PMESII Community of Interest Development to Support Planning
Statement of Work

1. Background. The Army Research Laboratory Human Research and Engineering Directorate Field Element at the Joint Forces Command (JFCOM) requires the capability to develop, maintain, analyze, and populate a website for networking PMESII (Political, Military, Economic, Social, Information, and Infrastructure) subject matter experts (SMEs) and associated PMESII technologies. The vision is to build a virtual network of SMEs and practitioners that can share expertise, tool sets, and technologies related to the research efforts in the Advanced Decision Architectures Collaborative Technology Alliance. The result will enable a Global PMESII Community of Interest (CoI) aka "whole of society" comprehensive approach. Specific to the US Government (USG), this network would assist in de-confliction of USG Policy and Engagement by enabling improved crisis response multi-dimensional planning.

2. Objective. The objective of this research is to develop the baseline infrastructure for a PMESII collaborator to support JFCOM's conduct of stability operations and to share information with international and USG agencies in order to support or lead reconstruction and stabilization efforts in the security, economic, infrastructure, rule of law, and governance sectors. This will improve collaboration and information sharing among stakeholders for the full spectrum of activities from development to crisis response. To facilitate this collaborative approach, a series of virtual workshops is needed to test the communication, goal-orientation, and consensus-gaining of the community in a virtual environment. Additionally, a scenario-based Limited Objective Experiment (LOE) will challenge the community with responding to real-world critical crises, enabling more effective and efficient collaboration and focusing on how operations will utilize the "whole of society" approach vs a "military only" solution. The Global PMESII CoI will require a collaborative capability to enable virtual cooperation, communication, and networking among its members in order to identify gaps/redundancies in existing research, tools, and processes relevant to PMESII analysis. This capability will serve as the community's primary workspace and as the primary reference point for those needing a "whole of society" answer to a problem. The tool must be inexpensive, easy-to-use, easily accessible to the majority of the community, and must be able to be installed and run in typical computing environments.

3. Scope of Work. In the performance of this task order, the contractor shall perform tasks as specified below:

3.1 Task 1. Virtual collaboration environment – A Collaborative capability is needed to enable virtual collaboration, communication, and networking among the PMESII community of interest (CoI). This capability is required as it will be the primary workspace of the community. It will also become the primary means for engagement by those having problems for which a "whole of society" answer is required. Ideas such as Second Life Grid or other collaboration platforms could be a viable solution but as this choice is made, the tool suite must be cost-effective, easy to use and download, and acceptable to the majority of the community.

3.1.1 Make use of a nominated representative virtual collaborative environment (VCE) to address the requirements, reporting on suitability and issues as they arise. Suitability and other issues to consider include collaborative requirements, especially,

> 1 Forging geographically dispersed teams
> 2 Sharing information and documents globally
> 3 Collaborating across time zones and physical locations
> 4 Sharing creation of and access to documents
> 5 Identifying and accessing external experts and resources
> 6 A virtual workplace with "easy-to-use" tools
> 7 Document repository
> 8 Management tools including calendaring/scheduling and task management
> 9 Lists and tables of rosters, tasks, community members, etc.
> 10 Communication tools including email, discussions, conferencing, VOIP, and voting

VCE requirements to consider in the establishment of a community use and interest include:

> 1 VCE must possess initial interest and motivation to lure first time users
> 2 VCE must possess the functionality to effectively facilitate collaboration to keep users and not drive them away in frustration

3.1.2 Support the initial collaboration protocol within the VCE

3.1.3 Provide virtual collaboration environment enhancements and maintenance

3.1.4 Provide a technical report on the implementation of the VCE with an emphasis on lessons learned and potential future directions for improvement.

3.2 Task 2. Virtual Iterative workshop series (VIWS): The idea of the virtual interactive workshop series is to develop tasks that will be of interest to the various individual specialties and as a multidisciplinary group. The experimentation will explore whether a diverse group with different backgrounds, motivations, and view points can focus on a goal, communicate in a virtual environment, and gain a consensus.

3.2.1 Tasks or topics to be developed will be from this list or similar:
3.2.1.1 Develop a charter for the working group using a wiki threaded approach.
3.2.1.2 Ask the community what tools would aid collaboration.
3.2.1.3 Prioritize and criticize the capability gap assessment.
3.2.1.4 Pick software (such as tools from the COMPOEX program) and try to integrate as a test-bed to have agent based, system dynamic, and serious gaming compliment each other.
3.2.1.5 Develop a methodology related to how it could be led/managed.

3.2.2 Establish the size and scope of each workshop

3.2.3 Identify workshop goals

3.2.4 Establish workshop schedule

3.2.5 Establish workshop series topics to be addressed

3.2.6 Ideas for research questions include:
3.2.6.1 Does collaboration within a virtual environment improve within a CoI over-time?
3.2.6.2 Are there core concepts which can be identified on which to support collaboration in a VCE?
3.2.6.3 What sorts of novel use of 3D virtual environments can be used to support the CoI?

3.3 Task 3. Scenario based LOE (Limited Objective Experiment): The idea behind the scenario-based Limited Objective Experiment is to stress the community with a representative real word critical emergency response problem. The problem must engage a diverse audience such as experts from the security, social science, humanitarian relief, training, logistics, policy, strategic engagement, and industry domains. While an experiment like this could be used by DoS, Industry, NGO's, or, multinational organization, this LOE will focus on how the intelligence, operations, and requirements cells within a Joint Task Force will access and engage such a community to come up with a "whole of society" approach to the problem vs. a military only solution. One approach may be to separate two "JTF" cells to assess the final solution, increase in communication, and/or type of people engaged.

3.3.1 Create or select the appropriate scenario.

3.3.2 Create the experimental design.

3.3.3 Ideas for research questions include:
3.3.3.1 Can the use of a virtual collaborative environment (VCE) enabled CoI improve the understanding of a current situation by participants?
3.3.3.2 If so, how does a VCE enabled CoI improve decision-making by the participants?

3.3.4 Provide a technical report on the outcome of the VIWS and the LOE with an emphasis on lessons learned and potential future directions for improvement of events and content within the VCE.

4. Travel. In performance of this task, it is anticipated that the contractor will travel as estimated below:

Location:	# of Trips	# of Individuals	# of days
Suffolk, VA	2 trips	2	6 days
Washington, DC	2 trips	2	6 days

5. Government Furnished Data/Property. ARL shall provide tools, available data, and points of contact as needed in support of these tasks.

6. Period of Performance. The contractor shall commence work on the date of award and conclude 10 months thereafter.

7. Deliverables.

7.1 All deliverables shall be submitted to the following Government personnel in hard copy or via electronic disk or secure communications only.

Dr. Jeff Hansberger
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COPY OF TRANSMITTAL DOCUMENTS ONLY:
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ATTN: AMSRD-ACC-R (Kevin Bassler)
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ATTN: AMSRD-ARL-HR-S (Dr. Laurel Allender)
Building 459
Aberdeen Proving Ground, MD 21005-5425
(410) 278-6233
e-mail: laurel.allender@us.army.mil

7.2 Progress Reports. The contractor shall prepare and submit in digital format (e-mail) progress reports, in contractor-selected format, on a quarterly basis. This report shall consist of technical progress, problems that occurred during the period of performance, and resolutions during that period, activities planned for the next reporting period for each of the tasks in section 3 of this SOW. The report shall include expenditures to date, remaining funds, and planned expenditures.

7.3 Technical Reports. The contractor shall prepare and submit in digital format (e-mail) technical reports, in a contractor-selected format, in conjunction with the requirements stipulated in section 3 of this SOW.

7.4 Software. The contractor shall deliver software in accordance with the requirements stipulated in section 3 of this SOW.

8.0 Security. This statement of work and the deliverables are unclassified. Distribution A, Public Release, applies.