# INCOSE Global Earth Observation System of Systems (GEOSS) Working Group Charter

## 1 PURPOSE

Briefly define the purpose of this Working Group (WG) or Initiative. (Note: An Initiative is defined as an effort that is sponsored directly by INCOSE corporate leadership or INCOSE Chapter and does not otherwise fall under an INCOSE WG. "INCOSE WG" applies to WG's that are formally chartered by INCOSE Technical Operations.)

This section should include the reason for initiating this effort: problem, issue or opportunity it will address and how this effort aligns with the goals/strategic aims of INCOSE.

## 2 GOAL

The Goal of the GEOSS Working group is to provide all of the required views specified by the RM-ODP standard, for each of the societal benefits areas and each of their scenarios. The RMP-ODP views to be provided are the Enterprise, Information, Computational, Engineering and Technical views.

## 3 SCOPE

The GEOSS Unified Modeling team engineering effort provides the depiction of all of the

The Reference Model of the Open Distributed Processing (RM-ODP) viewpoint using the

Unified Modeling and System Modeling Language as the syntax. This is done by expressing each scenario of each GEOSS Societal Benefit Area in five viewpoints as described in ISO/IEC

ISO/IEC 19793 1996 Part 3 Reference Model ODP Architecture and description *ISO/IEC 10746*

Skills and expertise required:

Define the skills and expertise that will be required for success.

Skills required include experience in developing RM-ODP viewpoints using the UML and SysML syntax. Lead system engineer must have 10 years of experience in use of UML and SysML syntax. Other system engineers must have a minimum of two years of experience in same areas as above.

Number of System Engineers required includes:

Two Senior with 5-10 years experience using UML/SysML and building solution architectures for Open Distributed Processing systems.

Three Mid -Level System Engineers with 3-5 years of experience using UML/SysML and building Solution Architectures for Open Distributed Processing systems.

There are currently no gaps and all positions are being filled by INCOSE members

## 4 MEMBERS, ROLES AND RESPONSIBILITIES

List the names of members and briefly describe their responsibilities.

Working Group Chair: Lawrence E. McGovern, DSC

Responsibilities

The lead shall be responsible for status reporting to Model based System Engineering Group Chair.

Members

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|---|---|
| INCOSE Representative: | Lawrence McGovern, Blue Heron Services |
| Architecture and Data Committee Representative: | Lawrence McGovern, Blue Heron Services |
| User Interface Committee Representative: | Lawrence McGovern, Blue Heron Services |
| Team Members: | Matt Sheranko, Blue Heron Services<br>Tom Powell, Blue Heron Services<br>William Conner, Blue Heron Services |

## 5 OUTCOMES (PRODUCTS/SERVICES)

Joined GEO as a participating organization in 2005.

Have completed inputs to Architecture Implementation Plan (AIP) 1, 2 and 3 and presented final reports. See attached report for AIP2.

Presented Engineering Final Report for AIP 2 to 80 Ministry representatives from their respective countries in Melbourne, Australia in September 2009.

Current tasking for AIP-3 includes updates to nine Societal Based (SBA) Area View Scenario Viewpoints for Enterprise, Information and Computational views and building of Engineering and Technical Viewpoints for all Nine SBA Scenarios. AIP-3 final report will be completed in April 2011 and be posted on this site.

INCOSE currently participates on the Architecture and Data Committee and the User Interface Committee of GEOSS and is responsible for the UML Architecture development which was recently modified to include SysML syntax diagrams

## 6 APPROACH

The Societal Benefit Area Teams have develops the individual scenarios and associated UML Use Cases. The GEOSS UML team develops the UML RM-ODP Architecture for each of the scenarios developed using five views of the ISO/IEC 19793 modeling concepts and structuring rules. These views are Enterprise, Information, Computational, Engineering and Technical.
The GEOSS Architecture Implementation Pilot (AIP) leads the incorporation of contributed components consistent with the GEOSS Architecture using a GEO Web Portal, WAF/CSW, AQ Community Portal, and a Clearinghouse search facility to access services through GEOSS Interoperability Arrangements in support of the GEOSS Societal Benefit Areas. AIP is a GEO task for elaborating the GEOSS Architecture under the purview of the GEO Architecture and Data Committee.
This Engineering Report (ER) is a key result of the each phase of AIP. AIP-2 was conducted from July 2008 to June 2009. A separate AIP-2 and 3 ER describes the overall process and results of AIP-2 and 3 phases and thereby provides a context for this Community SBA ER. [

## 7 MEASURES OF SUCCESS

- Number of AIPs supported since start of the INCOSE GEOSS UML team support – 3 to date
- Number of total scenarios completed: twelve-12 to data

### RESOURCE REQUIREMENTS

Atego Corporation provides access to and unlimited usage of a dedicated server and Artisan Studio version 7.20.
All personnel assigned to team are INCOSE volunteers.
Each person in team donates over 400 man hours per year.

## 8 DURATION

Duration of Architecture Implementation Plan (AIP) period of performance is 12 months.

## 9 DURATION OF EACH SIGNATURES

Lawrence E. McGovern Date: 4/15/2011

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**1st Level of Approval**

Technical Director, INCOSE Date August 2011

**2nd Level of Approval** (Note this will be added by the INCOSE Technical Director when deemed appropriate.)

Chairman, INCOSE Board of Directors Date


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## Revision History

| Date | Revision | Description | Author |
|---|---|---|---|
| | 1.0 | Initial Draft. | Lawrence E. Mcgovern |
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