

# Community Sensor Model Working Group

# CHARTER

Version 1.0



23 November 2005

Established to serve the:  
Imagery Focus Group  
Geospatial Intelligence Standards Working Group (GWG)  
Information Technology Standards Committee (ITSC)

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## **SECTION 1: PURPOSE**

In accordance with Section 5: References, paragraphs a and b, this Charter establishes the Community Sensor Model Working Group (CSMWG) as a Department of Defense / Intelligence Community / National System for Geospatial-Intelligence (DoD/IC/NSG) collaborative environment to support a coordinated community approach for the development, verification, validation, maintenance, and configuration management of sensor models. The group will serve as Subject Matter Experts (SMEs) and advisory body to the National Geospatial-Intelligence Agency's (NGA) National Center for Geospatial Intelligence Standards (NCGIS) and as a focus group of the Geospatial Intelligence (GEOINT) Standards Working Group (GWG) with the scope, mission, organization, functions, responsibilities, and procedures outlined below.

## **SECTION 2: MISSION**

The CSMWG is the technical focal point for sensor model-related standardization activities within the GEOINT community. Therefore, the CSMWG will ensure all sensor models identified and designated to support NSG geopositioning services, production and applications are based upon and compliant with open, consensus-based community standards, and ensure that compliant sensor models are usable by multiple applications across the NSG. The promulgation of a Technical Requirements Document (TRD) and attendant appendices is a direct expression of the CSMWG mission and serves as the master baseline standardization document prepared and managed by the CSMWG.

## **SECTION 3: BACKGROUND**

The DoD requires sensor models as a critical prerequisite for the entire range of current and projected future geopositioning products, services, and applications. A sensor model defines the transformation between objects, or real world coordinates of a point and its associated location in an image. The term 'Sensor Model' as used within this Charter is defined as having three characteristics: ability to mathematically transform from image space to ground space and vice versa; the ability to perform rigorous error propagation; and the ability to adjust the values of its sensor model parameters. NGA and the Air Force currently provide Subject Matter Experts (SMEs) (Government and contractors) in support of the Tactical Sensor Model (TSM) Program (TSMP), the Joint Targeting Workstation (JTW), the TSM Configuration Control Board (CCB), and the development of a Community Sensor Model (CSM) standard.

## **SECTION 4: SCOPE**

The scope of the CSMWG is:

- a) According to DoD Directive (DoDD) 5105.60, reference 5.c., which established the National Geospatial-Intelligence Agency (NGA); the NGA "...shall provide timely, relevant, and accurate imagery, imagery intelligence, and geospatial information in support of the national security objectives of the United States"; and "Prescribe and mandate standards and end-to-end technical architectures related to imagery, imagery intelligence, and geospatial information for the DoD Components and for the non-DoD elements of the Intelligence Community, "...to include:
  - i) "Standards for end-to-end architectures related to imagery, imagery intelligence, and geospatial information."
  - ii) "Technical guidance and direction to all the DoD Components and the non-DoD members of the Intelligence Community regarding standardization and interoperability of systems requiring geospatial information or imagery support," and "for exploitation and dissemination of imagery and imagery intelligence products and geospatial information."

- iii) "Develop policies and provide DoD participation in national and international imagery, imagery intelligence, and geospatial information activities..."
- b) Participation in the CSMWG is open to all DoD and IC organizations, Federal and civil agencies, coalition partners, academic institutions, and commercial organizations that standardize, produce or use sensor models. The CSMWG serves as a technical advisory body to the GWG regarding sensor model standards and attendant standardization activities, responding to the inquiries, tasks, and direction of the GWG to review standardization issues, providing salient technical information, and formulating recommendations for consideration by the GWG. The CSMWG monitors and participates in national, coalition and international standards organizations and activities to promote the standardization interests and objectives of the NSG. The CSMWG coordinates its activities with other forums within the GWG's Imagery Focus Group (Motion Imagery Standards Board (MISB) and National Imagery Transmission Format Standard (NITFS) Technical Board (NTB)), the other focus groups under the GWG, and with other Information Technology Standards Committee (ITSC) technical working groups.

## **SECTION 5: REFERENCES**

The CSMWG works under the guidelines provided by the following references:

- a) Memorandum of Agreement Between the National Geospatial-Intelligence Agency, the US Air Force, the US Navy, the US Army and the US Special Operations Command Regarding Sensor Model Development and Configuration Management
- b) Geospatial Intelligence Standards Working Group (GWG) Charter, 1 March 2005
- c) DoD Directive (DoDD), 5105.60, "National Imagery and Mapping Agency (NIMA)", 11 October 1996
- d) Geospatial Intelligence Standards Working Group (GWG) Standard Operating Procedures (SOP) as supplemented by the CSMWG
- e) DoD 4120.24-M, "Defense Standardization Program (DSP) Policies and Procedures," 9 March 2000.
- f) Draft DoD Standard Operating Procedure for the Information Technology Standards Committee (ITSC), IT Subcommittee Chairs (ISCs) and Technical Working Groups (TWGs), 16 May 2005

## **SECTION 6: FUNCTIONS AND RESPONSIBILITIES**

The CSMWG:

- a) Manages and coordinates the requirements-based CSM Standardization Program on behalf of the community.
- b) Develops and maintains a CSM Configuration Management (CM) Program (CMP) for the development, verification, validation, maintenance, and configuration management of sensor models.
  - i) The Community Sensor Model CMP Management Plan describes management procedures and processes for the Configuration Management Program, and it is reviewed and updated annually.
  - ii) The Configuration Control Board (CCB) reviews and recommends approval (or rejection) of all proposed Software Performance Reports (SPR) related to changes/enhancements to the TRD baseline.

- iii) The Verification and Validation subgroup provides management oversight for verification testing (to ensure sensor models are compliant with TRD baseline) and validation testing (to ensure proper functionality and performance) in a generic operationally-representative implementation.
- c) Promulgates and maintains standardization document baselines necessary for the DoD and Other Government Agencies (OGAs) to create and maintain sensor models for current and future sensors.
- d) Encourages photogrammetric rigor in the development, testing, and implementation of sensor models by leveraging the photogrammetric expertise resident within the CSMWG to maintain active representation and engagement in the commercial development arena.
- e) Functions as a chartered focus group of the GWG responsible for developing, verifying, and managing all sensor model standards within the DoD Information Technology (IT) Standards Registry (DISR).
  - i) Provides SMEs and serves as an advisory body to the NCGIS and GWG.
  - ii) Tracks compliance with the CSM standard and addresses implementation and performance issues across the community.
- f) Aligns its management structure to mirror the GWG management structure, follows operating procedures that are consistent with overarching GWG standard operating procedures.

## **SECTION 7: ORGANIZATION**

The CSMWG consists of:

- a) CSMWG Chair:
  - i) The CSMWG Chair is appointed by the GWG Chair. The Chair is responsible for overseeing and managing all CSMWG business to ensure it is conducted in a fair and open manner, and that sensor model community interests are represented accurately and faithfully to the NCGIS and GWG.
  - ii) The Chair's responsibilities, authorities, and functions include, but are not limited to:
    - (1) Represents the CSMWG at all meetings of the GWG and other related forums as required.
    - (2) Establishes and oversees Standing and Ad Hoc subgroups that conduct specific tasks or performs special studies in support of the CSMWG. Each subgroup has a Chair who reports to the CSMWG Chair. Subgroup Chairs are nominated by simple majority vote of the subgroup members. The nomination for subgroup Chair is forwarded in writing to the CSMWG Chair, who approves the nomination and documents the assignment of that nominee, or rejects the nomination in writing and provides reason(s) for the rejection to the charter subgroup membership. Chairs for Standing subgroups must be Core or Associate members (see Section 7c below). Ad Hoc subgroup Chairs may be assigned from any category of CSMWG membership, including Core and Associate Members, as well as Invited Guests and Other Interested Parties, as appropriate. Any CSMWG member, Invited Guest or Other Interested Party may serve on Standing or Ad Hoc subgroups. CSMWG Standing subgroups may include:
      - (a) Management Subgroup
      - (b) Configuration Control Board Subgroup
      - (c) Verification and Validation Subgroup

- (d) Requirements and Compliancy Subgroup
- (e) Future Technologies Subgroup
- (f) Services Subgroup
- (g) Test Data Subgroup
- (3) Maintains close communication and coordination with the GWG Chair and the GWG Standing and Ad Hoc working groups having interest in the activities of the CSMWG.
- (4) Coordinates Secretariat and other administrative support for the CSMWG and any CSMWG Standing or Ad Hoc subgroup.
- (5) Coordinates the agenda for CSMWG meetings, coordinates CSMWG and subgroup work, and ensures prompt and efficient conduct of all CSMWG business.
- (6) Serves as meeting lead, encourages consensus-building and teamwork among CSMWG membership.
- (7) Serves as Current Document Change Authority (CDCA) in accepting or rejecting recommended changes to the TRD or API baseline submitted by the CCB, and ensures integrity of Configuration Management Program.
- (8) Ensures that the CSMWG works within the framework described in the SOP for the Information Technology Standards Committee (ITSC), IT Subcommittee Chairs (ISCs) and Technical Working Groups (TWGs) as well as the GWG SOP.
- (9) Assigns an Alternate Chair (normally another Core Member), to act in the Chair's absence or on the Chair's behalf, as required or assigned by the Chair.
- b) CSMWG Secretariat: The Secretariat responsibilities encompass, but are not limited to the administrative tasks listed below. Conduct of these administrative tasks is supported by all the Core and Associate Members as required.
  - i) Supports the CSMWG Chair and general membership in executing the group's responsibilities, goals, and objectives.
  - ii) Assists the Chair in planning, coordinating, scheduling, and announcing all meetings of the group.
  - iii) Records and distributes meeting minutes and attendance lists for all CSMWG Standing and Ad Hoc Meetings and subgroup meetings.
  - iv) Documents all action items resulting from CSMWG Standing and Ad Hoc meetings and subgroup meetings, including status, disposition, organization/office of primary responsibility and suspense dates.
  - v) Maintains records documenting CSMWG and DISR Change Request (CR) findings, recommendations and decisions.
  - vi) Maintains control and configuration management of CSMWG documents, including this charter, all SOPs, and other documents developed by the group, such as abstracts, white papers, background papers, items of interest, decision/issue papers, etc.
  - vii) Facilitates effective group communications by maintaining web site(s), e-mail reflector lists, etc.
- c) CSMWG Members:
  - i) Core Members



- (1) The Memorandum of Agreement (MOA) (reference a), formalizes the cooperative relationship between Core Member organizations for the development, verification, validation, maintenance, and configuration management of sensor models. The MOA will be reviewed annually, revised as necessary, coordinated, and staffed within each respective Core member's organization.
  - (2) Core members appoint and designate in writing to the CSMWG Chair, a primary and alternate representative to the CSMWG.
- ii) Associate Members:
- (1) Associate members are government agencies, contractor or industry organizations, or academic institutions whose participation is important to advancing the goals of the CSMWG, and whose expertise and interest in sensor model development, testing and/or implementation brings a broader perspective to the CSMWG. Active and consistent participation by Associate membership is crucial to the success of the CSMWG in accomplishing its mission.
  - (2) Representatives from commercial industry and/or academic institutions, when acting in direct support of a member organization, and/or by invitation by any of the Core Members may become Associate members of the CSMWG.
- iii) Invited Guests and Other Interested Parties: Invited guest are experts, representatives from academia or other individuals who the CSMWG may require from time to time to attend meetings as presenters, advisors or observers because of their unique knowledge or expertise in a particular subject area. Other interested parties are government agencies or commercial entities or organizations who have an interest in CSMWG activities but who seek neither Core nor Associate membership status in the CSMWG. Such organizations are welcome and encouraged to participate, as they provide valuable perspective on issues before the CSMWG, and provide a broader base upon which to develop improved cooperation and interoperability across the community. Invited guests and other interested parties must be sponsored by a Core or Associate member.

## **SECTION 8: OPERATIONS**

The CSMWG functions and operates as an advisory body to the NCGIS and as a GWG Focus Group. As such, the group aligns with the GWG management structure and follows GWG standard operating procedures and CSMWG supplements thereto. In addition, the CSMWG participates under the direction and guidance of the NCGIS, to effect all required community coordination and comment resolution upon new or revised sensor model standards in accordance with published DSP policy and guidance.

- a) Meetings:
- i) Scheduling of Meetings: The CSMWG meets at such times and places as determined by the Chair.
  - ii) Standing Meetings: The CSMWG convenes standing meetings at least semi-annually, and more frequently as needed. The Chair publishes and distributes the standing meeting schedule at the beginning of each calendar year and provides updates as needed throughout the year.
  - iii) Ad Hoc Meetings: Additional meetings may be scheduled by the Chair as necessary to address urgent issues. Additional meetings also may be requested by any Core or Associate member to address crisis or other urgent issues. Requests for scheduling Ad Hoc meetings will be made to the Chair or the Secretariat.
  - iv) Meeting Facilities: To encourage active participation by all members and invited guests, all CSMWG meetings are held in facilities that can accommodate members

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who may have special accessibility needs. In addition, all meetings are conducted at the UNCLASSIFIED level if possible, in facilities that can accommodate unclassified individuals. Ideally, facilities chosen for CSMWG meetings also accommodate classified sidebar discussions, if needed.

- b) Member Participation:
  - i) Consistent, active participation and representation is required from all Core and Associate members. Core and Associate member organization representatives are expected to attend all standing meetings. If both the principal and alternate representatives are unable to attend, an appropriate replacement must be assigned. This replacement must be well-informed and empowered to act with the full authority of the principal or alternate, including being informed and empowered to present his/her organization's official position(s) and to participate fully in the CSMWG forum as a legitimate representative of the Core or Associate member's organization.
  - ii) Member representatives or their designated replacements routinely are assigned action items to be completed within an acceptable time period determined by the Chair or appropriate subgroup Chair. Member representatives routinely expend additional effort outside the formal group meetings to perform the work required to complete the action items that are assigned to them.
  - iii) Member representatives track and provide status on action items assigned to them during each regularly-scheduled CSMWG or subgroup meeting. Action item reviews are a normal part of CSMWG and subgroup meeting agendas. Members may call upon supporting staff members to respond to an action item or to attend regularly-scheduled group meetings to report progress on the resolution of action items.
- c) Issue Identification and Resolution: Issues, agenda items, and future discussion items may be raised or proposed by any Core or Associate member to the Chair or Secretariat. The Chair ensures that new items are placed on the agenda for the next scheduled standing meeting as appropriate. If an urgent issue that requires immediate attention arises between standing meetings, the Chair schedules and announces an Ad Hoc Meeting as soon as practicable.
- d) Recommendation and Decision Process:
  - i) All formal recommendations to the Chair are reached after discussion among the general membership and a simple majority vote by the Core Membership of the CSMWG.
  - ii) The Chair accepts or rejects recommendations and acts upon them accordingly, or remands the recommendation back to the Core membership for further consideration and/or revision.

Dissenting voters may submit a written declaration to the Chair, in the form of an issue paper, describing the dissenting view and providing rationale for that view. The Chair attempts to reach consensus among the disagreeing parties by reviewing the original rationale for the recommendation, scheduling further discussions, and gathering additional information before making a final decision on the matter. In rare cases, the Chair elevates the issue to the GWG for consideration and decision.

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**APPENDIX A: Memorandum of Agreement Between the National Geospatial-Intelligence Agency (NGA), the US Air Force, the US Navy, the US Army, and the US Special Operations Command Regarding Sensor Model Development and Configuration Management**

**Memorandum of Agreement  
Between the National Geospatial-Intelligence Agency (NGA),  
the US Air Force,  
the US Navy,  
the US Army,  
and the US Special Operations Command  
Regarding Sensor Model Development and Configuration Management**

**1. Purpose.** The vision for this MOA and collaboration is to ensure that sensor models and applications that use them are built in accordance with community standards. The Director, NGA is charged with prescribing and mandating standards and end-to-end technical architectures related to imagery, imagery intelligence, and geospatial information for the Department of Defense (DoD) Components and for non-DoD elements of the Intelligence Community (IC).<sup>1</sup> Thus, this Memorandum of Agreement (MOA) establishes a collaborative environment to support a multi-Service and NGA approach for the development, verification, validation, maintenance, and configuration management of the Community Sensor Model Standard (CSMS) for the purpose of geopositioning.

**2. Background.** The Services, Civil and Federal Agencies, Coalition Partners, and commercial organizations build and operate hundreds of satellite and airborne intelligence, surveillance, and reconnaissance (ISR) collectors that collect data to support the needs and requirements of the Intelligence Community (IC), warfighters, and homeland defense operations. Government and commercial organizations develop applications that use the collected data. Chief among these requirements is the capability to perform precision geopositioning off of collected data in a real-time netcentric operational environment. Sensor models are a critical prerequisite to support geopositioning capabilities. Standardizing the sensor models and applications and making them “plug and play” enables support of these numerous collectors in real time netcentric operations. In November 2001, the US Air Force (USAF) received approval to initiate a program to develop “plug-and-play” sensor models for each of the airborne imaging sensors in their inventory. Designated the *Tactical Sensor Model Standard* (TSMS) program, this initiative included development of Sensor Model Technical Requirements Document (TRD), an Application Program Interface (API) and Test Technical Requirements Document (TTRD). Working with the Air Force’s TSMS program office, NGA successfully demonstrated the TSMS initiative of a plug-and-play capability by transitioning their Sensor Model Factory (SMF) sensor models, which exist in the Joint Targeting Workstation (JTW), to community “plug-and-play” sensor model standard. Therefore to enable plug-and-play use, support geopositioning of and integrate the multitude of ISR collectors across various organizations in a real-time netcentric environment, this MOA 1) changes the lead from the USAF to NGA in 2006, 2) formalizes the cooperative relationship between the USAF and NGA efforts for the development, verification, validation, maintenance, and configuration management of sensor models and applications, 3) expands TSMS and renames it as the CSMS in order to address more collectors and include other organizations, e.g. the Army, Navy, and US Special Operations Command, 4) changes the name from the TSMWG to Community Sensor Model Working Group (CSMWG), and 5) ultimately intends to include collectors other than airborne.

**3. Shared Responsibilities, all signatories shall:**

- a. Appoint an O-5 or civilian equivalent to serve as a voting member of the CSMWG.
- b. Develop and execute a CSMWG Charter.
- c. Fund and budget for those positions identified in the CSMWG Charter relating to their respective organizations (e.g., CSM voting member, Subject Matter Experts).

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<sup>1</sup> See Department of Defense Directive 5105.60, paragraph 6.10, which may be found at <http://www.dtic.mil/whs/directives/corres/pdf2/d510560p.pdf>

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- d. Be responsible for supporting the CSMWG with respect to national, Department of Defense, commercial, federal and coalition overhead and airborne sensors.

**4. Under this agreement, NGA shall:**

- a. Establish a CSMWG under the Geospatial Intelligence Standards Working Group (GWG) and appoint an O-5 or civilian equivalent to serve as the chairman. (OPR: NGA/OGMT/NCGIS<sup>2</sup>)
- b. With the USAF, develop a transition plan (to include schedule, budget, etc) that identifies those portions of the TSM, JTW and other sensor model standard activities that will transition to the CSMWG. (OPR: NGA/ASI, OCR: NGA/OGMT/NCGIS)

**5. Under this agreement, the USAF shall:**

- a. With NGA, develop a transition plan (to include schedule, budget, etc) that identifies those portions of the TSM, JTW and other sensor model standard activities that will transition to the CSMWG. (OPR: HQ USAF/XOIR)
- b. Establish and manage a repository of tactical sensor models; and, develop and implement repeatable processes to make them available to appropriate and authorized government representatives through June 2007.

**6. The CSMWG shall be responsible for the following:**

- a. Serve as Subject Matter Experts (SME) and advisory body to NGA/OGMT/NCGIS
- b. Function as a chartered focus group of the Geospatial Intelligence Standards Working Group (GWG) responsible for developing, verifying, and managing all sensor model standards within the DoD IT Standards Registry (DISR).
- c. Promulgation and maintenance of a Technical Requirements Document (TRD) and attendant appendices.

**7. Effective Dates and Periodic Review.**

- a. This document is effective on the date signed by the last approving official.
- b. This document will be reviewed at a minimum every two years after the date of the last signatory. During review, all parties will determine the agreements continued adequacy and acceptability. Signers of this MOA may initiate discussions to recommend modifications to this MOA and/or supplemental documents at any time. This agreement may be reviewed and updated at any time with mutual consent of the parties. Any disputes or issues that arise from the implementation of this MOA may be raised to NGA/OGMT and/or the NGA Geospatial Intelligence Council for resolution.

**8. Authority.**

- a. Department of Defense Directive 5105.60, National Imagery and Mapping Agency, 11 October 1996.
- b. Department of Defense Instruction 4000.19, Interservice and Intragovernmental Support, 9 August 1995.
- c. Charter, Geospatial Intelligence Standards Working Group (GWG), 1 March 2005

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<sup>2</sup> NCGIS – National Center for Geospatial Intelligence Standards; Center established at NIMA (now NGA) in September 2002. Headed by the Director, NCGIS, an NGA employee.

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**APPENDIX B: Transition Plan for the Transfer of Management of the Community Sensor Model Working Group (CSMWG) from the United States Air Force to the National Geospatial-Intelligence Agency**



**TRANSITION PLAN**  
**FOR THE TRANSFER OF MANAGEMENT**  
**OF THE COMMUNITY SENSOR MODEL (CSM) WORKING GROUP**  
**FROM ASC RSW/SDLGSSS/TY TO NGA**

1. INTRODUCTION

Sensor Models are a critical prerequisite for the entire range of current and future geopositioning products, services, and applications required by the Department of Defense (DoD). The National Geospatial-Intelligence Agency (NGA) and the United States Air Force (USAF) currently provide subject matter experts (Government and contractors) in support of the Tactical Sensor Model (TSM) Program (TSMP), the Joint Target Workstation (JTW), the TSM Configuration Control Board (CCB) and the development of a community sensor model standard. The CSMWG has the goal of starting the transition of the appropriate portion of these activities under the CSMWG no later than December 2005 with a goal of completing transition (including budgetary responsibility) by June 2007.

2. OBJECTIVE

The objective of this transition plan is to ensure an orderly transition of USAF CSM responsibilities to NGA.

3. ASSUMPTIONS

- 3.1. NGA and USAF will continue to work in close coordination to avoid duplication of efforts.
- 3.2. Transfer of management responsibilities will not involve the oversight or execution of any currently contracted projects or future contracted efforts to build CSMs – Additionally, all current and future sensor model developments are to be funded by the owner (Service or Agency) of the sensor program office.
- 3.3. There will be no transfer of funding from USAF to NGA. The USAF will ensure the CSMWG efforts are funded until NGA funding is in place.
  - 3.3.1. NGA will plan and fund for verification and validation of six sensor models per year. Verification and Validation (V&V) may be conducted on additional models provided that the Services and NGA have coordinated on programmatics, manning, and funding.
- 3.4. NGA will meet the timelines specified below. Should NGA be ready to assume control of certain tasks prior to the expected transition date, the USAF will immediately consider transfer of that function.

#### 4. FUNCTIONS TO BE TRANSFERRED TO NGA

The following tasks will be transferred to NGA but do not represent an all-inclusive list of tasks involved with each function. NGA may need to perform additional functions not cited below in order for the CSM WG to function effectively. Further details on the nature of each task below will be contained in the CSM WG Charter.

##### 4.1. Future Requirements

4.1.1. The USAF will transfer the responsibility of future requirements research to NGA by January 2006 including the following tasks.

4.1.1.1. Through appropriate AF organization, discuss with program offices, their plans for the next 3-10 years

4.1.1.2. Survey any work being done by Universities and Industry partners

4.1.1.3. Analyze research results for potential requirements changes to the TRD

4.1.1.4. Submit potential new requirements to the ERB for evaluation of the requirement and feasibility of implementation

##### 4.2. Administration of the CSM Community of Practice (COP)

4.2.1. The USAF will assign administrator privileges to a designated NGA POC, who will assume the responsibility for the following tasks no later than 21 March 2006. Transfer of this responsibility will begin 1 October, 2005

4.2.1.1. Adding and deleting members as required

4.2.1.2. Posting/updating of CSM and associated information to the COP

4.2.1.3. Posting of meeting announcements to the COP

##### 4.3. Configuration Control Board (CCB)

4.3.1. The USAF will transfer the CCB process including the following tasks to NGA by June 2006.

4.3.1.1. Schedule bi-annual CCB meetings

4.3.1.2. Schedule CCB telecons on an as required basis

4.3.1.3. Chair the CCB meetings and conduct voting on changes to the TRD

4.3.1.4. Select and approve CCB members both voting and non-voting support

4.3.2. The USAF will transfer management of the configuration control process of the Technical Requirements Document (TRD) including the following tasks to NGA by June 2006.

4.3.2.1. Control the TRD and associated documents

4.3.2.2. Ensure changes once approved by the CCB are inserted in the appropriate document (as approved by the board)

4.3.2.3. Determining signature authority for the TRD and ensure that the document is formally approved/signed after changes have been made

- 4.3.2.4. Ensure that new versions of the TRD are submitted to the GWG Standards process to update the currently approved version

#### 4.4. Engineering Review Board (ERB)

- 4.4.1. The USAF will transfer responsibility for managing an ERB including the following tasks to NGA by June 2006
  - 4.4.1.1. Select a chair and appoint members of the ERB
  - 4.4.1.2. Maintain a contract vehicle with industry partners to provide technical reviews and evaluation in support of the ERB (Currently BAE, Harris, and Northrop Grumman)
  - 4.4.1.3. Conduct analysis and evaluation of future requirements and write up proposed changes for CCB vote

#### 4.5. Verification Testing

- 4.5.1. The USAF will transfer to NGA the responsibility to update, maintain, and test the Verification Test System (VTS) software as well as conduct VTS testing on sensor models once developed to ensure compliance with the TRD. Tasks include the following and will be transferred by June 2006.
  - 4.5.1.1. Update the VTS software after changes to the TRD
  - 4.5.1.2. Test the VTS software to ensure compliance to the TRD/API/TTRD
  - 4.5.1.3. Testing of sensor model compliance to the TRD using the VTS and a Sensor Exploitation Tool (SET) (i.e., RainDrop)

#### 4.6. Sensor Model Repository

- 4.6.1. The USAF will transfer responsibility for maintaining a sensor model repository to NGA by end of CY 2007
  - 4.6.1.1. This repository would maintain copies of all sensor models developed by NGA and the Services
  - 4.6.1.2. Disseminate sensor models to developers and programs once requirement for sensor models has been established

### 5. SCHEDULE

- 5.1. October 2005 – March 2006: NGA assumes administration of the USAF Community of Practice website
- 5.2. January 2006 – NGA assumes responsibility for analyzing and identifying future requirements
- 5.3. June 2006 – NGA assumes control/stand up of the administration of the CSM CCB process
- 5.4. June 2006 – NGA assumes control/stand up of the configuration management of the CMS TRD
- 5.5. June 2006 – NGA will assume control/stand up of the Engineering Review Board

5.6. June 2006 – NGA will assume control/stand up of Verification and Validation testing

5.7. June 2007 – NGA will assume control/stand up a sensor model repository

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**APPENDIX C: LIST OF ACRONYMS**

API	Application Program Interface
CCB	Configuration Control Board
CDCA	Current Document Change Authority
CM	Configuration Management
CMP	Configuration Management Program
CR	Change Request
CSM	Community Sensor Model
CSMWG	Community Sensor Model Working Group
DoD	Department of Defense
DoDD	Department of Defense Directive
DSP	Defense Standardization Program
GEOINT	Geospatial Intelligence
GWG	Geospatial Intelligence Standards Working Group
IC	Intelligence Community
ITSC	Information Technology Standards Committee
JTW	Joint Targeting Workstation
MOA	Memorandum of Agreement
NCGIS	National Center for Geospatial Intelligence Standards
NGA	National Geospatial-Intelligence Agency
NIMA	National Imagery and Mapping Agency
NSG	National System for Geospatial-Intelligence
OGA	Other Government Agency
SME	Subject Matter Expert
SOP	Standard Operating Procedure
SPR	Software Performance Reports
TRD	Technical Requirements Document
TSM	Tactical Sensor Model
TSMP	Tactical Sensor Model Program
TWG	Technical Working Group