

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.

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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	<input checked="" type="checkbox"/>		
2.2 Infrastructure	<input checked="" type="checkbox"/>		
2.3 Extensibility	<input checked="" type="checkbox"/>		
2.4 Interfaces	<input checked="" type="checkbox"/>		
2.5 Standards	<input checked="" type="checkbox"/>		
2.6 Architecture	<input checked="" type="checkbox"/>		
2.7 Partnership	<input checked="" type="checkbox"/>		
List of inherent supported neutral standards	API: <input checked="" type="checkbox"/> C/C++ / <input checked="" type="checkbox"/> Java / <input checked="" type="checkbox"/> .NET / <input checked="" type="checkbox"/> Web Services / Others: Please provide, if desired 3D: <input type="checkbox"/> IGES / <input type="checkbox"/> JT / <input type="checkbox"/> STL / <input type="checkbox"/> STEP / <input checked="" type="checkbox"/> VRML / Others: Please provide, if desired DX: <input type="checkbox"/> eCI@ss / <input checked="" type="checkbox"/> FMI / <input type="checkbox"/> IDX / <input checked="" type="checkbox"/> PDF / <input type="checkbox"/> ReqIF / <input type="checkbox"/> STEP / <input type="checkbox"/> 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/>