

MODEL VERSIONING FOR PRODUCT LINE ENGINEERING

Supported by Enterprise Architect and LemonTree

10.11.2017 | TdSE'17, Paderborn | Tim Michaelis (PrehCarConnect), Roman Bretz(LieberLieber)









COMPANY PRESENTATION





TechniSat AUTOMOTIVE						
Automotive business is established	Started delivery of the Ultra Low Radio into Volkswagen serial production		Started mass production of RNS 315 - navigation systems for Volkswagen Group		Started mass production of Volkswagen MIB2	
1997 1998 "Werra 1", fir radio from Te hits the mark	2002 rst car echniSat, ket	2007 "NAVI-DRESDI the first in-car navigation sys the market	2010 EN 1", tem, hits	2012 Volkswagen Gr Award for Tech Automotive	2014 roup nniSat	2016 Strategic realignment with Joyson and Preh
				Volkswagen Gro	up Award	Car connect





4 core competencies in Research & Development









LieberLieber

UNSERE KOMPETENZEN

Model-based Systems Engineering Infrastruktur für die Modellierung Integration von Daten mit Enterprise Architect

MOTIVATION









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PRODUCT LINE ENGINEERING WORKFLOW









Source Code Management fits perfectly								
Versions management	Branching and merging	Tagging versions	Distributed and concurrent work on same asset	Conflict resolution				



SOURCE CODE MANAGEMENT FITS PERFECTLY



Why not to reuse same approach on model level?



CHALLENGES ON MODEL LEVEL



LEMON TREE BASED MODEL VERSIONING



Compares and Merges Enterprise Architect Models Three-way diff and merge

Native VCS integration *SVN, Git, PTC, etc.*

Versioning complete EAP-Files as simple as text files

EAP-files and MBSE supported *MS SQL, Oracle, etc.*

https://en.wikipedia.org/wiki/Merge_(version_control)





Branching for models

Same approach as used for <u>source code</u>

Reviewing of model changes



DISTRIBUTED MODELING SUPPORT



WHAT IS MISSING?







Handling of large models

Handling of connected models



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Same way of flexible usage of the building-blocks within customer projects on both source code and model level

Each version of a building-block on source code and model level is labeled with unique identifiers Customer projects can import a dedicated version of a building-block and switch to any other version later Building-block can be modified within a customer project and on the platform level independently Platform decides when and how to integrate buildingblocks modified within the customer projects









TASK OF LIEBERLIEBER SOLUTION





CONCLUSION











TUNER CAR HAVINAVIGATION CAR CONNECT CAR CONNECT INFOTAINMENT TELEMATICS DRIVING ASSISTANCE CLOUD SERVICES

