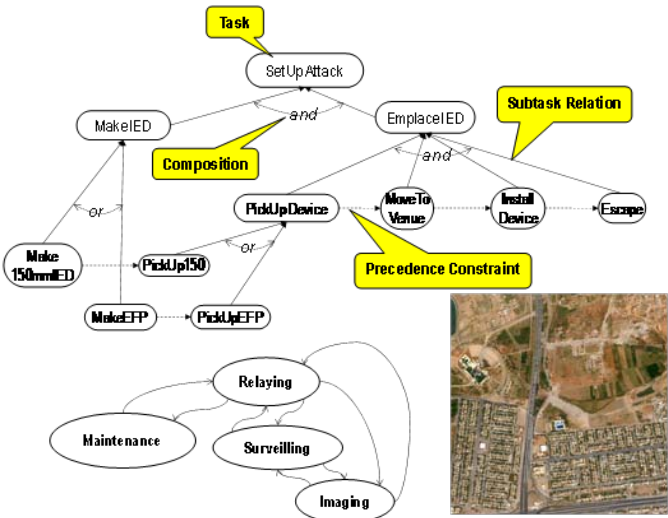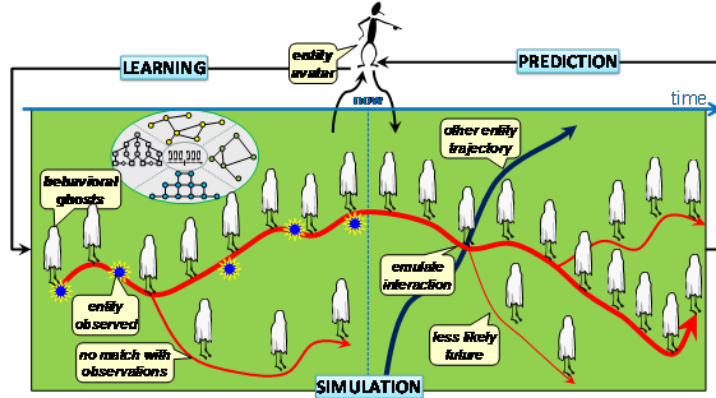- Organization: **Vector Research Center, division of TTGSI**

- Lead Investigator: **H. Van Dyke Parunak**

- Current Team Members: **none** currently (but open to teaming)
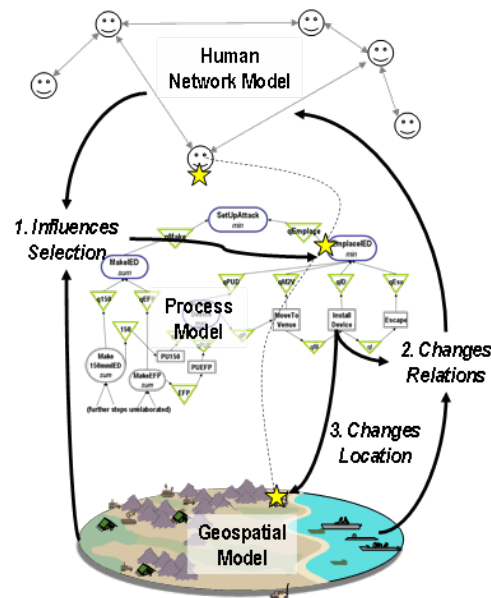
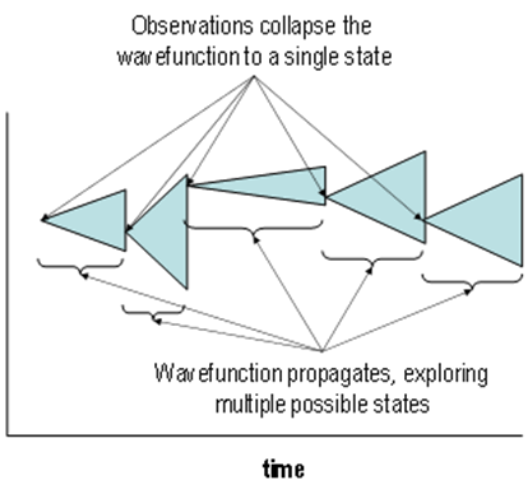# Research Areas of Interest
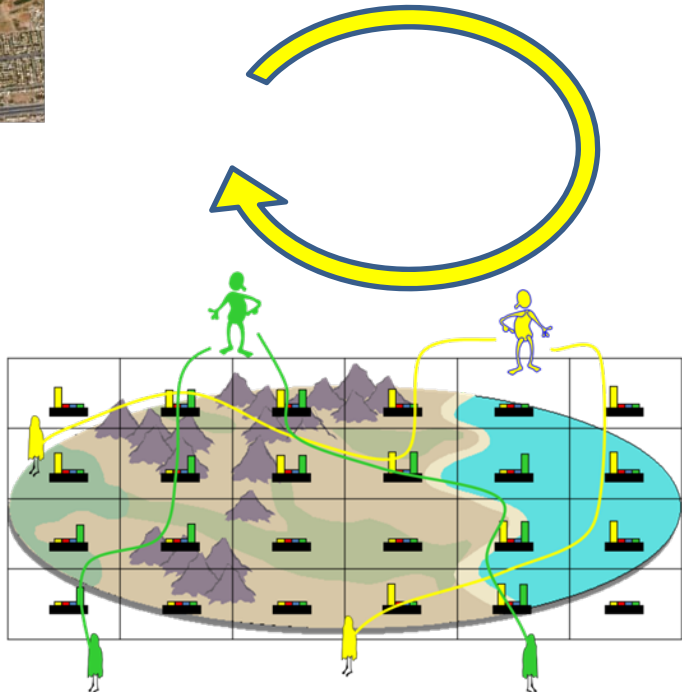

Behavior as Movement

Concurrent Multi-Future Simulation

Integration of Multiple Model Perspectives


Quantum Analogs

Probabilistic Interactions

Interplay of Data, Model, & Dynamic uncertainty
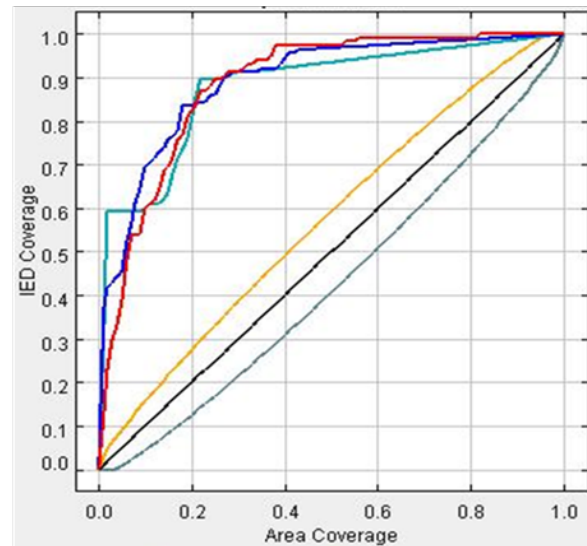
Unique Quals & Capabilities

- Polyagent modeling technology explores **large space** (~10^7) of alternative futures **concurrently** while preserving individual trajectories

- Demonstrated ability to forecast geospatial events **better than human experts** & **rival computational technologies**

15 min forecasts
t = 140 sec

Forces w/ 15 min tails
t = 140 + 900 sec
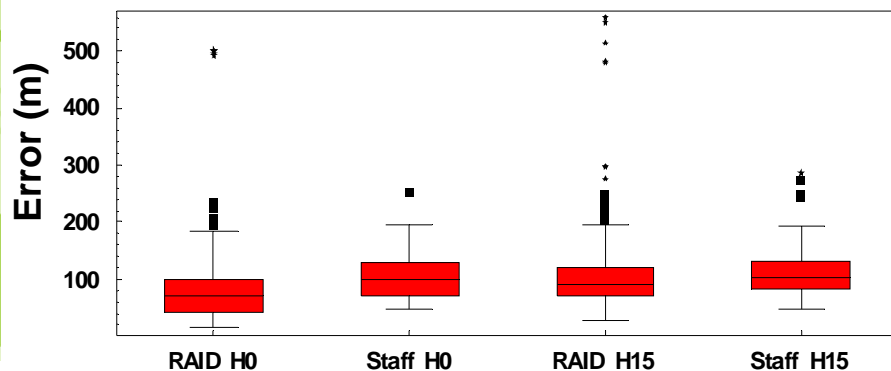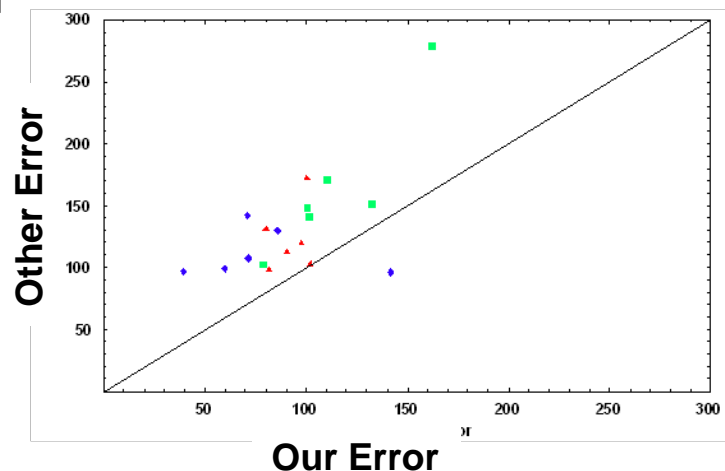
Capabilities Sought

ACE Technical Area	What we bring	What we need
Elicitation of probabilistic judgments	(not our forte)	Multi-scale, multi-resolution **elicitation methods**
Aggregation of judgments	Simulation-based information fusion yielding probability fields	Advanced **statistical theory** (e.g., information geometry)
Representation of aggregated forecasts	Representation as fields + fitted behavior models	A metaphor-friendly physicist with expertise in **quantum theory** to explore the entity-field duality that polyagents enable

Contact Information

- Name: **Van Parunak**

- Title: **Chief Scientist**

- Organization: **Vector Research Center**, division of TTGSI

- Email address: **van.parunak@newvectors.net**

- Phone number(s): **734 302 4684**

- url: **http://www.newvectors.net/staff/parunakv**