### Generic Device Models (Controller, Field Device, Process Device)

<table>
<thead>
<tr>
<th>Title</th>
<th>Date</th>
<th>Contacts</th>
<th>Version</th>
<th>Status</th>
<th></th>
<th>Certification</th>
<th>Key Words</th>
</tr>
</thead>
<tbody>
<tr>
<td>OPC Foundation:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Device (Di)</strong></td>
<td></td>
<td>Matthias Damm, chair</td>
<td>V1.00</td>
<td>Released</td>
<td>Dec-09</td>
<td></td>
<td>Physical device, software component, functional grouping</td>
</tr>
<tr>
<td><strong>Analyzer Devices (AD)</strong></td>
<td></td>
<td></td>
<td>V1.00</td>
<td>Released</td>
<td>Jan-13</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Client (Ci)</strong></td>
<td></td>
<td></td>
<td>V1.00</td>
<td>Released</td>
<td>Apr-14</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Server (Si)</strong></td>
<td></td>
<td></td>
<td>V1.00</td>
<td>Released</td>
<td>Apr-16</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Oil & Gas

<table>
<thead>
<tr>
<th>Title</th>
<th>Date</th>
<th>Contacts</th>
<th>Version</th>
<th>Status</th>
<th></th>
<th>Certification</th>
<th>Key Words</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>WAS and DCS (WAS)</strong></td>
<td></td>
<td>Paul Kübler</td>
<td>V1.00</td>
<td>Released</td>
<td>Jan-17</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>EnergyPlus Fluids</strong></td>
<td></td>
<td></td>
<td>V1.00</td>
<td>Released</td>
<td>Oct-17</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>EnergyPlus Models</strong></td>
<td></td>
<td></td>
<td>V1.00</td>
<td>Released</td>
<td>Oct-17</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Manufacturing Devices, Robots, Machines, Machine Tools

<table>
<thead>
<tr>
<th>Title</th>
<th>Date</th>
<th>Contacts</th>
<th>Version</th>
<th>Status</th>
<th></th>
<th>Certification</th>
<th>Key Words</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>UA for MovCont</strong></td>
<td></td>
<td>Tobias Hitzel</td>
<td>V1.00</td>
<td>Released</td>
<td>Nov-13</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>UA for CNC sys</strong></td>
<td></td>
<td>Götz Görisch</td>
<td>V1.00</td>
<td>Released</td>
<td>Feb-18</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Universal Machine Tool Interface (UMT)</strong></td>
<td></td>
<td>Götz Görisch</td>
<td>V1.00</td>
<td>Released</td>
<td>Jan-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Euromap</strong></td>
<td></td>
<td></td>
<td>V1.00</td>
<td>Released</td>
<td>Jan-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Europack</strong></td>
<td></td>
<td></td>
<td>V1.00</td>
<td>Released</td>
<td>Jan-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Mech and rubber machinery (M&amp;R)</strong></td>
<td></td>
<td></td>
<td>V1.00</td>
<td>Released</td>
<td>Jan-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Robotics</strong></td>
<td></td>
<td></td>
<td>V1.00</td>
<td>Released</td>
<td>Jan-19</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Aircraft</strong></td>
<td></td>
<td></td>
<td>V1.00</td>
<td>Released</td>
<td>Jan-19</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Version 2019-06-18

- **Abstract:**
  - Powertrain stands for a drive system that includes the motor starter, complete drive module (CDM), PLC, controller, automation system (e.g., two latter ones mostly need access to summarized data).
  - The implicit and explicit information model specified by unresolved IEC 61149 will be defined as an IA specification (using OPC UA constructs for the purpose of exposing "machine tool information") to OPC UA applications both inside and outside the production environment.

- **Key Words:**
  - VDMA, Automation, machine tool

---

**Additional Information:**

- **OPC UA for Process Devices (PTG PA-IONE)**
  - Specify and maintain OPC UA information models for Process Automation Devices initially based on
  - 
  - 
  - 

- **Engine Fluids**
  - Manufacturing execution systems (MES) are used for collecting the information generated by IMM at a central point for easier quality assurance and job and batch management.
  - The implicit and explicit information model specified by unresolved IEC 61149 will be defined as a UA specification (using OPC UA constructs for the purpose of exposing "machine tool information") to OPC UA applications both inside and outside the production environment.

- **Robotics**
  - Robotics stands for a complete motion device system that includes a lot of motion devices, includes for example industry robots (in terms of mobile robots also with several robot arms), robots with several control units, service robots and many more.

- **Aircraft**
  - Aircraft Vision

---

**Contacts:**

- **Powertrain**
- **End-of-arm Tools**
- **Weighing**
- **Robotics**
- **Plastics and rubber machinery (Euromap)**
- **Analyzer Devices (ADI)**
- **OPC Foundation:**
- **General Information regarding plastics and rubber machines.**
- **General Information for process industries (MPS)**
- **Microsoft Windows**
- **Examples:**
  - Particle Size Monitor, Acoustic Spectrometer, Gas Chromatograph

---

**Status:**

- Released
- In work
- Implemented
- Candidate
- Candidate
- Candidate
- Candidate
- Candidate

---

**Certification:**

- V1.00
- V1.01
- V1.02

---

**Key Words:**

- Physical device, software component, functional grouping

---

**Automation:**

- VDMA, Automation
### Enterprise, Asset Management, Packaging

**OPC Foundation:**

- **EA for ISA-S88: TC-59:** Describes the flow of information between Manufacturing Operations Management (MOM) and Enterprise Resource Management (ERP) systems.
  - **Status:** Released
  - **Firmware:** Oct-13
  - **Vendor:** Weihenstephan Standards
- **ISA-S95:** Defines StateMachines for the ISA-S95 package.
  - **Status:** Released
  - **Firmware:** Nov-16
  - **Vendor:** Markus Rentschler, Achim Laubenstein, Peter Turczak

**OPCSDML:**

- **Package SMDL:** 

**MIMOSA:**

- **Csp+ForMachine (CCLink):**
  - **Status:** Released
  - **Firmware:** Nov-16
  - **Vendor:** Dennis Brandl

**Weihenstephan Standards:**

- **CSP+ For Machine (CCLink) (TRL 4):**
  - **Status:** Released
  - **Firmware:** Nov-16
  - **Vendor:** Dennis Brandl, Peter Turczak

**Process Gaseous (Open-SCS):**

- **Product - Gas:**
  - **Status:** Released
  - **Firmware:** Nov-16
  - **Vendor:** Dennis Brandl

**Seats Administration Shell:**

- **ISA-95:** An OPC UA Information Model for exposing ISA-95 information to OPC UA applications and to exchange asset information between Industry 4.0 components.
  - **Status:** Released
  - **Firmware:** Oct-13
  - **Vendor:** Dennis Brandl

**Engineering:**

- **DEXPI:** Develop an OPC-UA Information Model for the DEXPI P&ID specification (see http://www.dexpi.org/wp-content/uploads/2016/05/DEXPI-Specification.pdf). P&IDs are the central engineering tools used by design engineers in the mechanical engineering industry.
  - **Status:** Released
  - **Firmware:** Nov-16
  - **Vendor:** Dennis Brandl

**Field Device Integration:**

- **Field Device Integration (FDI):** Manages information from intelligent field devices during their entire lifecycle - from configuration, commissioning and operation, to returning raw data to the device object. Model for field systems and the FS configuration server information model.
  - **Status:** Released
  - **Firmware:** Jul-15
  - **Vendor:** Dennis Brandl

- **Field Device Tool (FDT):** Maps the information of Device Type Manager (DTM) enabled devices. A DTM is a software component specific to Fieldbus types.
  - **Status:** Released
  - **Firmware:** Nov-16
  - **Vendor:** Dennis Brandl, Christian Diedrich

**Field Communication:**

- **CIP for KESO:**
  - **File:** 

- **CIP for Flexvar:**
  - **File:** 

### Building

- **SAFe:**
  - **File:** 

### Other

- **OPC-UA:**
  - **File:** 

### Fieldbus

- **Fieldbus:**
  - **File:** 

### Safety

- **Safety over UA:**
  - **File:** 

### Software Technology

- **Software Technology:**
  - **File:** 

### Woodworking Machinery

- **Woodworking Machinery:** Information models for commonly used woodworking machines and equipment used in primary and secondary wood processing.
  - **Status:** Released
  - **Firmware:** Oct-13
  - **Vendor:** Dennis Brandl, Peter Turczak

### Pumps and Vacuum Pumps

- **Pumps and Vacuum Pumps:** Information models for the evaluation of condition and operation data of pumps and vacuum pumps. The data exchange can be realised vertically to higher level manufacturing systems (e.g. MES) for information and diagnostic purposes or horizontally to similar equipment to align to interact or to co-operation in a process. Additionally, the setting of information parameters regarding the pumping process (e.g. max. or min. The basic description of pumps and vacuum pumps is supplemented by selected use cases (Identification; Design; System requirements; Implementation; Condition Based Maintenance; Preventive Maintenance; Breakdown Maintenance and Operation).
  - **Status:** Released
  - **Firmware:** Nov-16
  - **Vendor:** Dennis Brandl

### Lisa Industries

- **Lisa Industries:** Information models for glass production and processing equipment and a basic description of the flat glass cutting equipment. Main scope is to transport condition data of glass production and processing equipment, in particular flat glass cutting systems vertically into higher level manufacturing systems (MES, etc.) for information and diagnostic purposes as well horizontally to directly connected machines.
  - **Status:** Released
  - **Firmware:** Nov-16
  - **Vendor:** Dennis Brandl, Peter Turczak
<table>
<thead>
<tr>
<th>Energy</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>BACnet</td>
<td>Describes a gateway interface between the BACNET object model and OPC-UA in integration of building and industry automation.</td>
</tr>
<tr>
<td></td>
<td>Frank Schubert</td>
</tr>
<tr>
<td></td>
<td>RC 1.00</td>
</tr>
<tr>
<td>IEC 61850</td>
<td>Support the integration of electrical aspects into an industrial plant. It defines an OPC-UA Information Model to represent electrical substations and automation systems. The focus is on data exchange between a gateway to devices used to control electrical networks.</td>
</tr>
<tr>
<td></td>
<td>Raymond Borscia</td>
</tr>
<tr>
<td></td>
<td>Planned Release</td>
</tr>
<tr>
<td></td>
<td>VS 1.0</td>
</tr>
<tr>
<td></td>
<td>In work</td>
</tr>
</tbody>
</table>

|                                                                    | Mareide Wilkens                                                   |
|                                                                    | VS 1.0                                                          |
|                                                                    | In work                                                          |

<table>
<thead>
<tr>
<th>Miscellaneous</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>BACnet</td>
<td>Information Model to represent tobacco industry machine information to higher-level manufacturing systems (MMS/MOM) and to ease machine-to-machine communication.</td>
</tr>
<tr>
<td></td>
<td>Diego Paccagnan</td>
</tr>
<tr>
<td></td>
<td>Planned Release</td>
</tr>
<tr>
<td></td>
<td>VS 1.0</td>
</tr>
<tr>
<td></td>
<td>In work</td>
</tr>
<tr>
<td>IEC for Professional Kitchen Devices (HKI)</td>
<td>Fryer, Frying Pan, Conical Steamer, Combi Steamer, Multiple Deck Ovens, Pressure Cooking Kettle, Cooking Kettle, Multi Function Pan, Pasta Cooker / Cook Vat, Coffee Machine, Dishwashing Machine, Sanitary Tunnels, Cooking Zone, Frying And Grilling Appliance, Microwave Combination Oven, Ice Machine</td>
</tr>
<tr>
<td></td>
<td>Fabian Anzmann</td>
</tr>
<tr>
<td></td>
<td>Planned Release</td>
</tr>
<tr>
<td></td>
<td>VS 1.0</td>
</tr>
<tr>
<td></td>
<td>In work</td>
</tr>
</tbody>
</table>