

# Traceability Problem

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Sigma DeltaX



# The Problem

# 1. State/Progress of the project is unknown

- ▶ Which Requirements are implemented in unknown.
- ▶ Burn rate and forecast is unknown.

## 2. Struggle with Traceability Artifacts generation

- ▶ Excessive work on Polarion/Doors for the generation of Traceability artifact.
- ▶ Traceability report only available for certain snapshots of project state.

# Symptoms

# 1. Same bugs reported for more than one delivery

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Symptoms

Solution

Demo

Advantages

Comparison

## 2. Reported Issue analysis not clear: Bug, works as intended or not implemented

### 3. Content of release (delivery) not clear

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Symptoms

Solution

Demo

Advantages

Comparison



## 4. Definition of done and testing is not clear

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# Solution

# 1. Traceability as code

- ▶ Traceability labels lives in the code base

## 2. Maestro Requirement Utilities

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- Compile source code for requirement tags

### 3. Traceability report as build artifact

- ▶ Traceability report generated just like binary artifact (.hex, .elf)
- ▶ Summary report of pie chart at SYS[1-3], SWE[1-3]
- ▶ SYS1 coverage report send to customer with delivery

# Demo

# Demo Project

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# Advantages



# Stateless traceability

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Advantages

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- ▶ The traceability is a function of the working directory.
- ▶ Traceability can be invoked on intermediate working directory on developer machine.
- ▶ No baseline or requirement freeze. Code and Traceability share the same timeline.

# Real SOT (Source Of Truth)

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Advantages

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- ▶ The information is closest to Truth than any other approach.

- ▶ Allows for support of different file formats. Including:
  - ▶ .csv, .xls
  - ▶ plain-text (.c, .asm, .xml, .puml)

# Comparison

# Comparison

mcc

Reqtify

DOORS

Polarion

JIRA

Artifact Analysis

Automatic

Automatic

No

No

No

Timeline

Single Timeline

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