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July 10, 1998
PL-008-98

To: Mr. Keith Englander
Director, BMDO/JNI

From: Frank Handler
LLNL/BMDO/POET

Subject: Proposed revisions to POET Study 98-5 Statement of Work

Mr. Reed of the DoD Inspector General Defense Criminal Investigative Service suggested, in a letter to you dated June 15, 1998 (attached), several modifications to the Statement of Work for POET Study 98-5 (PS98-5). In a subsequent letter to you dated June 29, 1998 (attached) Mr. Reed indicated that he believed the modifications proposed in his June 15 letter were acceptable for implementation. I write this note to state clearly that the POET study team will not incorporate the proposed modifications in our Statement of Work for the reasons described below.

PS98-5 will assess the ability of the baseline algorithm (BLA) to determine which object among a threat cloud is lethal given that the threat type is known for the case of typical expected threat sensor data and for the data obtained from IFT-1A, and we will compare the performance reported by TRW against our assessment of the performance. We can do this unambiguously in the time allowed once we obtain the relevant data.

Let me address the proposed modifications as numbered in Mr. Reed's June 15 letter.

1. Under SCOPE Mr. Reed proposed to modify the last sentence by the bold underlined text included in the following quote from the PS98-5 Statement of Work: "The POET evaluation will address the technical performance of the techniques as indicated by available data and as reported by TRW" **and NRC. The concept and performance of the Threat Typing Sensitivity Report (TTSSR 1995 and 1996) must comply without exception to the TRD.**
 - 1) With respect to the inclusion of information from NRC, we will treat any information supplied by NRC as available data (and inclusion of NRC generated information is covered by the words "available data" in the Statement of Work) but we do not intend to explicitly evaluate the information provided by NRC for accuracy and consistency as a part of our study, beyond the appropriate scientific scrutiny we give to any information we obtain. We do intend to provide an evaluation of the information provided by TRW and consequently distinguish such information explicitly in the Statement of Work from other information we may obtain. If judged as relevant and valid, data provided by NRC will be used to help our evaluation of TRW's baseline discrimination technology.
 - 2) Similarly, we will treat the TTSSR as available data but we do not intend to explicitly evaluate the information in the TTSSR for accuracy and consistency as a part of our study, beyond the appropriate scientific scrutiny we give to any information we

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obtain. We recognize that the concept of threat typing is important in overall National Missile Defense (NMD) system performance with significant impact on EKV discrimination performance and that such impact should be examined carefully in the context of overall NMD architecture planning and threat assessment as discussed below.

- 3) With respect to evaluation that any information "must comply without exception to the TRD," the POET study will not evaluate to what extent the BLA may be utilized to meet the general requirements described in the TRD beyond the ability to determine which object among a threat cloud is lethal given that the threat type is known as stated above. The allocation of requirements for threat typing, discrimination and target object map generation among the National Missile Defense (NMD) architecture elements is the responsibility of NMD Joint Program Office (JPO) working with the Lead System Integrator (LSI) and the relevant NMD element program offices. Such allocation is done in keeping with the evolving technologies being developed for NMD space based sensors, ground based sensors, battle management, communications, and weapon elements and the evolving assessment of the NMD threat. We do not intend to interpret what allocation of requirements among the elements may have been appropriate in the time frame and NMD architecture envisioned in the TRD. Such an allocation would require a threat and architectural assessment beyond the scope, time frame and authority of our effort, with little or no current NMD programmatic relevance. Consequently we will not evaluate to what extent the TTSSR would "comply without exception to the TRD." The POET evaluation will determine the fundamental performance of the BLA and as such may be used as a foundation for comparison with present or past requirements by organizations with a need for such comparisons.
2. Under Para 1.1 BACKGROUND, Mr. Reed proposed to add the text "The EKV must comply without exception to the TRD with or without the Target Object Map (TOM)." As discussed in 1.3) above, the POET team will not perform an interpretation of TRD requirements in the historical context of 1993 NMD architecture, which would be required to determine compliance without exception. Neither will we perform a similar interpretation of the requirements which are being evolved currently by the NMD JPO and the NMD LSI. As mentioned above, our evaluation will assess the fundamental ability of the BLA to discriminate and may assist a comparison of the performance of the BLA against such interpretations of requirements as may be done by others.
3. Under Para. 1.2 OBJECTIVE, Mr. Reed suggested a) adding the words "and do they comply without exception to the TRD" after the word "principles" in Task 1 and b) again adding the words "and do they comply without exception to the TRD" after the word "IFT1A" and c) stating that any evaluation of IFT3 data must also comply without exception to the TRD. As discussed above, the POET team will not perform the architecture and requirements interpretation needed to determine compliance without exception to the TRD as indicated in the proposed changes.
4. Under Para 2 TASKS, Mr. Reed suggested adding the words "and compliance without exception to the TRD." This modification will also not be incorporated into the Statement of Work for the reasons discussed above.

5. Under Para 2 Task 2, Mr. Reed suggested adding the words "and its compliance without exception to the TRD." This modification will also not be incorporated into the Statement of Work for the reasons discussed above.

F. A. Handler

Frank Handler
POET/LLNL Cadre Leader

Attachments:

1. Letter from Mr. Samuel W. Reed to Mr. Keith Englander, dated June 15, 1998.
2. Letter from Mr. Samuel W. Reed to Mr. Keith Englander, dated June 29, 1998.

copy to:

Mr. Scott Conwell - BMDO/JNE
John O'Sullivan - Aerospace/POET
Ming-je Tsai - MITLL/POET
Lawrence Ng - LLNLPOET
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