

ProSTEP iViP/VDA JT Translator Benchmark

JT TRANSLATOR BENCHMARK

SHORT REPORT

Edition 1



Contents

1	Introduction	4
2	ProSTEP iViP/VDA JT Translator Benchmark	4
2.1	JT translators for downstream processes	4
2.2	Procedure	4
2.3	CAD systems and translators	4
2.4	Test criteria	6
2.5	Test models	7
2.6	Test execution	7
2.7	Documentation	8
3	Results	8
3.1	Geometry	8
3.2	PMI annotations	9
3.3	Auxiliary geometry	9
3.4	Positioning	9
3.5	Structure	10
4	Publication	10
5	Outlook	10
6	Acknowledgements	10

1 Introduction

The publication of the JT specification as an ISO Publicly Available Specification (PAS 14306) has laid the foundation for giving consideration to JT when designing efficient PLM processes.

The challenges this entails are many. It is up to the users and the responsible management at the companies in question to decide which of the options that JT offers is to be used for which use case. How well JT then actually supports the individual process steps will depend first and foremost on the quality of the data generated.

In order to achieve a greater degree of clarity here, the ProSTEP iViP Association and the Arbeitskreis PLM of the German Association of the Automotive Industry (VDA) have joined forces and conducted a systematic benchmark.

The test criteria for the benchmark were derived from use cases defined by representatives of leading OEMs and suppliers from the automotive and aerospace industries in the ProSTEP iViP / VDA JT Workflow Forum. In addition to the core topics related to the application of JT – visualization and the use of JT in downstream processes – data exchange processes, were, of course also described.

Since those involved saw the greatest need for clarification in classic data exchange scenarios and wanted to test the extent to which they could rely on the systems and translators already in use at their companies to implement the defined use cases, a pragmatic approach was selected for this first benchmark. This document will provide you with a summary of the results of the first ProSTEP iViP / VDA JT Translator Benchmark.

2 ProSTEP iViP / VDA JT Translator Benchmark

The JT translator benchmark provides an overview of the capabilities of selected JT translators for the export and import of JT files in CAD systems. The type of downstream process involved will result in different requirements with regard the data used. The results may provide help when selecting suitable translators.

The testing described here does not examine the quality of the JT files themselves in more depth. The objective of the testing performed was to determine how much of the information from the generating CAD system can be reproduced in the receiving system.

2.1 JT translators for downstream processes

There are already numerous JT translators available on the market today, and JT is being used by many companies as a lightweight visualization format in day-to-day business.

In addition to using JT merely as a visualization format, many companies are currently checking to see whether JT can be used in other downstream processes. In which case, additional requirements are placed on the JT format. For example, there is a need to exchange exact geometries, product data information and additional attributes.

Of interest is, therefore, not only how well JT data can be generated from CAD models but also how well CAD models can be generated from JT data.

2.2 Procedure

The benchmark involved testing the transfer from CAD to CAD via JT using a combination of different translators and CAD systems. The information to be transferred and the requirements were defined by users in the ProSTEP iViP / VDA JT Workflow Forum.

2.3 CAD systems and translators

Seven translators for four CAD systems participated. Only versions available on the market at the time the benchmark was started were used. The versions of the CAD systems used were determined by the participants in the ProSTEP iViP / VDA JT Workflow Forum. The translators and CAD systems involved in the benchmark are listed in Table 1 and Table 2.

All testing was performed on PCs with Microsoft Windows XP installed as the operating system.

These translators result in the test case matrix shown in Figure 1. The sending systems are listed in the column on the left and the receiving systems in the top row. The translators used to export the JT files are listed to the right of the sending systems, and the translators used to import the JT files are listed under the receiving systems. The abbreviations listed in Table 1 and Table 2 were used to make the matrix and result tables easier to read.