prostep IVIP

VDA | Verband der Automobilindustrie

prostep ivip / VDA Short Report

9th JT Application Benchmark

Version 1.0

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1 Introduction

JT has become a widely used standard format for product visualization in the industry. The prostep ivip Association and German Association of the Automotive Industry (VDA) are driving this adoption with three connected projects focusing on both users and vendors communities:

- The prostep ivip / VDA JT Workflow Forum,
- The prostep ivip / VDA JT Implementor Forum and
- The prostep ivip / VDA Application Benchmark.

From the start, these projects have continuously developed JT recommendations and implementation guidelines; performed benchmarks, documented requirements and discussed issues.

In August 2010, the prostep ivip Association submitted a JT specification to ISO for standardization. ISO published it as ISO 14306:2012 international standard in December 2012.

In June 2021 prostep ivip Association released the "JT Industrial Application Package" version 3 (PSI 14/part 1 v3): An enhanced specification of JT, combining guidelines and latest use case requirements. This prostep ivip recommendation is compatible with the JT ISO standard released in 2012 and provides latest capabilities of the file format. It was also released as DIN Spec 91383 in 2021.

As the latest in a row of nine benchmarks, this JT Application Benchmark was carried out in 2022 and 2023 to achieve an independent evaluation of the progress being made concerning the development of JT translators and viewing applications. The object of testing was the DIN Spec 91383 JT specification. Additionally, the interoperability between JT and the STEP AP242 Edition 3 Domain Model XML schema (published as ISO Standard ISO 10303-242:2022) was also part of the benchmark. In particular, the aim of the benchmark was to carry out a neutral comparison of current JT applications with a focus on proving the maturity of JT and AP242 XML applications concerning JT geometry and semantic PMI, Validation Properties, Assembly Structure, and Kinematic Mechanism.

The benchmark was managed by the JT Workflow Forum and JT Implementor Forum. It is an independent activity, financed directly by the prostep ivip association and VDA, and by the participating companies, whose products were tested. It is a neutral test of trendsetting JT applications against selected criteria, carried out by a neutral service provider. 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.