

CSM TRD 2007 08 01

Community Sensor Model (CSM)
Technical Requirements Document (TRD)
Appendix E
Example Statement of Objectives

1 August 2007
Version 2.A Revision

EXAMPLE STATEMENT OF OBJECTIVES

**For The
Community Sensor Models (CSM)
Developers**

Table of Contents

1.0	Scope.....	4
2.0	Requirements	4
3.0	Meetings.....	7
4.0	GFI:	7
5.0	CDRLs	7

1.0 Scope

This Statement of Objectives (SOO) outlines a plan for the Community Sensor Model (CSM) program (formerly known as the Tactical Sensor Model program) developers to deliver sensor models for integration into the Sensor Exploitation Tools (SETs). The goal of this program is to ensure that the Sensor Developers design, develop, verify and deliver sensor models in accordance with the CSM Technical Requirement Document (TRD) and appropriate appendices. The developer will support additional sensor model validation in accordance with the CSM TRD and CSM API

2.0 Requirements

The primary objective of the Community Sensor Model Program is to provide the Government and Industry with the capability to create and maintain sensor models for current and future sensors. The sensor models support Sensor Exploitation Tools (SETs) and other application tools that require a precise understanding of the image (data) and ground coordinate relationships. The objective of this task is to deliver a community sensor model that complies with the CSM TRD. The model shall calculate precise coordinate transformations within the constraints of the host system/platform. The specific objectives are as follows:

- 2.1 The Contractor shall design the sensor model to meet all requirements in the Technical Requirement Document (TRD), including appendices.
- 2.2 The Contractor shall comply with the appropriate security guides. (Director Central Intelligence Directive (DCID) 6/3 and Joint DODIIS / Cryptologic SCI Information Systems Security Standards (JDCSISS) in the safeguarding of all classified elements both internally and/or externally accessed. Each CSM will be designed such that it does not impede the ability of a SET to meet these requirements. (DI-MISC-80711A)
e.g. The Contractor will strive to meet the DCID 6/3 and JDCSISS security guides and as part of this effort and will review these guides and evaluate the compliance level of XXX software in meeting the security requirements. The Contractor shall provide a summary of where software is deemed not to meet the requirement.
- 2.3 The Contractor shall design and develop the Community sensor model as a dynamically linked (or loaded) library and shared object that does not require re-compilation of the SET. The Contractor shall design and develop the sensor model to support all operating systems and compilers documented in the TRD Appendix B.
- 2.4 The Contractor shall develop and provide a technical report detailing the software design information. (DI-MISC-80711A)

- 2.5 The Contractor shall develop and deliver an installation report for the sensor model. At a minimum, the report shall cover installation, setup and performance verification of the software. (DI-MISC-80711A)
- 2.6 The Contractor shall develop and deliver a technical report/documentation providing detailed information on the baseline performance, sensor model design, and error propagation for the sensor model. (DI-MISC-80711A)
- 2.7 The Contractor shall develop and deliver a detailed description of the model that provides the underlying equations and algorithms. (DI-MISC-80711A)
- 2.8 The Contractor shall develop, implement and deliver the sensor model (equation and algorithms) in MatLab, MathCad or similar environment. (This requirement can be tailored if the underlying sensor model implementation is proprietary.)
- 2.9 The contractor shall provide a minimum of 100 test points comparing sensor model results to ground truth, survey points, or points dropped on reference imagery. These test points should demonstrate image to ground, ground to image, and image loci transformations used in the sensor model verification and validation process. (If a MathCAD or MATLAB model is delivered, these test points should be calculated using both the math model as well as the software sensor model implementation.)
- 2.10 The Contractor shall perform and execute verification testing using government furnished imagery. The government shall have the option to witness the Formal Verification Testing. (DI-ATTS-80283B)
- 2.11 The Contractor shall use the Verification Test System (VTS) tool as the SET for all verification testing, and develop all test plans and procedures, including inputs and results, assuming VTS as the test interface. (DI-ATTS-80282B and DI-ATTS-80283B)
- 2.12 The Contract shall provide a test report that shall accompany the sensor model. (DI-IPSC-80283B)
- 2.13 The sensor model source and object code shall be delivered in CSM TRD appendix C specified format on compact disc. (An object code only delivery is acceptable if the sensor model implementation is proprietary.) If the sensor model is delivered with less than Government Unlimited Rights, clearly state the rights granted with this delivery and if necessary separately cost out the right for Government Unlimited Distribution of the Sensor Model.
- 2.14 The Contractor shall fill out and deliver a CSM Plugin Summary form.

- 2.15 The Government and the CSM VTS Prime Contractor will perform formal verification testing of the sensor model using the VTS after successful completion of Contractor testing and delivery of the sensor model. The Contractor shall provide technical support for this testing. (It is recommended the Government direct a specific level of support for supporting testing.) (DI-IPSC-80283B)
- 2.16 The Government will perform verification testing of the sensor model using a SET after the successful completion of testing of the sensor model with VTS at the Contractor's facility. This testing will take place at a location selected by the Government and will not require the Contractor to be present. Verification testing with a SET will take place the 2nd week after delivery of the sensor model verification testing. (DI-IPSC-80283B)
- 2.17 The Government will DD250 after successful completion of 2.14 and 2.15.
- 2.18 The Contractor shall provide management of the program cost, schedule, and technical performance and report progress to the government. In addition, the Contractor shall work with CSM Government and Contractor personnel on CSM Integrated Product Teams (IPT) as required. (DI-MGMT-80160A).
- 2.19 Contractor support will be required 30 days after the completion of Verification test at a location selected by the Government.

3.0 Meetings

- Sensor model development kickoff meeting: Contractors Facility.
- Technical Interchange Meeting: Government Program Office.
- Completion of sensor model meeting (Includes formal verification testing): Contractors Facility.
- Incorporation of sensor model into verification system: Prime Contractors Facility.

4.0 GFI:

CSM Technical Requirement Document
VTS Software
Sensor Imagery
CSM Plugin Summary Form

5.0 CDRLs

CONTRACT DATA REQUIREMENTS LIST		Contract No. _____	
1	Contract Title		
2	Contract Number		
3	Contract Date		
4	Contract Type		
5	Contract Description		
6	Contract Location		
7	Contract Value		
8	Contract Status		
9	Contract Start Date		
10	Contract End Date		
11	Contract Manager		
12	Contract Officer		
13	Contract Reference		
14	Contract Notes		
15	Contract Attachments		
16	Contract Documents		
17	Contract Specifications		
18	Contract Drawings		
19	Contract Schedule		
20	Contract Budget		
21	Contract Risk		
22	Contract Compliance		
23	Contract Security		
24	Contract Privacy		
25	Contract Accessibility		
26	Contract Sustainability		
27	Contract Innovation		
28	Contract Digitalization		
29	Contract Automation		
30	Contract Optimization		
31	Contract Performance		
32	Contract Quality		
33	Contract Safety		
34	Contract Health		
35	Contract Environment		
36	Contract Society		
37	Contract Culture		
38	Contract Values		
39	Contract Ethics		
40	Contract Integrity		
41	Contract Transparency		
42	Contract Accountability		
43	Contract Responsibility		
44	Contract Commitment		
45	Contract Partnership		
46	Contract Collaboration		
47	Contract Innovation		
48	Contract Leadership		
49	Contract Vision		
50	Contract Strategy		
51	Contract Planning		
52	Contract Execution		
53	Contract Monitoring		
54	Contract Evaluation		
55	Contract Improvement		
56	Contract Success		
57	Contract Satisfaction		
58	Contract Loyalty		
59	Contract Trust		
60	Contract Respect		
61	Contract Dignity		
62	Contract Freedom		
63	Contract Justice		
64	Contract Equity		
65	Contract Fairness		
66	Contract Honesty		
67	Contract Integrity		
68	Contract Credibility		
69	Contract Reliability		
70	Contract Consistency		
71	Contract Clarity		
72	Contract Simplicity		
73	Contract Efficiency		
74	Contract Effectiveness		
75	Contract Impact		
76	Contract Legacy		
77	Contract Reputation		
78	Contract Image		
79	Contract Brand		
80	Contract Identity		
81	Contract Voice		
82	Contract Message		
83	Contract Story		
84	Contract Experience		
85	Contract Journey		
86	Contract Path		
87	Contract Direction		
88	Contract Focus		
89	Contract Priority		
90	Contract Importance		
91	Contract Urgency		
92	Contract Timeliness		
93	Contract Accuracy		
94	Contract Precision		
95	Contract Detail		
96	Contract Thoroughness		
97	Contract Completeness		
98	Contract Finality		
99	Contract Closure		
100	Contract Resolution		