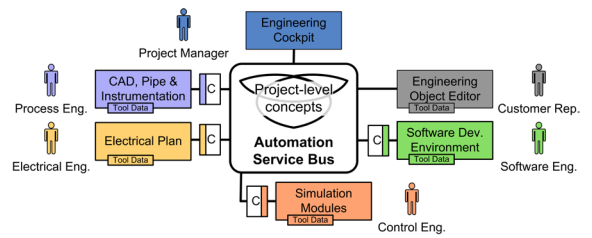


Qualitätsgesicherte Werkzeugketten



Der Aufwand für das qualitätsgesicherte Nachziehen von Planänderungen über Werkzeugketten in heterogenen Software-Werkzeugen unterschiedlicher Fachbereiche soll minimiert werden. Das nachvollziehbare und automatische Verteilen von Änderungen über den „Automation Service Bus“® (ASB) hilft dem Projektteam dieses Ziel zu erreichen.

Aufgabe

Im verteilten und parallelen Engineering industrieller Anlagen haben Planänderungen in einem Fachbereich oft Auswirkungen auf Pläne in anderen Bereichen, die speziellen Software-Werkzeuge arbeiten aber nicht nahtlos zusammen.

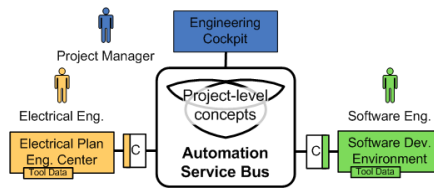
Werkzeugketten zwischen heterogenen Software-Werkzeugen sollen technische und begriffliche Lücken überbrücken, die durch Behelfsimplementierungen und informell organisierten Datenaustausch nur aufwändig und nicht ausreichend zuverlässig geschlossen werden.

Umsetzung

Der von logi.cals und dem CD-Labor CDL-Flex an der TU Wien entwickelte „Automation Service Bus“® (ASB) ist eine offene Technologie, um technische und begriffliche Lücken zwischen Planungsmodellen in heterogenen Software-Werkzeugen zu überbrücken.

Das Abbilden gemeinsamer Konzepte der Fachexperten im Projekt auf lokale Repräsentationen in Software-Werkzeugen erlaubt das automatische Erkennen von Änderungen und Konflikten und das zielgenaue Informieren der relevanten Fachexperten im Projektteam.

Aus erfolgten Änderungen in einer Domäne kann die Notwendigkeit von Änderungen in anderen Domänen



Beispiel für Engineering-Tickets

ID	Message	Originator	Originator Role	Destination	Type	Priority	Status	Message	Message ID
F1	Signal 2180-0000-1241 removed	Generator	user	revised (signal deleted)	major	critical	deleted	Project: waldenbauer	2180001
F1	Signal 2180-0000-1241 removed	Generator	user	revised (signal deleted)	major	critical	deleted	Project: waldenbauer	2180001
F1	Signal 2180-0000-1241 changed	Generator	activated	approved (signal change)	major	critical	deleted	Project: waldenbauer	2180001
F1	Signal 2180-0000-1241 changed	Generator	user	revised (signal deleted)	major	critical	deleted	Project: waldenbauer	2180001
F1	Signal changed (4 responses)	Schaltzentrale	user	approved (signal change)	major	critical	deleted	Project: waldenbauer	1218001
F1	Signal changed (4 responses)	Schaltzentrale	user	approved (signal change)	major	critical	deleted	Project: waldenbauer	1218001
F1	Signal deleted (4 responses) (2 signals)	Schaltzentrale	deleted	request for change	major	critical	deleted	Project: waldenbauer	2180001
F1	Signal deleted (4 responses) (2 signals)	Schaltzentrale	deleted	request for change	major	critical	deleted	Project: waldenbauer	2180001
F1	Signal 2180-0000-1241 changed	Schaltzentrale	class	revised (signal deleted)	major	critical	deleted	Project: waldenbauer	2180001
F1	Signal 2180-0000-1241 changed	Schaltzentrale	class	closed (for deletion)	major	critical	deleted	Project: waldenbauer	2180001
F1	Signal 2180-0000-1241 changed	Schaltzentrale	class	revised (signal deleted)	major	critical	deleted	Project: waldenbauer	2180001
F1	Signal 2180-0000-1241 changed	Generator	class	revised (signal change)	major	critical	deleted	Project: waldenbauer	2180001

Pre-Defined Ticket Information

Message	Originator	Originator Role	Destination	Type	Priority	Status	Message	Message ID
Signal deleted by Rasmus.waldenbauer (2 signals)	Generator	user	revised (signal deleted)	major	critical	deleted	Project: waldenbauer	2180001
Signal deleted by Rasmus.waldenbauer (2 signals)	Generator	user	revised (signal deleted)	major	critical	deleted	Project: waldenbauer	2180001
Signal 2180-0000-1241 changed	Schaltzentrale	class	closed (for deletion)	major	critical	deleted	Project: waldenbauer	2180001
Signal 2180-0000-1241 changed	Schaltzentrale	class	revised (signal deleted)	major	critical	deleted	Project: waldenbauer	2180001
Signal 2180-0000-1241 changed	Generator	class	revised (signal change)	major	critical	deleted	Project: waldenbauer	2180001

Project #10 (closed review (signal deleted); request for change)

Message	Originator	Originator Role	Destination	Type	Priority	Status	Message	Message ID
Signal: Main_RackCPU_2Channel_4PUs_2 (2 signals) ... has been deleted	Generator	user	revised (signal deleted)	major	critical	deleted	Project: waldenbauer	2180001
Signal: Main_RackCPU_2Channel_4PUs_2 (2 signals) ... has been deleted	Generator	user	revised (signal deleted)	major	critical	deleted	Project: waldenbauer	2180001
Signal: Main_RackCPU_2Channel_4PUs_2 (2 signals) ... has been deleted	Generator	user	revised (signal deleted)	major	critical	deleted	Project: waldenbauer	2180001
Signal: Main_RackCPU_2Channel_4PUs_2 (2 signals) ... has been deleted	Generator	user	revised (signal deleted)	major	critical	deleted	Project: waldenbauer	2180001
Signal: Main_RackCPU_2Channel_4PUs_2 (2 signals) ... has been deleted	Generator	user	revised (signal deleted)	major	critical	deleted	Project: waldenbauer	2180001

Project #10 (closed review (signal deleted); request for change)

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Signal: Main_RackCPU_2Channel_4PUs_2 (2 signals) ... has been deleted	Generator	user	revised (signal deleted)	major	critical	deleted	Project: waldenbauer	2180001
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Signal: Main_RackCPU_2Channel_4PUs_2 (2 signals) ... has been deleted	Generator	user	revised (signal deleted)	major	critical	deleted	Project: waldenbauer	2180001
Signal: Main_RackCPU_2Channel_4PUs_2 (2 signals) ... has been deleted	Generator	user	revised (signal deleted)	major	critical	deleted	Project: waldenbauer	2180001
Signal: Main_RackCPU_2Channel_4PUs_2 (2 signals) ... has been deleted	Generator	user	revised (signal deleted)	major	critical	deleted	Project: waldenbauer	2180001

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Signal: Main_RackCPU_2Channel_4PUs_2 (2 signals) ... has been deleted	Generator	user	revised (signal deleted)	major	critical	deleted	Project: waldenbauer	2180001

Project #10 (closed review (signal deleted); request for change)

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Signal: Main_RackCPU_2Channel_4PUs_2 (2 signals) ... has been deleted	Generator	user	revised (signal deleted)	major	critical	deleted	Project: waldenbauer	2180001
Signal: Main_RackCPU_2Channel_4PUs_2 (2 signals) ... has been deleted	Generator	user	revised (signal deleted)	major	critical	deleted	Project: waldenbauer	2180001
Signal: Main_RackCPU_2Channel_4PUs_2 (2 signals) ... has been deleted	Generator	user	revised (signal deleted)	major	critical	deleted	Project: waldenbauer	2180001

abgeleitet werden und können dazu automationsunterstützt so genannte Engineering-Tickets generiert werden, die entsprechend dem Rollenkonzept zugewiesen und verwaltet werden.

Das Werkzeuge übergreifende Änderungsmanagement wurde bei einem weltweit führenden Walzwerksautomatisierer mit Daten aus realen Projekten evaluiert.

Der erste Teilschritt für eine iterative Migration zu einer nachvollziehbaren Werkzeugkette mit EPlan Engineering Center und Probas wurde bei einem weltweit führenden Walzwerksautomatisierer prototypisch realisiert, um zu demonstrieren, dass die effiziente Integration heterogener Werkzeuge auch in komplexen Werkzeuglandschaften möglich ist.

Technische Daten:

- Automation Service Bus®, Service-orientierte Architektur
- EPlan Engineering Center, Probas
- Integration von Datenmodellen über gemeinsame Konzepte auf Projektebene
- Geeignet für die Ergänzung mit Datenaustauschstandards wie AutomationML

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