

# **ISO/IEC JTC 1/SC 24/WG 8**

## **Environmental Data Representation**

Meeting 38

Working Session 18 July 2022, 21:00 UTC

Plenary Session 25 July 2022, 21:00 UTC

Farid Mamaghani – WG 8 Convenor

# Working Session Agenda (draft original)

18 July 2022, 2100 UTC - online meeting

1. Welcome and Introductions
2. ISO Code of Conduct at Meetings
3. Adoption of Agenda
4. Current and Anticipated Work Plan:
  - 18041-5 EDCS LB to C++ (Myeong Won Lee / Richard Puk)
  - 18042-5 SRM LB to C++ (Myeong Won Lee / Richard Puk)
  - 18024-5 SEDRIS Part 1 LB to C++ (Myeong Won Lee)
5. SRM (18026) Edition 3 (Paul Berner / K. Trott / F. Mamaghani)
6. EDCS and SRM Registry
7. Publication of SEDRIS standards
8. Current status of Action Items
9. Review of the WG 8 work programme
10. Any other business
11. Draft recommendations to be forwarded to the WG 8 Plenary meeting

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- Respect Others
- Behave Ethically
- Escalate and Resolve Disputes
- Work for the Net Benefit of the International Community
- Uphold Consensus and Governance
- Agree to a Clear Purpose and Scope
- Participate Actively and Manage Effective Representation

Reference: ISO Code of Conduct for the Technical Work <https://www.iso.org/publication/PUB100397.html>

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  - STF XML encoding (Myeong Won Lee)
5. SRM (18026) Edition 3 (Paul Berner / K. Trott / F. Mamaghani)
6. Registry-related topics, including EDCS, SRM, and DRM Registries
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# Current and Anticipated Work Plan

- 18041-5 EDCS LB to C++ (Myeong Won Lee / Richard Puk)
  - NP (new work item) registered 29 June 2020
  - DIS ballot initiated 9 February 2022, DIS ballot closed successfully 5 May 2022
  - No National Body comments; Only comments (18) received from ISO Editors
  - Editing Meeting held 7 July '22, addressed all comments based on draft disposition of comments
  - Some comments based on latest Directives, which impact all sub-clause numbers and links
  - A few comments related to HTML nature of the document
  - Comments related to not acknowledging SEDRIS Organization contributions
- 18042-5 SRM LB to C++ (Myeong Won Lee / Richard Puk)
  - NP (new work item) registered 24 August 2021
  - Development of CD in progress
- 18024-5 SEDRIS Part 1 LB to C++ (Myeong Won Lee / Richard Puk)
  - Development of Working Draft in progress
  - An NP will be submitted along with Working Draft in coming months
- SEDRIS / STF XML encoding (Myeong Won Lee)

*Verbal Report by Dr. Myeong Won Lee on status of 18041-5 and 18042-5, and SEDRIS C++.*

*Myeong showed a report document that shows the recent progress with the XML encoding. The document is large (~17 MB), but is available online (URL can be provided by Myeong).*

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# Edition 3 of ISO/IEC 18026

## Spatial Reference Model (SRM)

- ◆ Work on Edition 3 of SRM resumed in Fall 2021
- ◆ Scope of Work: Continue development of specification from the 2012 baseline by extending the SRM concepts and the associated international standard for the following capabilities:
  - ❖ 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 Application Program Interface (API) functions
  - ❖ Comprehensive and improved treatment of **geodesics**
  - ❖ **Similarity transformation templates** – additional and uniform set of methods to perform datum transformations
  - ❖ Improved coverage of all cases of **error metrics** (Annex I.6 of ISO/IEC 18026)
  - ❖ Improvement of the **accuracy domains** in the Default profile (Clause 12 of ISO/IEC 18026)
- ◆ Work areas include:
  - ❖ Develop, design, and refine the concepts, algorithms, and associated interfaces
  - ❖ Test concepts and interfaces
  - ❖ Develop/revise/write the specification text
  - ❖ Revise/update the SRM Registry (as needed)



# Edition 3 of SRM – Overview and Status (1/2)

- ◆ Overview of Edition 2 (2009) of SRM – the standard is composed of:
  - 618+ pages
  - 29 cross-linked files (clauses, appendices, and index) plus a global Table of Contents (that lists sub-sections across all files) and header files (landing pages)
    - Each of the 30+ files/clauses is a separate hyper-linked PDF file (based on its source Word file)
  - 125+ Figures (114+ unique figures) across the clauses
  - 2210+ equations and formulae with special math symbols and notations
    - The number of equations is an approximation, since some equations are embedded in figures and some equations and/or set of symbols are difficult to count

# Edition 3 of SRM – Overview and Status (2/2)

- ◆ Status of Edition 3:
  - ❖ Previous baseline (2012-13), including DIS ballot comments, were reviewed and inventoried
  - ❖ All files converted to .docx & all equations updated from MathType to MS Equation Editor
  - ❖ Edition 3 introduces new Clause 6 – *Rotation and Orientation*
  - ❖ Significant updates to Clauses 4 (Concepts) and 5 (Coordinate Systems)
    - ❖ Concepts Clause is being significantly updated for better and more consistent flow
    - ❖ Clause 5 provides a more streamlined treatment of coordinate systems
  - ❖ Clauses 7 (Reference Datums and ORMs), 8 (SRFs), 9 (Designated Spatial Surfaces), 10 (Operations), 11 (API), along with other supporting clauses and annexes, being revised
  - ❖ Production Tasks include:
    - ❖ Multi-file and cross-linked PDFs (available tools are limited)
    - ❖ Cascade of page numbers in files as clauses grow or shrink
    - ❖ One Table of Contents across all clauses
    - ❖ Updating the Index (of terms) file
  - ❖ Expert responses received from Japan NB on Japanese datums that changed in 2011
  - ❖ Technical exchange meetings with OGC's GeoPose SWG

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5. SRM (18026) Edition 3 (Paul Berner / K. Trott / F. Mamaghani)
6. **Registry-related topics, including EDCS, SRM, and DRM Registries**
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# Registry-related Topics

- ◆ Some time in 2023, the SRM Registry will be updated to reflect any new changes from Edition 3
- ◆ EDCS and SEDRIS (DRM) Registries remain unchanged
  - No changes are anticipated for the DRM Registry
  - EDCS Registry requires an update to bring it inline with the published standard's content
- ◆ No additional informal meetings since Spring 2021 with ISO TC 211 members regarding TC 211 plans for revising ISO 19135-1: 2015
  - TC 211 was planning to revise 19135-1, and some members were exploring similarities to ISO/IEC 9973
  - ISO 19135-1: 2015 specifies procedures for establishing, maintaining, and publishing registers of unique, unambiguous, and permanent identifiers and meanings that are assigned to items of geographic information
  - SC 24's ISO/IEC 9973 establishes procedures for registration of items; it references the earlier (2005) Edition of ISO 19135
  - Most concepts between the two standards are very similar; their intended use is somewhat different
  - In 2021, some TC 211 members had expressed interest in exploring whether to create a mapping or harmonisation of ISO 19135 and ISO/IEC 9973, or produce a single more general standard that the two groups could then implement (as long as it does not break any existing implementations), or leave two standards as-is
  - Work on a new Edition of ISO 19135 has begun
  - In a recent contact with one TC 211 member the possibility of follow up to the April 2021 meeting was discussed
  - Recommendation to SC 24: Retain the resolution from 2021 for this topic

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6. Registry-related topics, including EDCS, SRM, and DRM Registries
7. Publication of SEDRIS standards *(verbal report by Farid M.)*
8. Current status of Action Items *(Action Items reviewed; some progress made with Registry landing page)*
9. Review of the WG 8 work programme *(current WG 8 work programme reviewed)*
10. Any other business *(none)*
11. Draft recommendations to be forwarded to the WG 8 Plenary meeting *(attendees agreed that no recommendations are needed to reflect anticipated standards, and TC 211 Liaison relation should be sufficient for any follow on meetings; Meeting notes can reflect the status of these and projected timelines for new work)*

# Plenary Session Agenda (draft original)

25 July 2022, 2100 UTC - online meeting

1. Welcome and introductions
2. ISO Code of Conduct at Meetings
3. Approval of the minutes of the 37<sup>th</sup> meeting held online 2021
4. Convenor's report
5. Summary of key topics from the Working Session
6. National Body reports
7. Liaison reports
  - SEDRIS
  - SISO
  - Any other liaison reports
8. Editors reports
9. Reports and Appointment of registry rapporteurs
  - EDCS
  - SRM
  - SEDRIS
  - Recommendation for TC 211 & SC 24 effort on Registry Standards
10. Work Schedule and Status of Systematic Reviews
11. Review and approval of WG 8 Recommendations to SC 24
12. Review action items
13. Adjourn

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4. Convenor's report (*see report WG8 N0669*)
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# Summary of key topics from the Working Session (on 18 July 2022)

- Resolution of DIS comments on EDCS LB to C++ 18041-5 being implemented
  - ◆ Updated text will be sent to SC 24 CM in August/Sept '22
- CD text for C++ language binding for SRM 18042-5 is being prepared
  - ◆ CD text will be distributed for comment in Q4 '22
- WD text for C++ language binding for SEDRIS Part 1 (DRM/STF) 18024-5 in work
  - ◆ An NWIP along with WD will be submitted in coming month
- SEDRIS / STF XML encoding
  - ◆ Significant work done on XML schema for DRM classes and data types
  - ◆ Interim report show and discussed; WG 8 members to review
- Report on the SEDRIS Organization's on-going effort to prepare SRM Edition 3
  - ◆ NWIP and CD text will be submitted in Q4 '22
- Report on registry-related topics
  - ◆ No issues for DRM registry
  - ◆ SRM registry will be updated in 2023, after DIS ballot of SRM Edition 3
  - ◆ No change on EDCS Registry status
  - ◆ Possible follow on to 2021 informal Registers discussions with some TC 211 members
- Verbal reports on: ISO issues with co-operative agreements and publication of standards
- No new Action Items from Working Session; no significant changes to status of 2 action items
- Work Programme and Recommendations to SC 24: To be reviewed during WG 8 Plenary

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  - Recommendation for TC 211 & SC 24 effort on Registry Standards
10. Work Schedule and Status of Systematic Reviews (*reviewed and confirmed to SC 24*)
11. Review and approval of WG 8 Recommendations to SC 24 (*reviewed & approved – see WG8 N0671*)
12. Review action items (*updated – see Minutes WG8 N0672*)
13. Adjourn