

ISO/IEC JTC 1/SC 24/WG 8 "Environmental representation"

Convenorship: BSI

Convenor: Mamaghani Farid Mr

**WG 8 2021 Recommendations to SC 24**

Document type	Related content	Document date	Expected action
Meeting / Working documents for discussion	Meeting: VIRTUAL 19 Jul 2021	2022-01-25	INFO by 2021-07-19

Description

WG 8 2021 Recommendations to SC 24

26-July-2021

Recommendations of ISO/IEC JTC 1 / SC 24/WG 8

to

SC 24 Online Plenary Meeting, 4 August 2021

**Resulting from the WG 8 Online Working Session & Plenary Meetings
on 19 and 26 July 2021**

PART 1: Progression of Work

1. Programme of Work

WG 8 Recommendation 001/2021: Approval of Current Programme of Work

ISO/IEC JTC1/SC 24/WG 8 requests that SC 24 approve the programme of work and document editors as described in the table below:

Short Title	Reference	WG	Editor	CD/CDAM/ PDTR	DIS (FCD)/ FCDAM	FDIS/FDAM/DTR	IS/ AMD/ TR
EDCS LB to C+ +	ISO/IEC 18041-5: 202x	8	Lee, Puk	06/21	12/21	-	10/22
SRM LB to C++	ISO/IEC 18042-5: 202x	8	Lee, Puk	11/21	11/22	-	10/23

The dates shown indicate the start of the ballot for the appropriate document and for IS/AMD/TR, the anticipated date.

2. Authorization of Progression to DIS

WG 8 Recommendation 002/2021: Progression of Work Item(s) to DIS

ISO/IEC/JTC 1/SC 24/WG 8 requests SC 24 to authorize the following documents for progression to DIS upon completion of the text and requests that the SC 24 Committee Manager issue a DIS ballot as the text becomes available:

Document Title

ISO/IEC 18041-5: EDCS language bindings – Part 5 C++

3. Authorization of Progression to CD

WG 8 Recommendation 003/2021: Progression of Work Item(s) to CD

ISO/IEC/JTC 1/SC 24/WG 8 requests SC 24 to authorize the following documents for progression to CD upon completion of the CD text and requests that the SC 24 Committee Manager issue a CD ballot as the text becomes available:

Document Title

ISO/IEC 18042-5: SRM language bindings – Part 5 C++
ISO/IEC 18024-5: SEDRIS Part 1 language bindings – Part 5 C++

4. Proposed New Work Items for ISO/IEC 18024

WG 8 Recommendation 004/2021: New Work Items for Language Bindings

ISO/IEC JTC 1/SC 24/WG 8 requests SC 24 members to support New Work Items currently being prepared, along with WD text, for the following standards:

Document Title

ISO/IEC 18024-5: SEDRIS Part 1 language bindings – Part 5 C++

5. Proposed New Work Item for ISO/IEC 18026 (SRM)

WG 8 Recommendation 005/2021: New Work Item for Edition 3 of SRM

Following support from potential users, ISO/IEC JTC 1/SC 24/WG 8 requests SC 24 members to support a New Work Item being raised, with text to be registered at CD stage, for 18026 Ed. 3 project to include enhancements, such as:

- Comprehensive and improved treatment of geodesics
- Similarity transformation templates – additional and uniform set of methods to perform datum transformations.
- Revision of informative Annex I.6 to cover all cases of error metrics.
- Improvement of the accuracy domains in the Default profile (Clause 12).
- Comprehensive treatment of rotation and orientation concepts to include rotation of vectors and orientations of objects and coordinate reference frames, and development of the corresponding API functions.

Document Title

ISO/IEC 18026 Ed 3 Revision

6. Confirmation of current Editions of EDCS, SRM, and 9973

WG 8 Recommendation 006/2021: Confirming current Editions of 18025, 18026, and 9973

Following the successful completion of the CIB for ISO/IEC 18025, 18026, and 9973, ISO/IEC JTC 1/SC 24/WG 8 requests that SC 24 confirm these three standards through a resolution during the SC 24 Plenary.

7. Support for Enhancements to Existing WG 8 Work

WG 8 Recommendation 007/2021: Enhancement to existing items resulting from on-going work items

ISO/IEC JTC 1/SC 24/WG 8 requests that SC 24 members support the following future proposals for new work within WG8:

Whereas:

Completed work on ISO/IEC 18025 (EDCS) and the planned revision of ISO/IEC 18026 (SRM) require modifications to other SEDRIS standards, including the respective language bindings;

Therefore:

ISO/IEC JTC 1/SC 24/WG 8 requests that SC 24 members support New Work Items, along with CD text, to incorporate the necessary enhancements in the following existing standards:

- ISO/IEC 18023-1 Ed. 2 SEDRIS Part 1 Revision
- ISO/IEC 18023-3 Ed. 2 SEDRIS Part 3 Revision
- ISO/IEC 18024-4 Ed. 2 SEDRIS language binding—C Revision
- ISO/IEC 18042-4 Ed. 2 SRM language binding—C Revision

8. Support for New WG 8 Work

WG 8 Recommendation 008/2021: Potential New Work Items

ISO/IEC JTC 1/SC 24/WG 8 plans to continue its cooperative work, in conjunction with the SEDRIS Organization, OKTAL-SE, Suwon University, SISO (Simulation Interoperability Standards Organization), and others on the possibility of new work in the following areas:

- Reuse and Interoperation of Environmental Data and Processes (SISO)
- Representation of Wang tiling for texture data (OKTAL-SE)
- Representation of procedurally generated geometry and terrain (OKTAL-SE)
- Representation of Patches of procedurally generated geo-typical data (OKTAL-SE)
- Use of Artificial Intelligence techniques in generation and processing of terrain data (OKTAL-SE)
- Representation of material roughness for sensor simulation (OKTAL-SE)
- Representation of a dynamic sea model (OKTAL-SE)
- Handling of varied and detailed metadata information for generation and processing of environmental data (SEDRIS Organization, OKTAL-SE)
- Guidelines and Techniques for using X3D to portray SEDRIS data (Korean NB/Suwon University)
- Development of an XML encoding for SEDRIS transmittals (Korean NB/Suwon University)

Part 2: Administration

1. Appointment of Editors

WG 8 Recommendation 009/2021: Appointment/Reaffirmation of Editors

ISO/IEC JTC1/SC 24/WG 8 recommends the following:

Document No.	Document Title	Editor
18023-1	SEDRIS Functional Specification	Puk, Mamaghani, Worley
18023-2	SEDRIS Transmittal Format	Puk
18023-3	SEDRIS Transmittal Format – Binary Encoding	Puk
18024-4	SEDRIS Language Binding Part 4 : C	Puk Worley
18025	Environmental Data Coding Specification (EDCS)	Cox, Hembree, Worley
18026	Spatial Reference Model (SRM)	Berner, Trott
18041-4	EDCS Language Bindings, Part 4: C	Puk Worley
18041-5	EDCS Language Bindings, Part 5: C++	Lee Puk
18042-4	SRM Language Bindings, Part 4: C	Puk Worley
18042-5	SRM Language Bindings, Part 5: C++	Lee Puk
9973	Procedure for registration of items	Puk, Mamaghani

2. Confirmation of WG 8 Title and Terms of Reference

WG 8 Recommendation 010/2021: WG 8 Title and Terms of Reference Confirmation

ISO/IEC JTC1/SC 24/WG 8 confirms its current title and terms of reference, as listed below (removing the “To” at start of each bullet), and recommends that SC 24 confirm these.

Title: Working Group 8: Environmental representation

Terms of Reference:

- Define standards for environmental data elements, including presentation properties, and their relationships in the context of a data representation model.
- Define standards for data interchange between environmental data providers and consumers.
- Define standards for spatial referencing and environmental data identification, analysis and reuse.

3. Appointment of Rapporteurs for Sections of the SC 24 Register

WG 8 Recommendation 011/2021: Appointment/Reaffirmation of Rapporteurs

ISO/IEC JTC1/SC 24/WG 8 recommends that SC 24 appoint and reaffirm the following SC 24 Registry Rapporteurs:

Dr. Paul Berner as the Rapporteur for the SRM Registry.
Mr. Farid Mamaghani as the Rapporteur for the DRM Registry.
Mr. Farid Mamaghani as the Rapporteur for the EDCS Registry.

4. Future Meetings

WG 8 Recommendation 012/2021: Future WG 8 Meetings

ISO/IEC JTC1/SC 24/WG 8 informs SC 24 it has not planned any face-to-face meetings as a Working Group before next year's SC 24 Plenary. However, communication and/or meetings of the Working Group will continue by means of e-mail, telephone and web-meetings.

Meeting	Date	Venue
WG 8 Working Session and Plenary	2022	Melbourne, FL, USA
WG 8 Working Session and Plenary	2023	Sydney, Australia
WG 8 Working Session and Plenary	2024	Europe
Editing meetings	As required	Web conference

5. Request ISO/IEC 18041-4:2016 to be corrected and made Publicly Available

WG 8 Recommendation 013/2021: Corrections to and Public Availability of 18041-4:2016

ISO/IEC JTC 1/SC 24/WG 8 requests the SC 24 Committee Manager to verify with ISO the validity of the published version of ISO/IEC 18041-4:2016 that was provided, since the top line of the index page describes the document as "the draft DIS text....". Similar issues may exist on other pages, headers, or body text.

ISO/IEC JTC 1/SC 24/WG 8 also requests SC 24 to approve the corrected version of ISO/IEC 18041-4:2016 and to inform ISO/IEC that the corrected 18041-4:2016 will need to continue to be made publicly available, since the older version is already freely available and the current version is freely available elsewhere.

6. Promoting Joint Work with ISO/TC 211

WG 8 Recommendation 014/2021: Continued Joint Work with ISO/TC 211

Whereas:

Continued opportunity for joint work with ISO/TC 211 (Geographic information/Geomatics) exists.

Therefore:

ISO/IEC JTC 1/SC 24/WG 8 requests SC 24 to continue the authorization of the following individuals to act as subject matter experts:

Dr. Paul Berner
Mr. Craig Rollins
Mr. Kevin Trott

plus additional subject matter experts as may be deemed appropriate for a given task, to actively participate with ISO/TC 211 experts in order to promote and facilitate joint work.

7. Review of Commonality of the Registration Procedures and Standards with ISO/TC 211

WG 8 Recommendation 015/2021: Work with ISO/TC 211 on Registry-related standards

ISO/IEC JTC 1/SC 24/WG 8 requests SC 24 members to support possible future joint work that began as informal April 2021 discussions between ISO/TC 211 and SC 24 experts to review areas of similarities and differences between the respective Registration Procedures standards of the two committees: ISO 19135-1 and ISO/IEC 9973. Based on discussions with TC 211 experts, a joint ad hoc group may be established to review whether to create a mapping or harmonisation between ISO 19135 and ISO/IEC 9973 or to work on a single standard that the two groups could then implement (so long as it does not break any existing implementations).

WG 8 recommends that SC 24 members support the possibility of forming such an ad hoc group between the two committees through a resolution during the SC 24 Plenary. Upon approval of such a resolution and on behalf of SC 24, WG 8 will prepare a Liaison Report to TC 211 on this topic and asks that the SC 24 Committee Manager submit to report to TC 211.

8. Continuation of the Cooperation with the SEDRIS Organization

WG 8 Recommendation 016/2021: Continued Cooperation with SEDRIS Organization

Whereas:

- a) ISO/IEC JTC 1/SC 24 and the SEDRIS Organization continue with cooperative and productive work to the mutual benefit of both organizations;
- b) there are additional SEDRIS-related standards projects in process that emanate from the SEDRIS Organization and/or National Bodies, and therefore additional future work is anticipated.

Therefore:

ISO/IEC JTC 1/SC 24/WG 8 requests that SC 24 endorse the continued successful cooperation with the SEDRIS Organization in the development of additional ISO/IEC work items based on SEDRIS-based standards.

9. Continuation of Cooperation with the Open Geospatial Consortium (OGC)

WG 8 Recommendation 017/2021: Continued Cooperation with OGC

Whereas:

ISO/IEC JTC 1/SC 24 and OGC have mutual interest in several areas, where each might apply base technologies developed by or in development within the other.

Therefore:

ISO/IEC JTC 1/SC 24/WG 8 requests that SC 24 endorse the continued cooperation with OGC.

10. Continuation of Cooperation with the Simulation Interoperability Standards Organization (SISO)

WG 8 Recommendation 018/2021: Continued Cooperation with SISO

Whereas:

ISO/IEC JTC 1/SC 24 and SISO have mutual interest in several specific projects, where each might apply base technologies developed by or in development within the other.

Therefore:

ISO/IEC JTC 1/SC 24/WG 8 requests that SC 24 endorse the continued cooperation with SISO.

11. Cooperation with ISO TC 184/SC 4/JWG 16

WG 8 Recommendation 019/2021: Continued Cooperation JWG 16

Whereas:

1. ISO/TC 184/SC 4/JWG 16 and ISO/IEC JTC1/SC24/WG 8 have mutual areas of common interest; and
2. there is an open invitation to ISO/IEC JTC1/SC 24 for joint participation in the work of ISO/TC 184/SC 4/JWG 16.

Therefore:

ISO/IEC JTC 1/SC 24/WG 8 endorses the cooperation and participation in the work of ISO/TC 184/SC 4/JWG 16 and requests SC 24 to invite ISO/TC 184/SC 4/JWG 16 to hold future joint meetings with ISO/IEC JTC 1/SC 24. Furthermore, ISO/IEC JTC 1/SC 24/WG 8 requests the active and on-going exchange of relevant documents and asks that ISO/TC 184/SC 4/JWG 16 develop procedures for the active participation of SC 24 technical experts in their work.

12. Convenor for WG 8

WG 8 Recommendation 020/2021: Appointment of WG 8 Convenor

Whereas:

The appointment of the Acting WG 8 Convenor, Farid Mamaghani, as the Convenor of WG 8 is in the active ballot stage,

Therefore:

ISO/IEC JTC 1/SC 24/WG 8 recommends that Farid Mamaghani be appointed as Acting Convenor, until the Convenor position has been filled.

PART 3: Liaison

1. External Liaison Officers

WG 8 Recommendation 021/2021: Appointment/Reaffirmation of Liaison Officers

ISO/IEC JTC1/SC 24/WG 8 recommends the appointment of the following external liaison officers:

Representative	Liaison to	Topic
Richard Puk	SEDRIS Organization	SEDRIS technology
Chris Body	ISO/TC 211/WG 6	SEDRIS technology
Kevin Trott	OGC	SEDRIS technology
Rob Cox	Digital Geographic Information Working Group (DGIWG)	SEDRIS technology
Louis Hembree	International Hydrographic Organization (IHO)	SEDRIS technology
Craig Rollins Paul Berner Kevin Trott	International Astronomical Union/International Association of Geodesy (IAU/IAG) Working Group on Cartographic Coordinates and Rotational Elements of the Planets and Satellites	Spatial referencing
Paul Berner Craig Rollins Kevin Trott	TC 211	Spatial referencing
Tim Gifford Paul Foley	Simulation Interoperability Standards Organization (SISO)	SEDRIS technology
Jack Cogman	NATO Modelling and Simulation Group (NMSG)	SEDRIS technology
Craig Rollins Paul Berner Farid Mamaghani	ISO Geodetic Registry Network	Spatial referencing
Farid Mamaghani Richard Puk Jack Cogman	TC 211	Registration Procedures
Jean Latger Kwan-Hee Yoo	ISO/IEC SC 42	Relationships between AI topics and environmental data

Part 4: Appreciation and Acknowledgments

1. Thanks to Charles Whitlock

ISO/IEC JTC1/SC 24/WG 8 expresses its appreciation to the outgoing SC 24 Committee Manager, Dr. Charles Whitlock, for his many years of service in support of SC 24 and WG 8, and wishes Charles all the best in his new BSI endeavours.

2. Welcome and Thanks to Jean Stride, SC 24 Committee Manager

ISO/IEC JTC1/SC 24/WG 8 expresses its appreciation to the new SC 24 Committee Manager, Ms. Jean Stride, for all her efforts during the past few months in supporting SC 24 and welcomes her back to SC 24.

3. Thanks to SC 24 Chair

ISO/IEC JTC1/SC 24/WG 8 expresses its appreciation to Dr. Myeong Won Lee as the Chair of SC 24, and her continued efforts and contributions to WG 8.

4. Thanks to Organizers

ISO/IEC JTC1/SC 24/WG 8 wishes to thank the following for their efforts in organising and supporting the 2021 online meetings:

- Dr. Bill Protzman and Mr. Farid Mamaghani for their work in preparing and coordinating the timetable for the multi-week online meetings due to Covid-19 pandemic.
- Dr. Myeong Won Lee, Dr. Charles Whitlock, and Ms. Jean Stride for arranging the Zoom connections and supporting the smooth operation of the meetings.