

Windchill, FRACAS, set Workflow state in a form by using calculations

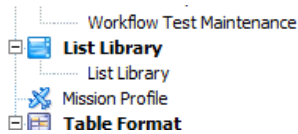
Mittwoch, 16. November 2016

This document is thought as a guide on how to configure the workflow option and change the workflow state in a form by using a combo box and a push button. It illustrates the steps, but assumes that in FRACAS an incident table (or any other table) and a basic form exists, so it does not start at the very beginning.

Things you need is:

- Windchill FRACAS admin rights
- FRACAS incident table or any subtable
 - ▣ **Table Format**
 - ▣ **Configurations**
 - Table Format (Configurations)
 - ▣ **FRACAS Incidents**
 - Table Format (FRACAS Incidents)
 - ▣ **FRACAS Incidents Subtable 1**
 - Table Format (FRACAS Incidents Subtable 1)
 - ▣ **FRACAS Maintenance Logs**
 - Table Format (FRACAS Maintenance Logs)
- A form set (or form design)
 - ▣ **Form Design**
 - ▣ **FRACAS Incidents**
 - Page 1 - Fault Report PM-31-0002-00-XX
 - Page 2 - Supplier Corrective Actions
 - ▣ **FRACAS Maintenance Logs**
 - Workflow Test Maintenance
 - ▣ **FRACAS Operating Times**
- A workflow file
 - ▣ **Problems**
 - ▣ **System Tree Items**
 - ▣ **Workflow**
- A lot of patiences

STEP1) I assume the "workflow" is some kind of predefined options and create a CHOICE LIST in the "List Library" -> "List definition". The list is called "getWorkflow".

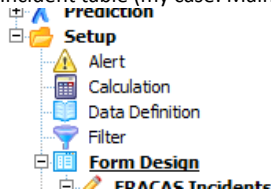


List Definition				
Filter	Display Text	Code	Non-Overrideable	Remarks
1	Names	NAMES	<input type="checkbox"/>	
2	Environment	ENVIRONMENT	<input type="checkbox"/>	
3	Site	SITE	<input checked="" type="checkbox"/>	
4	Criticality FHA	CRITICALITY FHA	<input checked="" type="checkbox"/>	
5	Status	STATUS	<input checked="" type="checkbox"/>	
6	E-Box failure list	E-BOX FAILURE LIST	<input type="checkbox"/>	
7	YES / NO	YES / NO	<input checked="" type="checkbox"/>	
8	Supplier	SUPPLIER	<input type="checkbox"/>	
9	Partlist	PARTLIST	<input type="checkbox"/>	
10	getWorkflow	GETWORKFLOW	<input checked="" type="checkbox"/>	
*	< Click here to insert a new record >			

List Choices						
Filter	Display Text	Code	Value	Hidden	Symbol	Remarks
1	Maintenance	SENDMAINTENANCE	##	<input type="checkbox"/>		
2	Production	SENDPRODUCTION	##	<input type="checkbox"/>		
*	< Click here to insert a new record >					

The list has in this case two choices "Maintenance" and "Production". This will be also the two workflow states later. Close the window when finished.

STEP2) Make the "Data Definition" (here we define the field in which the choice list will appear in the xxx-Incident table (my case: Maintenance Log)



Select in the Data Definition "Prompt" list the field you want to use for the list...I used "USER TEXT 50", It shouldn't be used already for other things, and set the field definitions as required. This means:

- User prompt...that is the label the user will see
- List...select the before defined list (i.e. getWorkflow")
- Order...as desired
- List choices text...as desired
- Set default value to whatever
- Give a tooltip
- Close window

Data Definition			
			Table type: FRACAS Maintenance Logs
Default Prompt	User Prompt	Data Changed?	
User Text 47		<input type="checkbox"/>	
User Text 48		<input type="checkbox"/>	
User Text 49		<input type="checkbox"/>	
User Text 5		<input type="checkbox"/>	
User Text 50	Set next step	<input checked="" type="checkbox"/>	
User Text 6		<input type="checkbox"/>	
User Text 7		<input type="checkbox"/>	
User Text 8		<input type="checkbox"/>	
User Text 9		<input type="checkbox"/>	
User Value 1		<input type="checkbox"/>	
User Value 10		<input type="checkbox"/>	
User Value 11		<input type="checkbox"/>	

Field Definition	
Field purpose:	Text field for customized usage.
User prompt:	Set next step
<input type="checkbox"/> Shared field	-- This setting is only applicable for Problems.
Share field with:	
Shared field:	
List:	getWorkflow
List choices order:	Alphabetically
List choices text:	Show Display Text
Memo field type:	-- This setting is only available for Memo fields.
Precision:	0
Default value:	Maintenance
Tooltip:	Changes the workflow
Remarks:	

Field Definition | Dependent List Definition

STEP 3) Define the Workflow.

- Select the table type you want to use (in this case I choose my table "FRACAS maintenance log")
- Enter new records (=each record is a workflow change -> this is more or less an email send to a user/user group to inform them that the incident requires some input from them)
- The text field accepts HTML5.0 format
- Data field from FRACAS can be used as reference
- At the end, close window

I define two workflows " Maintenance" and "Production". All other fields are pretty self speaking and not explained in detailed.

Workflow Steps

Table type: FRACAS Maintenance Logs

	Display Text	Code	Remarks
1	Maintenance	MAINT	
2	Production	PROD	
*	< Click here to insert a new record >		

Email

To... Tobias Krieger

CC... < empty >

Subject: Workflow set to Maintenance

Maintenance

Email Email Preview

STEP4) Add the Field "User Text 50" ("Set next step") from STEP 2 into the (Maintenance Log) Table

- Table Format
 - o Select "Table Format" below "Maintenance Log Table"
 - o Click "insert new record....."
 - o Select out of the drop down list in the data field the field from step 2.
 - o Select out of the drop down list in the data field the field "Workflow State" and disable this field.
 - o Close the window

Table Format - FRACAS Maintenance Log Fields		
	Table Type	Data Field
1	FRACAS Maintenance Logs	Maintenance Log Identifier
2	FRACAS Maintenance Logs	Incident
3	FRACAS Maintenance Logs	Maintenance Level
4	FRACAS Maintenance Logs	Replaced?
5	FRACAS Maintenance Logs	Number of Men
6	FRACAS Maintenance Logs	Elapsed Maintenance Time
7	FRACAS Maintenance Logs	Total Maintenance Time
8	FRACAS Maintenance Logs	Cost, Item
9	FRACAS Maintenance Logs	Cost, Maintenance
10	FRACAS Maintenance Logs	Workflow State
11	FRACAS Maintenance Logs	Set next step
*	< Click here to insert a new record >	

Field Definition	
Width:	18
<input type="checkbox"/> Disabled	
Text color:	
Background color:	

STEP5) Prepare the Calculations for doing something if later in the form a workflow is selected and a push button is pressed.

- Enter a new record in "Calculations"
- Select in Table Type the FRACAS Maintenance Log
- Select as Result Field "Workflow State"
- Enter the following line in the field "Calculation" (assuming that everything is named identically as I did)
 - o You can use "Data Fields" and "Text Functions" to combine what you need, use for the "then" and "else" cases the Workflows you want to trigger.

\$IfThenElse([~63.MtUserText50]="Maintenance"; "Maintenance"; "Production")

Calculations						
	Calculation Name	Module	Calculation Type	Calculate Automatically	Calculation Summary	Remarks
1	Person - Corrective Action Entry	FRACAS	Text	<input checked="" type="checkbox"/>	Person, Corrective Action Entry (FRACAS Incidents) = \$ifthenelse(Description, ...	
2	Closed?	FRACAS	Text	<input checked="" type="checkbox"/>	Closed? (FRACAS Incidents) = \$ifthenelse(Status (FRACAS Incidents)="Closed...	
3	Person - Incident Entry	FRACAS	Text	<input checked="" type="checkbox"/>	Person, Incident Entry (FRACAS Incidents) = \$ifthenelse(Description, Incident ...	
4	Person - Analysis Entry	FRACAS	Text	<input checked="" type="checkbox"/>	Person, Analysis Entry (FRACAS Incidents) = \$ifthenelse(Description, Analysis ...	
5	Configuration Mapping	FRACAS	Text	<input type="checkbox"/>	Form Set (FRACAS Incidents) =	
6	Failure per AV per Configuration	FRACAS	Number	<input type="checkbox"/>	Average Failure/AV (Configurations) = abs(SumField(Incident Identifier (FRAC...	
7	Testcalculation	FRACAS	Text	<input type="checkbox"/>	Average Failure/AV (Configurations) = SumField()	
8	Configuration, Name	FRACAS	Text	<input checked="" type="checkbox"/>	Name (Configurations) = Configuration Identifier (Configurations) + " (" + Cust...	
9	WorkflowTest	FRACAS	Text	<input type="checkbox"/>	Workflow State (FRACAS Maintenance Logs) = \$ifthenelse(Set next step (FRACAS Maintenance Logs)=="Maintenance", "Maintenance", "Production")	
*	< Click here to insert a new record >					

Calculation Editor

Table type:

Result field:

Calculation: `$ifthenelse(Set next step (FRACAS Maintenance Logs)=="Maintenance"; "Maintenance"; "Production")`

Table type:

Result field:

Calculation: `$ifthenelse(Set next step (FRACAS Maintenance Logs)=="Maintenance"; "Maintenance"; "Production")`

- Close the window.

STEP6) Form Design: Add the field and a button to the "Maintenance Log Form"....

- Menu -> "Insert" -> combo box, place it wherever you want on the form

Maintenance Form

Entry Date:

Person, Maintenance Entry:

User Text 1:

Actions Taken, Maintenance:


Aircraft Mechanic Troubleshooting Chart

DOES IT MOVE?

```

graph TD
    A[DOES IT MOVE?] -- No --> B[Should it?]
    A -- Yes --> C[Should it?]
    B -- No --> D[No Problem]
    B -- Yes --> E[ ]
    C -- Yes --> F[ ]
    C -- No --> G[No Problem]
    
```

Maintenance Form

Entry Date: 

Person, Maintenance Entry:

User Text 1:

Actions Taken, Maintenance:

Workflow State:

Aircraft Mechanic Troubleshooting Chart

DOES IT MOVE?

```

graph TD
    A[DOES IT MOVE?] -- No --> B[Should it?];
    A -- Yes --> C[Should it?];
    B -- No --> D[No Problem];
    B -- Yes --> E[Image of a bottle];
    C -- Yes --> F[No Problem];
    C -- No --> G[Image of a wheel];
    
```

- o Right click -> Select "Properties" -> Data Exchange
- o Select Table Type ("FRACAS Maintenance Log")
- o Data field "Set next step"
- o Choice list should be set already
- o Required for input: Yes (or no, whatever is suitable)

Combo Box Properties

- General
- Layout
- Styles
- Data Exchange

Data Exchange

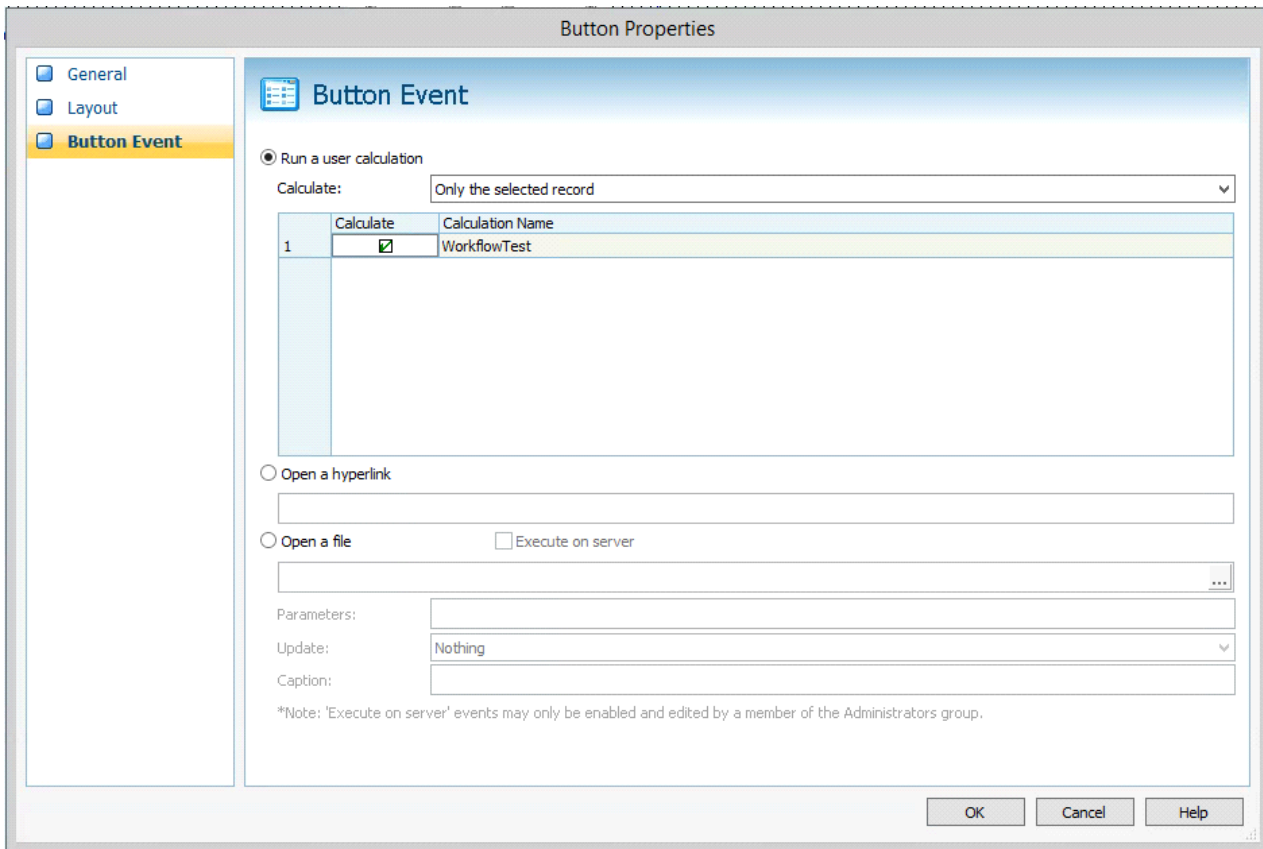
Table type:

Data field:

Choice list:

Required input for Web:

- Menu -> "Insert" -> Button, place it wherever you want
- Right click -> "Properties" -> Button Event
- Select "run a user calculation" (only the selected record)
- Select the in Step 5 defined calculation (Workflow Test)

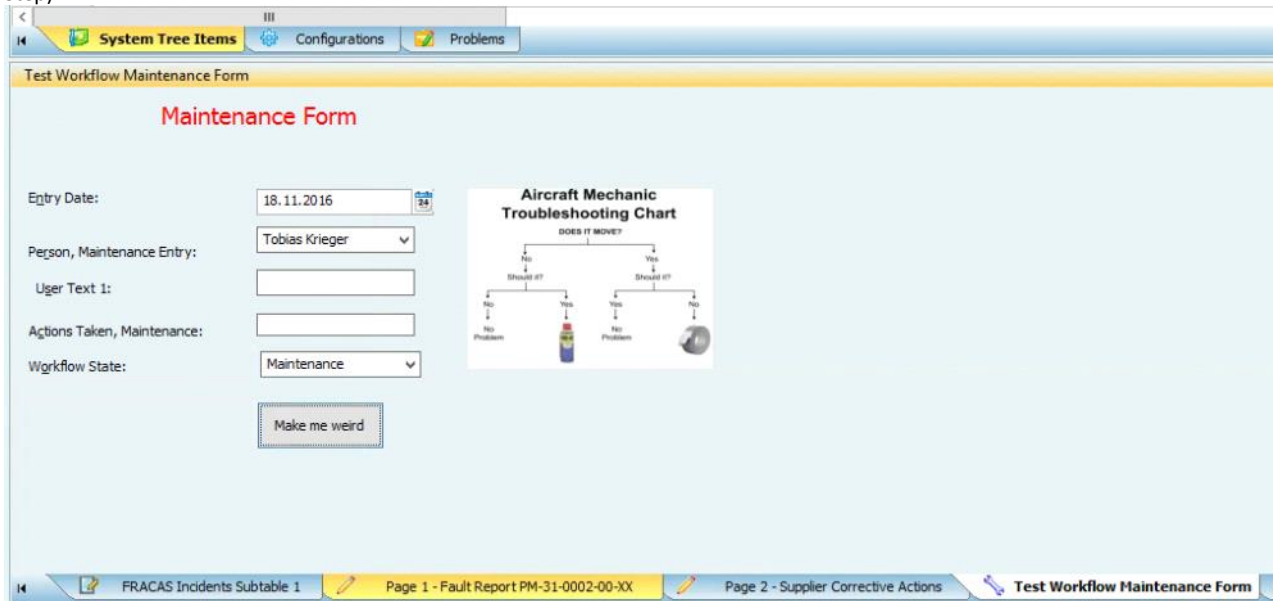


STEP 7) you are finished, time to test.

If everything except the project is closed and saved, go to the table (i.e. FRACAS Maintenance Log) in which you entered the two fields (Workflow and UserText59 (Set next Step). Just check that it is there. Workflow should be disabled. The reason why? Because else you send always immediately an email when you change the state....

Filter	Identifier	Incident	Maintenance Level	Replaced?	Number of Men	Elapsed Maintenance Time	Total Maintenance Time	Cost, Item	Cost, Maintenance	Workflow State	Set next step
1		FID-00002964		<input type="checkbox"/>	1	#, #	0	#, #	#, #	Maintenance	Maintenance
* a new record >											

Next open the form in the project and you should see the "xxxx" Button and the Combo field (Set next Step).



There should be two options available in the drop down menu (which represents the workflow states).

Select one and push the button. A few minutes later an email should be in your Inbox (or in the inbox of whoever is put in the workflow header....) with the right content (This is a maintenance workflow, this is a production workflow.....).

Greetings,

Tobias