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White Paper

Engineering Change Management Reference Process

covering ECM Recommendation V2.0

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Engineering Change Management Reference Process

covering VDA 4965 V3.0

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FOREWORD

This document is an addendum which provides an explanation of the SASIG ECM Reference Process. Its purpose is to describe additional aspects which are not explicitly covered by the SASIG ECM Recommendation due to various reasons, but which seems to be necessary in order to get familiar with the ideas behind the SASIG ECM Recommendation.

The representation of the SASIG ECM Reference Process (in IDEF0 notation, a United States Department of Defense Standard for the definition of Processes) contained in this document reflects the understanding of the SASIG ECM Working Group about the whole SASIG ECM Reference Process and its sub-processes on level 1, e.g. Engineering Change Request (ECR) and Engineering Change Order (ECO) processes.

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Abstract

This document is an overview of the SASIG ECM Reference Process. The purpose of this document is to further elaborate on and cover topics not specifically addressed by the SASIG ECM Recommendation. The SASIG ECM WG feels that additional simplification will help the end users better understand the strategy and thought process behind the SASIG ECM Recommendation.

The SASIG ECM Reference Process (in IDEF0 notation) covered in this documents reflects the collective, consensus based position taken by the global SASIG Work Group on the said Reference Process and all it's sub-process on level 1 e.g. Engineering Change Request (ECR) and Engineering Change Order (ECO). Details and special cases (back jumps and iterations) are not shown intentionally because all such details are covered in the SASIG ECM Recommendation.

This IDEF0 notation is not a substitute to the detailed ECM Reference Process outlined in The SASIG ECM Recommendation, which is the Master Document.

The term "Reference Process" is used to emphasize the fact that the ECM Process here is not intended to reflect any in-house ECM Process of any contributing member companies.

Overview

White paper goal: to provide general information which is not explicitly covered by the SASIG ECM Recommendation. This addendum is designed to further simplify the understanding and the scope of the SASIG ECM Recommendation.

White paper status: This release covers the scope defined by the SASIG ECM Recommendation. The maintenance of this document is the sole responsibility of the SASIG ECM Working Group. Issues and concerns regarding this document should be forwarded to the points of contact identified in the maintenance section of this document.

Intended audience: All ECM Process Owners within the global automotive supply chain.

Intended use: to describe the scope of the SASIG ECM Recommendation and to contribute to the common understanding and the common terminology of the SASIG ECM Reference Process.

White paper structure: the overall scope of this document is partitioned into a set of chapters corresponding to needs identified for providing background information on the SASIG ECM Recommendation. Within a chapter, there may be sections and sub-sections. These sections and sub-sections further divide the scope covered by the chapter into smaller components of coherent functionality that interact with each other to realize the functionality of the entire chapter. The chapters are:

- The SASIG ECM Evolution Process: semantic net of the working context of the SASIG ECM WG
- IDEF0 – Short Overview: short introduction into the IDEF0 notation.
- SASIG ECM Reference Process Synopsis: provides on overview of the scope of the SASIG ECM Reference Process and revealing the major dependencies of its phases
- IDEF0 Representation of the SASIG ECM Reference Process: provides a detailed top-down decomposition of the SASIG ECM Reference Process using the IDEF0 notation as well as the definition of the major activities including inputs and outputs.

Assumptions

The authors of this document act on the assumption that the reader of this document is familiar with their internal Engineering Change Management processes.

Basic Definitions

The following definitions apply in the scope of this document:

Product

- item that is offered to the market

Product Definition Data

- collection of data necessary to precisely defined the Product as designed

Entity

- a person(s), department or an organization

Product Owner

- Entity that possesses a Product i.e. that is responsible for the Product

Engineering Change

- a modification of the Product Definition Data of a Product, factoring in the urgency, impact, and complexity of the change

Process Owner

- Entity that defines and possesses a process

ECM Process Owner

- Entity that “defines” and “possesses” an ECM process
- a Process Owner belongs to the product owner

ECM Process

- the coordinated management and uniform tracking of Engineering Changes, starting with the identification of potential for change and ending with the manufacturing implementation of change

Coordinator

- Entity responsible for managing an Engineering Change
- this Entity is equal to or is authorized by the Product Owner of the Product that should/will be changed

Participant

- Entity involved in the processing of an Engineering Change
- typically, a supplier that is responsible for one or more parts that are/will be changed play the role of an Participant

EC Manager

- Entity that oversees and is responsible for the processing of an Engineering Change
- the EC Manager reports to the Coordinator

Acronyms

The following acronyms are used within this document (alphabetical order):

AS	▪ *Alternative Solution*
BOM	▪ *Bill of Material*
ECM	▪ *Engineering Change Management*
ECO	▪ *Engineering Change Order*
ECR	▪ *Engineering Change Request*
ICOM	▪ *Input, Control, Output, and Mechanism*
IDEF0	▪ *Integrated Definition for Function Modelling*
IM	▪ *Issue Management*
OEM	▪ *Original Equipment Manufacturer*
MCO	▪ *Manufacturing Change Order*