ProSTEP iViP/VDA JT Application Benchmark

7th JT Application Benchmark

SHORT REPORT

ProSTEP iViP

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1 Introduction

JT has become a widely used format for product visualization during the product development process. The ProSTEP iViP Association and the German Association of the Automotive Industry (VDA) have launched three JT-related projects in succession, which are being coordinated with each other: The ProSTEP iViP / VDA JT Workflow Forum, the ProSTEP iViP / VDA JT Application Benchmark and the ProSTEP iViP / VDA JT Implementor Forum. In August 2010, the ProSTEP iViP Association submitted the latest JT specification (version 9.5) to the ISO for standardization. JT 9.5 was published by ISO as ISO 14306:2012 in December, 2012.

Since then, ProSTEP iViP and VDA have developed implementation guidelines for JT and discussed issues and further requirements. This eventually led to the publishing of the JT Industrial Application Package (PSI 14), combining the guidelines and enhancements with the latest JT specification. This specification is compatible with the ISO standard released in 2012 as well as with the latest proprietary versions of JT.

As the latest in a row of seven benchmarks, the JT Application Benchmark was carried out in 2016 to achieve an independent evaluation of the progress being made with regard to the development of JT translators and viewing applications. The object of testing was ISO 14306:2012 (JT 9.5). Additionally, the interoperability between JT and the STEP AP242 Business Object (BO) Model XML schema (published as ISO Standard ISO 10303-242:2014) was also part of the benchmark.

The benchmark was managed by the JT Workflow Forum and JT Implementor Forum. Because the benchmark is an independent activity, it was financed directly by the two organizations, the ProSTEP iViP Association and the VDA, and not by the participating companies whose products were tested. It is a neutral test of trendsetting JT applications with regard to the selected criteria. Therefore, the results of the benchmark cannot only be used to evaluate the application of JT in PLM environments, but also for improvement of the interoperability of the applications.

As such applications are undergoing a permanent development; the benchmark can only give a snapshot of the functions and qualities of the applications.

2 Approach

The JT Application Benchmark is a common activity of the ProSTEP iViP Association and the VDA. Goal of the benchmark is a neutral evaluation of actual JT applications. Focal points of this 7th benchmark were the testing of CAD-JT and JT-CAD translators as well as testing the state of the art regarding the interaction of JT and STEP AP242 XML. Also, the performance of viewing applications was tested.

2.1 Four steps

Based on the Lessons Learned from previous benchmarks, the JT Workflow and JT Implementor Forum agreed on the following four-step approach:

1. The JT Workflow Forum clarified the target intent for the benchmark and provided details on the expected outcome.
2. The vendors made proposals for the JT file scope, configuration settings and evaluation approach which in their eyes would best fit the requirements.
3. A proof of concept / test run for the benchmark was conducted, using the agreed-on settings and test models, with close involvement of the vendors.
4. After the successful test run, the actual benchmark was conducted.