



# CACI

EVER VIGILANT



## CACI and the Intelligence Community

CACI operates across the IC and DoD from S&T to field support for tactical missions. Our R&D expertise supports much of the Federal S&T community including IARPA, DARPA and ONR. We deliver a full range of solutions including hardware, software and systems integration as well as analytic and field support. Our subject matter expertise includes signals processing, geospatial analysis, image analysis, chem/bio analysis, cyber and human language technologies. We partner with academic institutions, small business and specialty providers to deliver the right solution wherever it is needed. Our expertise goes all the way from research to supporting operations – we know the theory and can deliver results.

## CACI and IARPA Open Source Indicators

CACI provided software design, integration and DevOps for the EMBERS (Early Model Based Event Recognition using Surrogates) team. The EMBERS system forecasts significant societal events, such as civil unrest incidents and disease outbreaks, on the basis of continuous, automated analysis of publicly available data. EMBERS was developed jointly with over a dozen contributors led by Virginia Tech. EMBERS has been operational since November 2012 and has delivered over 20,000 fine-grained event-predictions for Latin America and the Middle East.

## SIGINT Mission Planning and Situational Awareness

**UNCLASSIFIED**  
**ISR APERTURE**

asc10100 (AIRBORNE)  
Lat: 19.774444°, Lon: 119.020599°  
Altitude: 9140.000 m  
Speed: 102.9 kph  
Bearing: 227.009°  
Status: BUSY  
Last Update: 12 Mar 2013 12:56:49 CDT  
Sensor: asc10101  
Status: COLLECTING  
Status Message: FMC  
Type: GEONET  
Currently Tuned Frequency: 159.32 MHz  
Currently Tuned Bandwidth: 10.00 MHz

## SIGINT signal acquisition, detection, surveillance, and geolocation

**UNCLASSIFIED**  
**GEO net**

## POINT GUARD

**UNCLASSIFIED**  
**POINT GUARD**

## Multi-INT Location and Targeting

**RAPID RELIABLE TARGETING**

**FIND** **FIX** **FINISH**

SIINT CUEING: JOINT THREAT WARNING SYSTEM  
UAS IMAGERY PROCESSING: ISR SA TOOL 8 CONCORD  
PRECISION TARGETING: NSA CERTIFIED CAT 1 COORDINATES

SCAN EAGLE 2003 | SHADOW 2004 | PUMA 2004 | INTEGRATOR 2005

**MULTI-INT PRECISION TARGETING WITH TACTICAL UAS**

## Data Ingest

**EMBERS**  
Early Model Based Event Recognition using Surrogates

## Text Analytic Enrichment

- Geospatial Interpretation**
  - Interpret source, affiliation, and references
- Sentiment Analysis**
  - Identify sentiment along three axes: valence, dominance, and arousal
- Entity Extraction**
  - Identify references to people, places, organizations, and dates
- Date Normalization**
  - Interpret date expressions as machine-readable dates
- Keyword Matching**
  - Match specified words in multiple surface forms

## Analytic Modeling



## Delivery

{22143, [Labor, 0111, 12/26/12, (Argentina, Misiones, Puerto Rico)], 0.87}

## Operational Environment - AWS

