Work Using a Shared System Representation

A growing number of professionals from various disciplines are putting their knowledge into one product. To ensure that everyone involved has the same understanding of the system, it is important to work on a shared system representation. To this end, teams can use a visual representation for developing, specifying and supporting a system.

This allows stakeholders from different areas to add details on various aspects to the shared system representation. Consequently, the specifications for system

behaviour - functional, mechanical, electrical and electronical, amongst many more - are described centrally and thus are available for everyone. The intuitive and highly systematic approach automatically constructs the system structure as a basis for all other activities in the process.

Transparent development processes, shared system understanding and close, integrated, cooperative working provide the basis for fast, efficient product development.
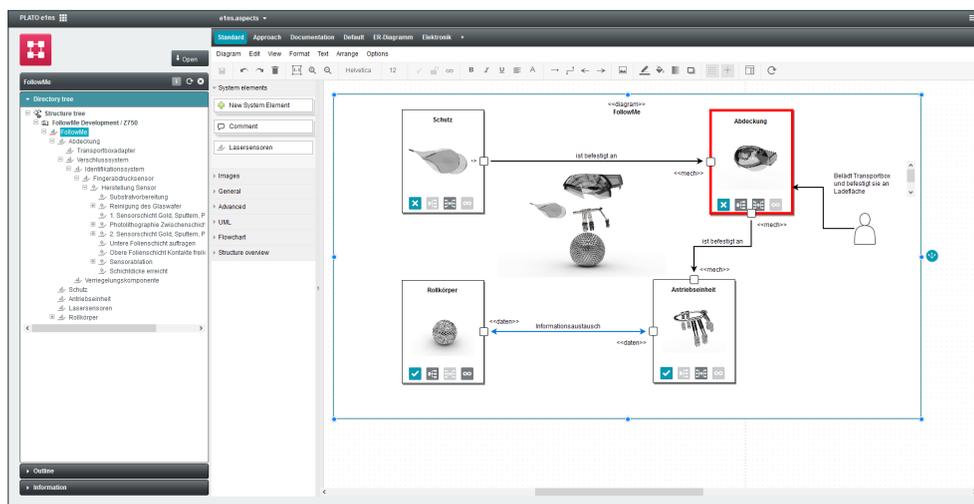

Fig.: The system and its behavior is described in a model.

Functions and Benefits of e1ns.aspects

- Specification of structures, behaviour and requirements

- Visualization of system behaviour

- Company-wide, uniform system representation

- Relationships between elements are displayed

- Data and relationship transparency

- System model guides the development process and is continually adapted

e1ns.aspects

Primary Focus and Functions of e1ns.aspects

Integration in the PDP*

- Modeled structures are automatically converted to a tree view.

- The directory tree is used as the main product representation to conduct further analyses.

- The people involved in the project operate based on the structure and provide the specifications (technical/functional specification), risk or hazard analyses, DVP&R's, etc., depending on their area of responsibility.

Aspect-oriented Engineering

- Any view of a system/element can be created to describe its behavior according to various aspects.

- This means each engineering discipline can have the system representation it needs - mechanical, electronic, etc.

- The central availability of all aspects simplifies decision processes in development.

Easy to Use

- Simple, intuitive, and in the web browser.

- The graphic interface displays all elements of a system.

- Elements are created to build a system or existing elements are simply dragged into the interface and dropped at the desired location.

- A system can be divided into any number of levels (additional worksheets).

- Elements are connected if they depend on or have a mutual influence on each other.

- A connection between elements can have properties (force, signal, …).

- Photos and images for the elements are displayed directly.

Collaboration

- The common system representation enables and promotes collaboration.

- A graphic model provides project members with a simple introduction to the architecture of a system.

Technology

- It can be started immediately, and no training in model development is necessary.

- A current standard in systems engineering is used as the work method. SysML (Systems Modeling Language) is a standardized extension of UML (Unified Modeling Language) for the modeling of complex systems.

PDP*= Product Development Process