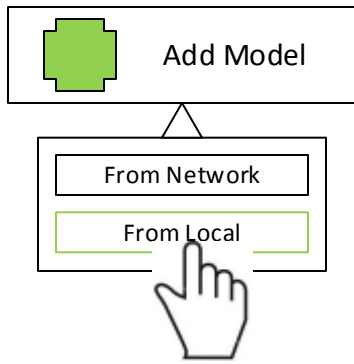
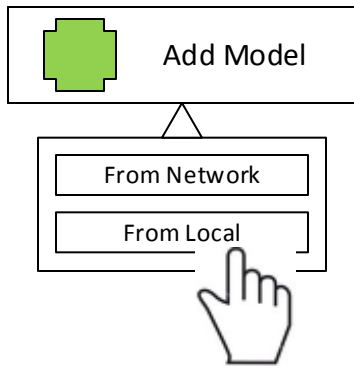


When the composer is empty the “Add Model” flyout is opened



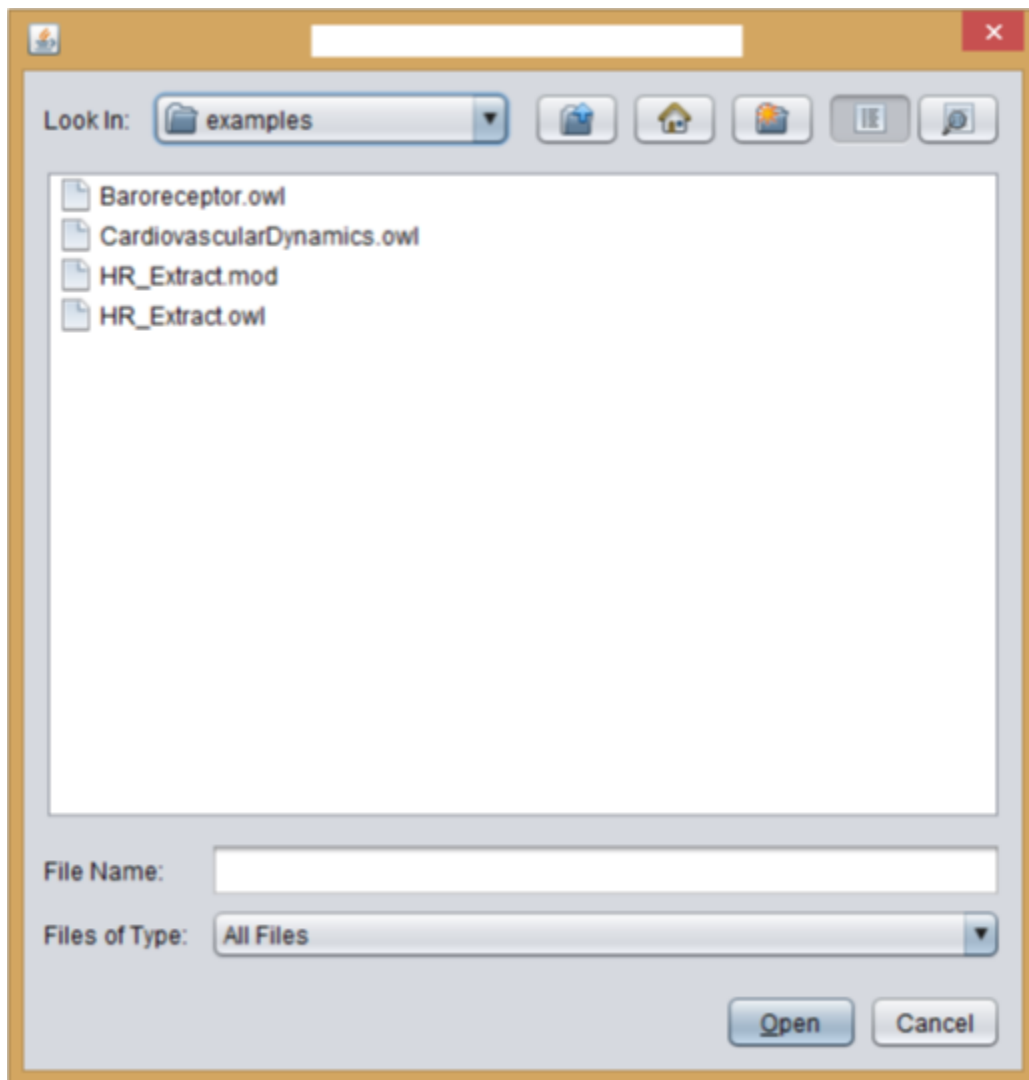
Users can choose a model from their local machine or the network



Clicking the Add Model button opens the source model location drop down.

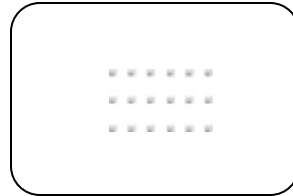


Users selects a model from the file picker





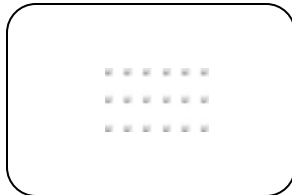
Model D



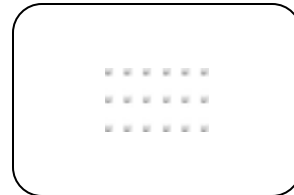
Models are added to the workflow canvas



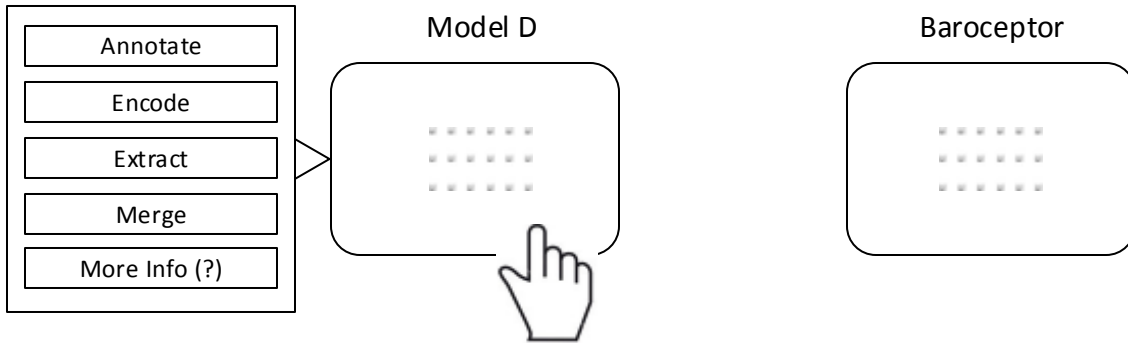
Model D



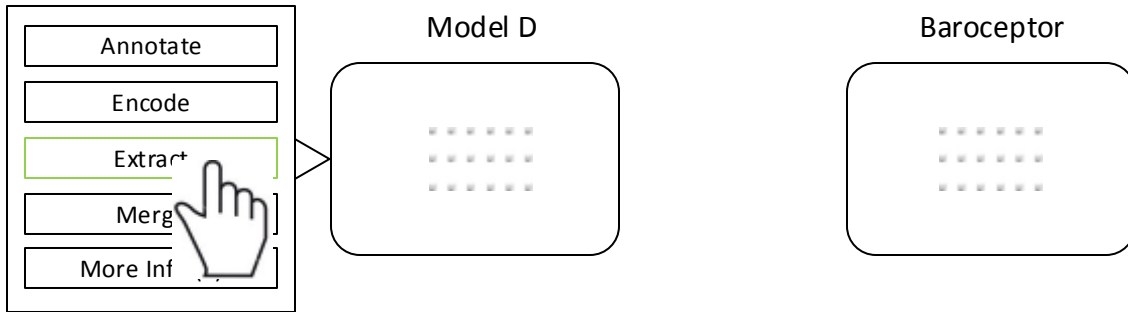
Baroreceptor



Canvas automatically reflows when models are added and deleted.



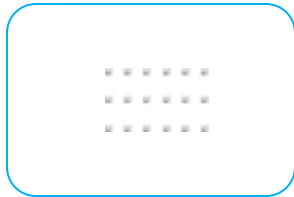
Clicking on a model opens it's command flyout



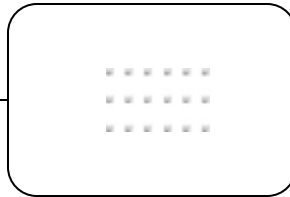
Clicking a command opens its corresponding tool



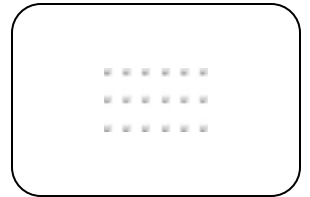
Model D Extracted



Model D



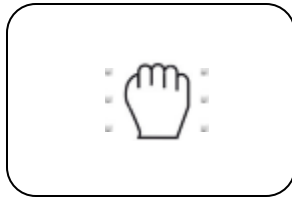
Baroreceptor



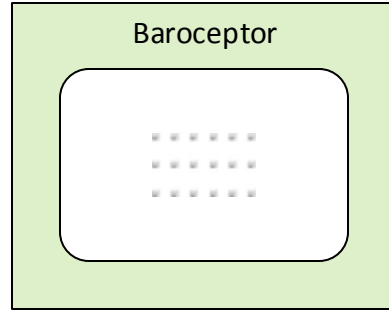
Extracted models are highlighted in blue



Model D



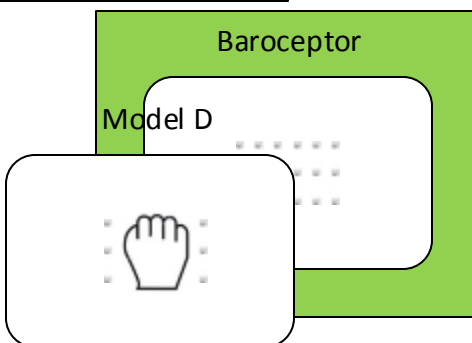
Baroreceptor



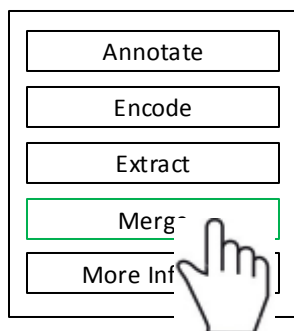
Models are draggable



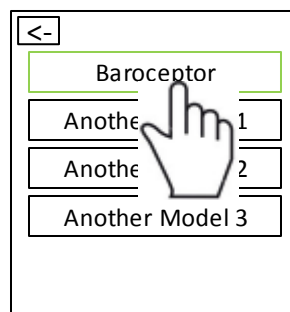
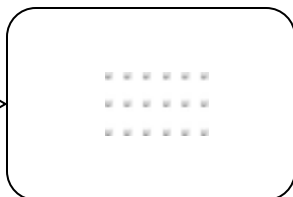
Models are merged when one is released on top of another



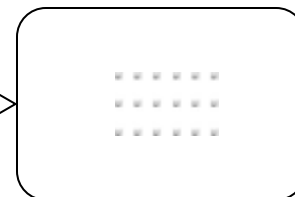
You can also merge models using the Merge command.



Model D



Model D



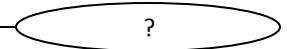
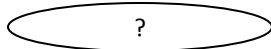


"Model D Baroreceptor"

Property Maopings

Model D

Baroreceptor



Search...

Name ▼	Code Word ▼	Equation ▼
Property A	A	$mx + b$
Property B	B	$mx + b$
Property C	C	$mx + b$
Property D	D	$mx + b$
Property E	E	$mx + b$
Property F	F	$mx + b$
Property G	G	$mx + b$
Property H	H	$mx + b$
Property I	I	$mx + b$
Property J	J	$mx + b$

Choose a property in Model D to map to a property in Baroreceptor



“Model D Baroreceptor”

Property Maopings

Model D

Baroreceptor



Property A

?

Search...

Name ▼	Code Word	Equation ▼
Aortic blood pressure	Paop	User defined input
Baroreceptor firing rate	Nbr	$t = \text{Nbr_t}$
Baroreceptor gain	K	1
Contractility control offset	amin	-2
Heart Rate	HR	$h1 + h2 * F_hrs - h3 * F_hrs^2 \dots$
Simulation end time	t.max	12
Simulation start time	t.min	0
Sympathetic discharge rate at CNS for ...	N_con	$\text{If}(t > L_con) (N_con * (-1) \dots$
Time domain for simulation	t	User defined input
Volume of systemic arteries	Vsa	225

Choose a property in Baroreceptor to map to “Property A” in Model D.

Heart Rate seems like the right choice.



“Model D Baroreceptor”

Property Maopings

Model D

Baroreceptor



Property A

$A = mx + b$

Choose Representation ... ▼

Heart Rate

HR: $h1 + h2 * F_hrs - h3 * F_hrs^2 +$
 $h4 * F_hrv^2 + h6 * F_hrv * F_hrs$



Add New

Done

Choose a property value to use in the merged model



“Model D Baroreceptor”

Property Maopings

Model D

Baroreceptor



Property A

$A = mx + b$

Choose Representation ... ▲

$mx + b$

$HR = h1 + h2 * ..$



Heart Rate

HR: $h1 + h2 * F_hrs - h3 * F_hrs^2 +$
 $h4 * F_hrv^2 + h6 * F_hrv * F_hrs$

Add New

Done



“Model D Baroreceptor”

Property Maopings

Model D

Baroreceptor



Property A

$A = mx + b$

$mx + b$



Heart Rate

HR: $h1 + h2 * F_hrs - h3 * F_hrs^2 +$
 $h4 * F_hrv^2 + h6 * F_hrv * F_hrs$

Add New

Done



Add a new property mapping



“Model D Baroreceptor”

Property Maopings

Model D

Baroreceptor



Property A

$A = mx + b$

$mx+b$

Heart Rate

Heart Rate: $h1 + h2 * F_hrs - h3 * F_hrs^2 + h4 * F_hrv^2 + h6 * F_hrv * F_hrs$



Property C

$C = mx + b$

$t = Nbr_t$

Baroreceptor Firin ...

$Nbr: t = Nbr_t$



Property E

$E = mx + b$

1

Baroreceptor Gain

$K: 1$



Property F

$F = mx + b$

Choose Representation ...

Aortic blood pre ...

Paop: User defined input

Add New

Done



Select Done to return to workflow

(Note that there exists a property mapping without a value)



“Model D Baroreceptor”

Property Maopings

Model D

Baroreceptor



Property A

$A = mx + b$

$mx+b$



Heart Rate

Heart Rate: $h1 + h2 * F_hrs - h3 * F_hrs^2 + h4 * F_hrv^2 + h6 * F_hrv * F_hrs$



Property C

$C = mx + b$

$t = Nbr_t$



Baroreceptor Firin ...

$Nbr: t = Nbr_t$



Property E

$E = mx + b$

1



Baroreceptor Gain

$K: 1$



Property F

$F = mx + b$

Choose Representation ...



Aortic blood pre ...

Paop: User defined input

! Resolve Property Mappings

Add New

Done



If unresolved property mappings exist show validation errors



“Model D Baroreceptor”

Property Maopings

Model D

Baroreceptor



Property A

$A = mx + b$

$mx+b$



Heart Rate

Heart Rate: $h1 + h2 * F_hrs - h3 * F_hrs^2 + h4 * F_hrv^2 + h6 * F_hrv * F_hrs$



Property C

$C = mx + b$

$t = Nbr_t$



Baroreceptor Firin ...

$Nbr: t = Nbr_t$



Property E

$E = mx + b$

1



Baroreceptor Gain

$K: 1$



Property F

$F = mx + b$

Choose Representation ...



Aortic blood pre ...

Paop: User defined input



! Resolve Property Mappings

Add New

Done

Remove the unresolved property mapping



"Model D Baroreceptor"

Property Maopings

Model D

Baroreceptor



Property A

$A = mx + b$

$mx+b$



Heart Rate

Heart Rate: $h1 + h2 * F_hrs - h3 * F_hrs^2 + h4 * F_hrv^2 + h6 * F_hrv * F_hrs$



Property C

$C = mx + b$

$t = Nbr_t$



Baroreceptor Firin ...

Nbr: $t = Nbr_t$



Property E

$E = mx + b$

1



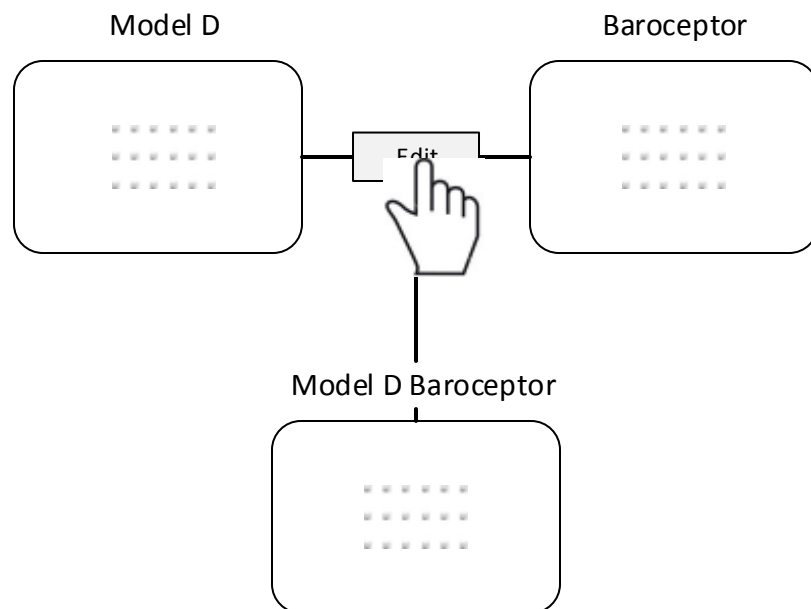
Baroreceptor Gain

K: 1

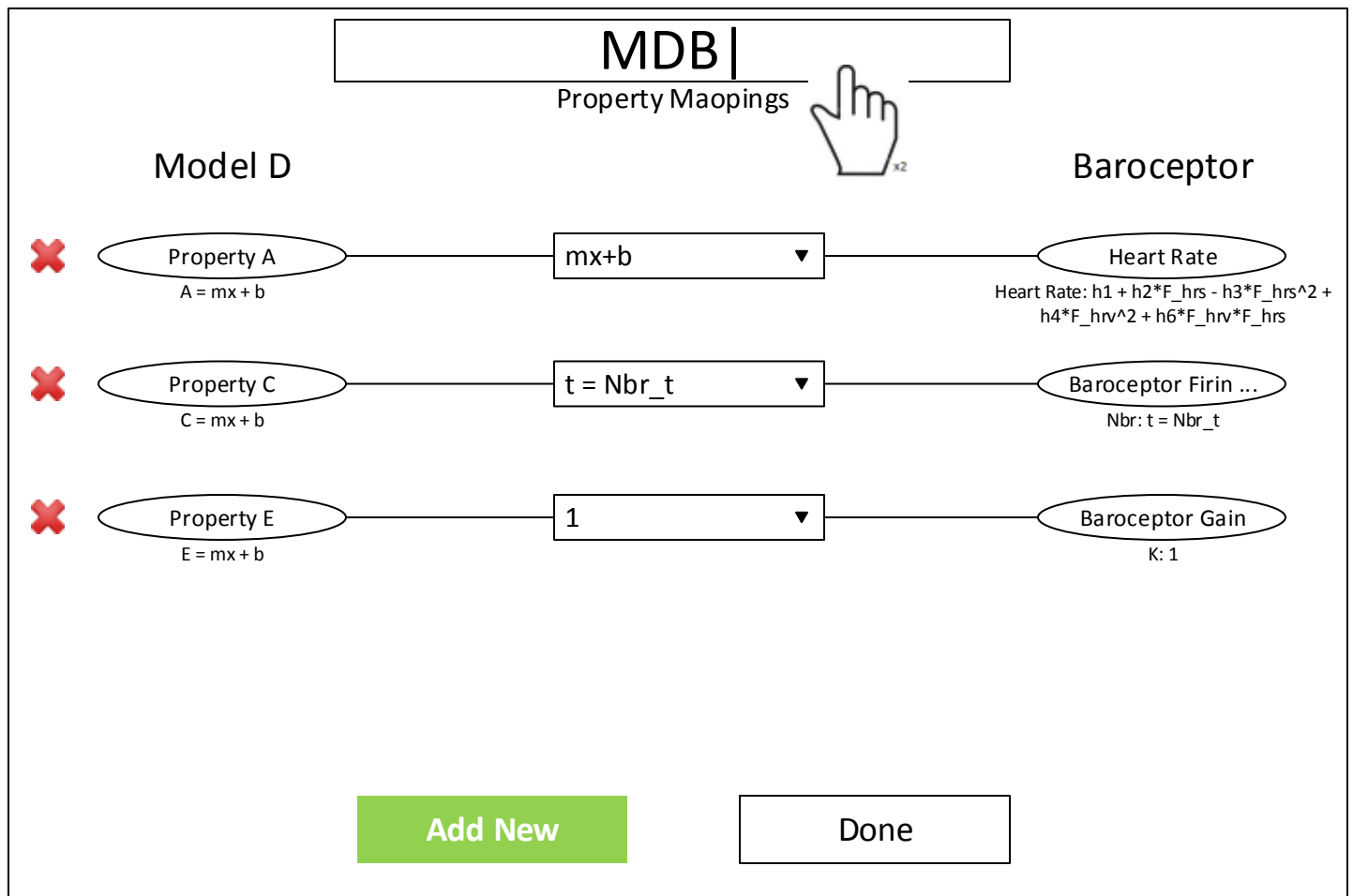
Add New

Done

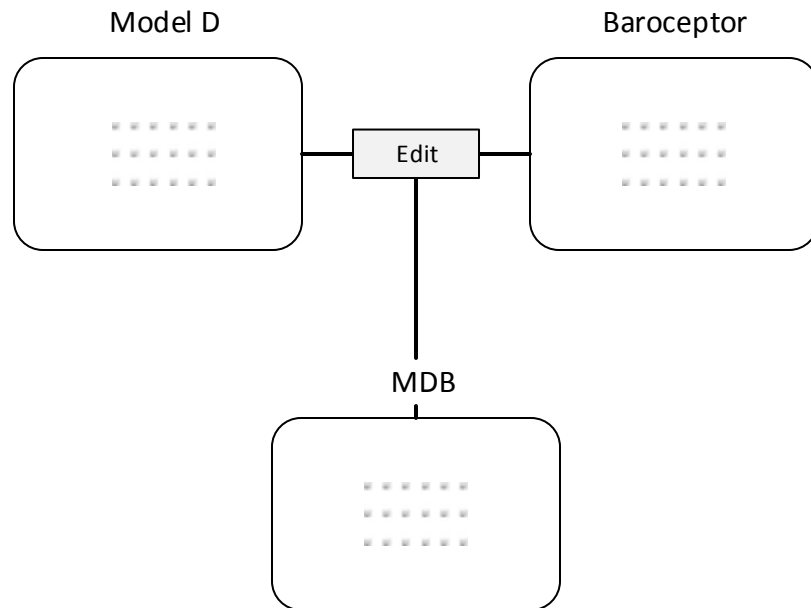




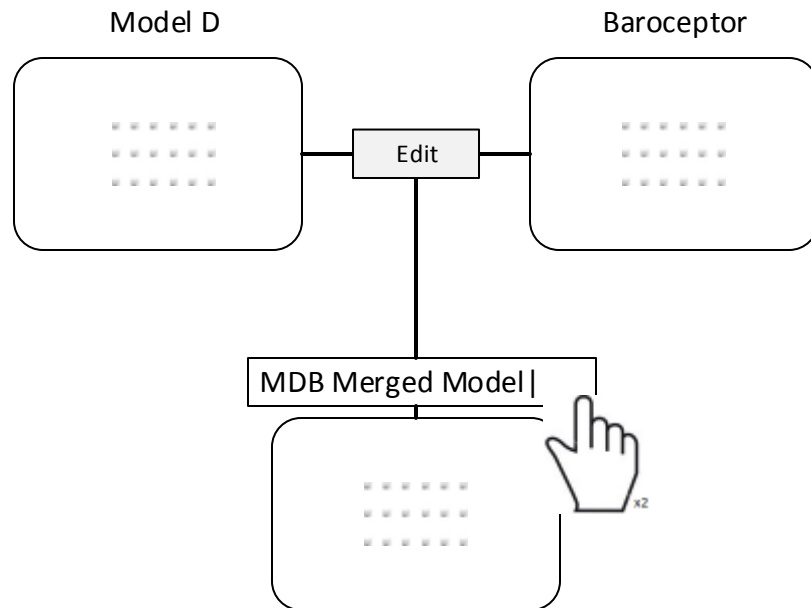
Click edit to update the merged model



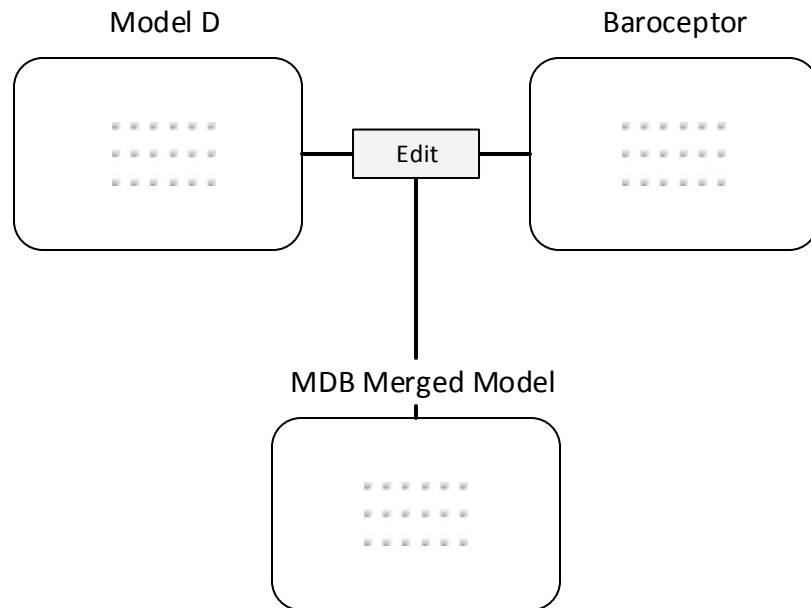
Double click the model's name to change it



A valid merged model with an updated name



Rename a model by double clicking it's name.



Viola, a merged model with valid property mappings and an update name.