

Requirements & Architecture: Managing Traces in a model- based Build-Pipeline



MESCONF 2023

Topics

Introduction

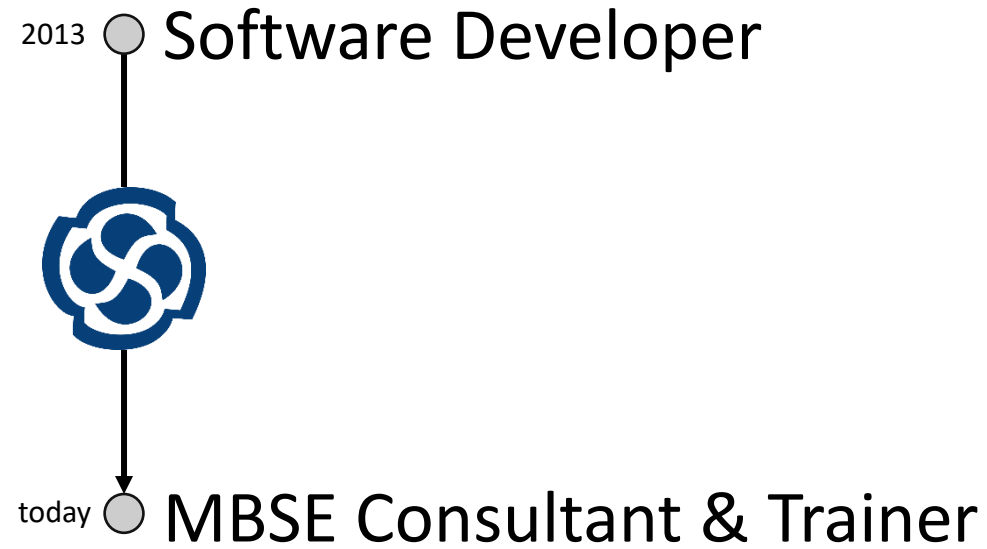
Toolchain

ALM Integration LemonTree.Connect

Live Demo



Philipp Kalenda



LieberLieber

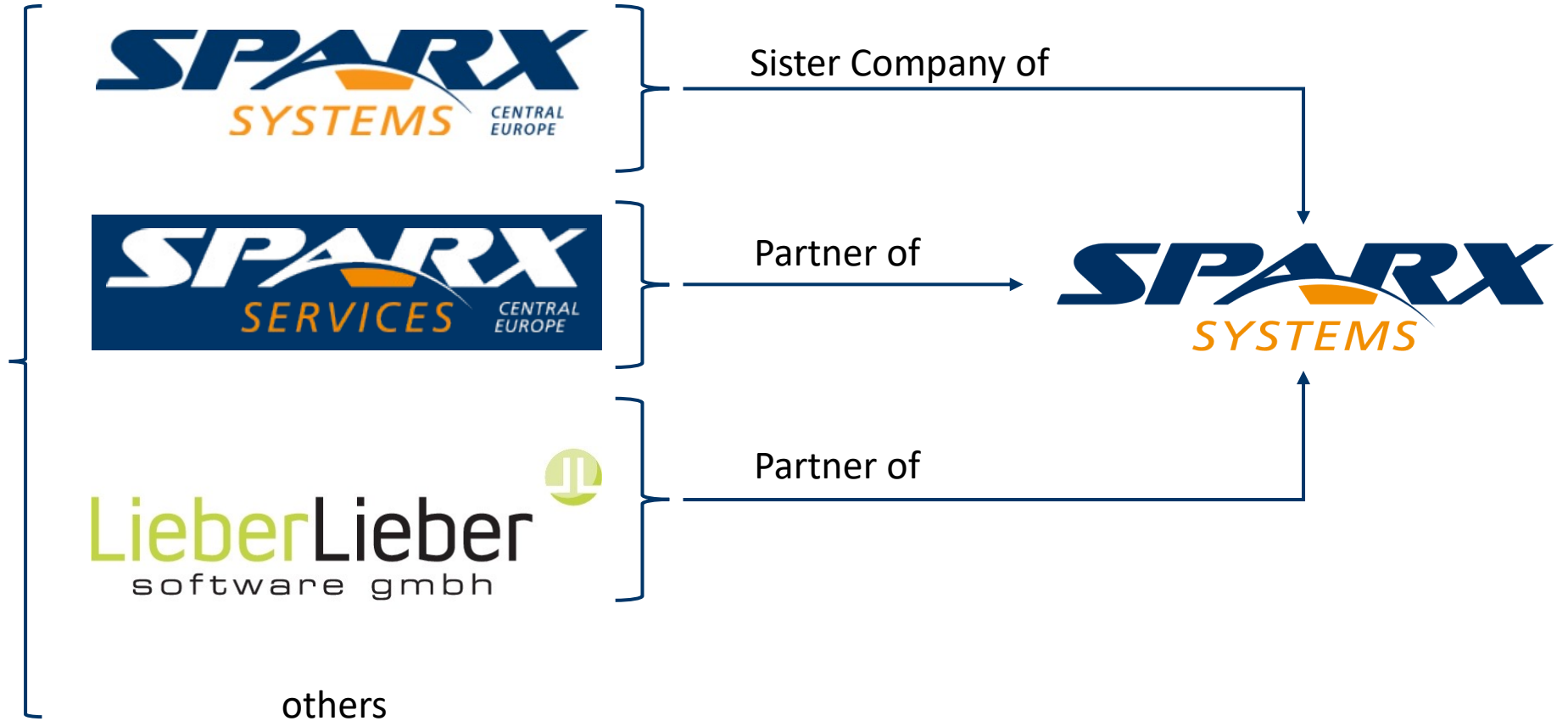


Vienna, Austria





Peter Lieber
Holding



Tracing Architecture and Requirements

Traceability is the Model Intelligence

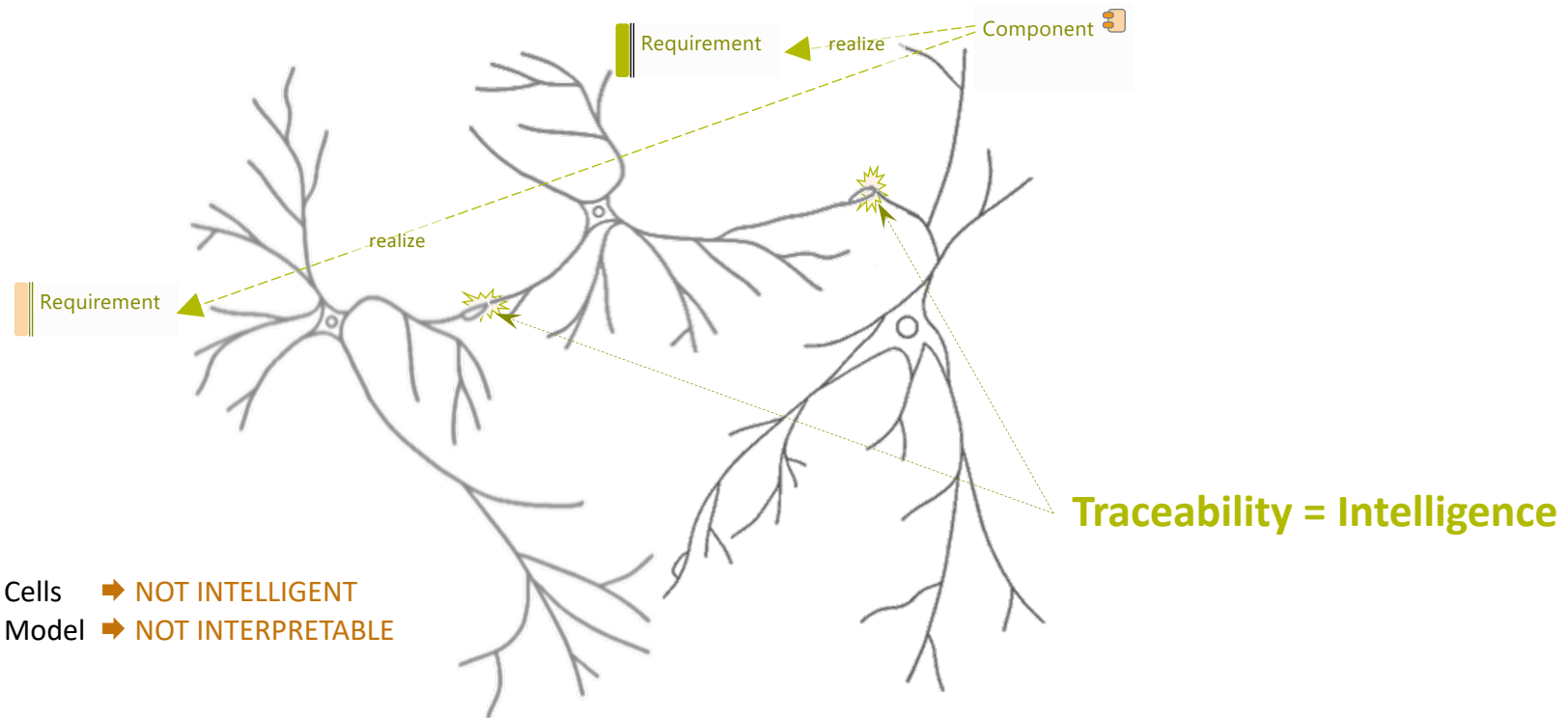
Requirement

Component 

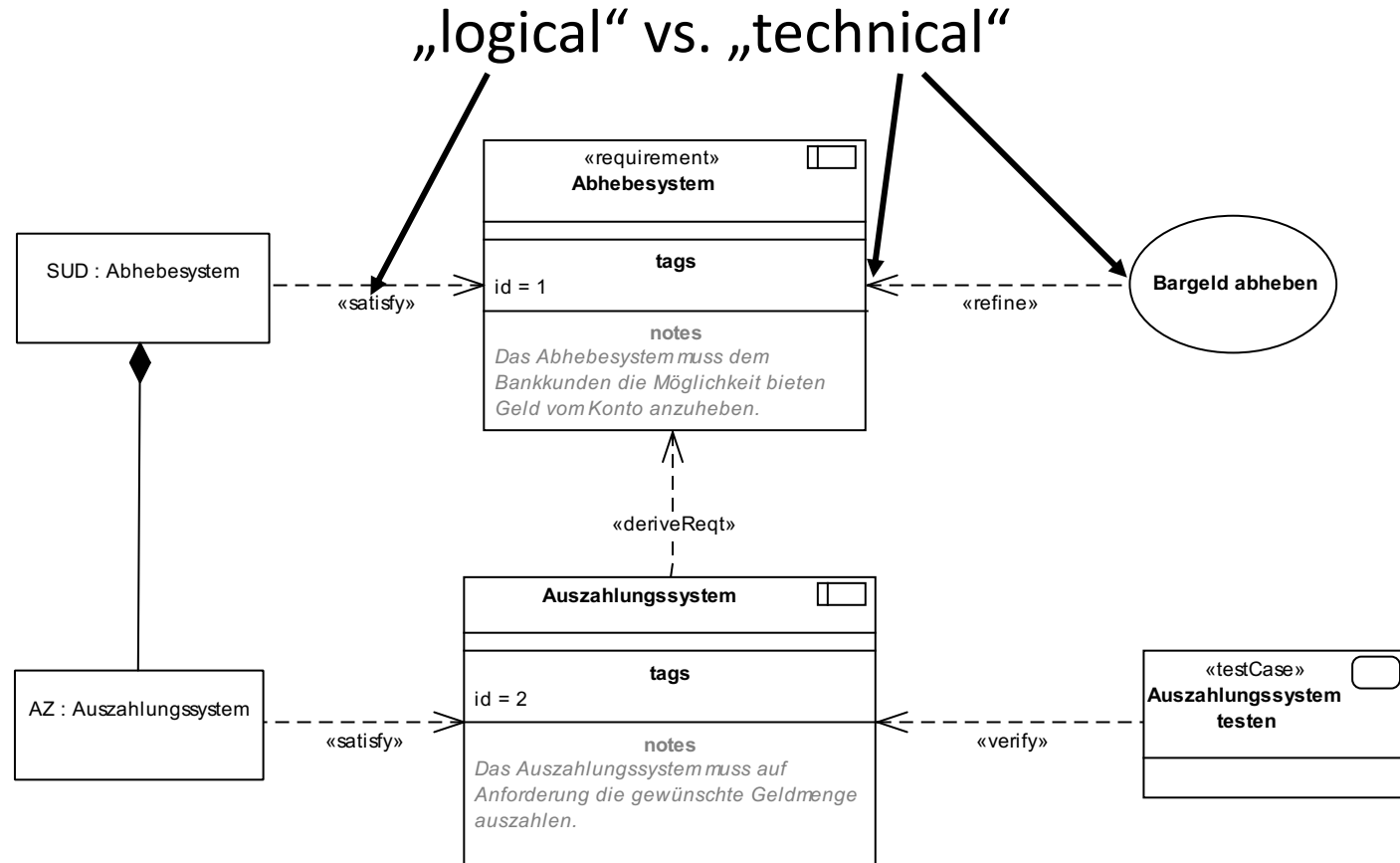
Requirement

Disconnected Cells ➔ NOT INTELLIGENT
Disconnected Model ➔ NOT INTERPRETABLE

Traceability is the Model Intelligence

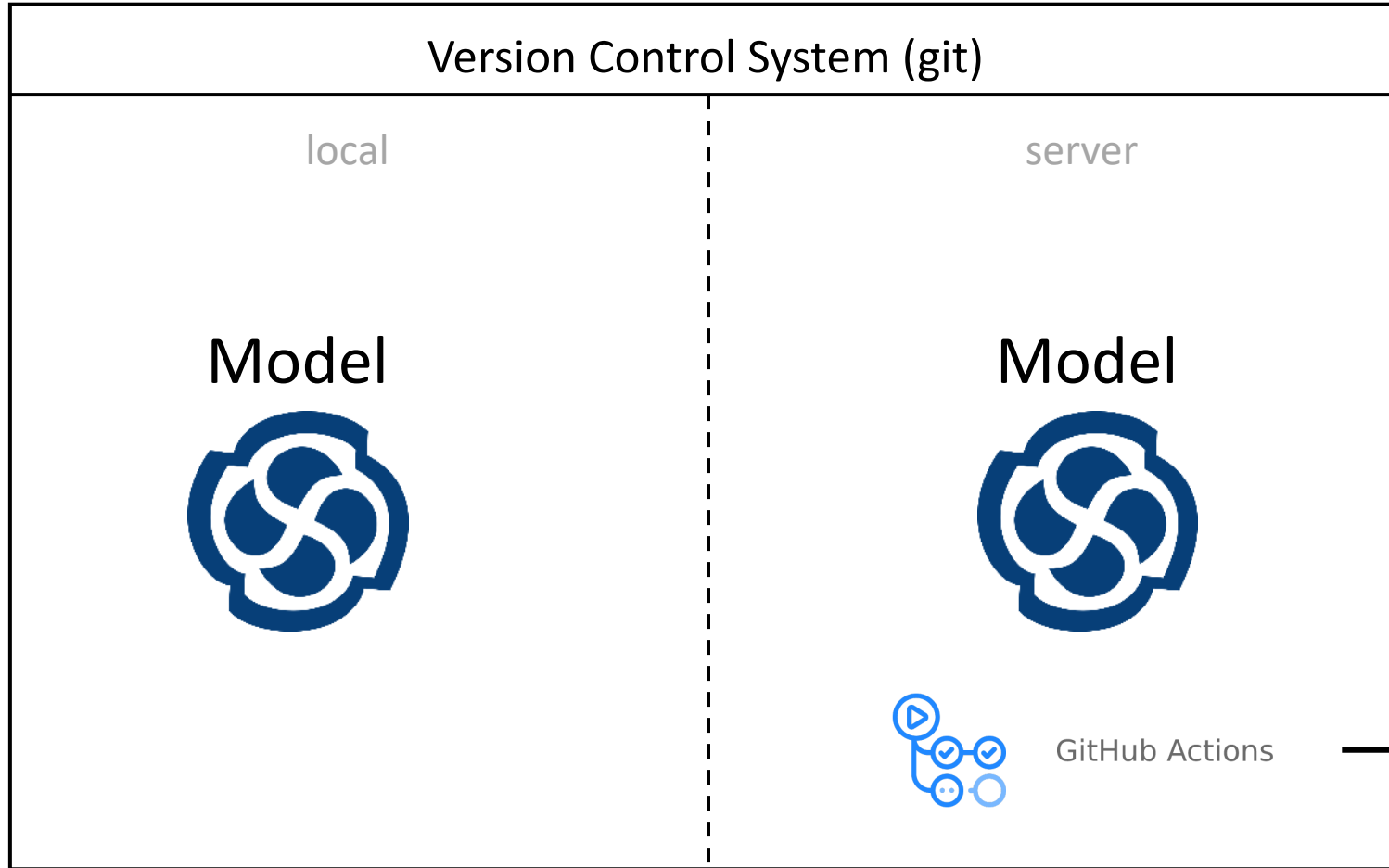


Establishing Traceability



Toolchain for establishing Traceability in a Build Pipeline

ALM Tool



LemonTree.Web

LemonTree.Connect
for Enterprise Architect



LemonTree based Model Versioning

The screenshot displays the LemonTree application window, which is used for comparing and merging EA models. The interface is divided into several panels:

- Top Panel:** Shows the current project name "LemonTree" and a search bar.
- Left Panel:** Lists impacted elements (42 / 42) with 2 conflicts. It includes a search bar and a list of elements like MainState, Manage Users, Mouse, Mouse Init, Move the Mouse, PutData, and Set System Tick to 100Hz. Below this is a section for impacted diagrams (19 / 19) with 1 conflict, including Manage Users and a comment.
- Center Panel:** Displays two side-by-side state machine diagrams for comparison. The left diagram is labeled "A - A.eap" and the right is "B - B.eap". Both show a StateMachine with states like Wait, MoveMouse, WaitAgain, and DisplayInformation. The right diagram has a red box highlighting a change in the DisplayInformation state.
- Right Panel:** Shows details for the selected element, "MainState:State → DisplayInformation:State". It indicates that this element is "New" in the current version.
- Bottom Panel:** Shows element properties, including the name and UML type.

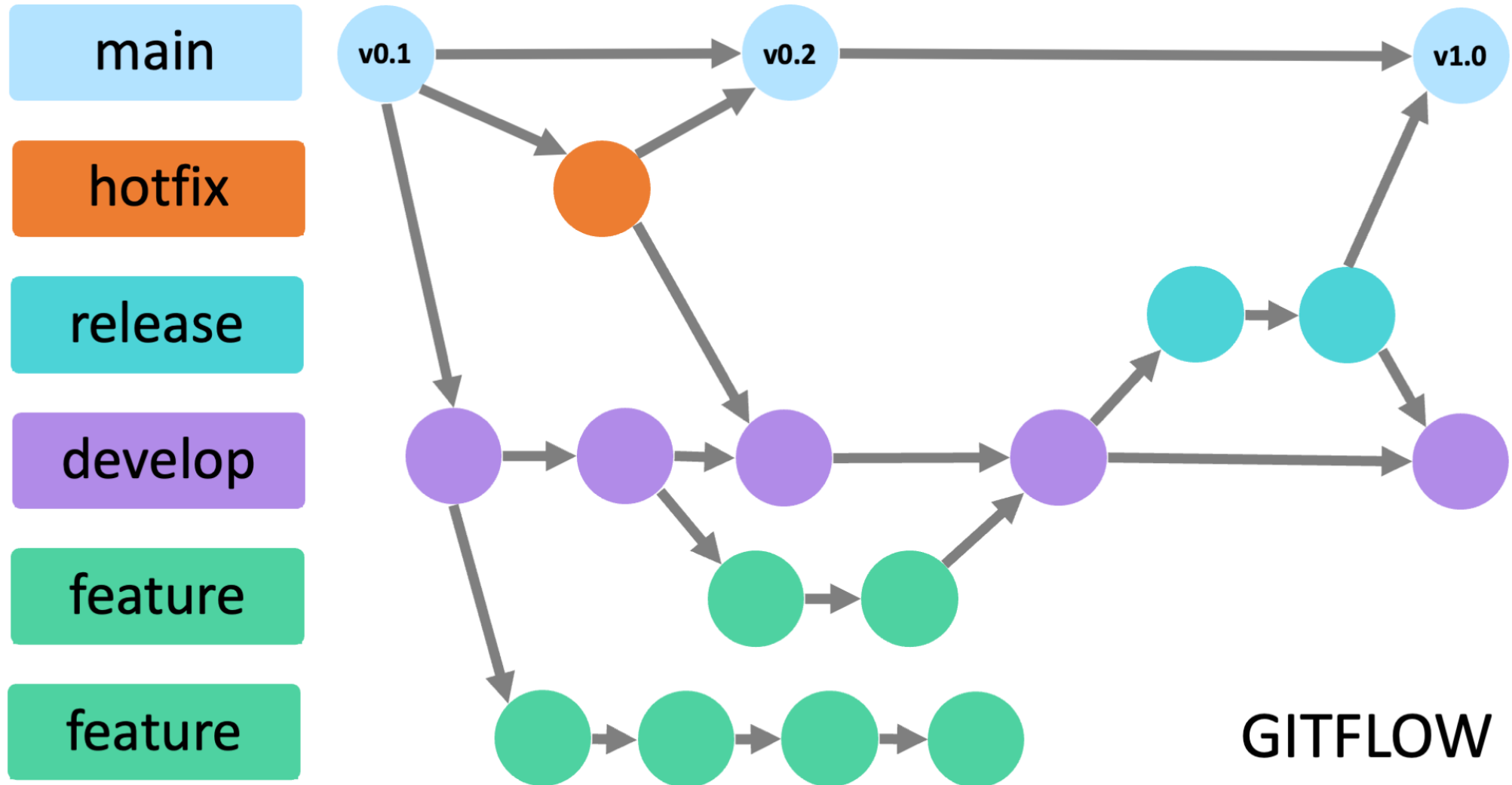
Compares and Merges EA Models

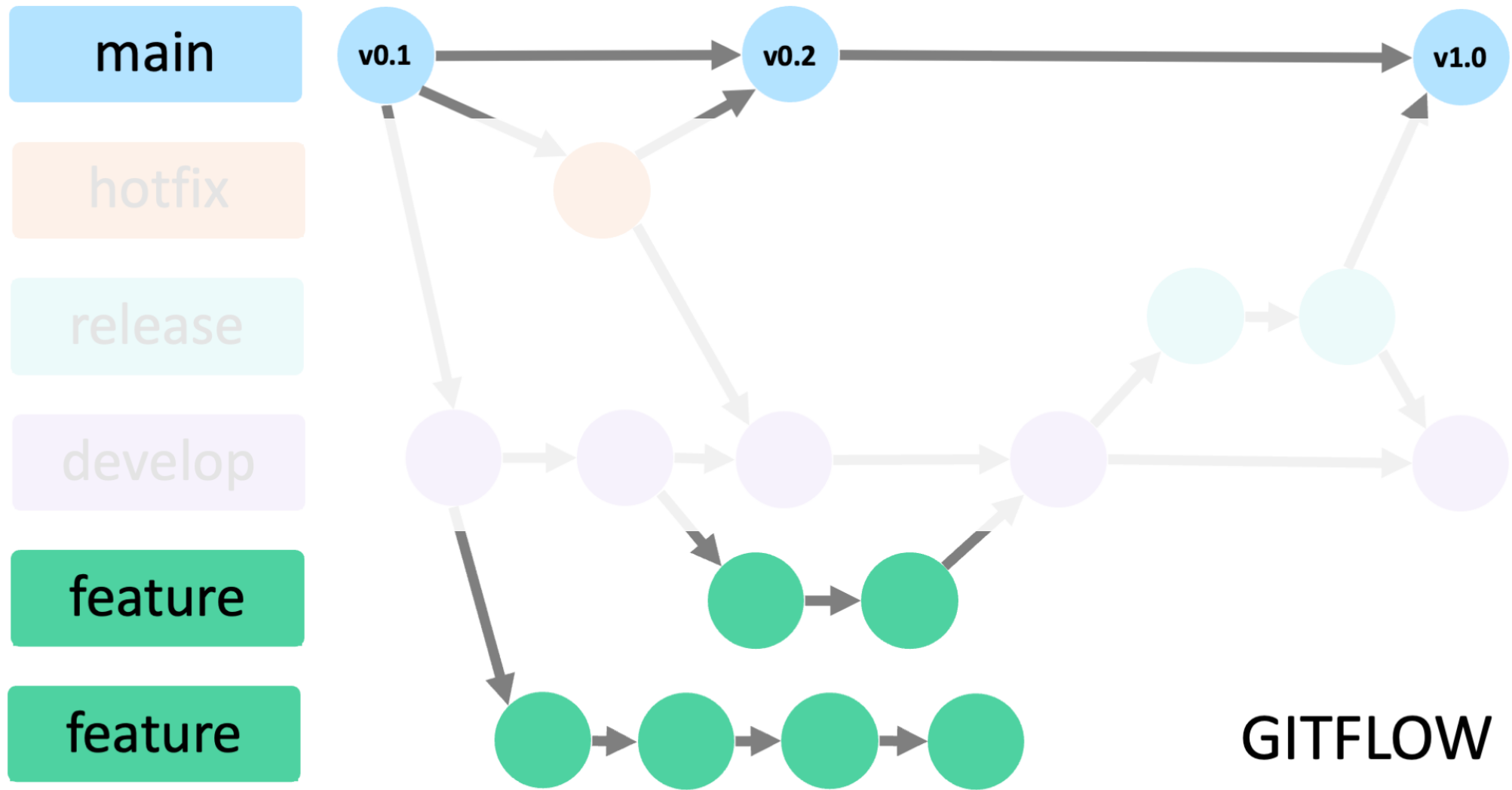
Versioning complete EAP-Files
as simple as text files

Three-way diff and merge

Native VCS integration
SVN, Git, PTC, etc.

EAP(x)-files and MBSE supported
MS SQL, Oracle, etc.

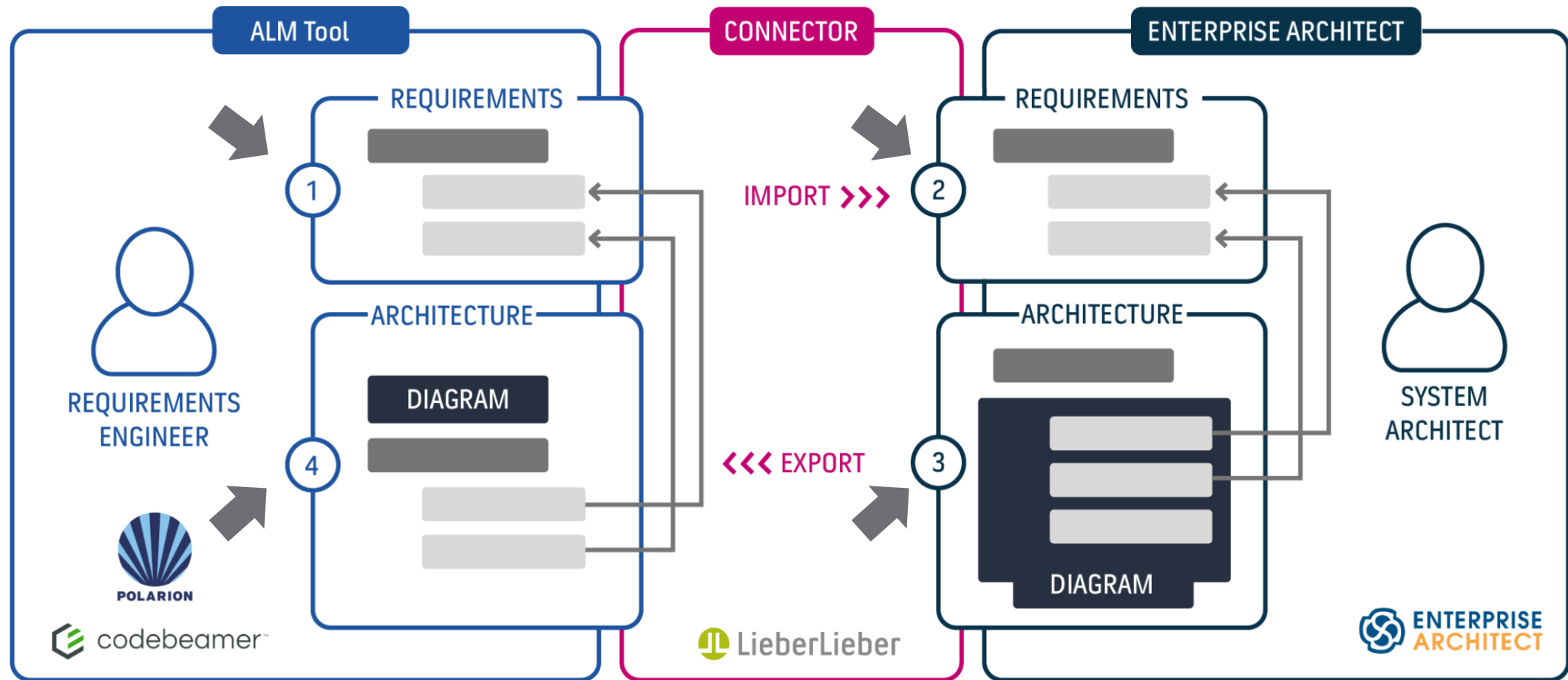




GITFLOW



ALM Integration – LemonTree.Connect



DEMO



Thank you!

LemonTree



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Model Based Team collaboration using strategies
from Software Engineering