**JTC 1/SC 24/WG8\_N0655**

**ISO/IEC JTC 1/SC 24**

**Working Group 8**

**36th WG 8 Plenary Meeting**

**Minutes of Working Session, WG 8 Plenary, and Related SC 24 Meetings**

**On-line Meetings held via ISO Zoom**

**3 and 10 August 2020**

This document records the following meetings:

* WG 8 Working Session on Monday 3 August 2020
* WG 8 Plenary on Monday 10 August 2020
* Additional Items discussed during the Week

Contents

Section 1: [References](#References)

Section 2: [WG 8 Working Session and Presentations](#WorkingSession)

Section 3: [WG 8 Plenary](#WG8Plenary)

Section 4: [Other Related SC 24 Meetings](#Section4)

Appendix A: [Working Session Agenda](#AppendixA)

Appendix B: [WG 8 Plenary Agenda](#AppendixB)

Appendix C: [SC 24 Meeting Plan](#AppendixC)SC 24 Meeting Plan

Appendix D: [List of Attendees](#AppendixD)

Appendix E: [WG 8 Work Schedule](#AppendixF)

Appendix F: [Action Items](#AppendixG)

* + - 1. References

The following documents are referred to in these minutes:

**WG8 N0619:** Minutes of WG 8 Meetings – Arlington, USA 2018

**WG8 N0649:** WG 8Convenor’s Report

**WG8 N0651:** SEDRIS Organization Liaison Report to SC 24 and WG 8

**SC24 N4411**

**WG8 N0652:** Proposal for an XML encoding of SEDRIS data

**SC24 N4397**

**WG8 N0653:** Update on SISO RIEDP Products and Standards

**WG8 N0654:** WG 8 Recommendations to SC 24

**SC24 N4359:** Australia NB Report

**SC24 N4410:** Japan NB Report

**SC24 N4382:** Korea NB Report

**SC24 N4370:** UK NB Report

**SC24 N4358:** USA NB Report

**SC24 N4432:** SC 24 Resolutions OnLine 2020

URLs for Access to Documents

The following links allow access to the appropriate Document Registers.

The WG 8 documents are stored in the SEDRIS WG 8 Document Register, which may be accessed at:

[SEDRIS WG 8 Document Register](http://www.sedris.org/wg8home/document.htm)

WG 8 Documents are also stored on the ISO Document Register, which may be accessed via:

[ISO Document Register for SC 24/WG 8 documents](https://isotc.iso.org/livelink/livelink?func=ll&objid=8916670&objaction=ndocslist)

All SC 24 documents are stored in the ISO Document Platform and may be accessed via:

[ISO Document Register for SC 24 documents](https://isotc.iso.org/livelink/livelink?func=ll&objid=8916524&objaction=ndocslist)

* + - 1. Online WG 8 Working Session and Presentations

**Monday 3rd August 2020**

**21:00 UTC (Coordinated Universal Time)**

Corresponding to:

07:00 – 09:00 Tuesday 4 August: Australia (East Coast)

06:00 – 08:00 Tuesday 4 August: Japan

06:00 – 08:00 Tuesday 4 August: Korea

05:00 – 07:00 Tuesday 4 August: Beijing (China Standard Time)

23:00 – 01:00 Monday/Tuesday 3/4 August: France

22:00 – 24:00 Monday 3 August: UK

17:00 – 19:00 Monday 3 August: USA (East Coast)

14:00 – 16:00 Monday 3 August: USA (Pacific)

The Agenda is given in [Appendix A](#_AppendixA).

An agenda item for Any Other Business was added at the end of the meeting.

**Chair: Jack Cogman**

**Introduction**

The attendees are shown in shown in [Appendix D](#AppendixD).

Welcome and Introductions

The attendees at the meeting introduced themselves.

 ISO Code of conduct at Meetings

As is now mandatory at ISO meetings, the ISO Code of conduct (JTC1\_N14496) was shown at the start of the meeting.

Current and Anticipated Work Plan

The project for 18041-5: EDCS language bindings – Part 5: C++ was registered in June 2020, together with a WD. Work is currently in progress for the CD.

**Recommend to SC 24** to support progression of 18041-5 to CD

NWIPs and associated WDs are being prepared for:

18042-5: SRM language bindings – Part 5: C++

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

**Recommend to SC 24** to support NWIPs for the above two projects.

Completion of SRM Edition 3 (18026) is still considered important and will be added to WG 8 programme when it commences.

**Recommend to SC 24** to support a New Work Item being raised to allow the completion of work on 18026 (SRM) Edition 3.

As reported at the 2019 plenary meetings, EDCS LB to C, Ed 3 (18041-4) was published in May 2016 and yet the document issued by ISO is still the DIS text for Edition 3, even though it has a front cover referring to ISO/IEC 18041-4:2016(E).

**Recommend to SC 24** to renew attempts to ensure that the version of 18041-4:2016 published by ISO is the correct version and for it to made publicly available.

 Proposal for an XML-based format for SEDRIS (Myeong Won Lee)

The possibility of generating SEDRIS data in an XML-based SEDRIS Transmittal is of interest to the Korean National Body and has been recently discussed. Prof. Myeong Won Lee discussed her ideas for developing a standard for XML encoding of SEDRIS data, including showing a number of examples of existing small SEDRIS data encoded in XML.

Further details are given in her presentation “Proposal for an XML Encoding for SEDRIS Transmittals”, documents **WG8 N0652 and SC24** N4397. To access these documents, go to [References](#References).

The following comments were made in response to the presentation:

* Current SEDRIS Transmittal Format (STF), which is a binary encoding of SEDRIS transmittals, has a very compact format, whereas XML has not. If the size of an STF were in Terabytes, which can often be the case, then the equivalent XML could be in Petabytes. This would restrict the use of XML to smaller size areas of environmental data.
* An XML output from SEDRIS could be a topic for future work.
* It is often assumed that data in a transmittal represent objects that are used in 3D graphics. This is not always the case, since the data can be representing non-visual information, for example, atmospheric conditions such as temperature, wind velocity, pressure. It is more a question of knowing whether you have the appropriate tools to read the data that is of interest to you.
* The approach seems to be to test whether XML is valid for a number of small cases of existing polygonal content, then attempting to combine the work to provide more complex 3D content. However, it might be more efficient to use an approach based on the fundamental concepts of the SEDRIS DRM and understanding how to use and then encode the DRM classes.

**Recommend to SC 24** to support a possible new project on “XML encoding of SEDRIS data”.

 Update on SISO RIEDP Products and Standards (Farid Mamaghani)

A SISO product development group has been working on the Reuse and Interoperation of Environmental Data and Processes (RIEDP). The RIEDP requirements are very similar to those addressed by SEDRIS, but focusing on use of existing formats to share data and limited only to terrain data and associated information. RIEDP leverages existing source data formats commonly used in GIS and simulation applications. RIEDP uses concepts and standards from SEDRIS and has provided an opportunity for synergy between the two.

Development on RIEDP has now been going on for 10 years. The SEDRIS technology of the DRM (Data Representation Model), EDCS and SRM have been used extensively in the development. SC 24 standards are used and referenced by the RIEDP standards.

RIEDP consists of two products. Product 1 is the RIEDP Data Model Foundations, a SISO Guidance Document, and was published in September 2018. Product 2 is the RIEDP Detailed Features Description, a SISO Standard, and is currently under development. Product 2 is planned to be published in 2021.

To enable data and capabilities defined in a number of different industry-formats to be interchangeable under a unified approach, RIEDP specifies semantics through attributes and attribution, uses innovative and efficient metadata constructs, provides data organization on media, and defines a set of profiles for specific application sub-domains. RIEDP also defines the concept of Feature Template that collects attributes common to all objects of a given type, e.g., trees, buildings, roads etc.

Further details are given in “Update on RIEDP Products and Standards”, **WG8 N0653.**

To access this document, go to [References](#References).

The following comments were made in response to the presentation:

* What was the intent of giving a presentation about a SISO Standard?
	+ It was to show how SEDRIS standards are being used in other, externally developed standards. It was also to promote RIEDP to the environmental data processing community. The work of RIEDP is very relevant and related to SC 24.
* If RIEDP is a SISO standard, why should ISO be involved?
	+ Because SISO is very focussed on Modelling and Simulation, whereas ISO has a wider coverage of users and the RIEDP effort can apply to those.

 SISO EDRS Product Support Group (Farid Mamaghani)

EDRS is a SISO Product Support Group for Environmental Data Representation Standards (EDRS). The SISO-supported or developed standards that fall within the EDRS scope include SEDRIS and RIEDP. The chair of EDRS is Paul Foley, a long-time participant in SC 24 and WG 8 efforts. As Paul was unfortunately unable to join the meeting, Farid Mamaghani gave the meeting an update in his place.

SISO aims to promote modelling and simulation interoperability and reuse for the benefit of all users. In addition to SEDRIS and RIEDP, other initiatives exist in this area, including CDB (Common Database), which has been adopted by OGC (the Open Geospatial Consortium) as an OGC standard. EDRS is currently working with the community of interest to highlight the similarities, differences, and characteristics of these standards to promote a more informed understanding of the state of the art.

 NGA Plans for Spatial Referencing (Craig Rollins)

Craig Rollins informed the meeting that the US NGA (National Geospatial Agency) would be very interested if the SRM standard could be updated to Edition 3, as originally planned. A DIS for SRM Ed 3 was issued in October 2012, but the development of an FDIS had to be cancelled due to the programme time limit being exceeded.

**Recommend to SC 24** that a renewed effort be made to complete and publish SRM Ed. 3.

EDCS Registry

There have been no changes to the contents of the EDCS Class of items in the SC 24 Registry.

At the 2019 WG 8 meeting, it was reported that the download function that allows registry content to be downloaded in Excel or Access format was currently not available. This was raised as Action 35-01, but has not yet been resolved.

SC 24 Road Map

The proposal for a SC 24 Roadmap was first made at the 2018 meetings by Farid Mamaghani in response to concern that some of the standards currently being developed may not address the real needs of users. The intention of a Roadmap is to address practical and non-academic problems, focus the approach on the development of standards that solve those problems, and ask whether, in 10 years’ time, we will have any regrets over the direction that had been taken.

The idea of producing an SC 24 Roadmap was supported by the chair, Myeong Won Lee. There will be further discussions on a Roadmap at an SC 24 on-line meeting, to be called after the Business Plan has been issued.

Current Status of Action items

The status of those action Items still open at the end of the 35th WG 8 plenary in Takamatsu is as follows:

Action Items still open at end of 35th WG 8 Plenary in 2019

**Action 33-01**

Requirement:

Update the front page of the SC 24 Registry to enable additional classes to have links to their contents.

Current Status:

To implement the change, access to the SC 24 Registry site content is needed. As the SC 24 Committee Manager had such access rights on a previous occasion, Farid Mamaghani and Charles Whitlock will discuss to see whether this is still the case.

**Continuing**

**Action 34-03**

Requirement:

Update the SC 24 Register to:

* Add registered items for SEDRIS – Part 1
* Add registered items for SRM
* Update BIIF profiles, when requested
* Add new BIIF profiles, when available

Current Status:

No comments were made for this action at the meeting. During a subsequent review while these minutes were being written, it was questioned why two items relating to BIIF profiles had been included.

The general problem relating to this action and Action 33-01 were originally raised in 2016 as Action 31-01. In June 2017, the BIIF Profile section of the SC 24 Register was updated to include the Open Skies Digital Data Exchange Format, as recorded in the Action List for the 2017 WG 8 Minutes (**WG8 N0619**). Action 31-01 was transferred to 33-01 at the same time. This action (34-01) was raised in 2018, when the requirements for BIIF profiles were erroneously included.

The two items referring to BIIF Profiles have been removed. Since the remining items for SEDRIS Part 1 and SRM are instances of Action 33-01, they were incorporated into that action. This action was therefore closed.

**Closed**

**Action 35-01**

Requirement:

Complete the updates to the EDCS Registry, such that the download function for contents of the Registry may be re-enabled.

Current Status:

The completion of this task is partial and will require additional software changes to the EDCS database processing, for which there is limited expert time. Higher priority tasks may mean that this task would have to be delayed.

**Continuing**

**Action 35-02**

Requirement:

Send a comparison of the relative attributes of WG 8 and the AG for Systems Integration Visualization (SIV) to the meeting attendees, in order to promote discussion on the options for AG SIV becoming a Working Group.

Current Status:

A comparison of the relative attributes of WG 8 and SIV was sent by email on 18 Feb 2020. The replies from the SC 24 Chair and the SIV Study Group were that SIV could fit into any of the SC 24 Working Groups, in which case it was better for it to become a new WG. The proposal was therefore rejected.

**Closed 2020-03-15**

Action Items raised during this Meeting

No new actions were raised at the meeting.

The updated 2020 Action List is shown in [Appendix F](#AppendixG)

Review of the planned WG 8 Work Programme

The NWIP for 18041-5 EDCS LB to C++ was approved in January 2020, but was not registered until the first meeting on 30 June 2020.

NWIPs for 18042-5 SRM LB to C++ and 18024-5 SEDRIS LB to C++ are currently in preparation.

The updated work schedule is shown in [Appendix E](#AppendixE) and includes anticipated future work programmes.

Draft WG 8 Recommendations to be forwarded to the WG 8 Plenary

It was agreed that the Recommendations to SC 24 should include the following:

* The need for ISO to publish the correct version of EDCS LB to C (18041-4) Ed 3
* Make EDCS LB to C (18041-4) Ed 3 a publicly available standard
* To support the progression of work for 18041-5 to CD
* To support New work Items for 18042-5 and 18024-5
* To support a New Work Item for 18026 (SRM) Edition 3
* To support the development of an XML encoding for SEDRIS transmittals

The final wording of the Recommendations was completed during the WG 8 Plenary.

Any Other Business

* Louis Hembree pointed out that the definition of Mass in the EDCS needs to be updated to align with the recently revised International definition. It was agreed that further action would be taken off-line
* Farid Mamaghani reported that he recently learned the sad news that Kevin Trott’s wife had passed away 2 weeks ago. The meeting attendees expressed their condolences for Kevin, who is a long-time member of SC 24 and a co-editor of the SRM standard.

The WG 8 Working Session concluded at approximately 23:00 UTC.

[Back to Top](#Top)

* + - 1. 36th WG 8 Plenary

**21:00 UTC, Monday 10th August 2020**

Corresponding to:

07:00 – 09:00 Tuesday 11 August: Australia (East Coast)

06:00 – 08:00 Tuesday 11 August: Japan

06:00 – 08:00 Tuesday 11 August: Korea

05:00 – 07:00 Tuesday 11 August: Beijing (China Standard Time)

23:00 – 01:00 Monday/Tuesday 10/11 August: France

22:00 – 24:00 Monday 10 August: UK

17:00 – 19:00 Monday 10 August: USA (East Coast)

14:00 – 16:00 Monday 10 August: USA (Pacific)

**Chair: Jack Cogman**

The attendees at the meeting are shown in [Appendix D](#AppendixD). This included participants that participated remotely via web conferencing.

The WG 8 Plenary Agenda is given in [Appendix B](#AppendixB).

Welcome

The Convenor, Jack Cogman, welcomed attendees to the meeting.

Roll Call and Introductions

Each person attending the meeting introduced herself/himself.

Minutes of the 35th WG 8 plenary meeting held in Takamatsu, Japan

There were no comments, so the minutes of the last Plenary meeting were approved.

 Convenor’s Report

Jack Cogman gave a brief summary of the Convenor’s Report document, which is given in document **WG8 N0649**. To access this document, go to [References](#References).

As stated at the end of the Convenor’s Report, Jack Cogman announced that he intends to stand down as Convenor. A replacement Convenor therefore needs to be found.

Rob Cox has indicated that he could possibly be available in 2 years’ time.

Farid Mamaghani has indicated it would be difficult for him without travel funding. He would, however, consider taking on the role on a temporary basis.

**Recommend to SC 24** the appointment of Farid Mamaghani as Acting Convenor of SC 24/WG 8.

 Summary of key topics from the WG 8 Working Session

A summary was given of the following topics discussed during the Working Session on 3 August:

* Status of Current Projects (See 2.3)
* XML-based Format for SEDRIS (See 2.4 and WG8\_0652)

Farid Mamaghani commented that the SEDRIS Model Viewer is only intended to be used with 3D models. To view full terrain database transmittals encoded in XML, a different visualization tool should be used in testing.

Don Brutzman commented that the value of XML is its interoperability and that it is worth continuing with this work.

* RIEDP Project Update (See 2.5 and WG8\_0653)
* SISO Environmental Data Representation Standards (EDRS) (See 2.6)
* Future Plans for Spatial Referencing Standard (See 2.7)

Craig Rollins commented that this is currently being discussed in the US NGA and it would be beneficial to involve someone who has links with OGC.

 National Body Reports

National body reports have been issued as the following documents:

**SC24 N4359** – Australia

**SC24 N4410** – Japan

**SC24 N4382** – Korea

**SC24 N4370** – UK

**SC24 N4358** – USA

For access to these documents, go to [References](#References)

Liaison Reports

SEDRIS

The SEDRIS Organization Liaison Report (**WG8 N0651 and SC24 N4411**) describes activities over the last 12 months. The SEDRIS Organization is a major contributor to the work of WG 8, but also contributes to the work of:

* WG 9 on Mixed and Augmented Reality (MAR) documents and standards. The need to clearly identify and provide focus for the problems being solved has been emphasized.
* AG on Systems Integration Visualization (SIV), now WG 10. Particularly supports the importance of this work.
* SC 24 initiatives and activities, including scope statements of Working Groups and the planning of the 2020 SC 24 meetings.
* SISO RIEDP Guideline and Standard.
* SISO EDRS (Environmental Data Representation Standards) Product Support Group
* Close cooperation with the US National Geospatial-Intelligence Agency (NGA)

To access the above document, go to [References](#References)

SISO

There was no liaison report from SISO, the Simulation Interoperability Standards Organization.

Other

There were no other Liaison Reports.

Editors Reports

The current active programme 18041-5 has only just started, hence there was no Editor’s Report.

Report from the Registry Rapporteurs

SC 24 Register – General

The entry point for the registries for SEDRIS part 1 and SRM are currently not linked to their corresponding register sites from the main SC 24 Registry site. This was raised as Action 34-03 at the 2018 Plenary in Toulouse, but has not progressed.

EDCS Registry

The EDCS Registry has about 300 new items to address. As these were could not be resolved during the publishing of Edition 2 of the EDCS standard, a decision needs to be made to either eliminate the items or resolve them with the submitters, based on Edition 2 of the EDCS standard.

A problem with the content Download capability of the EDCS Registry as Access or Excel files has not yet been resolved.

Louis Hembree has noted that there have been changes to the use of some units for physical measures and that the registry needs to be reviewed to ensure consistency.

SRM Registry

No items have been submitted to date.

SEDRIS DRM Registry

No items have been submitted to date.

Appointment of Registry Rapporteurs

The existing Registry Rapporteurs were re-appointed, with no objections, as shown below:

EDCS: Farid Mamaghani

SRM: Paul Berner

DRM: Farid Mamaghani

WG 8 Content of the SC 24 Business Report for 2020-2021

The 2020-21 Business Plan needs to be submitted to JTC 1 by 7 September 2020 and is being coordinated by the SC 24 Chair, Myeong Won Lee.

The WG 8 content is being prepared by Jack Cogman and will record the progress on current and proposed projects and will state the WG 8 strategy of supporting the use of WG 8 standards that

make use of data representing the environment in which the application is operating.

Work Schedule

The EDCS language binding to C++, together with the planned SRM and SEDRIS language bindings to C++, have been added to the Work Schedule. The table in [Appendix E](#AppendixF) shows the status of WG 8 standards that have changed since 2014, plus anticipated future work.

Recommendations to SC 24

The new or modified recommendations for 2020 were those raised at the Working Session, as summarized in 2.12, plus the following recommendations raised at this meeting.

1. To appoint Farid Mamaghani as Acting Convenor of SC 24/WG 8
2. To amend the section in the Recommendations on “Support for New WG 8 Work” by adding the point of contact and the sponsoring authority for each item
3. To remove the recommendation to evaluate the scope and work of WG 8 and AG SIV
4. To add ‘**Lee** and Puk for 18041-5’ to the Appointment of Editors

These recommendations were incorporated into the 2019 Recommendations to produce the 2020 Recommendations to SC 24, as given by **Document WG8 0654**. This document may be accessed via the links given in [References](#References).

Action Items

Existing Open Items

The status of the existing Action Items was updated in Section 2.10 of the Working Session, as follows:

31-02: Closed

31-03: Closed

33-01: Continuing

33-02: Closed

34-01: Closed

34-02: Closed

34-03: Closed

35-01: Continuing

35-02: Closed

New Items

No new action items were raised at either the Working Session or Plenary meetings.

The updated action list is shown in [Appendix F](#AppendixG)

Adjourn

The Plenary meeting closed at 23:00 UTC.

[Back to Top](#Top)

* + - 1. **Other Related SC 24 Meetings**

In addition to the WG 8 meetings, other meetings held during the week highlighted issues considered to be of interest to WG 8. A summary of these is provided in this section.

 SC 24 Status Meeting, 21:00 UTC 27 July

This meeting was attended by Phil Wennblom and Lisa Rajchel, the JTC 1 Chair and Secretary, respectively. The main items of discussion were:

* **The Scope of SC 24**

The reason for discussing the scope of SC 24 was that one of the options considered in the restructuring of SC 29 involves the creation of a WG for Encoding of 3D Graphics. It was felt that to users of standards this can appear to conflict with the scope of SC 24.

Phil Wennblom pointed out that WGs do not have scopes, but are defined by the projects they have been assigned to work on.

* **The Creation of New WGs in SC 24**

Two new Working Groups were proposed, one for the current AG on System Integration Visualization and the other for the work initiated at BSI on the commercial use of VR/AR techniques.

 HoD/C Meeting, 23:45 UTC 27 July

The following were discussed:

* **Business Plan for 2020-21**

WG Convenors and the Chair were reminded that all need to contribute to the SC 24 Business Plan.

* **ISO Document Platform**

All SC 24 documents are now published on the ISO Document Platform, which replaces the LiveLink system used previously.

* **WG 7 Convenor**

It has not been possible to contact the WG 7 Convenor, Cong Wang, for many months. It therefore seems necessary to put out a call for a replacement.

* **WG 8 Convenor**

The WG 8 Convenor, Jack Cogman, has announced that he will stand down when his term of office expires at the end of 2020. A call for a replacement is therefore required.

2nd HoD/C Meeting, 13:00 UTC 5 August

The meeting was attended by Tim McGarr, Dawn Hunter, and Emelie Bratt for the BSI, and by Phil Wennblom, JTC 1 Chair.

* **Establishment of a WG for AG System integration Visualisation**

The new WG should not include the term System Integration, as it is confusing. Peter Ryan was asked to draft an alternative title.

The establishment of a new Working Group, as WG 10, was approved.

* **Establishment of a WG for Business Focussed Standards for VR/AR**

The proposed title was considered too long and the phrase ‘focus of standards’ should be removed.

There are many references to safety in the proposed standards being prepared by the new working group. These need to be checked to ensure there is no overlap with either SC 24/WG 9 or other ISO or ISO/IEC groups.

The establishment of a new Working Group, as WG 11, was approved.

* **WG 7 Convenor**

Charles Whitlock has tried to contact Cong Wang using her private email, but with no success. He will write to the Chinese NB expressing SC 24’s concern.

If a Convenor is not participating, an SC is allowed to appoint a replacement.

For the 2020 meetings, Jason Smith is the Acting Convenor of WG 7.

* **WG 8 Convenor**

Phil Wennblom stated that it is good practice to put out a call for candidates so that all NBs are aware of the vacancy.

Jack Cogman has been in discussion with Farid Mamaghani regarding a replacement Convenor.

SC 24 Scope Meeting, 21:00 UTC 6 August

There was further discussion on the creation of the two new WGs.

SC 24 Plenary, 21:00 UTC 17 August

* Approved the creation of SC 24/WG 10: Representation and Visualization of Information for Systems Integration. Peter Ryan appointed as Acting Convenor.
* Approved the creation of SC 24/WG 11: Health, Safety and Usability of Augmented and Virtual Reality (AR/VR). Gary Smith appointed as Acting Convenor.

The resolutions made at the SC 24 Plenary are recorded in:

SC 24 Resolutions OnLine 2020 (**SC24 4432**), which may be accessed via [References.](#References)

[Back to Top](#Top)

#  Appendix A

**WG 8 Environmental Data Representation**

On-line WG 8 Working Session 2020

**Agenda**

**21:00 UTC (Coordinated Universal Time) Monday 3rd August 2020**

Corresponding to:

07:00 – 09:00 Tuesday 4 August: Australia (East Coast)

06:00 – 08:00 Tuesday 4 August: Japan

06:00 – 08:00 Tuesday 4 August: Korea

05:00 – 07:00 Tuesday 4 August: Beijing (China Standard Time)

23:00 – 01:00 Monday/Tuesday 3/4 August: France

22:00 – 23:59 Monday 3 August: UK

17:00 – 19:00 Monday 3 August: USA (East Coast)

14:00 – 16:00 Monday 3 August: USA (Pacific)

**Chair: Jack Cogman**

1. Welcome and Introductions
2. ISO Code of Conduct at Meetings
3. Current and Anticipated Work Plan:

3.1 18041-5 EDCS LB to C++

3.2 18042-5 SRM LB to C++

3.3 18024-5 SEDRIS Part 1 LB to C++

1. Proposal for an XML-based format for SEDRIS (Myeong Won Lee)
2. Update on SISO RIEDP Products and Standards (Farid Mamaghani)
3. SISO EDRS Product Support Group (Paul Foley)
4. NGA Plans for Spatial Referencing (Craig Rollins)
5. EDCS Registry
6. SC 24 Road Map
7. Current status of Action Items
8. Review of the planned WG 8 work programme
9. Draft recommendations to be forwarded to the WG 8 Plenary meeting

[Back to Top](#Top) **Appendix B**

WG 8 Environmental Data Representation
On-line 36th WG 8 Plenary Meeting 2020

Agenda

**21:00 UTC, Monday 10th August 2020**

Corresponding to:

07:00 – 09:00 Tuesday 11 August: Australia (East Coast)

06:00 – 08:00 Tuesday 11 August: Japan

06:00 – 08:00 Tuesday 11 August: Korea

05:00 – 07:00 Tuesday 11 August: Beijing (China Standard Time)

23:00 – 01:00 Monday/Tuesday 10/11 August: France

22:00 – 23:59 Monday 10 August: UK

17:00 – 19:00 Monday 10 August: USA (East Coast)

14:00 – 16:00 Monday 10 August: USA (Pacific)

**Chair: Jack Cogman**

1. Welcome and introductions
2. ISO Code of Conduct at Meetings
3. Approval of the minutes of the 35th meeting held at Takamatsu, Japan 2019
4. Convenor's report
* Replacement for WG 8 Convenor
1. Summary of key topics from the Working Session
2. National Body reports
3. Liaison reports
* SEDRIS
* SISO
* Any other liaison reports
1. Editors reports
2. Reports and Appointment of registry rapporteurs
* EDCS
* SRM
* SEDRIS
1. Summary of WG 8 content in the draft SC 24 Business Plan for 2020-21
2. Work Schedule
3. Review and approval of WG 8 Recommendations to SC 24
4. Review action items
5. Adjourn

[Back to Top](#Top)

**Appendix C – SC 24 Meeting Plan**

**Meeting Schedule for the 2020 Online SC 24 and Working Group Meetings**

**27 July - 17 August 2019 (UTC)**





[Back to Top](#Top)

**Appendix D**

**List of Attendees**

**2020 SC 24/ WG 8 Online Meetings**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | **Affiliation**  | **E-mail** | **WG 8 Working Session**  | **WG 8 Plenary** |
| **All attendance was remotely via Zoom** |
| **SC 24 Officers** |  |  |  |  |
| Myeong Won Lee | SC 24 Chair, Suwon University | myongwonlee@gmail.com | ✓ | ✓ |
| Charles Whitlock | SC 24 Secretary, BSI | charles.whitlock@bsigroup.com | ✓ | ✓ |
| **Australia** |  |  |  |  |
| Peter Ryan | DSTO Australia | peter.ryan@dsto.defence.gov.au | ✓ | ✓ |
| Doug Stapleton |  | doug.stapleton@hinfosec.com.au | ✓ | ✓ |
| **Korea** |  |  |  |  |
| Kwan-Hee Yoo | Chungbuk University | khyoo@chungbuk.ac.kr | ✓ | ✓ |
| Young-Mun Kim |  |  | ✓ |  |
| Ha-Jine Kim | Ex-Chair of SC 24 | hjkimn@ajou.ac.kr | ✓ |  |
| **Japan** |  |  |  |  |
| Takeshi Kurata | AIST | t.kurata@aist.go.jp | ✓ | ✓ |
| **UK** |  |  |  |  |
| Jack Cogman | WG 8 Convenor | jack.cogman@datasim.net | ✓ | ✓ |
| Martin Smith | UK HoD, WG 7 | msmith1@talktalk.net | ✓ | ✓ |
| **US** |  |  |  |  |
| Dick Puk | Intelligraphics, WG 6 Convenor | puk@igraphics.com | ✓ | ✓ |
| Jason Smith | L3Harris Corp. | jason.smith@harris.com |  |  |
| Rob Cox | US DoD PEO STRI | robert.m.cox14.civ@mail.mil | ✓ | ✓ |
| Craig Rollins | US DoD NGA | craig.m.rollins@nga.mil | ✓ | ✓ |
| **SEDRIS LO** |  |  |  |  |
| Paul Berner | SEDRIS Organization | sedris\_pdb@verizon.net | ✓ | ✓ |
| Tim Gifford | SEDRIS Organization | tim.gifford003@gmail.com |  | ✓ |
| Louis Hembree | SEDRIS Organization | hembree@razzolink.com | ✓ |  |
| Warren Machi | Abamis, SEDRIS Organization | wmacchi@abamis.com | ✓ |  |
| Farid Mamaghani | SEDRIS Organization | farid@sedris.org | ✓ | ✓ |
| **Web3D LO** |  |  |  |  |
| Don Brutzman | Web3D Consortium | brutzman@nps.navy.mil | ✓ | ✓ |

[Back to Top](#Top)

**Appendix E**

**WG 8 Work Schedule – Showing only the events that have occurred since 2014**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Standard** | **WD** | **CD****PDAM****PDTR** | **DIS****FPDAM** | **FDIS****FDAM****DTR** | **IS/TR** |
| **EDCS Amendment 1 initially, then changed to Edition 2****18025** | **Approved Oct 08** | **PDAM** **Aug 11** | **DIS Sep 12** | **FDIS** **Oct 13** | **Ed 2: 2014 2014-02** |
| **EDCS LB to C Ed 3****18041-4** | **NWIP 14 Jun 13** | **CD 14 Jun 13** | **DIS** **15 Nov 15** |  | **Ed 3: 2016 2016-05-27** |
| **SRM Edition 3****18026** | **Approved Feb 09** | **CD** **Aug 11** | **DIS Oct 12** | **FDIS Cancelled Q2 2014** | **(Ed 3)****NWIP to be raised** |
| **EDCS LB to C++** **18041-5** | **WD****30 Jun 20** | **CD****Dec 20**  | **DIS****Dec 21**  | **FDIS****Apr 22**  | **IS****Oct 22** |
| **SRM LB to C++****18042-5** | In Preparation |  |  |  |  |
| **SEDRIS LB to C++****18024-5** | In Preparation |  |  |  |  |
| **SRM Edition 3****18026** |  | Planned |  |  |  |
| **SRM LB to C Ed. 1 Amendment 2****18042-4** | NWIP when SRM Ed 3 published |  |  |  |  |

= Completed

**Abbreviations**

**NWIP:** New Work Item Proposal

**CD:** Committee Draft

**PDAM:** PreliminaryDraft Amendment

**PDTR:** Preliminary Draft Technical Report

**DIS:** Draft International Standard

**FPDAM:** Final Preliminary Draft Amendment

**FDIS:** Final Draft International Standard

**FCD:** Final Committee Draft (No longer used)

**FDAM:** Final Draft Amendment

**DTR:** Draft Technical Report

**IS:** International Standard

**TR:** Technical Report

[Back to Top](#Top)

**Appendix F**

**Action Items**

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

**36th WG 8 Plenary
Held online, 10th August 2020**

**This table shows only those Action Items that were still open at the end of the 35th WG 8 Plenary on 2019-08-29.**

**Shaded areas indicate action items that have been closed since then.**

| No. | Action Item | Assigned to | Due | Done | Comment |
| --- | --- | --- | --- | --- | --- |
| 33-01 | Update the front page of the SC 24 Registry to enable additional classes to have links to their contents. In particular, the capability is required to:* Add registered items for SEDRIS – Part 1
* Add registered items for SRM
 | F. Mamaghani,C. Whitlock | April 2021 |  | 2018-08-09: **Continuing**2019-08-29: **Continuing**2020-08-10: To implement the change, access is required to the SC 24 Registry site content. As the SC 24 Committee Manager had such access rights on a previous occasion, Farid Mamaghani and Charles Whitlock will discuss to see whether this is still the case.2020-12-04: On reviewing Action 34-03, it was realized that adding registered items for SEDRIS-Part 1 and SRM are specific examples of this requirement. They have therefore been included as part of this action.**Continuing** |
| 34-03 | Up: Update the SC 24 Register to:* Add registered items for SEDRIS – Part 1
* Add registered items for SRM
* Update BIIF profiles, when requested
* Add new BIIF profiles, when available
 | F. Mamaghani,J. CogmanC. Whitlock | June 2019 |  | 2019-08-29: No action reported.**Continuing**2020-08-10: Similar to Action 33-01, but no other comment made.2020-12-04: On reviewing this action, it was noted that actions for BIIF profiles were not needed, since the profiles were updated in June 2017 to add the Open Skies Digital Exchange Format (Ref: Action List given in the 2017 WG 8 Minutes (**WG8 N0619**).BIIF profile actions deleted.SEDRIS – part 1 and SRM actions transferred to Action 33-01, as they are specific examples of the same requirement.This action therefore closed**Closed** |
| 35-01 | Complete the updates to the EDCS Registry, such that the download function for contents of the Registry may be re-enabled.  | F. Mamaghani,J. Cogman | August 2020 |  | 2019-08-28: Raised at the 2019 WG 8 Working Session**Continuing**2020-08-10: The completion of this task is partial and will require additional software changes to the EDCS database processing, for which there is limited expert time. Higher priority tasks may mean that this task would have to be delayed.**Continuing** |
| 35-02 | Send a comparison of the relative attributes of WG 8 and the AG for Systems Integration Visualization to the meeting attendees, to allow review and comment on the options for AG SIV becoming a Working Group | J. Cogman | February 2020 | February 2020 | 2019-08-28: Raised at the 2019 WG 8 Working Session2020-02-18: A comparison of the relative attributes of WG 8 and SIV was distributed by email to SC 24. The replies from the SC 24 Chair and the SIV Study Group were that SIV could fit into any of the SC 24 Working Groups, in which case it was better for it to become a new WG. The proposal was therefore rejected.**Closed 2020-03-15**  |

[Back to Top](#Top)