



# BOBCAT

## Accelerating the Intelligence Analysis Process

<http://bobcatonline.com>



### What does BOBCAT do?

BOBCAT provides a suite of web services for discovering themes and exploring relationships found in military and intelligence data. This data can be stored in any kind of unstructured or structured format. BOBCAT goes beyond simple trend analysis by turning data into actionable intelligence that can be used to predict future events.

### Why is BOBCAT important?

BOBCAT automatically organizes data in a way that enables military and intelligence analysts to quickly see what activities are important, who the key actors are, how they are coordinating, predict future events, and prevent those events before they occur. The actionable intelligence provided by BOBCAT results in saved lives.

### How does BOBCAT integrate into my enterprise?

BOBCAT is provided as a suite of web services developed under the Service Oriented Architecture (SOA) paradigm. These services integrate easily into any SOA-based enterprise.

### Why the name BOBCAT?

Bobcats are the most adaptable and resilient of all members of the cat family. They possess the most lethal combination of speed, agility, and killing power regularly killing prey eight times their size. Intelligence analysts need that same combination of firepower to sift through all of the data at their disposal to ultimately stop the new terrorist threat.

Intelligence analysts are presented with large volumes of multi-source data every day. Making sense out of all of this data, or converting it into information and then actionable intelligence proves to be very difficult. From a military or intelligence perspective, "actionable intelligence" means being able to identify the key activities, actors, and relationships from this sea of data. In a technical sense, it requires the ability to:

- **Extract and correlate** seemingly unrelated pieces of data,
- **Distinguish** that data from the white noise of harmless civilian activity, and
- **Find the hidden relationships** that characterize the true threat.

Identifying suspicious entities and predicting their intent in today's asymmetric warfare environment requires finding hidden relationships against an overwhelming backdrop of noise. Complicating the situation is the vast array of data sources to be considered, including not only standard sensors, but also unstructured text sources such as human intelligence reports, intercepted telephone conversations, open sources, etc. Unfortunately, standard tools for working with different sources and formats of data are often brittle and prevent the use of advanced analytical techniques.

The BOBCAT suite of services have been developed to overcome these obstacles, enabling important pieces of information, "needles in the haystack", to be identified and brought to the attention of the analyst.

### Key Features

BOBCAT provides a series of key features that enable the Warfighter to:

- Process massive amounts of structured and unstructured data and quickly identify themes of activities that are occurring.
- Characterize the relationships between actors that are coordinating the activities.
- Identify relationships between entities in the data that may otherwise go unnoticed.
- Use the themes and relationship networks to predict and prevent future actions.
- Focus on what data is important and ask questions that result in accurate conclusions faster than ever before.

## Product Overview

BOBCAT provides a suite of web services for discovering themes and exploring relationships found in military and intelligence data. This data can be stored in any kind of unstructured or structured format. BOBCAT goes beyond simple trend analysis by turning data into actionable intelligence that can be used to predict future events. BOBCAT accomplishes this by identifying Themes and Networks, Predicting events, and tracking them Geospatially over time.

## Themes

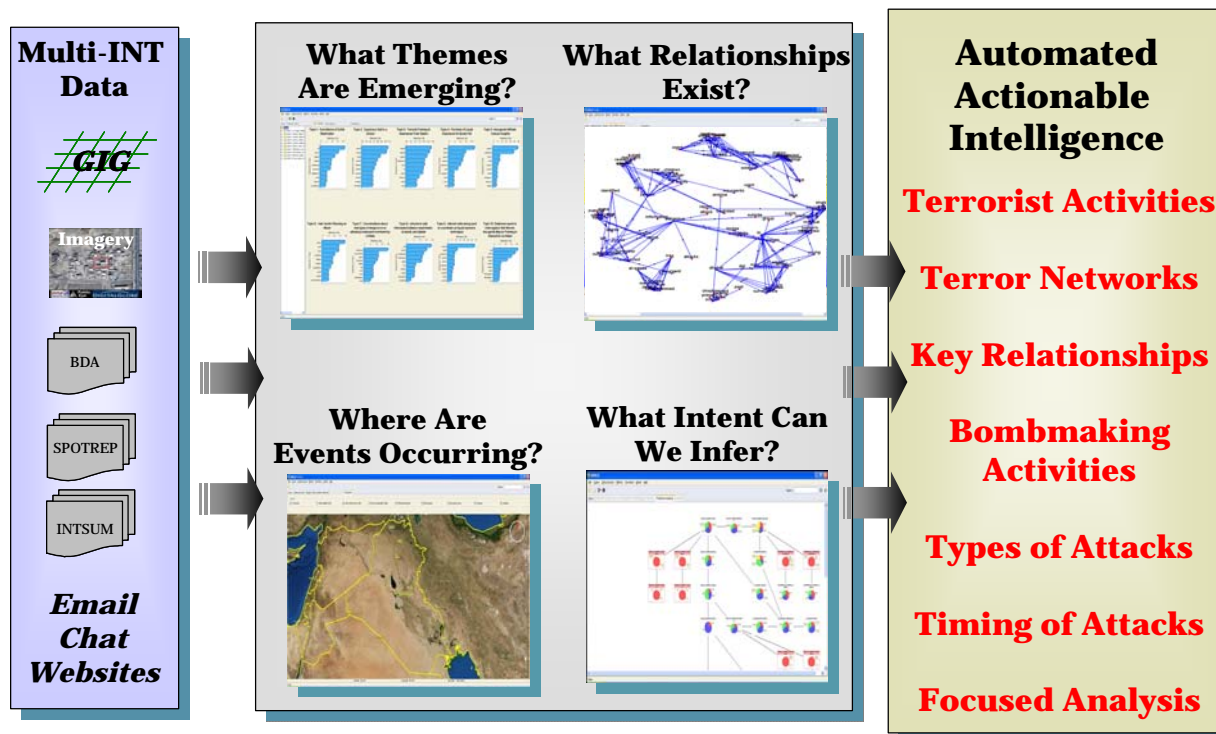
BOBCAT processes virtually any type of data set and is able to 1) identify the number of themes in a data set and 2) characterize those themes based on the content observed. To use the “needle in the haystack” analogy, BOBCAT is able to identify the number of haystacks in a data set and give each one a meaningful label. The Warfighter is able to scan the themes and quickly determine what is important and what is not, leading to more focused analysis.

## Networks

From the themes BOBCAT can characterize the relationships that exist across the entities discovered in the data. Traditional approaches discover these relationships through document co-occurrence – where entities must be mentioned in the same document. BOBCAT goes much further by first identifying what terrorists may be collaborating on (through the themes) and then identifying who is collaborating. BOBCAT also characterizes the strength of relationships so the Warfighter can focus in on strong or hidden relationships.

## Prediction

BOBCAT goes beyond simple trend analysis by taking the output of Themes and Networks to predict future events. Based on DAC-developed advances in Bayesian network technology, BOBCAT is able to manage probability models of virtually any size, over time and space, and update these models with real-time battlefield and intelligence data.



*BOBCAT empowers the Warfighter to quickly drive to detailed, accurate conclusions by focusing questions and answers on the most important pieces of information.*