**3D Geospatial Modelling & Simulation - Next Steps**

**31 March 2017**

**Background:**

Based on the dialog and outcomes of the 3D Geospatial Modeling and Simulation Summit held in Orlando in September 2017, the organizers of the Summit have prepared a Wiki containing presentations from that event (<http://external.opengis.org/twiki_public/Geospatial3DMS/WebHome>).

A draft “way forward” roadmap has been developed below to encourage dialog on possible activities to broaden the impact of open standards in the M&S community, and to further advance the concept of a global model of the earth achieved through community-wide implementation of standards-based interoperability.

Part of our roadmap will be to continue to emphasize the value and efficiencies of leveraging SISO, OGC and complementary standards to create new efficiencies in interoperability of M&S data and tools. From a location standpoint, the roadmap will highlight the benefits of applying OGC Web Services standards to port geospatial information in to the terrain generation and rendering processes. Further, OGC standards can be used as a mechanism for M&S to be ported to the broad range of existing standards-based geospatial technologies to be used in establishing situational awareness and in the command and control decision cycle. These capabilities were demonstrated at the GEOINT 2013\* event held in Tampa.

Results from the Orlando Summit were encouraging, with a subset of the audience expressing significant interest to plan and advance a standards-based capability demonstration for implementation as part of a future Operation Blended Warrior event. A goal would be to leverage current technologies enabled by SISO, OGC and other open standards to generate a new terrain data set for use in OBW 2018.

Collaboration between SISO and OGC on M&S and geospatial standards advancement, and continued coordination with the USGIF M&S Working Group will be essential to assure that our overall interoperability approach in standards development and deployment is well coordinated and that community interests are addressed.

**Potential Next Steps:**

Going forward, the following roadmap milestones are recommended:

**Q1 2017**

* Stand up M&S Web presence and invite summit attendees, members of the OGC, SISO, and USGIF to register. Include all public presentations, and capture discussion going forward

**Q2 2017**

* Establish alliances between relevant SDOs to optimize cooperative development in support of M&S:
  + SISO (RIEDP Product Development Group activity is of interest)
  + OGC
  + Khronos Group (COLLADA)
  + Web3D
  + Others?
* Assess current M&S technology baselines and potential avenues for shaping a high-level interoperability framework / reference architecture for M&S
* Develop and publicly issue a white paper outlining the 3D Geospatial M&S Standards framework / reference architecture, to include SISO, OGC, Web3D, buildingSMART International and other complementary standards, as well as a discussion of the “to be” state that will enhance interoperability between and among existing M&S Terrain and rendering solutions.
* Convene 3D Geospatial M&S discussion as part of GEOINT 2017 in San Antonio., and OGC meetings in St. John’s Newfoundland. Leverage these meetings to review White Paper, Roadmap and entertain questions and feedback.

**Q3 2017**

* Identify initial thoughts on interoperability pilots, experiments and other cooperative industry / user rapid prototyping / engineering initiatives to test and validate new levels of interoperability. Join up SDO and USGIF membership to plan and conduct these initiatives.
* Develop and publicly issue 2017 3D M&S Roadmap with USGIF, SISO and OGC membership and staff
* Meeting at SISO SIW, Orlando this September.

**Q4 2017**

* Reach out to OBW team to devise and offer interoperability pilot to generate new terrain area of interest for OBW 2018
* Reach out to MODSIM and other M&S Conference organizers to get on program agendas / exhibit areas
* Plan and conduct 3D Geospatial M&S Summit II session on the roadmap, standards framework/reference architecture and its potential to support improved interoperability, OBW 2017 and the model of the world concept. (Orlando, in concert with I/ITSEC, and with the lead service for OBW 2018 (AF))