Enabling Analyst-Centric Collaborative Modeling, Forecasting, and Evaluation

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Enable analyst-centric collaborative analysis using intuitive tools to construct, justify, contextualize, evaluate, and apply operationally relevant probabilistic forecasting models

- **Express and Refine Knowledge**
  - Design powerful but accessible modeling tools to support model construction
  - Design tools for justify, annotate, and source models
  - Leverage expertise in socio-cultural / behavioral models & dynamics

- **Evaluate and Apply Models**
  - Design tools to guide inexperienced modelers through evaluation and application
  - Design sensitivity analysis tools to identify potential issues in models

- **Collaboration**
  - Design collaborative workspace to allow remote users to cooperate in model construction
  - Design community model to provide metadata for interpreting models
  - Design automated tools for aggregating related probabilistic models
Qualifications and Capabilities

**Technology / Research:**
- Build / apply probabilistic reasoning and forecasting models
  - Full gamut of computational modeling approaches
  - Adaptive approaches for critical military / intelligence reasoning & forecasting requirements
  - Make computational approaches accessible to analysts
  - Multiple ongoing programs in Human Social-Cultural-Behavioral (HSCB) modeling & analysis
- Intuitive graphical model development for tools and HCIs
  - Deep understanding of modeling domain, including cognitive & collaboration challenges
  - Experience applying Cognitive Systems Engineering tenets to design user-focused HCIs
  - Systems for user creation & adaptation of models
  - Intuitive tools for Bayesian network, social network, and hybrid computational model development
- Software engineering
  - Extensive collaboration with Users, SMEs, and target computing environment
  - Rapid prototyping to demonstrate proof-of-concept of cutting edge research concepts
  - Open standards for interoperability
  - Successful transitions to operationally deployed analysis tools and software components

**Teaming:**
- Experienced in leading teams of Small Businesses & University researchers; provide link between basic/applied research and Customer operations / mission requirements & Programs
- Collaborative strategic partner as Sub to Large Systems Integrators

**Customers:**
- Current & past programs with Gov’t, including IARPA, DARPA, DHS, SOCOM, JIOWC, etc.
"Dream Team"

**We Seek:**

- Academic teammates with new/innovative:
  - Computational modeling approaches that are well suited to collaboration and/or integration results
  - Approaches to collaborative model development
- Partners (SB, LSI) with operational domain expertise and programs in the target intel environment
- Partners with existing systems that can be augmented with advanced collaborative probabilistic forecasting methods
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