CPO Statement of Theorem Solutions

Following the prerequisites of ProSTEP iViP's Code of PLM Openness (CPO) IT vendors shall determine and provide a list of their relevant products and the degree of fulfillment as a "CPO Statement" (cf. CPO Chapter 2.8).

This CPO Statement refers to:

Product Name	**CADverter and Publish 3D**
Product Version	**18.X**
Contact	**Mark Stowe** **mark.stowe@theorem.com**

This CPO Statement was created and published by Theorem Solutions in form of a self-assessment with regard to the CPO.

Publication Date of this CPO Statement: 10th June 2015

Content

1 Executive Summary

Theorem is committed to implement the requirements and criteria formulated in the Codex of PLM Openness (CPO Version 1.1). CPO is an initiative of the ProSTEP iViP association for establishing a common understanding on openness of IT systems in the context of PLM. Theorem believes that open standards make life easier for users and developers alike, by promoting interoperability and efficiency.

Theorem has, since 1991, offered proven and certified software products in the area of CAD/CAM, PDM and PLM interoperability. The principals of the "Codex of PLM Openness" play an important part in our software architecture and in the development of our software products.

Our software products facilitate interoperability and collaboration and enable our users to connect disparate Applications and IT-Systems easily, by providing ISO based STEP, STEP and JT Interoperability solutions PDF.

CADverter is a suite of data translation products primarily targeted at the translation requirements of computer aided design data created for complex mechanical design products e.g. aerospace & automotive applications.

Publish 3D is a suite of publishing products for extending the value of CAD data into PDF documents. It enables users to add rich 3D content into PDF documents for use in the wider user community in engineering organisations.

Products are available to support the requirements of direct translation between all mainstream CAD applications; e.g. CATIA V4/V5 and V6, NX, Creo Parametric etc. as well as standards based translations such as ISO 10303 (STEP AP203 AP214 and AP242) and ISO 14306:2012 (JT) and ISO 24517-1:2008 (PDF).

The translators are widely deployed within the mechanical engineering sector both internally within OEM's as well as within supply chain collaboration activities.

As an independent software developer Theorem Solutions has close software development relationships with all of the main CAD authors. However each translator solution is developed as an independent component externally linked to the CAD applications where necessary, offering a tight integration with functions exposed by the specific CAD application author.

This enables all of the translators to be implemented with any design work flow or product lifecycle management solution. This enables the process of data translation and data verification to be fully automated within the design and data management activities with the activity running automatically in the background.

Company Name:	Theorem Solutions	**Contact Person:**	Mark Stowe
Product Name:	CADverter and Publish 3D		

CPO Term	Fulfilled (100%)	Comments because of deviations
2.1 Interoperability	☒	
2.2 Infrastructure	☐	Theorem's architectural base is the Microsoft .NET platform. Driven by the support requirements of CAD/PLM vendor's software, this route allows Theorem to directly interface with ALL major CAD/PLM systems and allows us to offer extended support in a web based environment via web services. We currently see little demand for Linux solutions in our marketplace. But, if a customer requirement emerged supported by major CAD/PLM vendor infrastructure, we would expect to provide a solution within a 6 month period.
2.3 Extensibility	☐	Theorem do not provide an API to allow users or third parties to extend the functionality of their CADverter and Publish 3D product data structures. However, users can manipulate the format of the data output via user defined configurations. CADverter and Publish 3D can be considered a commodity product that is closely linked to the CAD applications that are targeted for data exchange. This linkage does not lend itself to third party extensions. Instead, Theorem offer a set of Process Automation tools 'Theorem Process Manager (TPM)' and

		PDM-Exchange that allow the workflow associated with data translation, validation and transfer to be tailored to specific customer requirements.
2.4 Interfaces	☒	
2.5 Standards	☒	
2.6 Architecture	☐	Theorem's architectural base is the Microsoft .NET platform. Due to the nature of CADverter/Publish 3D components it is not required to provide interface access below the component level. However, Theorem's PDM-Exchange product suite offers a web service interface, that allows extension to process workflows and user interfaces to satisfy specific user requirements
2.7 Partnership	☒	
List of inherent supported neutral standards	API: ☐C/C++ / ☐Java / ☐.NET / ☐Web Services / Others: Please provide, if desired 3D: ☒IGES / ☒JT / ☒STL / ☒STEP / ☒VRML / Others: Please provide, if desired DX: ☐eCl@ss / ☐FMI / ☐IDX / ☒PDF / ☐ReqIF / ☐STEP / ☐VEC Others: Please provide more or URL to product flyers, if desired Remarks: Please provide information, if e.g. certain standards are not supported throughout the whole software suite for which you want to provide this statement.	

2 Details of Self-Assessment

The following chapters summarize the results of the CPO-related self-assessment of [Company Name] with regard to [Product Name].

2.1 CPO Chapter 2.1: Interoperability

Theorem's CADverter and Publish 3D products can be implemented standalone, as part of an import/export capability from within CAD applications, as part of a wider advanced process workflow delivered by TPM or PDM-Exchange or as part of a PLM workflow.

Details of our Product offerings can be found at: http://www.theorem.com/

2.2 CPO Chapter 2.2: Infrastructure

Details of supported platforms (hardware and OS) vary between products and have dependencies on supported CAD systems. We offer support for the following CAD environments: CATIA V4/V5; 3DEXPERIENCE; Creo Parametric; NX and the following Visualization Systems: JT, Creo View, 3DXML. In addition we offer support for the following Publishing Environments: 3DViaComposer/Solidworks Composer/CATIA Composer; Arbortext IsoDraw and PDF.

Specific product infrastructure requirements are detailed in our Product Release Announcement documents which are available on request from: sales@theorem.com

2.3 CPO Chapter 2.5: Standards

Supported data exchange formats:

Theorem's CADverter products offer support for the following standards based formats: ISO 10303 for STEP AP203; STEP AP214; STEP AP242; ISO 14306:2012 for the JT Visualization format; ISO 24517-1:2008 for PDF

In addition, Theorem participate/contribute regularly to a variety of standards based forums that include: ProSTEP iViP Symposium; PDES; JTOpen TRB and MRB; 3D PDF Consortium.

2.4 CPO Chapter 2.6: Architecture

The IT system's architecture is conforming CPO 2.6 — Yes ☐ / No ☒

2.5 CPO Chapter 2.7: Partnership

2.5.1 Data Generated by Users

Data generated by IT users with an IT system is and remains the intellectual property of these IT users, according CPO 2.7.4 — Yes ☒ / No ☐

2.5.2 Partnership Models

Partnership models are offered according CPO 2.7.7 — Yes ☒ / No ☐

Theorem provide a licensing model for use by third party IT Vendors to license and sub-license Theorem technology

2.5.3 Support of User and Innovation Groups

Supported groups are:

Theorem offer technical and managerial support to the JTOpen community. We also support the CATIA Operators Exchange and various regional user groups for Dassault, PTC and Siemens PLM products.