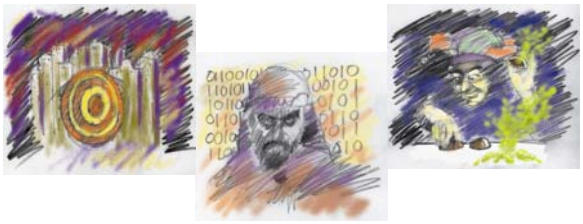

An Advanced Toolset for Preventing Terrorist Actions

Immediately after the terrorist attacks on September 11, 2001, the Advanced Concepts Group launched a study of possible technologies for the global war on Terrorism. Since then we have developed concepts for an advanced toolset for anticipating and detecting terrorist actions which has a strong correlation with the findings in the "Congressional Report: Joint Inquiry into Intelligence Community Activities before and after the Terrorist Attacks of September 11, 2001." The specific tools that we are exploring are described here briefly.

- One of the primary needs in improving our nation's ability to "connect the dots" is the ability to fit intelligence data to the proper models of terrorist behaviors. To meet this need we call for the creation of a national "red gaming" capability to generate and collect hypothetical scenarios. These scenarios and fragments of scenarios, at the level of hypothetical "observable" events, would be stored and manipulated by a compute engine to allow the continuous generation of more hypothetical scenarios. Finally, a tool which we call the **Hypothesizer** could be used by analysts to call on this engine to expand their view what might be unfolding and to help them to eliminate spurious "dots" inconsistent with reasonable scenarios.
- Our nation needs to develop deep and comprehensive knowledge of terrorism and make this knowledge accessible where it is needed, when it is needed, and in the form needed. To attain this goal, we propose the creation of a virtual community of terrorism experts, **KnowNet**, to share and create knowledge. Specifically this would involve the creation of a national or international network to provide insight on short and long-term terrorist-related issues using experts fed with high-grade source information and supported by an infrastructure that enables communication, analysis, and collaboration.
- We also need to improve our understanding of the factors and processes that lead to the emergence and persistence of terrorists. To meet this need we propose the development of a **computational psycho-social model** that allows us to play 'what if' games with interventions in the recruitment pipeline to identify those which will preclude the development of a group structure that will lead to violence.
- The best high performance team of machines and people need to be applied this situation. Currently we are observing humans in group situations involving high stress, high cognitive tasks using physiological monitors to look for signatures of high-performance collaborations. The goal is a **Mentor/Pal** system that could coach teams to reach high performance states.
- **SDAC** (Sense, Decide, Act, Communicate) systems will improve intelligence information. The key need is a network of SDAC devices that are highly capable, inexpensive, and can self organize into systems for detection and reaction.

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