

15 August 2016

SEDRIS Organization Report
to
ISO/IEC JTC 1/SC 24 and WG 8
SC 24 and WG 8 Plenary Meetings
Beijing, China
22 - 26 August 2016

A summary of SEDRIS Organization's progress and contributions to the work of SC 24 and its working groups over the past 12 months is provided in this report.

During this period, the SEDRIS Organization has continued its efforts and support for the work of WG 9 standards on Mixed and Augmented Reality (MAR). It has contributed to the review of the 2nd Committee Draft (CD) text of ISO/IEC 18039 (MAR Reference Model), and has actively participated in WG 9 meetings. It has also supported the progression of the upcoming new work items including the Sensor Representation in MAR, the Live Actor and Entity Representation in MAR, the MAR Information Model, and the Benchmarks for Registration and Tracking Methods for MAR (systems). The latter is also related to the standards on real-time dead-reckoning algorithms developed by Simulation Interoperability Standards Organization (SISO) and Institute of Electrical and Electronics Engineers (IEEE). The work in mixed and augmented reality is highly relevant to the existing capabilities and standards in networked modeling and simulation applications in which live and virtual environments are combined and integrated. The SEDRIS Organization produced a short paper on this topic, titled "Intersection of Networking, Simulation, Graphics, Sensors, and Data Technologies" in support of WG 9-related efforts. The SEDRIS standards developed and maintained in WG 8 are highly relevant to the work of WG 9 and the underlying MAR-related data models, architectures, and corresponding capabilities and standards.

The SEDRIS Organization has continued its long-standing relationship with SISO and informed the leadership of the SISO Standards Activity Committee (SAC) of the 2nd CD ballot of ISO/IEC 18039. Despite interest from SISO members in mixed and augmented reality efforts, and because of insufficient internal SISO timelines, SISO was not able to review and provide comments on the document during this cycle. The SEDRIS Organization continued to make significant contributions to the development of standards in SISO's RIEDP PDG (Reuse and Interoperation of Environmental Data and Processes - Product Development Group). A summary of the status of the latest RIEDP products will be presented during the WG 8 meetings in Beijing. The SEDRIS Organization also continued to support the work of SISO's EDRS PSG (Environmental Data Representation Standards - Product Support Group) in promoting awareness and disseminating information on events, topics, and information related to environmental data standards.

The close cooperation of the SEDRIS Organization and key geodesy experts at the US National Geospatial-Intelligence Agency (NGA) has successfully continued on projects and efforts of mutual interest. NGA experts have continued the work on the development of new techniques (related to the so-called Web-Mercator) that provide the use of well-known and proven Mercator transformation accuracies, while performing as efficiently as existing web/mobile implementations. The SEDRIS Organization has contributed to the review and

development of techniques for a fast *Inverse Mercator* algorithm, as well as the measurement of the accuracy and performance of those computations. In addition, SEDRIS Organization experts contributed to the development and review of a paper on this topic.

The SEDRIS Organization has also participated in the efforts of the US National Body's INCITS/H3 Technical Committee (computer graphics and image processing; the U.S. TAG to ISO/IEC JTC1/SC24) in promoting and supporting the SC 24 standards and activities.

After the successful completion of the DIS ballot for Edition 3 of ISO/IEC 18041-4 (EDCS language bindings), and having received no additional comments, in Spring 2016 a member of the Editing Team reviewed the ITTF-prepared candidate standard and found no issues in the document. Edition 3 of ISO/IEC 18041-4 was published in early June 2016.

Because of the continuing resource constraints, the progression of other SEDRIS standards, including the Edition 3 of ISO/IEC 18026 (SRM), remains on hold. In addition, the preparation of ballot packages for previously submitted EDCS Registry items is also on hold, since these items require a full review against Edition 2 of ISO/IEC 18025 before they can be finalized. Similarly, the plans for start of the new work item proposals for Edition 2 of SRM Language binding (ISO/IEC 18042-4), Edition 2 of SEDRIS Part 1 (ISO/IEC 18023-1), Edition 2 of SEDRIS Part 3 (ISO/IEC 18023-3), and Edition 2 of SEDRIS Language binding (ISO/IEC 18024-4) continue to be delayed.

The WG 8 leadership and the SEDRIS Organization, in coordination with the SC 24 Secretariat, have been working with the ISO managers to resolve several SC 24 and WG 8 action items related to the SC 24 Registry web site. This includes the required updates to the content and presentation of the registry web area, especially in support of WG 7 documents. It also includes updates to the ISO web page on Maintenance Agencies and Registration Authorities, as well as other related topics. When completed, the results of this effort will be reported to SC 24.

The SEDRIS Organization looks forward to continued productive work with SC 24 and its working groups in developing, progressing, and promoting the SC 24 standards.

Respectfully submitted,

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