IEEE Draft Discussion

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Background and Purpose

- **Background**
  - **At AMG25, the AMG reviewed issues raised with Draft1 of the IEEE draft HLA standardd (1516) and SDG recommendations**
    - **AMG supported the recommended SDG actions**
  - **TSTCore and Specification POCs reviewed Draft2 released by the SDG in late July, interms of**
    - **the acceptability of draft changes to DoD needs**
    - **outstanding issues and their potential impact on DoD users**
- **Purpose**
  - **Review results of the Draft2 review**
  - **Review outstanding issues and proposed actions**

IEEE Draft 1516 Draft 2

- **IEEE SISO SDGs meet in July to review comments on Draft1 and as a result Draft2 was released**
- **Draft 2 reflects the SDG recommendations presented at AMG15 in June**
- **Recommend that the AMG endorse this draft**
- **No plans to update the specification at this time**
    - **This is an interim draft; process is continuing**
    - **DoD will stay with version 1.3 final 1516 is adopted and endorsed by DoD**
    - **AMG endorsement of Draft2 is an official sign that cooperative efforts are moving forward toward common standards to support both industry and DoD**

Outstanding Issues

- **With the issuance of Draft2, there were a set of issues still to be addressed**
- **TSTCore and Spec Reps met to review these issues**
- **Review process included discussions with the users who expressed needs for certain capabilities and queries of representations who might be affected by the changes**
- **Issues**
  - **User supplied time**
  - **Unique object instance handles**
  - **Multiple routing spaces**
  - **Federate failure notification**
  - **OMT tables and data typing**
- **Each issue is discussed in terms of the user need, background on AMG experience with the issues, and recommended actions**

User Supplied Time

- **Issue**
  - **Certain realtime users (RPR-FOM group and others) have the need to send 'user defined time' with all attributeupdates and interaction**
  - **This 'user defined time' is to be used by the recipient in the process of the update or interaction**
  - **This user defined tag is substantively different from the current time management services where time values are processed by the RTI to support event synchronization**

User Supplied Time (Continued)

- **AMG/HLA Experience/Assessment**
  - **This need is unrelated to the current time management services which support event synchronization; these users was recieve order delivery of attrributes and updates**
  - **The existing user supplied tag provides the desired atomic attribute association but limits the associated data representation to a string.**
- **Recommendation**
  - **Employ the user supplied tag service argument mechanism.**
  - **Enhance the definition of the user supplied tag to permit arbitrary values.**
  - **Add a new OMT table to document the use of the user supplied tag mechanism.**
- **Action**
  - **Submit comment to the IEEE SDG**

Unique Object Instance Handles

- **Issue**
  - **Prior to Spec 1.2 the RTI was required to generate federation execution-wide unique object instance handles.**
  - **In Spec 1.3 the object instance handles were only required to be unique to a given Federate and object instance names were introduced.**
  - **Users feel that names are cumbersome and resource consumptive for use across the federation at execution time.**
- **AMG/HLA Experience/Assessment**
  - **DMSO canvassed current RTI developers and found no perceived implementation issues with a reversion to federation-wide unique object handles.**
- **Recommendation**
  - **Go back to federation execution-wide unique handles**
- **Action**
  - **Have Randall submit comment to IEEE SDG**

Multiple Routing Spaces

- **Issue**
  - **RPR-FOM group has asked that a given class attribute/interaction class be allowed to have multiple routing spaces assigned to it.**
- **AMG/HLA Experience/Assessment**
  - **DDM assessment during review of STOW experience suggested that the current routing space flexibility supported the range of anticipated uses and can be implemented efficiently**
- **Recommendation**
  - **No change to Spec at this time**
- **Action**
  - **Investigate with actual users (Perceptronics and LADS) the extent to which there may be real limits in the current specification and possible options for addressing these**
    - **Assess how applications are supported with current, thorough experimentation**

Federation Execution Failure Model

- **Issue**
  - **Execution managers have difficulties determining the status of participating federates in the presence of certain failures**
  - **Internally the RTI is aware of failures on the part of participating federates and it is desireable for this information to be made available to federates**
- **Recommendation**
  - **Add federate status information to the MOM**
  - **Perform additional research on a standard Federation Execution Failure Model (what does 'failure' mean under different RTI development strategies)**
- **Action**
  - **Submit comment to IEEE SDG**

OMT Tables

- **Issue**
  - Users suggested that the data type mechanism in the OMT is limited and there needs to be a new way to capture the representation of certain types.
- **AMG/HLA Experience/Assessment**
  - Cadre, RPR-FOM, and IEEE SDG comments have all pointed to these issues.
- **Recommendation**
  - Make Annex B a table and add new type construction functions (fixed and variant records, arrays, and simple type definitions) to the OMT.
  - Investigate the impact of these new and changed tables on the OMT DIF.
- **Action**
  - Submit to IEEE SDG
  - Review DIF formats and investigate use of applicable existing industry standards.