Subject: How to deal with Implicit-Or Split limitations
Posted by kong on Tue, 04 Oct 2016 21:32:35 GMT
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To illustrate a workflow requirement I am struggling with, let's look at the workflow as described in http://www.tonymarston.net/php-mysql/workflow.html#sample:

As an example, if for whatever reasons a new business requirement is: Allow order cancellations by customers anytime after charging credit card but before shipment (and of course refund payments minus a handling fee as part of the order cancellation procedure). This requirement could be modeled in a straight forward manner like this:

However, such workflow would require multiple Implicit-Or splits without any timed transitions as currently required in Radicore. So, how should one go about thinking, modeling and implementing such a business requirement in Radicore workflow?

Subject: Re: How to deal with Implicit-Or Split limitations
Posted by AJM on Wed, 05 Oct 2016 08:22:07 GMT
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As an implicit OR split can only have 2 outbound arcs you will have to introduce another place after D which effectively says "Cancel or Continue". So as soon as the Shipment (Continue) tales place the Cancel operation then becomes disabled.

Subject: Re: How to deal with Implicit-Or Split limitations
Posted by AJM on Wed, 05 Oct 2016 11:32:17 GMT
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Note that an implicit OR split can only have two arcs, and one of the transitions MUST have a timer as a trigger. If you want more than one arc, or conditions without a timer, then you MUST use an explicit OR split.

Subject: Re: How to deal with Implicit-Or Split limitations
Posted by kong on Wed, 05 Oct 2016 19:55:35 GMT
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Not sure I grasp this completely, so based on what I understand here are 2 solutions that approximate the required behavior.

Solution 1:

Solution 2:

Out of these 2, I think that the second solution is closer to the required behavior.
Any other solutions to get even closer to the business requirement?

Subject: Re: How to deal with Implicit-Or Split limitations
Posted by AJM on Wed, 05 Oct 2016 22:30:09 GMT
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Your requirement is that at the shipping stage there should be a choice - either ship or cancel. When one of these choices is made it disables the other. You must build this choice into your workflow using an Explicit OR split.

Subject: Re: How to deal with Implicit-Or Split limitations
Posted by kong on Wed, 05 Oct 2016 23:42:43 GMT
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Yes, I think I did that in both solutions. In solution 1 I added an Explicit-Or to allow choice between cancel or continue before the "Ship" transition. In solution 2, I made all the transitions between "credit card charge" and "ship" into Explicit-Or with a 'cancel' arc, so that order could be canceled at any stage. Am I missing something?

Subject: Re: How to deal with Implicit-Or Split limitations
Posted by AJM on Thu, 06 Oct 2016 11:21:28 GMT
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The more I read this post the more I realise that what you are trying to do is perfectly logical, yet my implementation does not allow it. I have gone back to my original reference material at http://martinfowler.workflowpatterns.com/documentation/docum ents/vanderaalst98application.pdf and I now see that my implementation is too restrictive. I shall start work on modifying it so that an Implicit-OR-split can have more than 2 arcs, and that it need not have a transition with a TIMER trigger. I will post the updated code here as soon as I can.

Subject: Re: How to deal with Implicit-Or Split limitations
Posted by kong on Thu, 06 Oct 2016 16:53:48 GMT
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Actually, after reviewing the source code of the workflow engine, I think it already supports implicit-or splits with multiple arcs without requirement for having one timed transition following it.

You just have to remove this constraint from wf_workflow_s01.class.inc, function _cm_validateUpdate:

```
if ($arc['arc_count'] > 2) {
    // "Too many arcs of type 'OR-split (Implicit)' at place '$place_name'"
    $errors[] = getLanguageText('e0065', $place_name);
} // if
```

BTW, that paper in your link is written by the same professor Wil van der Aalst who built the website that I linked here http:// radicore.org/fud/index.php?t=msg&th=891&goto=5940&#msg_5940.

Subject: Re: How to deal with Implicit-Or Split limitations
Posted by AJM on Thu, 06 Oct 2016 18:16:09 GMT
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It's a little more complicated than that. Attached is a zip file which contains the changed scripts. Let me know if it works.

File Attachments

1) workflow.zip, downloaded 2073 times

Subject: Re: How to deal with Implicit-Or Split limitations
Posted by kong on Fri, 07 Oct 2016 17:04:33 GMT
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Looks good. Thank you.
