CPO Statement of TheMathWorks, Inc.

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	**MATLAB, Simulink and Simscape**
Product Version	**Release R2015a**
Contact	**Full name of the CPO-related contact** **Guido.sandmann@mathworks.de**

This CPO Statement was created and published by The MathWorks, Inc. in form of a self-assessment with regard to the CPO.

Publication Date of this CPO Statement: 22 May 2015

Content

1 Executive Summary

MathWorks is committed to Openness.

The MathWorks products are built on top of the core platform products MATLAB® and Simulink®. With these products, MathWorks provides open APIs that allow third-party tool providers to realize complementary solutions to MATLAB and Simulink.

The MathWorks Connections Program directory includes more than 400 commercially available products and services based on MATLAB and Simulink that address technical needs across a wide range of applications and industries.

Note: in order to make use of file or data formats listed in this document, additional MATLAB Toolboxes, Simulink Blocksets, or other MathWorks products may be required.

Company Name:	The MathWorks, Inc.	**Contact Person:**	Guido Sandmann
Product Name:	MATLAB, Simulink, Simscape		

CPO Term	Fulfilled (100%)	Comments because of deviations
2.1 Interoperability	☒	
2.2 Infrastructure	☒	
2.3 Extensibility	☒	
2.4 Interfaces	☒	
2.5 Standards	☒	
2.6 Architecture	☒	
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 The MathWorks with regard to MATLAB.

2.1 CPO Chapter 2.1: Interoperability

APIs have the following standard language bindings:

2.1.1 MATLAB

- **Data formats:** Microsoft Word , Excel, PDF, HDF 4 and 5,
- **Audio & Video formats:** WAVE, OGG, FLAC, AU, MP3, and MPEG-4 AAC, AVI, MPEG-1, Motion JPEG 2000
- **Databases:** SQL, ODBC/JBDC-standard databases
- **External Programming languages:** Ability to call Java Libraries, .Net Libraries, COM/ActiveX, Web Services, Perl
- **Report Generation:** PDF, HTML, Microsoft Word, Rich Text Format (RTF)
- **Code Generation:** ANSI C/C++, Verilog, VHDL,
- IEC 61131-3 Structured Text
- **Stand-alone Application Deployment:** .Net Component, Excel-AddIn, COM Component, Java Package
- **Bus Systems:** CAN, XCP, TCP/IP, UDP
- **Data Acquisition:** USB, PCI, PCI-Express®, PXI, PXI-Express, OPC
- **Instrument Control:** GPIB, VISA, TCP/IP, and UDP

2.1.2 Simulink

- **Software Architecture:** AUTOSAR 2.1 – 4.x
- **Functional Safety:** ISO 26262, EN 50128, DO 178B/C
- **Instrument and Bus Control:** GPIB, VISA, TCP/IP, UDP, XCP, CAN
- **Modeling and Co-Simulation:** S-Functions (MATLAB, C/C++, FORTRAN, numerous third-party modeling tools)
- **Code Generation:** MISRA**,** ANSI C/C++, Verilog, VHDL, IEC 61131-3 Structured Text,
- **Report Generation:** PDF, HTML, Microsoft Word, Rich Text Format (RTF)

2.1.3 Simscape

- **CAD Import** (SimMechanics Link): SolidWorks®, Autodesk Inventor®, PTC® Creo™ (Pro/ENGINEER®)
- SimMechanics Import XML Schema

2.2 CPO Chapter 2.2: Infrastructure

Supported platforms (hardware and OS) are:

MathWorks publishes the supported and discontinued platforms through the following web page:

- http://www.mathworks.com/support/sysreq/roadmap.html

2.3 CPO Chapter 2.5: Standards

Supported data exchange formats:

MATLAB supports various formats and standards as listed in 2.1.

2.4 CPO Chapter 2.6: Architecture

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

Please provide relevant information or URL to product flyers providing relevant information

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 ☐

- The MathWorks Connections Program directory includes more than 400 commercially available products and services based on MATLAB and Simulink that address technical needs across a wide range of applications and industries.

2.5.3 Support of User and Innovation Groups

Supported groups are:

MATLAB Central: http://www.mathworks.com/matlabcentral/

MakerZone: http://makerzone.mathworks.com/