

CAX-IF Round 39J Summary

The CAX-IF completed its 39th round of testing at its meeting March 13-15, 2017, in Gaithersburg, MD, USA. Some of the highlights of this round were:

- Testing of the AP 242 Business Object Model showed good results. Some issues with attributes were identified and are being addressed. This will be tested again in the next round of testing, using the AP 242 Technical Corrigendum schema.
- Testing of Alternative Part Shapes showed excellent results. The first test of this use case focused on a sheet metal bracket. It contained both the folded and the flat shapes of the bracket. The challenge encountered will be how to present both part shapes to the CAD user, as the various CAD systems manage this scenario in quite diverse ways.
- Product Manufacturing Information (PMI) was tested in this round. The NIST PMI test cases were utilized. Two new system vendors participated in testing this functionality for the first time, Elysium and Techsoft 3D. Updates to the NIST STEP File Analyzer (SFA) helped to identify issues with Saved Views.
- Intense technical discussions were held at the March meeting. Some of the “hot” topics included Persistent IDs, Assembly-level PMI, and the PMI Presentation Placeholder.
- The CAX-IF met with the LOTAR Engineering Analysis and Simulation (EAS) Workgroup. Discussions on the EAS Pilot Project and testing AP 209 Edition 2 in the CAX-IF dominated this interaction. To support this testing, multi-domain support is being added to the **CAX-IF Evaluation Statistics And Results (CAESAR)** system.
- The 40th Round of CAX-IF testing will test most of the same functionality as Round 39J. Some additional functionality may include Composites, Kinematics using the AP 242 Business Object Model, and Persistent IDs to support downstream processes such as CAM and Inspection.
- NIST continues to be a major supporter of the CAX-IF. Extensive enhancements have been made to the SFA for PMI. The SFA also supports AP 209 Edition 2 files with a viewer and model checker. NIST has also developed some on-line capability in the form of a PMI Test Case Browser - Interactive search and filter for PMI elements, and a PMI Verification Testing Results Browser - Interactive search and filter for CAD system PMI capabilities