

Proposal Evaluation Debrief N252-110-0091

Proposal Number: N252-110-0091 **Topic Number:** N252-110

Title: Cloud-Native Modular Cognitive Warfare Simulation Platform

Firm: Groundbreaker Solutions LLC

Evaluator 1

Criteria A

Strength: Interesting approach that uses live data "hybridized" with synthetic data. The proposal offers to develop a hybrid simulation engine, merging agent-based modeling with LLM-generated simulation data. The system would provide automated alerts for red, blue and white cell players, together with social engineering cues.

They offer to develop real-time adaptive control that monitors participant performance; it would adjust the scenario through monitoring participant performance. Just-in-time hints, event modulation and gamified dashboards are also offered. The proposal provides a fairly high-level discussion; the proposer breaks down multiple components of the envisioned system including the hybrid simulation engine, adaptive scenario controls, interfaces and cloud architecture. LLMs would create narrative content that cohere with observed behaviors in real-world incidents.

They plan to use the MITRE framework. They provided detailed multi-modal attack scenarios that show thought and creativity.

Weakness: They do not appear to have their own data stores, at least none are discussed. They intend to develop a pipeline using live data, cybersecurity logs, and other data mapped to the simulation ontology to get the data needed for the simulation. Obtaining Twitter/X data is quite expensive; they don't seem to account for this. They intend to try to find data through the creation of a pipeline, trawling real-world data sources during the Phase 1.

Their discussion of how players would play the role of cyber-defenders is not well described. There is no description of how the simulation would play out on a cyber-range. How they would incorporate a simulation of cyber-technical attack is not discussed.

Criteria B

Strength: Proposed lead investigator claims experience with narrative analysis, Hofstede framework, and narrative analysis; some cybersecurity and AI experience.

Weakness: While they claim expertise in cognitive warfare (a field that is less than ten years old, at least under that name), they don't provide evidence of prior work or knowledge.

Even related prior work is not discussed. It's not certain what their experience with cyber-technical attacks might be or the depth of their knowledge and understanding of the problem space.

Criteria C

Strength: Proposal provides some indication of commercial markets (finance, healthcare, etc.) that might be appropriate for commercialization of this effort.

Weakness: Offerers suggests that SPACECOM has shown an interest but doesn't provide any letters of support.