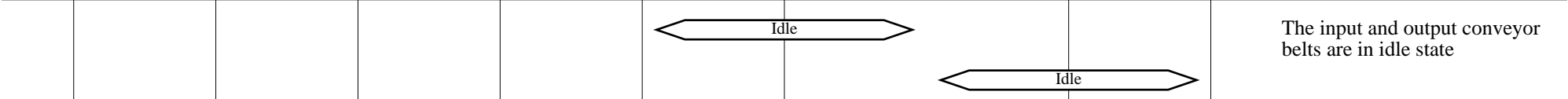


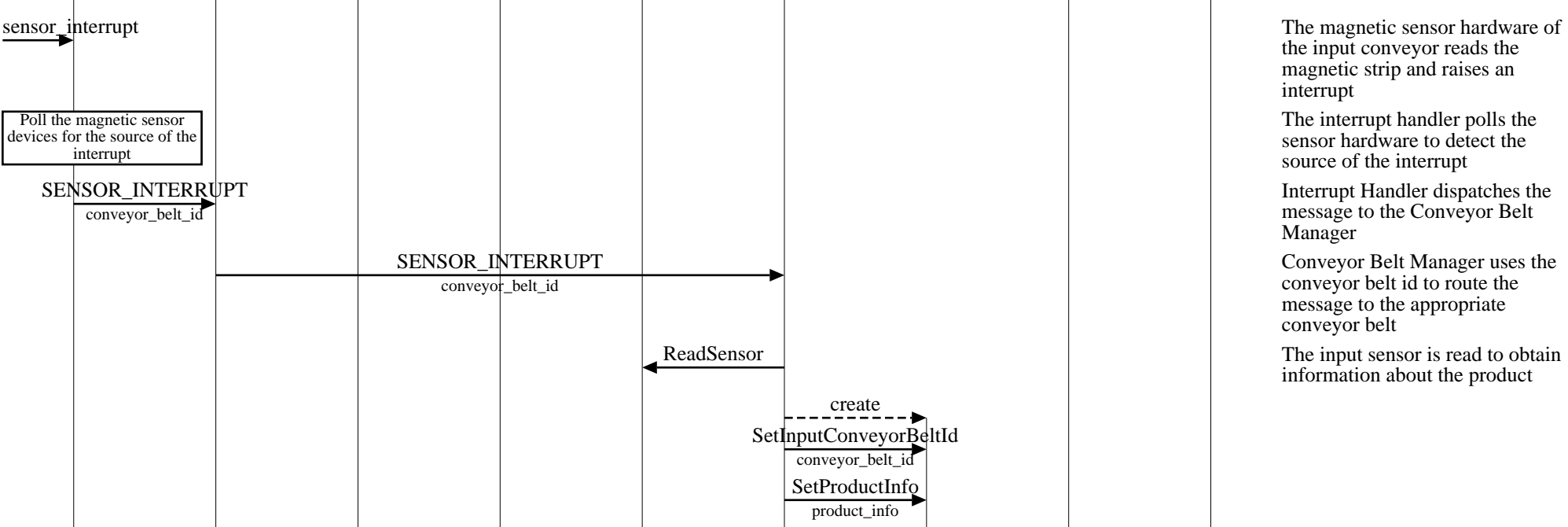
Package Routing in the Helix Router (Package Routed Successfully)									
helix router									EventHelix.com/EventStudio 2.0
core			input			output			05-Jul-03 11:23 (Page 1)
interrupt handler	conveyor belt manager	operator	routing table	input magnetic sensor	input conveyor belt	package	output conveyor belt	output magnetic sensor	

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The input and output conveyor belts are in idle state

A new package has been received at an input conveyor belt.



The magnetic sensor hardware of the input conveyor reads the magnetic strip and raises an interrupt

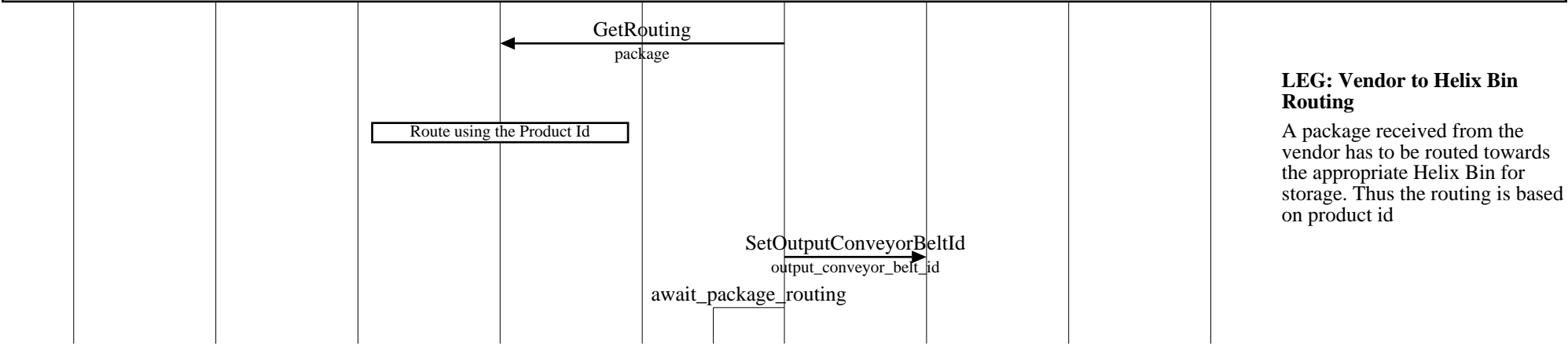
The interrupt handler polls the sensor hardware to detect the source of the interrupt

Interrupt Handler dispatches the message to the Conveyor Belt Manager

Conveyor Belt Manager uses the conveyor belt id to route the message to the appropriate conveyor belt

The input sensor is read to obtain information about the product

Routing the received package



LEG: Vendor to Helix Bin Routing

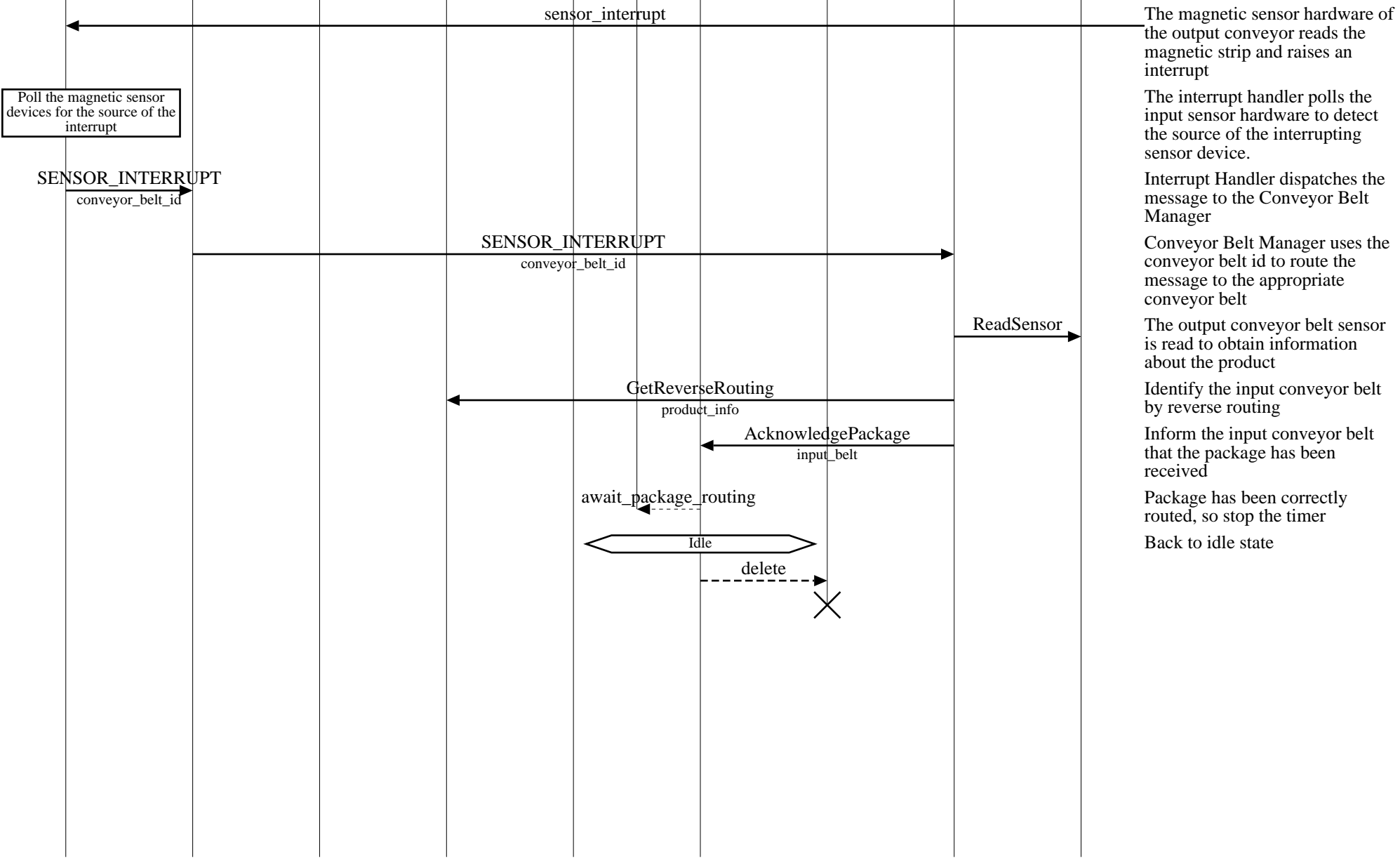
A package received from the vendor has to be routed towards the appropriate Helix Bin for storage. Thus the routing is based on product id

Package Routing in the Helix Router (Package Routed Successfully)									
helix router									EventHelix.com/EventStudio 2.0
core			input			output			05-Jul-03 11:23 (Page 2)
interrupt handler	conveyor belt manager	operator	routing table	input magnetic sensor	input conveyor belt	package	output conveyor belt	output magnetic sensor	

◀ Awaiting Package Routing ▶

LEG: Routing Successful

Package reaches the destination conveyor belt



The magnetic sensor hardware of the output conveyor reads the magnetic strip and raises an interrupt

The interrupt handler polls the input sensor hardware to detect the source of the interrupting sensor device.

Interrupt Handler dispatches the message to the Conveyor Belt Manager

Conveyor Belt Manager uses the conveyor belt id to route the message to the appropriate conveyor belt

The output conveyor belt sensor is read to obtain information about the product

Identify the input conveyor belt by reverse routing

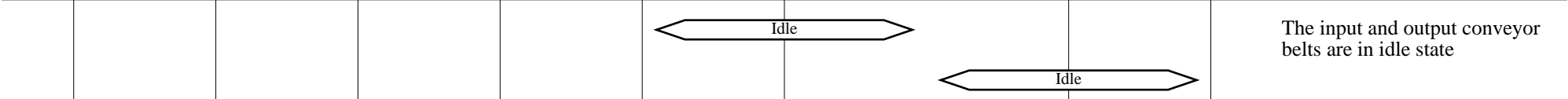
Inform the input conveyor belt that the package has been received

Package has been correctly routed, so stop the timer

Back to idle state

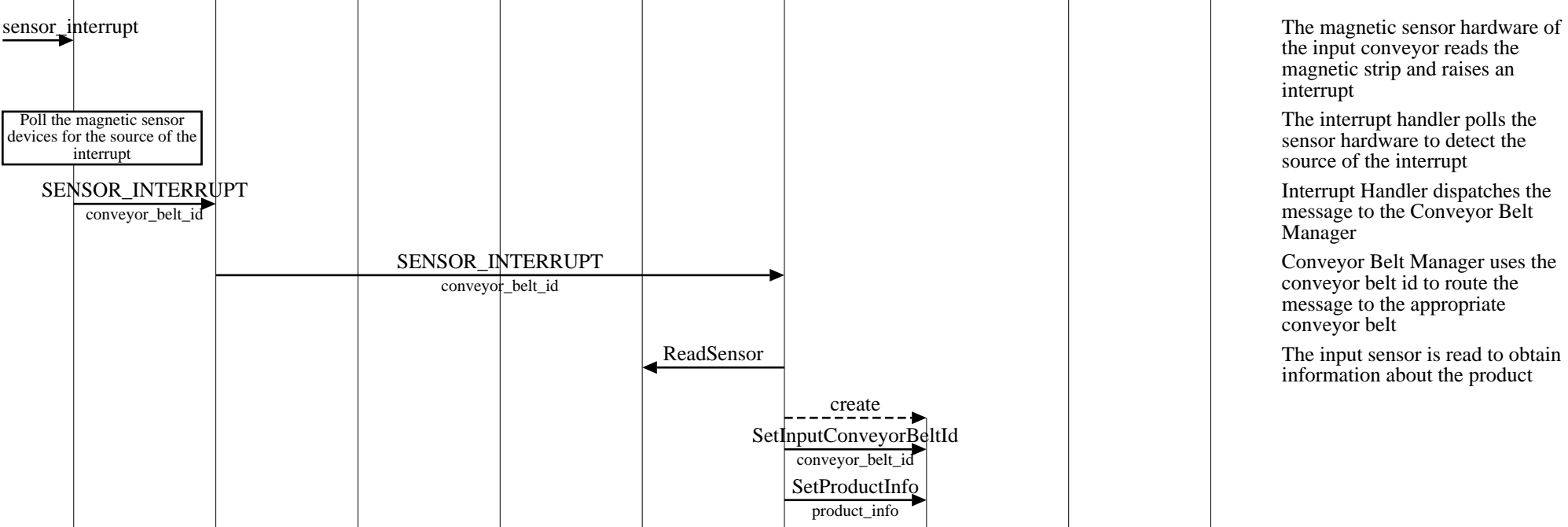
Package Routing in the Helix Router (Conveyor Belt Jammed)									
helix router									EventHelix.com/EventStudio 2.0
core				input			output		
interrupt handler	conveyor belt manager	operator	routing table	input magnetic sensor	input conveyor belt	package	output conveyor belt	output magnetic sensor	05-Jul-03 11:23 (Page 3)

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The input and output conveyor belts are in idle state

A new package has been received at an input conveyor belt.



The magnetic sensor hardware of the input conveyor reads the magnetic strip and raises an interrupt

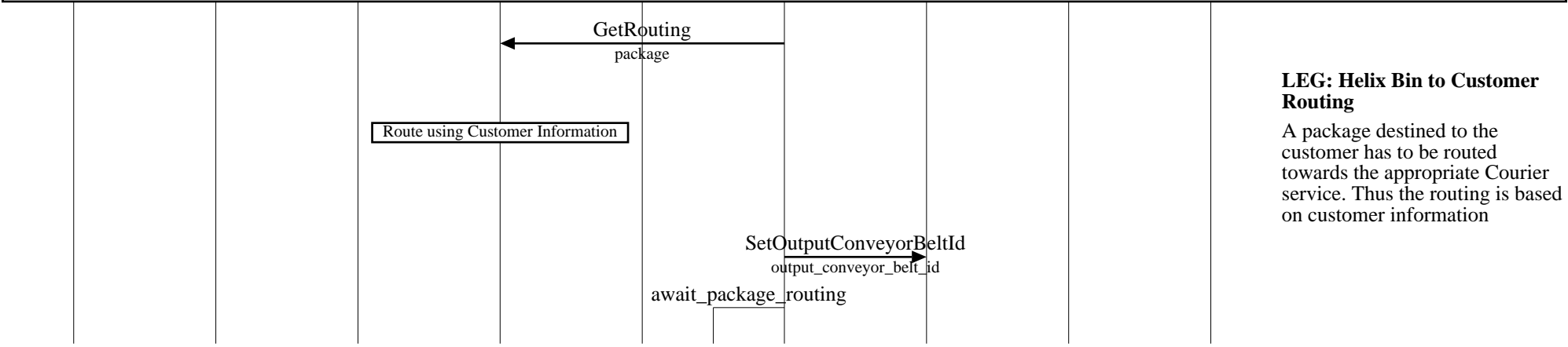
The interrupt handler polls the sensor hardware to detect the source of the interrupt

Interrupt Handler dispatches the message to the Conveyor Belt Manager

Conveyor Belt Manager uses the conveyor belt id to route the message to the appropriate conveyor belt

The input sensor is read to obtain information about the product

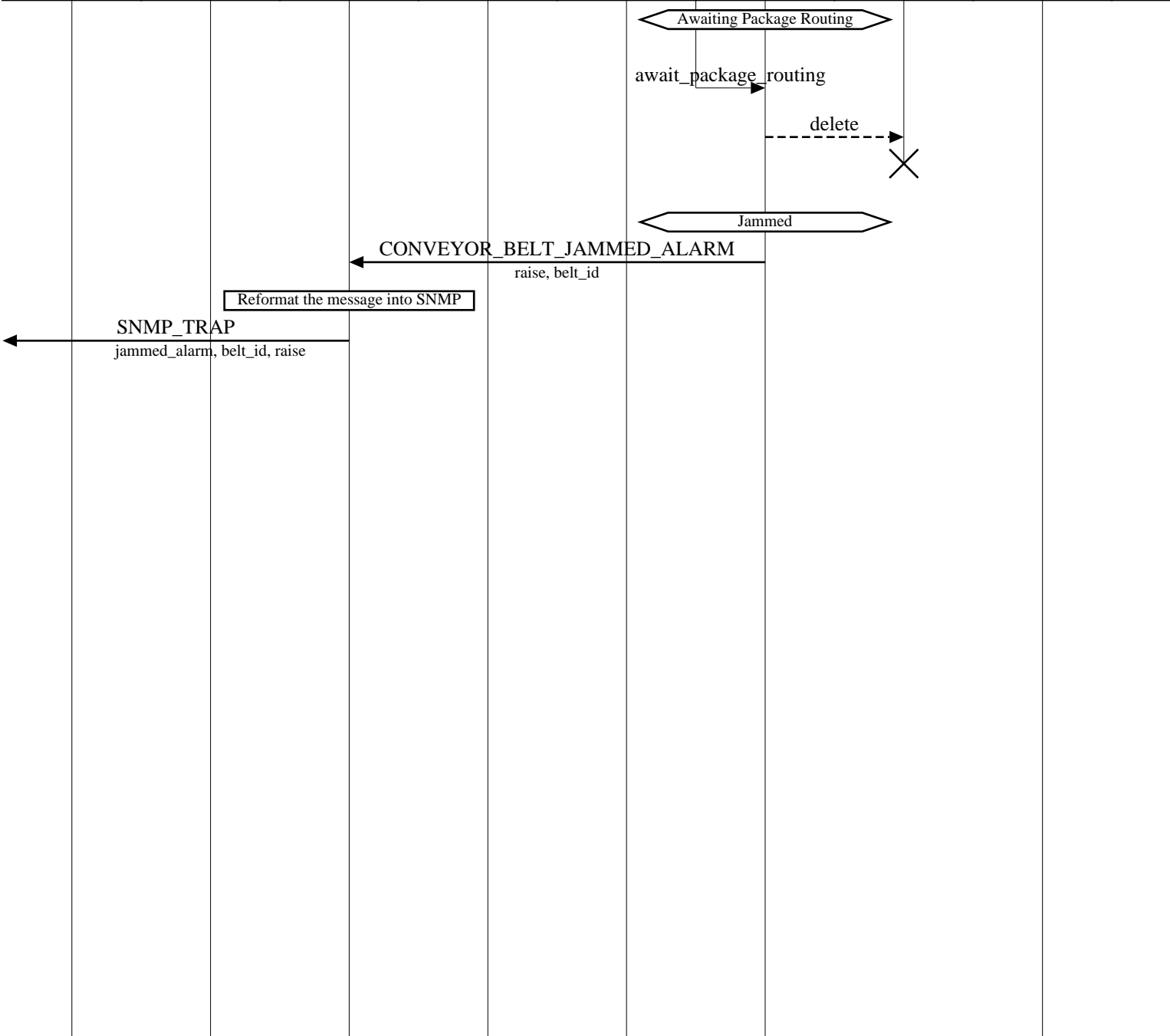
Routing the received package



LEG: Helix Bin to Customer Routing

A package destined to the customer has to be routed towards the appropriate Courier service. Thus the routing is based on customer information

Package Routing in the Helix Router (Conveyor Belt Jammed)									
helix router									EventHelix.com/EventStudio 2.0
core				input			output		05-Jul-03 11:23 (Page 4)
interrupt handler	conveyor belt manager	operator	routing table	input magnetic sensor	input conveyor belt	package	output conveyor belt	output magnetic sensor	



LEG: Conveyor Belt Jammed
 Input conveyor belt times out for routing completion

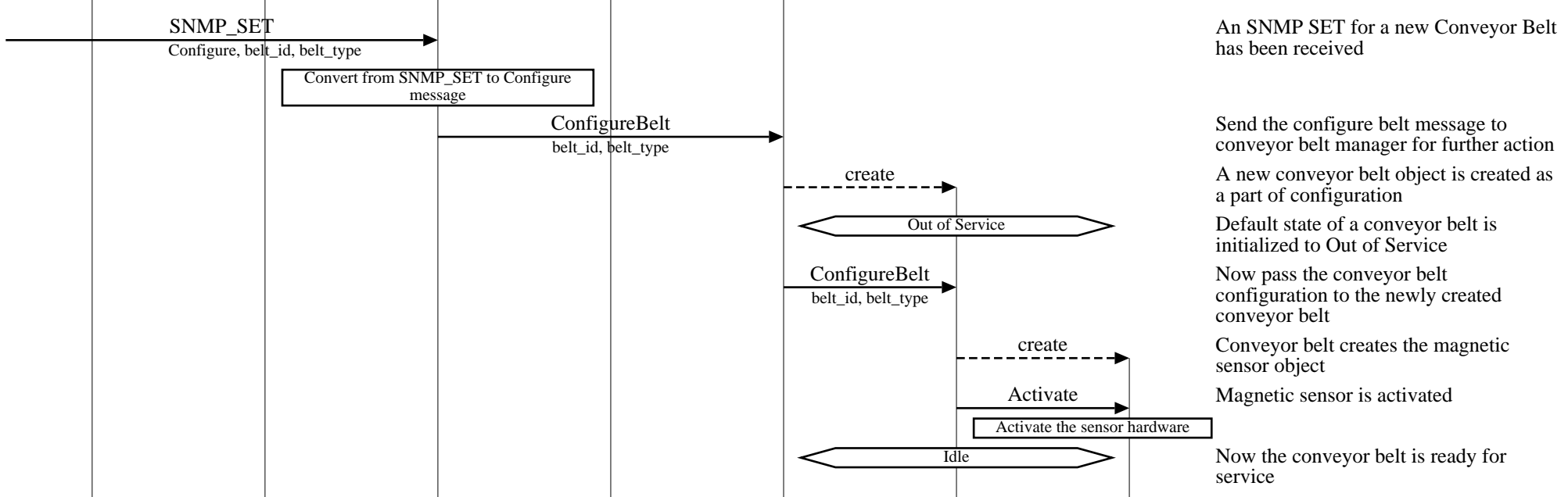
Routing has failed, so delete the package object
 Moving to Jammed state
 Inform operator about the JAM

The alarms is converted into an SNMP trap and sent out

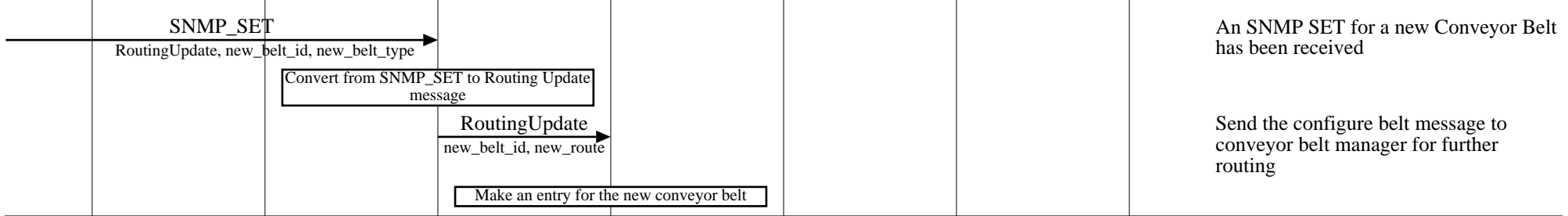
Conveyor Belt Management (Creating and Deleting a Conveyor Belt)						
helix router						EventHelix.com/EventStudio 2.0
core			belt			
interrupt handler	router	operator	routing table	conveyor belt manager	conveyor belt	magnetic sensor
05-Jul-03 11:23 (Page 5)						

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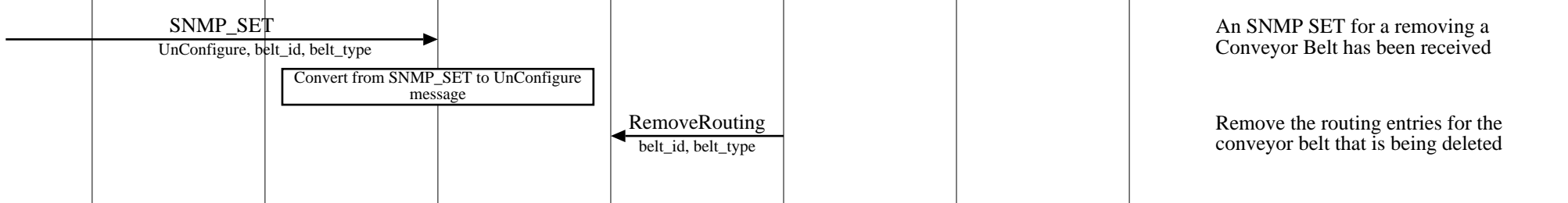
Creating a Conveyor Belt



Routing Table Update for the New Conveyor Belt



Deleting a Conveyor Belt



Conveyor Belt Management (Creating and Deleting a Conveyor Belt)

helix router

EventHelix.com/EventStudio 2.0

core

belt

interrupt handler

router

operator

routing table

conveyor belt manager

conveyor belt

magnetic sensor

05-Jul-03 11:23 (Page 6)

Remove entry for the deleted conveyor belt

UnConfigureBelt

belt_id, belt_type

Send the configure belt message to conveyor belt manager for further action

UnConfigureBelt

belt_id, belt_type

Magnetic sensor is activated

Deactivate

Deactivate the sensor hardware

delete

Conveyor belt deletes the magnetic sensor object

delete

Now remove the conveyor belt object