

Variants in APIS®

By Dimitri Daudrich

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Roadmap for 21.01.2022

- Concept of variants in APIS®
- Create variants
- Overview of variant independent & variant specific values
- Object Inspector Editor
- Variants Matrix Editor
- Variants & Control Plan
- Variants & Process Flow Chart
- Variants & FMEA Form Sheet

Concept of variants in APIS®

MASTER Structure

Variant **independent**
content

Variant **specific**
content

Variant 1

Variant **specific** content

Variant 2

Variant **specific** content

Variant ...

Variant **specific** content

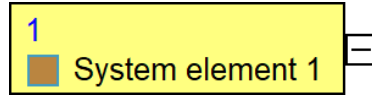
Create Variants

- Display options: „variant specific values“
- Workstation settings -> General: „variants: manage variants when working within the master structure “
- Exclude and include items

Overview of variant **independent** values

Name of ...

System Elements



Functions  Name of a Function

Failures  Name of a Failure

Product Characteristics  Name of Product Characteristic

Process Characteristics  Name of Process Characteristic

Preventive Actions  Name of Preventive Action

Detection Actions  Name of Detection Action

Overview of variant **specific** values

1. Function Net 

2. Failure Net 

3. Specification of Product / Process characteristics

 Product Characteristic = 12 mm \pm 0.1

 Process Characteristic = 12 mm \pm 0.1

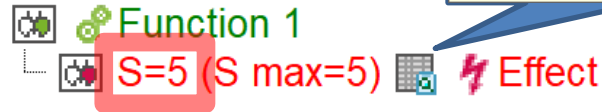
4. Classification  <SC> **Function**

5. User Defined Attributes  **A_r** User defined Attribute **Function**

Overview of variant **specific** values

6. Ratings

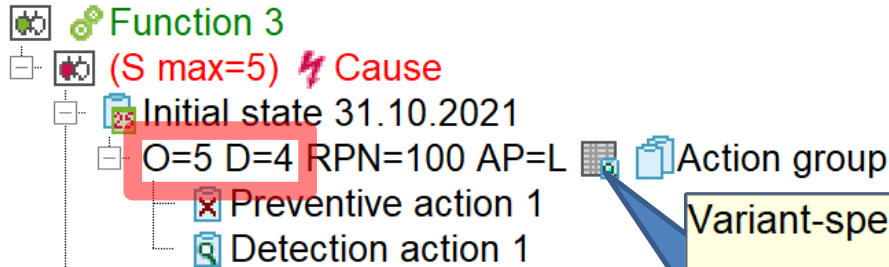
- Severity



Variant-specific values

- Structure variant: Variant 1
- Severity: 5

- Occurrence & Detection rating

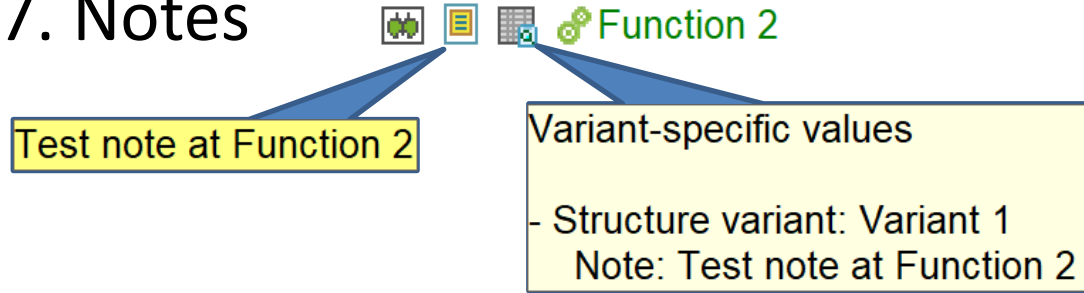


Variant-specific values

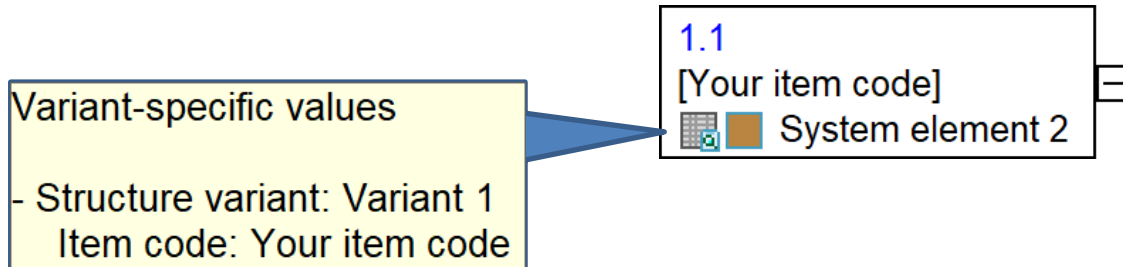
- Structure variant: Variant 1
- Detection (D): 4
- Occurrence (O): 5

Overview of variant **specific** values

7. Notes

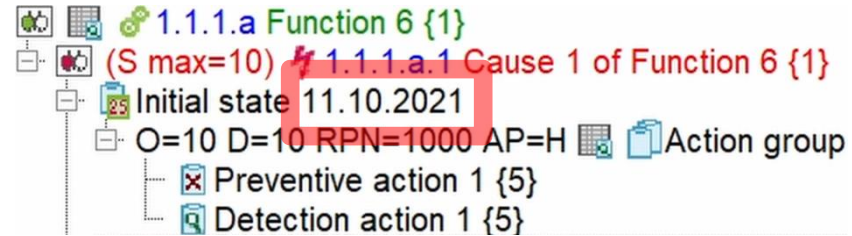


8. Item code (of System elements)

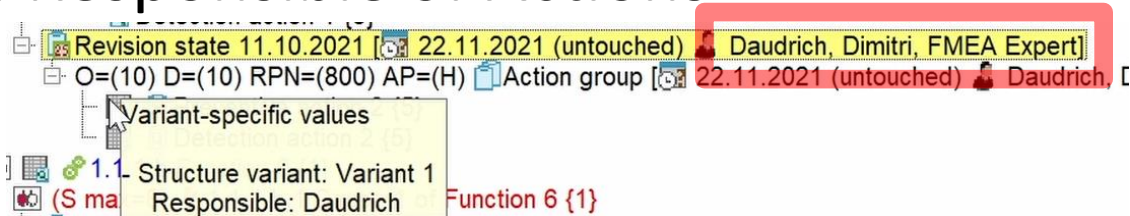


Overview of variant **specific** values

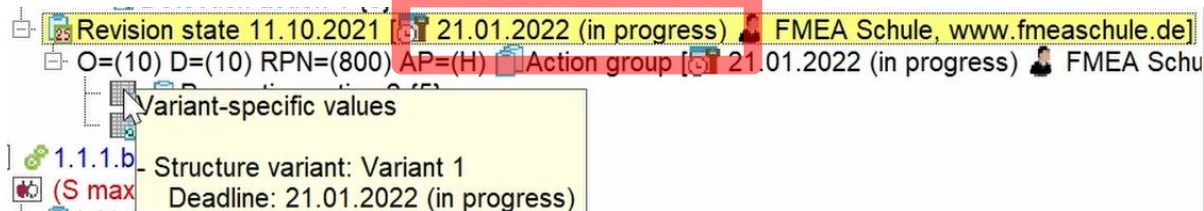
9. Date of Revision States



10. Responsible of Actions

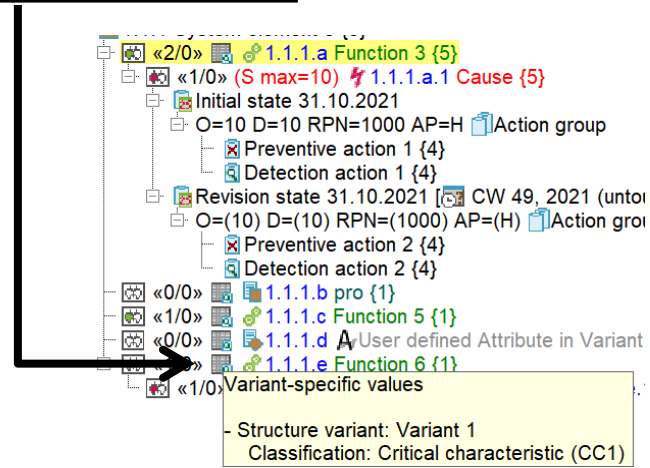


11. Deadlines and status of Actions



Object Inspector Editor

- Editors -> „Object inspector“
- or double mouse click on variant specific icon



Variants Matrix Editor

- Editors -> „Variants Matrix“

Variants

- Variants & Control Plan
 - Create **one** CP for all variants
- Variants & Process Flow Chart
 - Create **for each** variant a PFC
- Variants & FMEA Form Sheet
 - Create **one** FMEA Form Sheet for all variants

Filter in APIS®

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Roadmap for 21.01.2022

- Different types of Filter in APIS
- Overview of Filter categories in APIS®
- Pre-defined filter
- Export / Import Filter
- Examples

Different types of Filter in APIS

- Filter and highlight



Overview of Filter categories in APIS®

Editor	Filter Category	Included in the Management Report?
Structure Tree	1	Yes
Function/Failure Analysis Editor	1	Yes
Variants Matrix	1	Yes
Statistics Editor	2	Yes
Deadline Editor	2	Yes
“old” FMEA Form Sheet	2	Yes
“new” AIAG&VDA Form Sheet	3	No
IQ Explorer (Search Editor)	4	Yes
Management Report	5	Yes
Function Net	5	Yes
Failure Net	6	No
Causes based FMEA Form	6	No
Process Flow Chart	7	No
Control Plan	7	No

Pre-defined filter (Examples)

Structure tree

System-defined filters

Actions

- ... Open deadlines
- ... Open deadlines of the current user
- ... Future deadlines
- ... Deadlines overdue (all responsables)
- ... Actions without deadlines (without symbolic)
- ... Improved actions (completed)
- ... Action Priority (AP) [p]

Methodology

- ... Not completely connected failure net [p]
- ... Function/requirements net not continuously linked [p]
- ... Incompletely revised objects (assistant rules)

Top risk (RPN)

- ... The top 10 failures (RPN: last rated revision state) [p]
- ... The top 10 failures (RPN: initial state) [p]
- ... The top 10 failures (RPN: last completed revision state) [p]
- ... Actions with maximum RPN or date in the future [p]

Modifications

- ... Changes of structure version [p]
- ... Creation or modification date (stamp) [p]

Structure variants

- ... All objects with inclusion attribute

“old” FMEA Form Sheet & “new” AIAG&VDA Form Sheet

FMEA Form

AIAG/VDA Form

System-defined filters

Actions

- ... Open deadlines
- ... Open deadlines of the current user
- ... Future deadlines
- ... Deadlines overdue (all responsables)
- ... Actions without deadlines (without symbolic)
- ... Improved actions (completed)
- ... Action Priority (AP) [p]

Top risk (RPN)

- ... The top 10 failures (RPN: last rated revision state) [p]
- ... The top 10 failures (RPN: initial state) [p]
- ... The top 10 failures (RPN: last completed revision state) [p]
- ... Actions with maximum RPN or date in the future [p]

Modifications

- ... Changes of structure version [p]

Export / Import Filter

Examples

- Filter for Management Report
- SC/CC Symbols

Thank you!

Please give me your **feedback**:

<https://fmeaschule.de/21-01-2022/>

(anonymous)

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