

SEDRIS Organization Report
to
ISO/IEC JTC 1/SC 24 and WG 8
SC 24 and WG 8 Plenary (online) Meetings
12 July - 4 August 2021

Since the 2020 online SC 24 Plenary and Working Group meetings, SEDRIS Organization has continued its contributions to new and on-going work of SC 24 and its working groups, including new and existing items in WG 8, WG 9, the recently established WG 10, as well as support to SC 24-level activities.

Emanating from the Korean National Body's work to visualize SEDRIS data using X3D, two WG 8 work items associated with C++ language bindings for the application program interface (API) of EDCS and SRM are progressing at committee draft and working draft stages, respectively. Another C++ language binding for the SEDRIS DRM and STF may also be initiated soon. SEDRIS Organization is supporting the development of these new work items by reviewing the drafts and providing information on the concepts and documentation on the existing C++ software implementations of the three APIs. Korean National Body is also working on a visualization tool that can take STF data as input and generate X3D content, as well as XML-based STF content. These may result in additional new work items, and therefore their technical details and potential challenges are being discussed and supported by SEDRIS Organization.

The productive and close cooperation with key geodesy experts at the US National Geospatial-Intelligence Agency (NGA) continues on various projects and efforts of mutual interest. This has included the planning for development of the Edition 3 of the SRM, which is anticipated as a new work item with accompanying committee draft text some time in 2022.

Other WG 8 related efforts are the continued SEDRIS Organization's contributions to Simulation Interoperability Standards Organization's (SISO) standards being developed within SISO's Reuse and Interoperation of Environmental Data and Processes (RIEDP) Product Development Group (PDG) and the work of SISO's Environmental Data Representation Standards Product Support Group, which closely cooperates with WG 8 and provides a focal point for relevant SISO community activities on environmental data standards and topics. The RIEDP standards use and reference the SEDRIS standards, and are highly relevant to on-going work within WG 8 and SC 24. The first RIEDP PDG product, the *RIEDP Data Model Foundations*, was published in 2018 as the SISO Guidance Product SISO-GUIDE-007-2018. Work on the second product (the *RIEDP Detailed Features Descriptions*) continues, with contributions from experts in the simulation community on environmental characteristic associated with material, light, and sensor-related semantics.

SEDRIS Organization has continued its contributions to the development and review of WG 9 documents and standards on Mixed and Augmented Reality (MAR). The work of WG 9 remains of great interest and is important. As noted in prior reports, and in order to enhance and strengthen the areas of work in WG 9, it is important that WG 9 increase seeking more of

the direct involvement of practitioners in industry, ensuring the standards focus on providing capabilities and tested solutions that will address practical and existing problems.

The recently established WG 10 is producing a Technical Specification (*Guidelines for Representation and Visualization of Smart Cities*) that focuses on the use of SC 24 standards for representing and visualizing data and information in Smart City applications. SEDRIS Organization continues to contribute to the development of this Technical Specification, while strongly supporting the important goals of WG 10.

The emerging work in Smart Cities, the on-going work in MAR, and the use of (VR, AR, or traditional) visualization in training, education, and other applications are closely associated with the capabilities and standards developed for networked modeling and simulation (M&S) applications, in which live and virtual environments are combined and integrated. The experiences gained in the networked M&S domain, including the concepts and capabilities in SEDRIS technologies, are valuable assets in supporting SC 24 and JTC 1 efforts, contributing to the underlying data models, architectures, and representation techniques that are required.

SC 24 standards will play a key role in supporting JTC 1 Systems Integration initiatives, such as Big Data, Sensors, and Smart Cities. In line with these goals, it is critical that SC 24 visualization standards provide a richer support for bi-directional interaction between the user and the underlying data. In addition, it is also critical for all standards activities in SC 24 to clearly articulate what problem is being solved, why the problem is relevant and important, and what value the solutions offer to standardizing the methods or practice in the community. SEDRIS Organization first raised this issue in 2017 and 2018, which tangentially resulted in further work on the SC 24 Roadmap. While the Roadmap is important, the core issues in clearly articulating “*what problems are being solved and why*” should also remain in focus.

During the past year, SEDRIS Organization also supported various SC 24 initiatives and activities. This included participation in the refinement of the SC 24 Roadmap, representing SC 24 in the vocabulary discussions of JTC 1/AG 18, participating in JTC 1/AG 13 regarding the use of VR/AR technology in a variety of training/education applications, and review of the revisions to the SC 24 scope statement and participating in internal and external discussions regarding feedback on changes to the scope. SEDRIS Organization also supported both the US National Body and SC 24 in the planning and scheduling of the 2021 online Plenary and Working Group meetings.

SEDRIS Organization expresses gratitude and appreciation to Dr. Jack Cogman for his continued support and involvement in SEDRIS, WG 8, and SC 24 activities since he stepped down as the WG 8 Convenor at the end of 2020, after more than 22 years of service. SEDRIS Organization expresses gratitude to Dr. Charles Whitlock who has served as the Committee Manager of SC 24 for many years. As Charles embarks on new duties, SEDRIS Organization welcomes back Ms. Jean Stride as the new SC 24 Committee Manager.

SEDRIS Organization looks forward to continued productive work with SC 24 and all its working groups, including the newly established WG 10 and WG 11, in developing, progressing, and promoting the SC 24 standards.

Respectfully submitted,

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29 June 2021