prostep ivip overview movie

https://www.youtube.com/watch?v=Emko_EjDAD8
prostep ivip at a Glance

A strong association since 1993

Leading Worldwide-acting Neutral & Non-Profit Network
- More than 180 Members from Industry, IT and Research
- Driven & Funded by its Members
- Know-how exchange in non-competitive areas
- Sharing risks and funds, instead of doing it alone
- Best practices, even beyond branches and continents

Digital Transformer in Product Creation & Production
- Defining Standards & Interfaces for Digital Processes
- Safeguarding industrial Benefits & Interoperability

Expert in IT-Standards & Industrial Implementation
Challenge - „Act Differently“
prostep ivip – Digitalization, Standards & Networking
Providing Results of Industrial Relevance
Fast and Flexible

Defining Standards & Industrialization for Digital Transformation:
- e.g. ISO 10303 (STEP), ISO 14306 (JT), LOTAR, OMG ReqIF
- Dozens of prostep ivip, VDA, VDMA Recommendations
- Tons of White Papers and Recommended Practices

Together with Partners to bring the relevant standard(s) to the market:
Save the date
prostep ivip Symposium
12/13 May 2020
Stuttgart, Germany

https://www.prostep-ivip-symposium.org

Conference Program
5 Keynotes
40 Presentation & Workshops
35 Exhibiting Companies
700 Participants
The Product in a Context of System of Systems

Products are becoming cybertronic with an ability to communicate.

- New (kind of) players
- New business models

Traditional players / products

Source: Porter/Heppelmann, Hybrid vehicles
Development cycles of model variants and software in Automotive
Customer-focus is shifting from stiff to flexible features & services (e.g. Tesla)

2012 2013 2014 2015 2016 2017 2018

Model S
- Display of fast charging stations with one-click navigation

Model X
- Traffic bound navigation
- Calendar App
- New power management options
- Location-based intelligent air suspension

Model 3
- Automatic emergency brake
- Blind spot warning
- Park Services
- Lane detection system
- Blind spot assistant
- Speed assistant
- Adaptive cruise control

Source: FAST 2030

Software breakthrough are contributing at larger extend to innovation in Automotive
Model-based approaches are overhauling document-based process

Product Lifecycle Management (Basis to realize the Digital Twin)
Model-based approaches are overhauling document-based process

- Requirements
- Behaviour
- Architecture
- Validation

- Connected world
- Smart factory

- Connectivity
- Safety
- Services

**Industrie 4.0**

**IoT**

Internet of Things

Enabling Interoperability

Engineering IT Standards for Product Properties

Manufacturing Standards for Structure Plants, Control Logic & Shop Floor

General IT Standards for Safety, Interoperability & Communication
prostep ivip Technical Program 2019

**IMPLEMENTOR FORUMS**
- 3D MDM-IF
- CAX-IF
- ECAD-IF
- ECAD/MCAD COLLABORATION-IF
- JT-IF
- PDM-IF
- REQIF-IF

**BENCHMARKS**
- JT APPLICATION BM
- REQIF BM
- STEP AP242 BM (PDM)

**COMMUNICATION**
- CODE OF OPENNESS (CPO)
- JT ISO V3
- STANDARDIZATION STRATEGY BOARD
- STEP AP242 MAINTENANCE

**STANDARDIZATION**
- 3D MEASURE DATA MANAGEMENT WF
- ADDITIVE MANUFACTURING INTERFACES
- CDLC
- DIGITAL DATA PACKAGE (DDP)
- DPDA
- FUNCTIONAL DATA EXCHANGE (FDX)
- JT WF
- LOTAR
- PLIM
- PROJEKTTERMINAGEMENT
- REQIF WF
- SMARTSE
- SYSML WF
- VES WF

**USER-DRIVEN PROJECTS**
- 3D MEASURE DATA MANAGEMENT WF
- ADDITIVE MANUFACTURING INTERFACES
- CDLC
- DIGITAL DATA PACKAGE (DDP)
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- FUNCTIONAL DATA EXCHANGE (FDX)
- JT WF
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**BENCHMARKS**
- JT APPLICATION BM
- REQIF BM
- STEP AP242 BM (PDM)

29 Projects
Example: Systems Engineering Highlights of the Technical Program

- **Smart Systems Engineering**: Establish best practices for Distributed collaborative System Development between partners using existing Systems Engineering methods and standards.

- **Cross-Discipline Lifecycle Collab.**: Key principles and best practices for Cross-Discipline Engineering Collaboration using industrial scenarios.

- **Standardization Strategy Board**: Based on IT Standards, we foster Systems Engineering for the virtual prototype in all maturity stages.

- **SysML Workflow Forum**: Elaboration of consolidated best practices and analysis of limitations of MBSE based on SysML applying Industrial Use Cases.
Cognitive Engineering (role of AI in Manufacturing)
Wherever you apply AI, you’ve got to do your ETL homework!

“Data Preparation for Data Analytics” is an initiative driven by research members in the Association to leverage the industrial application of AI

It’s aim is to:
• Work out recommendations and best practices.
• Develop a reference framework for the "global data lake" incl. the definition of roles and processes.
Our digitization vision: closing gaps with key topics and actively driving process excellence ...

STEP 1
Prioritization of topics and core functions along the V-Modell

STEP 2
Detailing and positioning of fundamental capabilities along the prioritized topics
Our digitization vision: closing gaps with key topics and actively driving process excellence ...

**STEP 3**
Realization of a **functional business model** that shows what we are doing in the PCP (including external cooperation)

**STEP 4**
Derivation of a map from STEP 3, which shows the **holistic use of information** based on harmonized recommendations
For your Attention ...

Questions?

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