ASD-SSG Radar Charts

Status

Dr Nicolas Figay, ASD SSG Workshop, 4th of March, 2025
https://www.linkedin.com/in/nfigay/
nicolas.figay@airbus.com

ASD – The Voice of Industry

Last Published SSG Standards Radar Chart: V1.10d (October 2019)

- No published release since then
- Made available as Portal page and PowerPoint with embedded documents for each "blip", i.e. standard in the radar
- Today available as an HTML page extracted from the Portal before its decommissioning
- Difficult to maintain, to update and not a modern way to present recommendations of ASD SSG
- Align with the way AIA published the commonly agreed standards to be used

Last Produced SSG Standards Radar Charts

We split per domain/working group the radars to be produced in order addressing cross lifecycle interoperability as promoted in the white paper about Through Life Cycle Interoperability

- Product Definition and Analysis Interoperability: standards related to PDM and CAx Systems in the published Radar
- Systems Engineering interoperability: a list produced without blips categorization (no change since 2022) by Yves Baudier and Nicolas Figay
- Manufacturing interoperability: an important work made by Steven Carter (Rolls Royce) with some support of Nicolas Figay (Airbus) but no agreed categorization of blips so no publication
- Product Support interoperability: reporting and follow up of S series from ASD, without production of a dedicated radar by ASD SSG yet
- Supply Chain interoperability; reporting and follow up of some related standards by Sami Scemama but no produced dedicated radar
- Through-life cycle interoperability: mainly the production of a position paper - no dedicated radar (some specification in the last released radar) - importance to publish a consistent set of complementary standards
- Common Interoperability Topics: cross domain or more technical interoperability standards including security, training … never started working group - closely related to Architecture Of Reference
- Other topics: blockchains, IA…

The radar chart viewer and editor

Supporting tools for assisting production, exploitation and publication of Radar Charts and producing innovative assets for improving attractivity and reusability of the produced Radar charts and associated "blips" document

- Principles and mock up proposed by Nicolas Figay
- On going prototype development, presented at ASD SSG and ASD last year
- Closely related to Semantic Cartography and ArchiCG open source prototype
- Potential technical issue for making interactive radar chart published though ASD Web site or for supporting their production being computer aided
- Developed on best effort without funding

Analysis of the current situation

Sufficient commitment for strategic alignment of the ASD SSG members?

- Why no no radar chart published since 2019 reflecting an actual alignment and agreement?
- Are the required stakeholders in the various companies sufficiently informed and involved in the process?
- Is the path from agreed external open standards to internally applied specification clear enough with accurate deployment and qualified collaboration chains?

Scope to be restricted or extended?

- We cover many topics with too restricted resources. However, strategic effort on a too restricted scope is useless for actual cross life cycle interoperability and if willing to prevent silos. This is going against the definition of PLM, according to CIMDATA.
  Not possible to exclude and to ignore emerging disruptive technologies (IA, Sovereign Data Platform …)
- The today's consider standards are not based on the new emerging technologies and need some modernisation concerning the proposed bindings in order preventing obsolescence and loss of the accurate and deep knowledge embedded on the standards elected by ASD SSG
- We need to take into account emerging regulations, interoperability having to be considered in socio technical environments and digital business ecosystems which are not necessarily homogeneous

What are the initiatives for which we need to establish liaisons?

- In the current landscape, it is not possible to work alone and we need to establish connection and liaisons with legacy initiatives which matters, such as Gaya-X, Decade-X, National and European Defence Initiative, ESCC, etc.
- What is the value we have to offer to these initiatives?
- How to include and connect regulations to be applied with useable standards which will bring an actual value?
- Are we sufficiently connected to some standardization organisations related to our perimeter? E.g. INCOSE and local national organisations, EDM.OMG, IEEE…

Recommendations for the academic and research world

- How can we make the importance of ASD SSG visible and understandable for the academic community and researchers for addressing potential scientific issues we are facing for preparing and building continuous operational interoperability at an acceptable price with clearly identified benefits and value creation?

The way forward

Collecting for each ASD SSG Member their position about the current radar

- For each standard, in the radar
    1. Is the versioned standard or one part of the standard internally applicable in your organization?
    2. Is the versioned standard or one part of the standard internally applicable in some programs where you are involved in?
    3. Is the standard applicable in conjunction with some other standards in the list or out of the list?
    4. Any obsolescence about the Blip description (ASD SSG Id Card of the standard)?
    5. Any applicable standards applicable in your organization or programs which are relevant for ASD SSG purpose but not mentioned

    ⇒ Analysis for making an update of adopted standard.

- Could be aided by some features under development for the Radar Chart producer with comparison of applicable standards radar charts and asd-ssg radar charts

By experts involved in ASD SSG and members, review of the standards to track, to be developed or where we should contribute to the development

- To be proposed by the Working Group of ASD SSG per topic: System Engineering, PLM, Manufacturing, Support, Interoperability Framework, …

- Could be aided by some features under development for the Radar Chart producer from with a list of standards coming from Standardization Organization open data.

New digital capabilities for the Governance of Open and Strategic Standards

The Context

- A need exist for supporting Strategic Roadmaps and Maturity Assessments of Cross Life Cycle PLM Standards addressed by ASD SSG since about 20 Years
- This is mandatory for Effective Collaboration, Interoperability and Reuse in emerging Digital Business Ecosystem
- It should also serves Standards Compliance and Auditable Knowledge about how to switch from External to Internal standards in organizations

A Prototype under Development for ASD SSG

- Open Source & free authored by an ASD SSG PLM Interoperability Expert – based on open standardized technologies
- No executable, no server, no remote data, possible to embed in GSite and Confluence Pages– minimum administration needs, low cost, easy to publish in various environments
- Connected with Semantic Cartography tool based for Architects supporting Continuous Operation Interoperability building

The Current Situation

For this, ASD Strategic Standardization Group has been for year working on office documents for producing Strategic Radar Charts capturing tracked, candidate and adopted standards at European Aeronautic, Space and Defence level, plus recommending involvement of Airbus for developing required standards including set up of implementor forum. But

- More and more standards to manage and assess
- Weak links between Enterprises BMS standards and Applicable External Standards. It makes ensuring standards based Interoperability difficult

There is an opportunity for digitalizing Strategic Standardization Radar Charts and their associated processes:
- Monitoring and analysis based on Open Data made available by Standardization organisation,
- building interactive Radar Chart based on Semantic Cartography,
- publishing Interactive Radar Charts, Integrating them in Semantic Cartographies for Process and Solution Architects
- Making standard

Let's make Attractive and Rich Publication of Strategic Standard Recommendations

- For Harmonization and Reuse inside SSG for Cross Life Cycle Interoperability Standards Monitoring
- For Harmonization and Reuse outside within ASD digital business ecosystem
- For supporting Informal Network of Experts knowing well standards and making them visible and useful

However requires some sponsoring for visibility and usage

Reuse opportunity by ASD EADSF?

🎯 From Open Standardization Data to Interactive Semantic Radars

🧭 Process Overview

1. 📥 Access & Ingest Open Data
   - Source: ASD, ISO, OMG, etc.
   - Metadata extraction: domain, maturity, lifecycle, issuer
   - Filtering: relevance to organization, community of interest

2. 🧱 Build the Interactive Radar
   - Dimensions: Domain × Positioning × Level of adoption
   - Linked tags: projects, stakeholders, compliance scope

3. 🌐 **Publish & Interact**
   - Web-based radar with filters, tooltips, live updates
   - Export options

4. 🔗 **Integrate into Enterprise Cartography**
   - Link to capabilities, processes, and EA layers (e.g., ArchiMate)
   - Semantic alignment with roles, use cases, lifecycle stages
   - Support for governance, impact analysis, traceability

«Open and Enterprise Standards Strategic Governance» Process Support

🧱 Build the Interactive Radar

Re-injection as part of the strategy in the enterprise architecture repository (strategic layer in ArchiMate)

Publication as HTML with Javascript and SVG (or PDF/Raster Image)

🌐 Publish & Interact

Bringing together current and future standards to be considered by a community of interest

Embedded in Google GSite, Confluence, etc.

📥 Access & Ingest Open Data

Open Data from ASD, ISO, OMG, W3C, etc.

The standardization landscape involving various technical committees, related organizations and stakeholders, standards, and classification schemes

🔗 Integrate into Enterprise Cartography

A standardization landscape integrating open data as an ArchiMate Semantic Cartography