

#### **XML Editing**

Dick Bronson - *R R - C irK its*, *Inc*.

Further Clinics in this series:

- Create a Detailed CTC Machine Model with JMRI/PanelPro 10:00 PM, Monday, July 6<sup>th</sup>
  - Introduction to Layout Control with JMRI/PanelPro

•This Clinic is a Repeat 4:00 PM, Friday, July 10<sup>th</sup>



Where we are going:

- New graphical editing options for Logix and Panels
- SSL Simple Signal Logic (SSL-clinic-2)



Logix copy

## Logix copy

 At the end of the last section we had some Logix for a single lever. Reload 2009Clinic3.xml if you do not already have it open.



Logix copy



- At the end of the last section we had some Logix for a single lever. Reload 2009Clinic3.xml if you do not already have it open.
- Select 'Tools Logix' to reopen our Logix for this panel.

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JMRI <sup>®</sup>	Logix cop
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- At the end of the last section we had some Logix for a single lever. Reload 2009Clinic3.xml if you do not already have it open.
- Select 'Tools Logix' to reopen our Logix for this panel.
- Click 'Select' and choose 'Copy'
- Enter the new Logix names.



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- Select 'Tools Logix' to reopen our Logix for this panel.
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- Enter the new Logix names.
- Then 'Copy'



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### **Indirect Layout Control**

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- At the end of the last section we had some Logix for a single lever. Reload 2009Clinic3.xml if you do not already have it open.
- Select 'Tools Logix' to reopen our Logix for this panel.
- Click 'Select' and choose 'Copy'
- Enter the new Logix names.
- Then 'Copy'
- Change the names of each conditional you want to copy.



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### **Indirect Layout Control**

Logix copy

At the end of the last section

we had some Logix for a single lever. Reload 2009Clinic3.xml if

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Select 'Tools – Logix' to reopen

Click 'Select' and choose 'Copy'

conditional you want to copy.

To their new values, then click

Enter the new Logix names.

Change the names of each

our Logix for this panel.

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	Indirect Layout Control         Image: Control         <	
JMRI -		Logix copy
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Done Delete Logix		



Logix copy

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			Conditional	System Nam	ie IX7:WCC1					
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R2	AND		Sensor, IS8:CB, for Sensor	Active	False	$\checkmark$	Edit	Delete		
R3	AND	NOT	Turnout, LT2, for Turnout C	losed	True		Edit	Delete		
R4	AND		Sensor, IS7:WL, for Sensor	Active	True		Edit	Delete		
			Add State Variat		k State Variable					
			L	ogic Operato	r					
Action	15			A	the set of set 2					
			Consequent	Actions (the	(then' part)					
Actio	n Descr	iption								
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On C	hange T	o True	, Delayed Set Turnout, LT2 to	Closed, afte	r 5 seconds.		Edit	Delete		
			Add A	Action Re	eorder					
			Update Conditional	Cancel	Delete Condit	ional				

- This copied the full structure of the Logix under a new name but of course you must still edit each conditional and enter its proper new values.
- This is much faster than making a new entry from scratch as many times only one number must change per entry.



Logix copy

1	<u> </u>		Edit Conditional				
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R2	AND		Sensor, IS8:CB, for Sensor Active	False	$\checkmark$	Edit	Delete
R3	AND	NOT	Turnout, LT2, for Turnout Closed	True		Edit	Delete
R4	AND		Sensor, IS7:WL, for Sensor Active	True		Edit	Delete
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ction							
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			Consequent Actions (the	then part)		1	
Action	n Descr	iption					
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On Ch	nange T	o True,	Delayed Set Turnout, LT2 to Closed, after	5 seconds.		Edit	Delete
			Add Action Re	order			
			Update Conditional Cancel	Delete Condit	ional		

- This copies the full structure of the Logix under a new name but of course you must still edit each conditional and enter its proper new values.
- This is much faster than making a new entry from scratch as many times only one number must change per entry.
- Click Edit to change each line.



Logix copy

*	Edit Conditional		_ <b>-</b> X	
Window	w Help			
	Conditional System Name IX7:WCC1			
	Conditional User Name Switch 7 Normal			
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	Antecedent Variables (the 'if' part)			
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On Ch	ange To True, Delayed Set Turnout, LT2 to Closed, after 5 seconds.	Edit	Delete	
	Add Action Reorder			
	Update Conditional Cancel Delete Conditional			

## \_ogix copy

- This copies the full structure of the Logix under a new name but of course you must still edit each conditional and enter its proper new values.
- This is much faster than making a new entry from scratch as many times only one number must change per entry.
- Click Edit to change each line.
- In this case correct the sensor name for plant 7, then 'Update'.



Logix copy

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1				Edit Conditiona	al			_ 🗆 🗙					
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R4	AND		Sensor, IS7:W	L, for Sensor Active	True		Edit	Delete					
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Add Action Reorder													
			Update	Update Conditional Cancel Delete Conditional									

- This copies the full structure of the Logix under a new name but of course you must still edit each conditional and enter its proper new values.
- This is much faster than making a new entry from scratch as many times only one number must change per entry.
- Click Edit to change each line.
- In this case correct the sensor name for plant 7, then 'Update'.
- Click 'Update Conditional' and then 'Done' when all the copied conditionals have been changed to their new values.



#### Logix for Interface



## Logix for Interface

 We left our last clinic with some Logix that couldn't be fully tested because we didn't have any visual turnout feedback.



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- We left our last clinic with some Logix that couldn't be fully tested because we didn't have any visual turnout feedback.
- Lets solve this by connecting the turnout state with the panel indicators, again with sound and delay. The Logix name is: IX5:WK (plant 5:, sWitch, indiKator)



#### Logix for Interface

- We left our last clinic with some Logix that couldn't be fully tested because we didn't have any visual turnout feedback.
- Lets solve this by connecting the turnout state with the panel indicators, again with sound and delay. The Logix name is: IX5:WK (plant 5:, sWitch, indiKator)
- This Conditional has only one variable, the turnout 'LT1'

Edit Conditional									
Window Help									
Conditional System Name IX5:WKC1									
Conditional User Name									
Logical Expression:									
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#### Logix for Interface

- We left our last clinic with some Logix that couldn't be fully tested because we didn't have any visual turnout feedback.
- Lets solve this by connecting the turnout state with the panel indicators, again with sound and delay. The Logix name is: IX5:WK (plant 5:, sWitch, indiKator)
- This Conditional has only one variable, the turnout 'LT1'
- However it has lots of actions. New in 2.6 is the capability of having as many actions as we require, not just two as originally allowed.

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Logical Exp	ression:					
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#### Logix for Interface

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## ogix for Interface

 This change allows us to do all the required actions for both thrown and closed actions in one single conditional.



#### Logix for Interface

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- This change allows us to do all the required actions for both thrown and closed actions in one single conditional.
- First we do the actions that happen when the turnout is 'Thrown'. Turn off the 'N' lamp,
  then after 5 seconds turn on the 'R' lamp.



#### Logix for Interface

A Contraction of the second se	Edit Conditional				
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- This change allows us to do all the required actions for both thrown and closed actions in one single conditional.
- First we do the actions that happen when the turnout is 'Thrown'. Turn off the 'N' lamp, then after 5 seconds turn on the 'R' lamp.
- Next we do the actions when the turnout is 'Un-thrown' (Closed). Turn off the 'R' lamp, then after 5 seconds turn on the 'N' lamp.



#### Logix for Interface

		Edit Conditional				
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Logical Expres	ssion:					
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On Change, P	lay Sou	und File from file, /usr/local/JMRI/resources/	/sounds/Code-r	eceive	Edit	Delete
		Add Action Re	order			
		Update Conditional Cancel	Delete Cond	itional		

- This change allows us to do all the required actions for both thrown and closed actions in one single conditional.
- First we do the actions that happen when the turnout is 'Thrown'. Turn off the 'N' lamp, then after 5 seconds turn on the 'R' lamp.
- Next we do the actions when the turnout is 'Un-thrown' (Closed). Turn off the 'R' lamp, then after 5 seconds turn on the 'N' lamp.
- Finally we do the actions that happen on any change. i.e. play the 'Sound of relays.'



#### Logix for Interface

k.		Edit Conditional				×
Window Help	)					
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		Antecedent Variables (th	ne 'if' part)			
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- This change allows us to do all the required actions for both thrown and closed actions in one single conditional.
- First we do the actions that happen when the turnout is 'Thrown'. Turn off the 'N' lamp, then after 5 seconds turn on the 'R' lamp.
- Next we do the actions when the turnout is 'Un-thrown' (Closed). Turn off the 'R' lamp, then after 5 seconds turn on the 'N' lamp.
- Finally we do the actions that happen on any change. i.e. play the 'Sound of relays.'
- 'Update Conditional' to finish.



P<u>i</u>

### **Indirect Layout Control**

#### Logix for Interface



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Now after using the 'Copy' option and editing to match our panel items, we have sound and light for each position.



#### Logix for Interface



- Now after using the 'Copy' option and editing to match our panel items, we have sound and light for each position.
- Quick tests show that the panel now has animation and sounds, as well as basic interlocking.







Logix entry





Logix entry





Logix entry



## Logix entry

- Now change the lever.
- Push the Code Button.
- And Our turnout changes.
- But not if the OS shows occupied.
- Save our work as



Logix entry

#### -Panel Editor Clinic 3 - • × Logix entry Edit Marker Help 2009 Clinic 3 Editor \_ O × PŘ. File Window Help Now change the New Panel... lever. Store Panels... Store Image Index Push the Code Create/Edit Image Index × Save <u>¢</u>, Button. 📄 .jmri ø I Look In: v 趑 And Our turnout changes. a decoders RXTX-install Bordon-a.xml 📄 old 2009Clinic1.xml Bordon-b.xml But not if the OS programmers Bordon-combined 2009Clinic2.xml 2009Clinic3.xml resources Bordon-route.xml shows occupied. catales Trees.xml 📄 roster APB Test.xml Save our work. 7 -4 File Name: 2009Clinic3.xml As 2009Clinic4.xml Files of Type: XML files v Cancel Save 10 SIGNAL SIGNAL



#### Icon Editing



## Icon editing

 Also new in 2.6 is the ability to graphically edit the icon data. Right click on an icon to bring up its popup menu.



#### Icon Editing





#### Icon Editing





#### Icon Editing



## Icon editing

- Also new in 2.6 is the ability to graphically edit the icon data. Right click on an icon to bring up its popup menu.
- Click on 'Edit'
- This opens the 'Edit Sensor' window.
- You may change the icon images or re-connect the sensor to a different sensor number.



#### Icon Editing



## Icon editing

- Also new in 2.6 is the ability to graphically edit the icon data. Right click on an icon to bring up its popup menu.
- Click on 'Edit'
- This opens the 'Edit Sensor' window.
- You may change the icon images or re-connect the sensor to a different sensor number.
- You may not change the icon type. For that drastic a change you must delete the old and add the new type.



## Manual Editing

- In the last section we created the 2nd, 3rd, and 4<sup>th</sup> sections of our panel by using the new 'Copy' function of the Logix, then correcting individual values as required.
- The same thing could have been accomplished manually using an XML text editor with copy and replace. However, this requires a detailed understanding of the .XML file format, and is error prone.



# Manual Editing

- Another reason to use manual editing has been to edit icon information that needs to be changed without completely re-entering them.
- Again the current version 2.6 has new features that can help by providing graphical editing of icon data.
- If you still require the ability to do manual editing of the .XML files the following may be helpful.



- Manual editing of the Panel.xml files.
  - Select an editor that will NOT reformat your files.
  - Select an editor that does NOT think it automatically knows how to edit any file with a .xml extension.
  - For Windows users, 'XML Marker' available from http://symbolclick.com/ is an excellent option.
  - On Linux I am use Bluefish which is a standard programming editor with a cute logo.





- What we have covered so far:
  - Basic manual editing of the panel .xml file.
- Where we are going next:
  - Simple Signal Logic (SSL-clinic-2)