Form 442 Attachment for Section 4: Government Project Description
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# *Precision UHF Geolocation*

**1. Introduction**
This task will perform research and development to enable precision T/FDOA geolocation of Ultra-High Frequency (UHF) emitters through the development of a signal discriminator and the development of geolocation techniques that make use of this discriminator. Developments under this task can be used to enhance existing and emerging T/FDOA geolocation systems with an UHF geolocation capability.

**2. Background**
Conventional Direction Finding and Line-of Bearing (DF-LOB) techniques used to prosecute UHF signals of interests are accuracy limited and are very dependent on the range to target. Conversely, T/FDOA techniques are just as dependent on emitter range, but can provide precision geolocation positions. Knowledge of line-of-site to an UHF emitter would allow for highly precise T/FDOA geolocation.

**3. Task Description**
The specific tasks to be performed as part of the Precision UHF Geolocation Project are listed below.

3.1 This task will focus on the development and testing of discriminator algorithms. These algorithms will be based on the following techniques: 1) T/FOA Measurement Consistency; and 2) Multi-Peak CAF Plane Processing. These algorithms will be implemented into mainline geolocation code of CCOP HITS.

3.2. Laboratory and ground tests will be conducted to support development, testing and analysis of the algorithms developed under 3.1. Additionally, ground tests will be conducted to demonstrate UHF DF-LOB geolocation capabilities utilizing HF, VHF, and UHF frequencies. Results will be analyzed and documented as part of the final technical report.

4. Contract:
Unclassified contract # 03-G-3300 Task Order 015

**5. Point. of Contact**
The Government POC for this work is Mr. Terry Sprague, SPAWARSYSCEN Charleston (843) 218-5721.

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