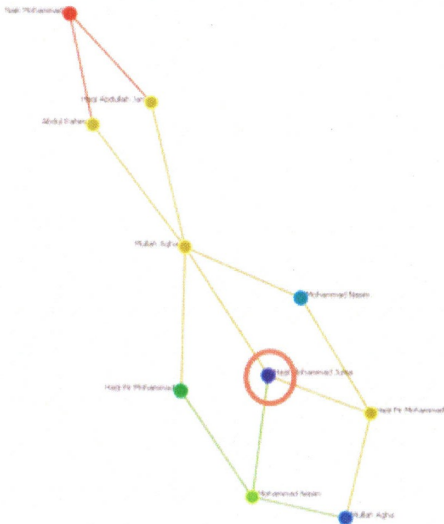
Commonality between Tribes



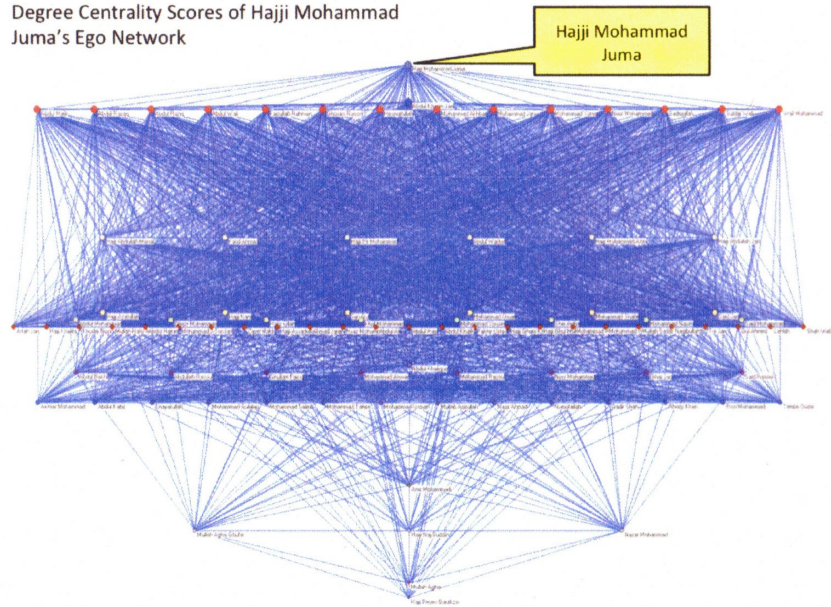
**Social Network Analysis
provided *for the first time*
empirical evidence used to
understand the tribal
networks**

Moving beyond key leader identification

Khakrez - Hajji Mohammad Juma's network



Degree Centrality Scores of Hajji Mohammad Juma's Ego Network



Analytic methods enabled the commander to identify structurally equivalent actors – *something not possible before.*

Interagency Feedback

“One of the main things I like about the capability is that the material presented **exactly coincides** with the *understanding* that I gained from my experience in this region, here in Afghanistan for three years, and 36 years of USDA experience in the field working with tribes and clans in the U.S.”

--Jim Green, SOTF-S **USDA Agricultural Advisor**

“I have worked in this district for almost a year, and the products depicted using Lighthouse **directly coincide** with my own conceptual *understanding* of the communities in this district—*products which were developed in only two weeks time by an operator new to the area.*”

--George Hale, SOTF-S **USAID Developmental Advisor**

Questions?