# Ideas on the Future Direction of SC 24

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# Agenda

- **The Reason for this Presentation**

- **The SC 24 response to JTC 1 System Integration**

- **SC 24 related requirements from other Standards Bodies**

- **How can SC 24 address these requirements?**

- **How can this offer be improved?**

- **A suggested Future Direction for SC 24**

# The Reason for this Presentation

- **JTC 1 Policy for System Integration**
  - JTC 1 Standing Document 24 (SD 24) on System Integration Standardization Guidelines was published in 2017 and reported to the SC 24 2017 Plenary in Arlington by the SC 24 Chair

  - The document requests a change from a "Stovepipe" view of standards to a "Matrix" view

- **Where will SC 24 Standards be in 10 years time?**
  - This question was asked at the 2018 Plenary by Farid Mamaghani

  - Will we have any regrets over the path taken or the opportunities missed?

- **Resolution 30 of the 2018 SC 24 Plenary**
  - Resolution 30 called for the development of a Roadmap for Future Planning of SC 24

- **The reason for this presentation is to continue the development of the Roadmap and to address these issues**

# The SC 24 response to JTC 1 System integration

- Positive

- **Study Group for System Integration Visualization established**

  o **Established in 2017, the SG is focusing on:**
    - **Smart City representation and visualization**
    - **VR-based training and education systems**
    - **Health information systems**

  o **The establishment of this SG is a step in the right direction**

- **Do SC 24 Standards still have a "Stovepipe" appearance?**

  o **An interface exists between WG 6 (X3D) and WG 9 (MAR)**

  o **The technical relationships between other SC 24 standards, however, could be improved**

  o **Greater synergy is required between SC 24 standards**

# SC 24 related Requirements from other Standards Bodies

- **Requirement for Visualization of STEP (ISO 10303) data**
  - ○ **TC 184/SC 4/JWG 16 (joint working group with SC 24) was established to assess preferred standards for visualization**

- **Requirement for Visualization of Smart City data**
  - ○ **The standards being developed by JTC 1/WG 11 Smart Cities will require supporting visualization standards**

- **Requirements for Detailed Environmental Data Definition**
  - ○ **JTC 1/WG 11 standards will also need support to represent and exchange Smart City environmental data**

  - ○ **RIEDP (Reuse and Interoperation of Environmental Data and Processes), a SISO project, requires environmental data representation**

- **Other Requirements identified by SG SIV**

- **Updates on all these requirements have been given during this Presentation Session**

# How can SC 24 address these requirements?

- **Requirements for Visualization**

  o **X3D provides a modeling and visualization capability**

  o **H-Anim provides simulation of human animation**

  o **The MAR set of standards provide the capability for mixed and augmented reality visualization**

- **Requirements for Representation of Environmental Data**
  o **The SEDRIS DRM provides a comprehensive, unambiguous and interchangeable method for specifying environmental data**

  o **EDCS provides a dictionary for defining the characteristics and identifiers of environmental objects**

  o **SRM provides an unambiguous definition of position and orientation**

# How can this be improved?

- **General Approach:**
  - o Focus the development of new and emerging standards on actual use cases that address user needs and practices

  - o Develop Technical Specifications that provide how-to guidance for using the standards in combination

  - o Develop a roadmap for use of the standards in web applications

  - o Promote content (data and data repositories) based on the standards

- **Technical Approach**
  - o Develop an interconnected system of utilities and applications that allow the SC 24 standards to be used in combination to meet new and emerging requirements

# An Interconnected System of SC 24 Standards

- **Leverage the combined value of SC 24 standards**
  - Develop an interconnected system of utilities and applications that allow SC 24 standards to be used in combination
    - currently referred to in the IT domain as an Ecosystem

  - Basic definition of an Ecosystem:
    - "A biological community of interacting organisms and their physical environments"

  - For standards, we need "A community of interacting standards while still providing the function for which they were originally developed".

- **Examples of Possible Future Developments**
  - Develop an interface between X3D and the SEDRIS DRM

  - Develop a C++ binding for the SEDRIS DRM

  - Incorporate use of PNG and BIIF in all applicable SC 24 standards and applications

# Suggested Future Direction of SC 24

- **The Goal for future development should be to use existing Standards in combination**

    o **New Work Item Proposals should take the possible combined value of SC 24 standards into account**

- **Promote a Culture of thinking of SC 24 as a whole, rather than individual Working Groups**

- **These suggestions are offered to encourage SC 24 members to propose other ideas for the way forward**

**The purpose of this presentation has been to continue the development of the SC 24 Roadmap**

**The ideas that have been put forward are just that: Ideas. We do not yet have an agreed policy**

**It is important that we do have an agreed policy for the Roadmap and Future Direction of SC 24**

**Please make your ideas known to help point us in the right direction**

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