ArtWork

SMART AND CONNECTED WORKER

ITEA 4 – 22019

Work package 6:

Dissemination, Exploitation & Standardization

Deliverable 6.6

Standardization Plan

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Review Task Level	Melanie Stolze	ifak
Review WP Level	Thomas Bär	DAIMLER
Review Board Level	Atieh Hanna	VOLVO

Executive Summary

The ARTWORK project builds on the consortium's extensive experience in previous collaborative initiatives and progresses toward delivering innovative solutions that strengthen Industry 4.0 ecosystems.

The project focuses on advancing digital twin technologies through the use and extension of the Asset Administration Shell (AAS) standard in cooperation with the Industrial Digital Twin Association, while also promoting long-term value creation by releasing core software components as open source.

These efforts aim to generate new business opportunities for partners and contribute to broader industrial standardization.

Content

1 Introduction

This document is a work in progress document that will be finalized at the end of the project. This version is a snapshot of the current status and some sections have not been completed.

Many of the partners in the ARTWORK consortium have long experience from previous ITEA and similar collaboration activities, and over the years several projects have delivered solutions and standards as a starting point for this project.

The ARTWORK result creates several business opportunities for the ARTWORK partners and towards standardization.

2 Standardization Directions

In general, the project follows the following two directions:

- The Digital Twin is the key technology of Industry 4.0. With the standard of Asset Administration Shell (AAS), the technology is accessible to every company and sets an industry standard. ARTWORK tries to use and extend existing standards as well as pushing new sub-models with the “Industrial Digital Twin Association” (https://industrialdigitaltwin.org/en/).

- Aiming to develop and share open source code for main parts of the developed code that can be reused and continued developed by any partners after the project. The link to specific open source software is listed in each description of the different exploitable results.

3 Activities towards standard of Asset Administration Shell (AAS)

The digital twin connects physical industrial products with the digital world. However, for the successful implementation and international dissemination of this core technology of Industry 4.0 in practice, a common understanding of all stakeholders in industry, associations and research is necessary.

The “Industrial Digital Twin Association” acts as a central point of contact for us. We use the necessary specifications for the Asset Administration Shell and additional sub models for the industrial digital twin if necessary.

3.1 List of used AAS sub-models

Currently the following already published sub-models are used for the description of machines, tools and worker:

- Digital Nameplate
- Technical Data
- Contact Information
- Handover Documentation
- Asset Interfaces Description
- Asset Interfaces Mapping Configuration
- Capability Description
- Provision of Simulation Models


machines

tools



worker

3.2 List of created AAS sub-models

One additional sub-model (production calendar) has been prepared and is published.

Another additional sub-model is in review and will be published soon, four other sub-models are in preparation.