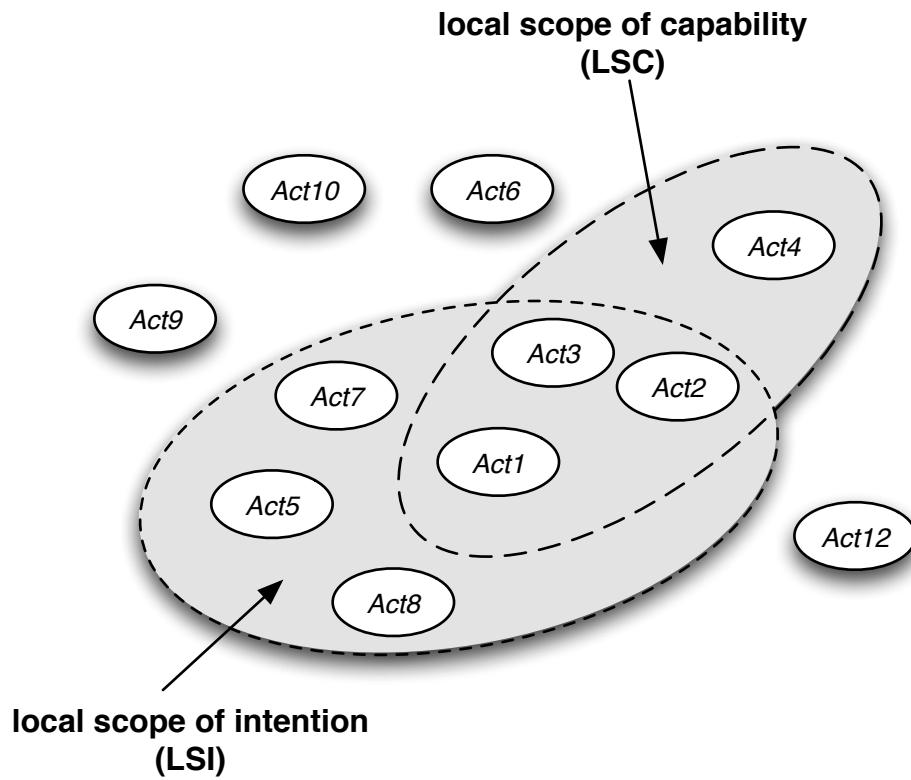
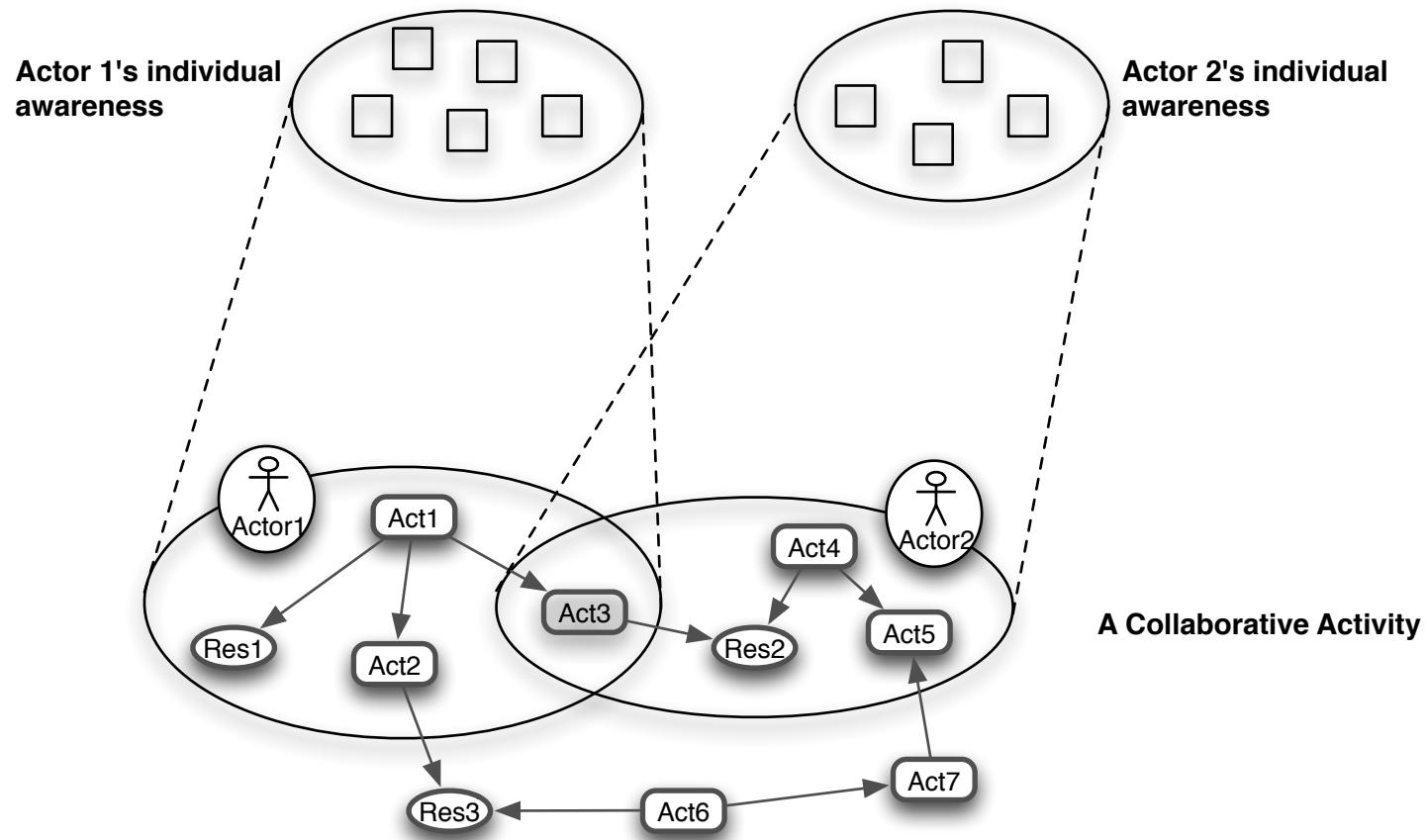
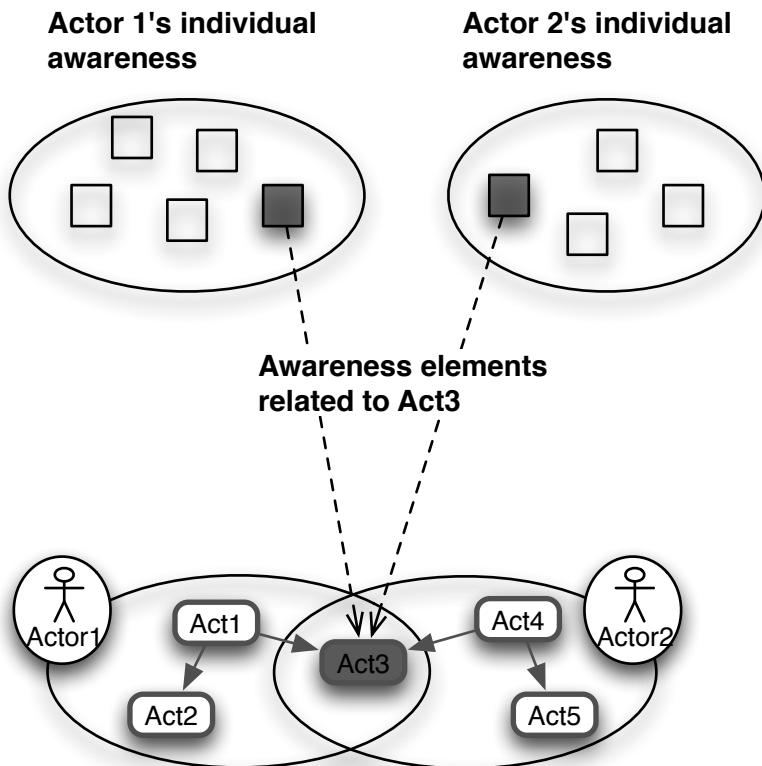


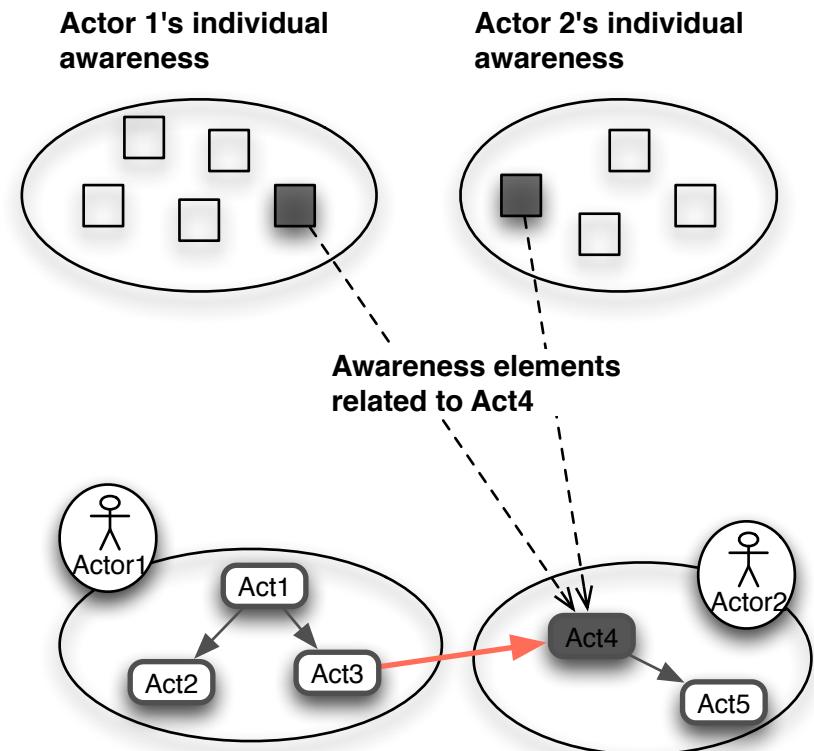
 action
 resource
 actor
 local scope of work
 dependency



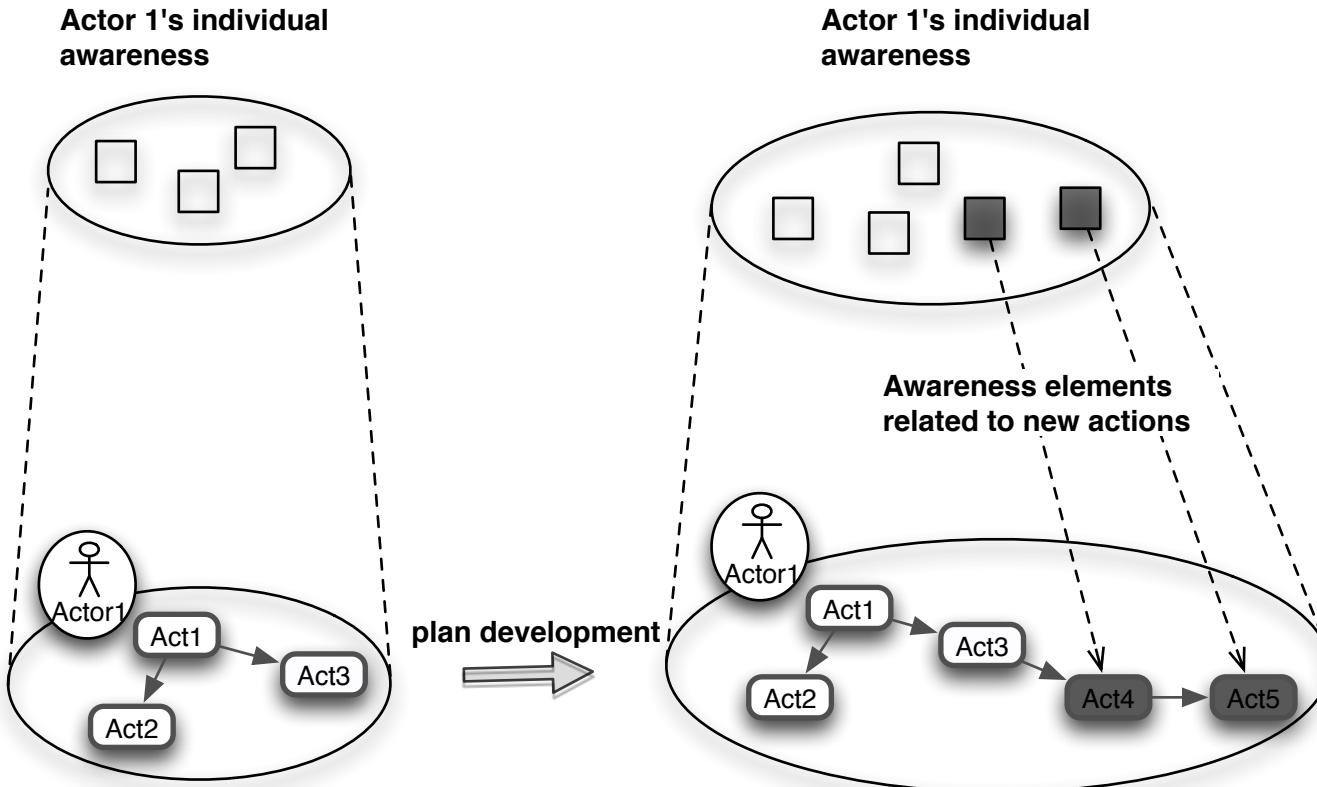


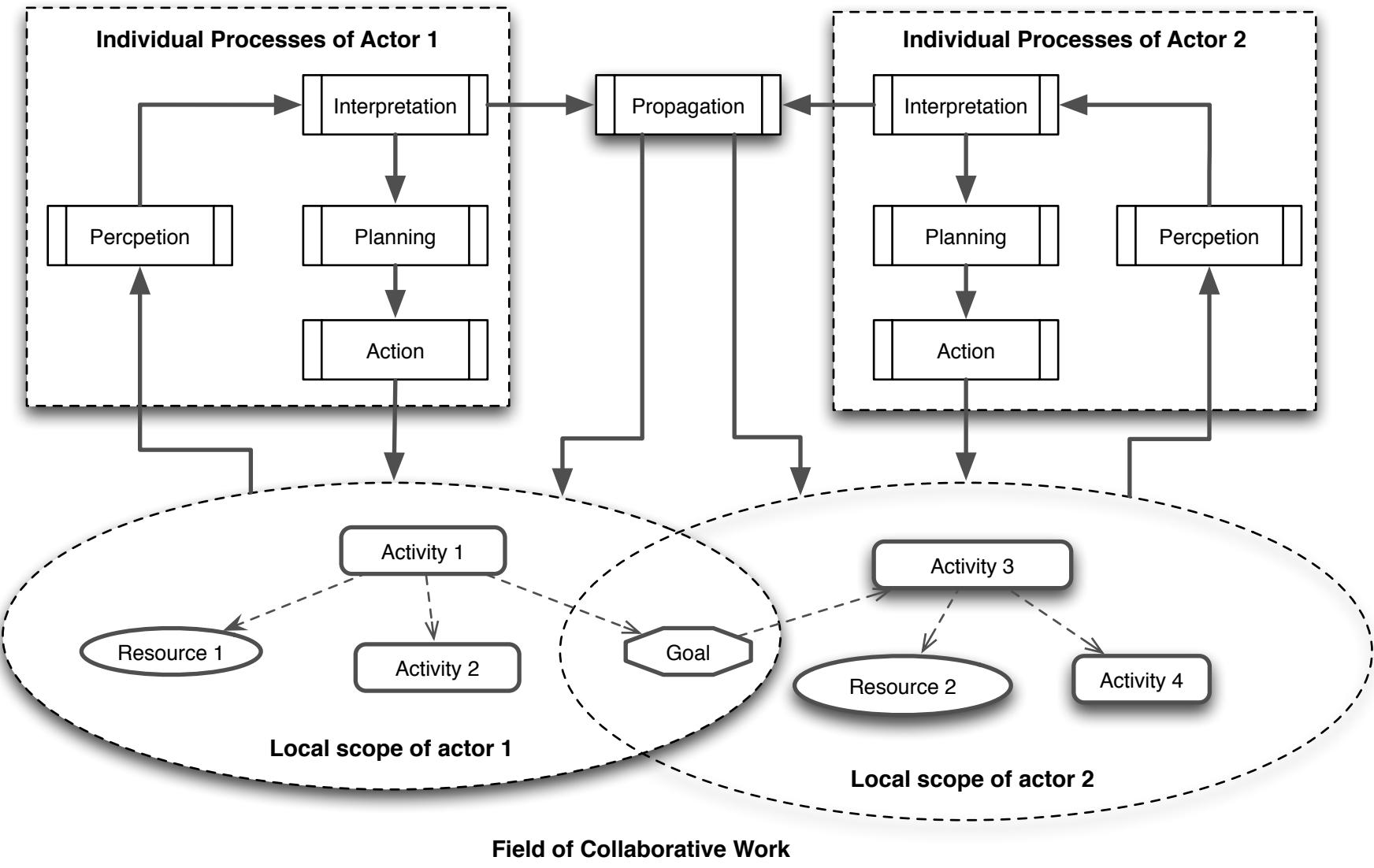


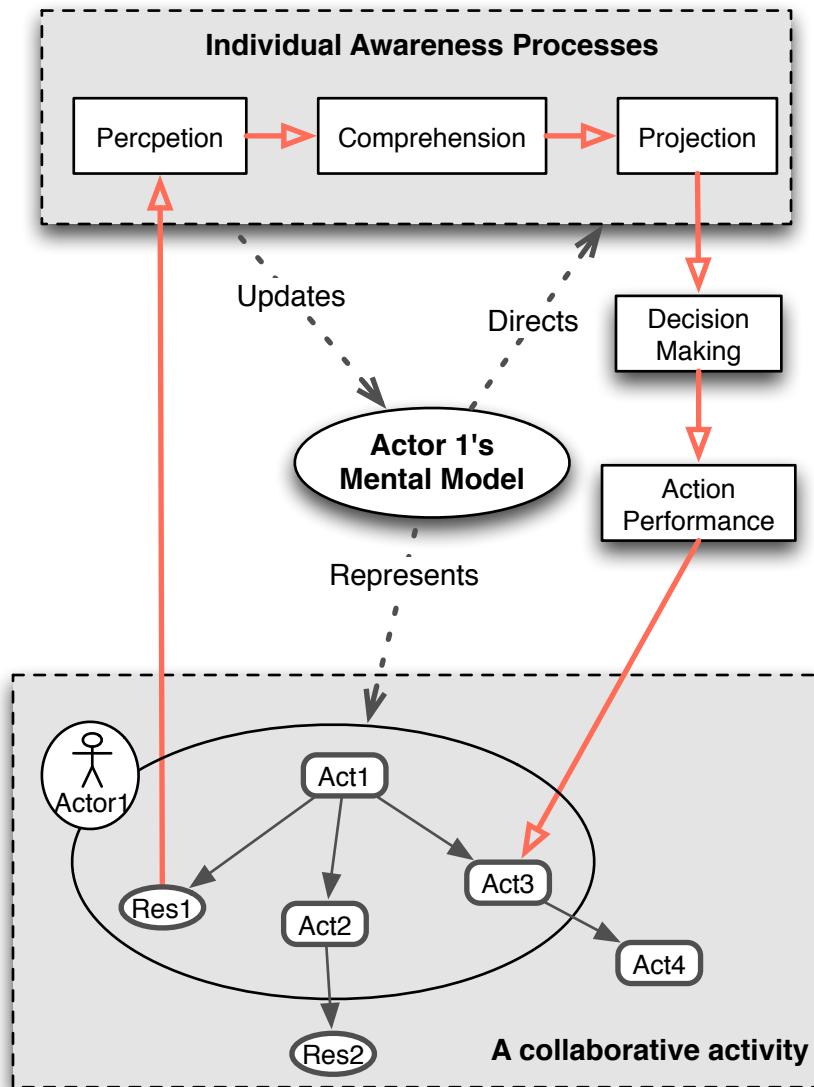
(1) Overlaps between local scopes

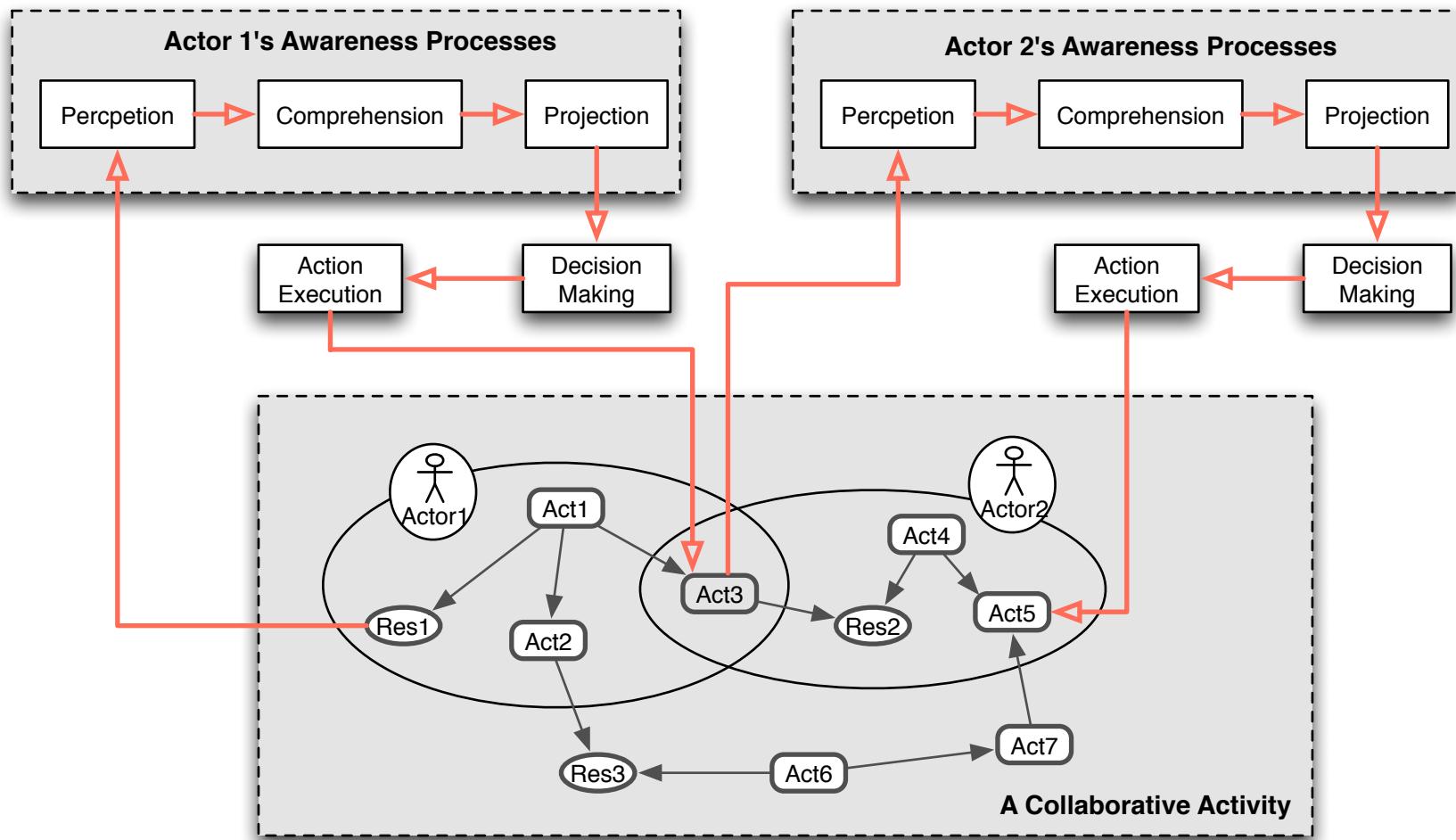


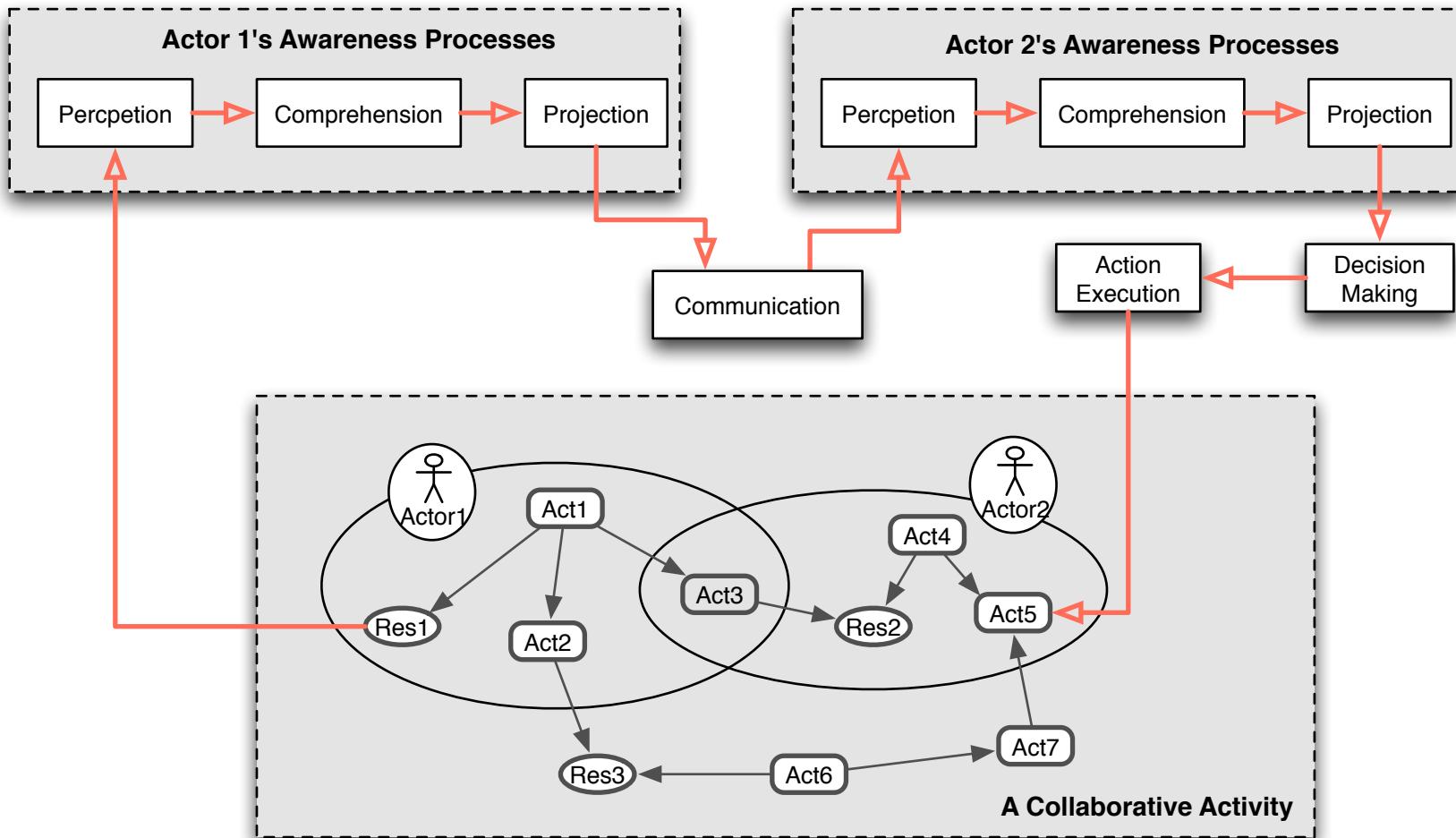
(2) Dependencies across local scopes

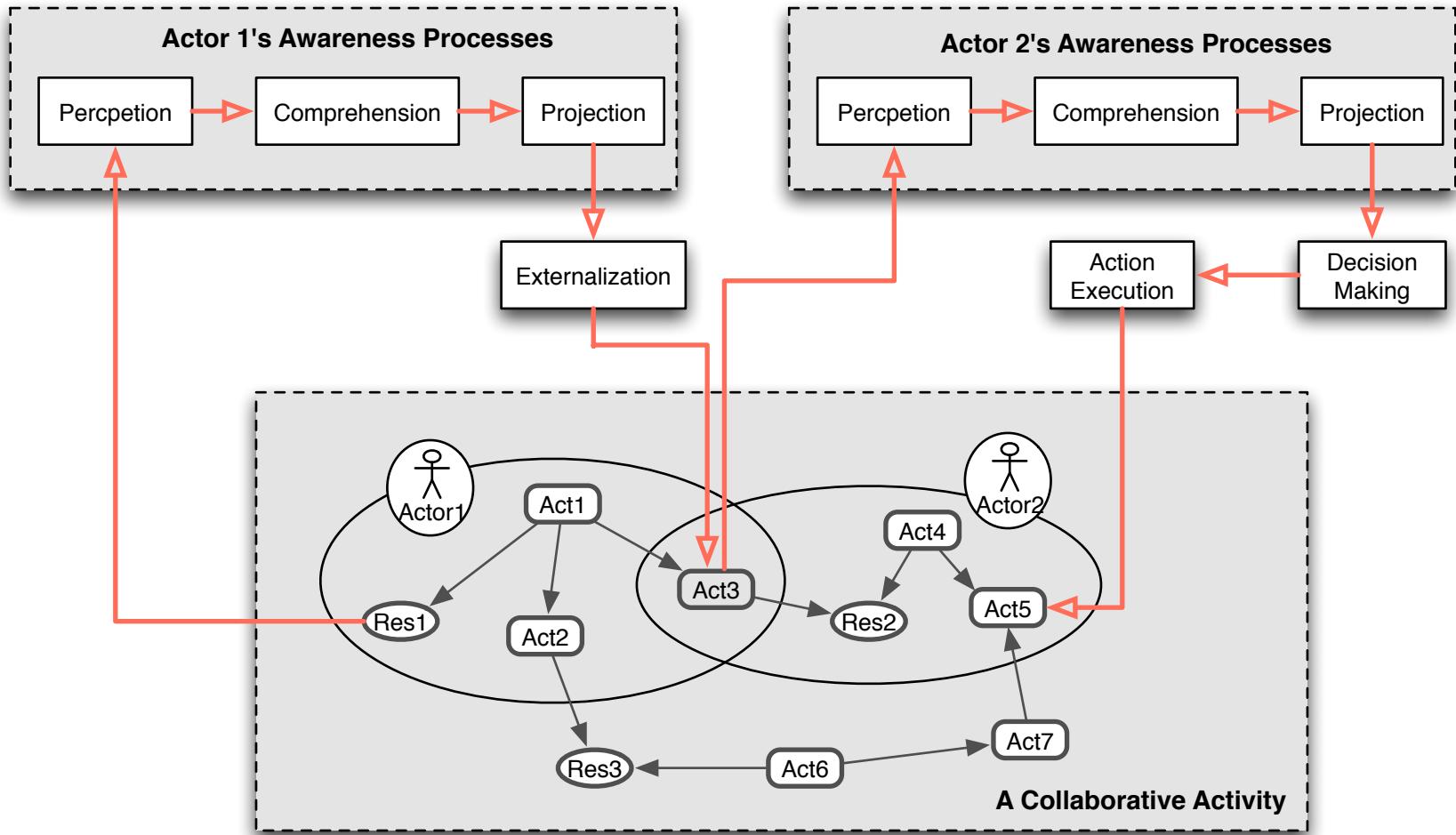


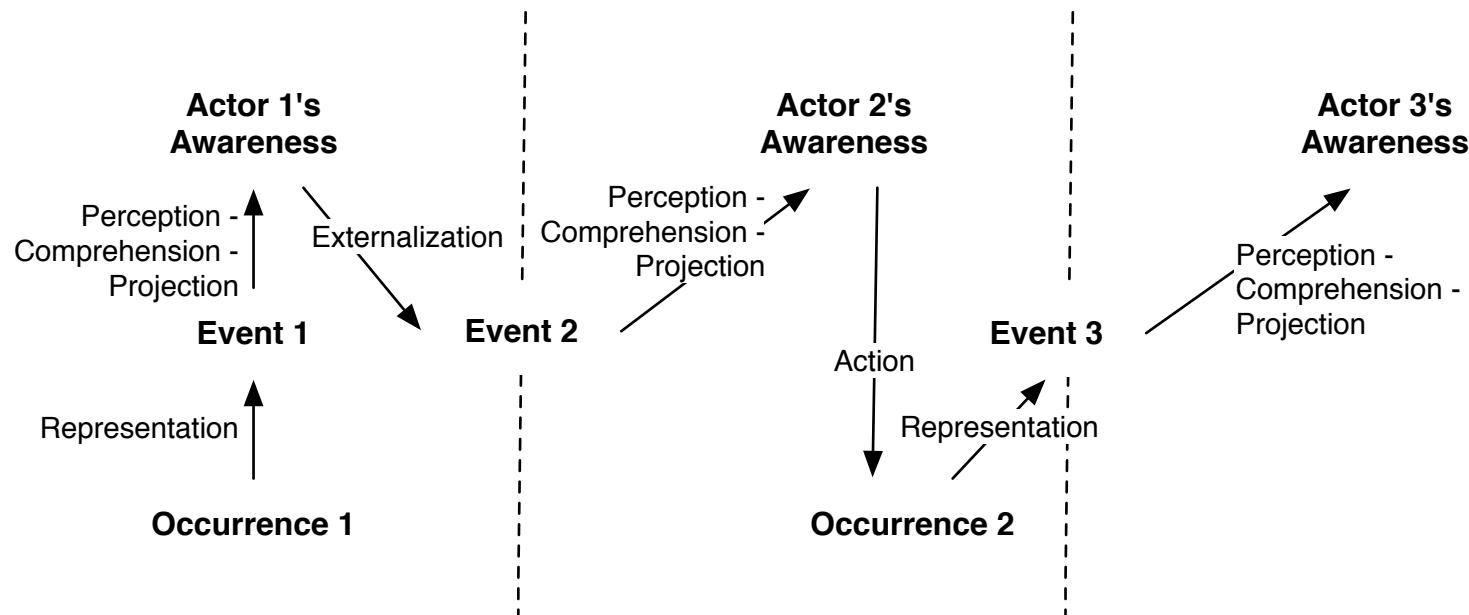
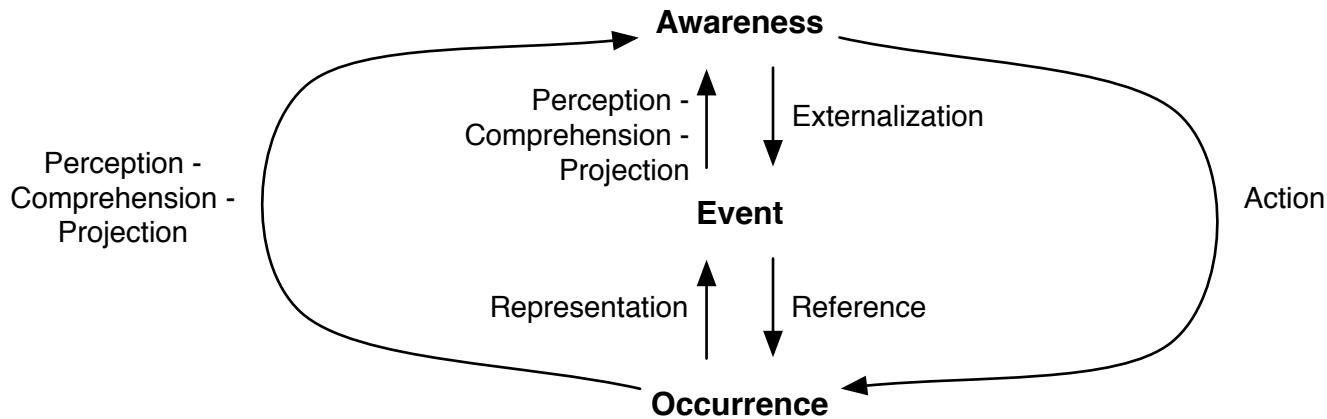


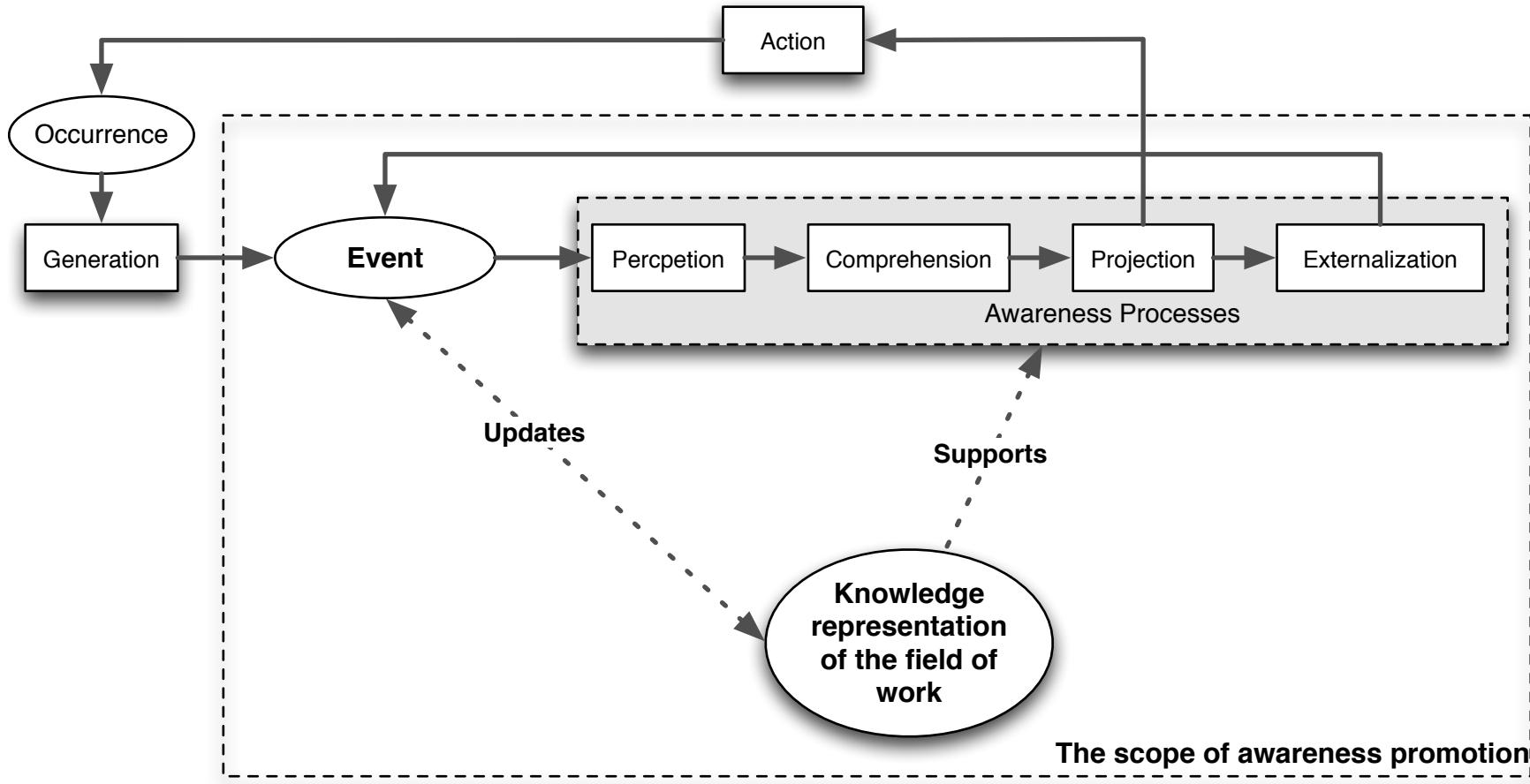


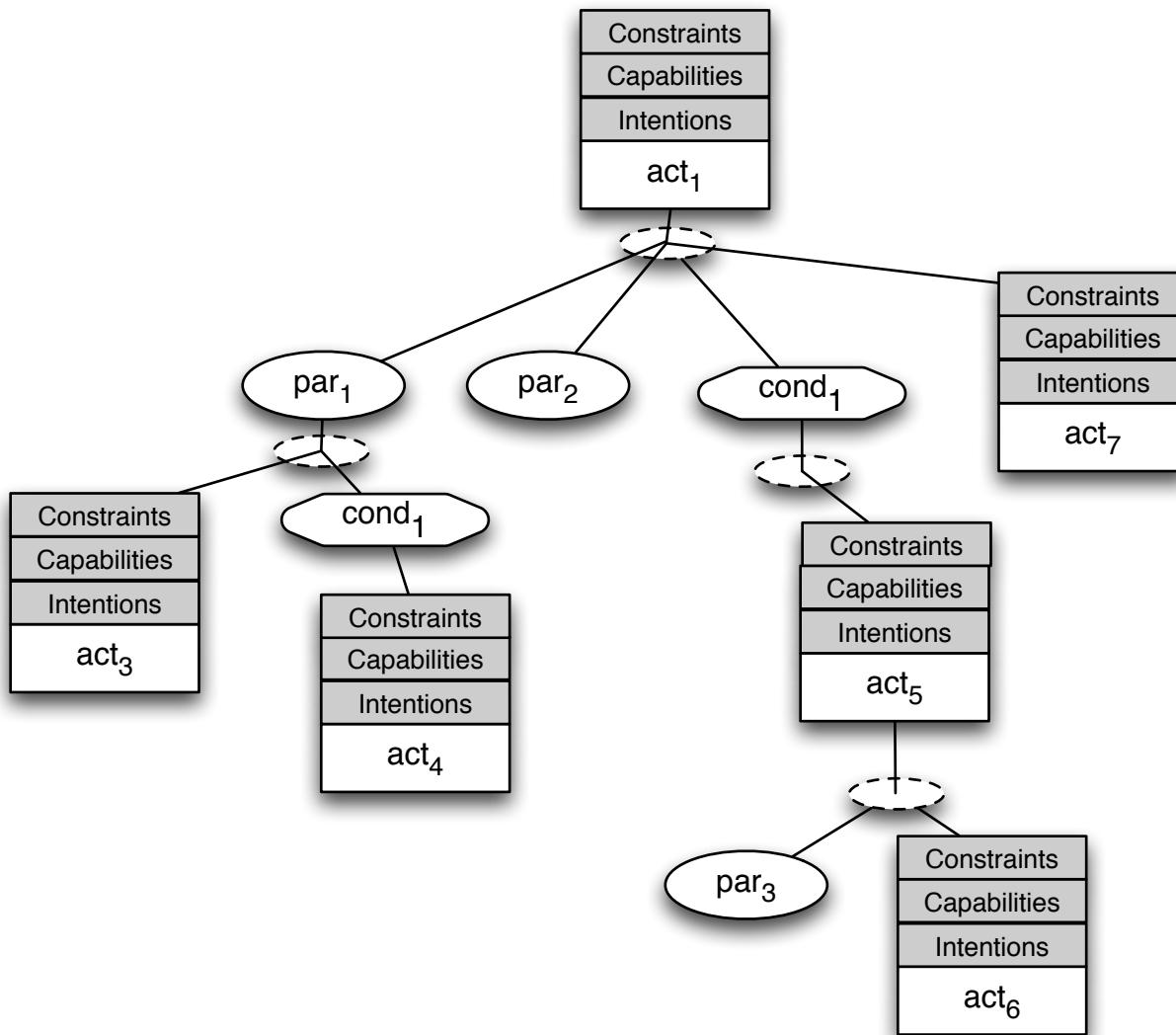


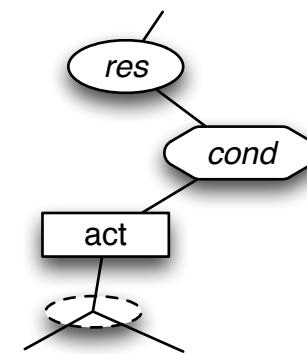
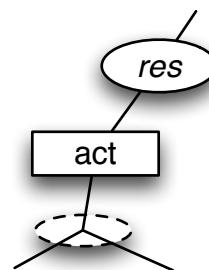
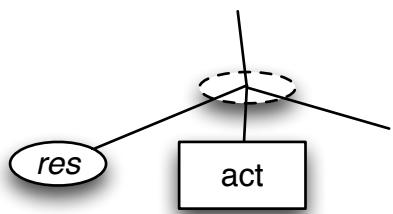
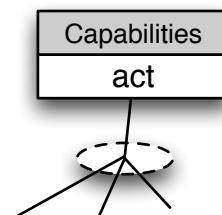
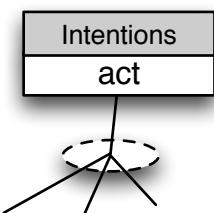
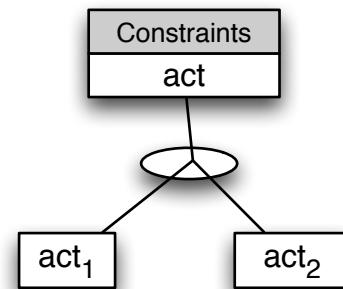
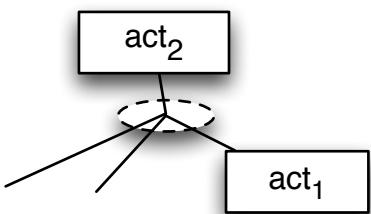


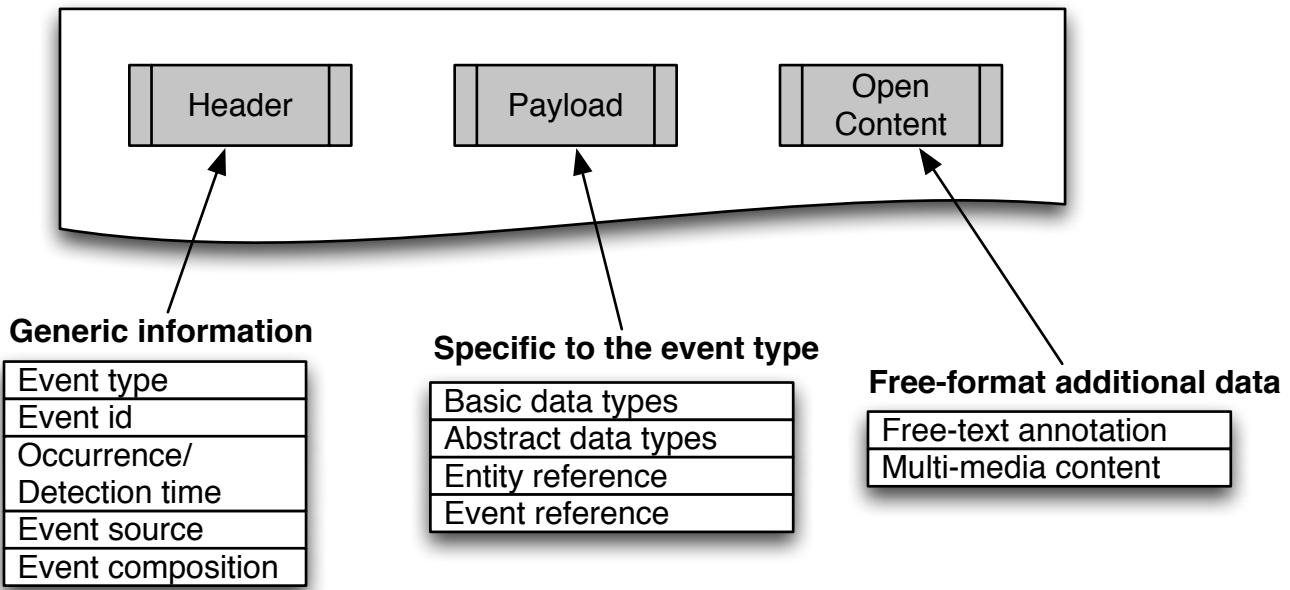


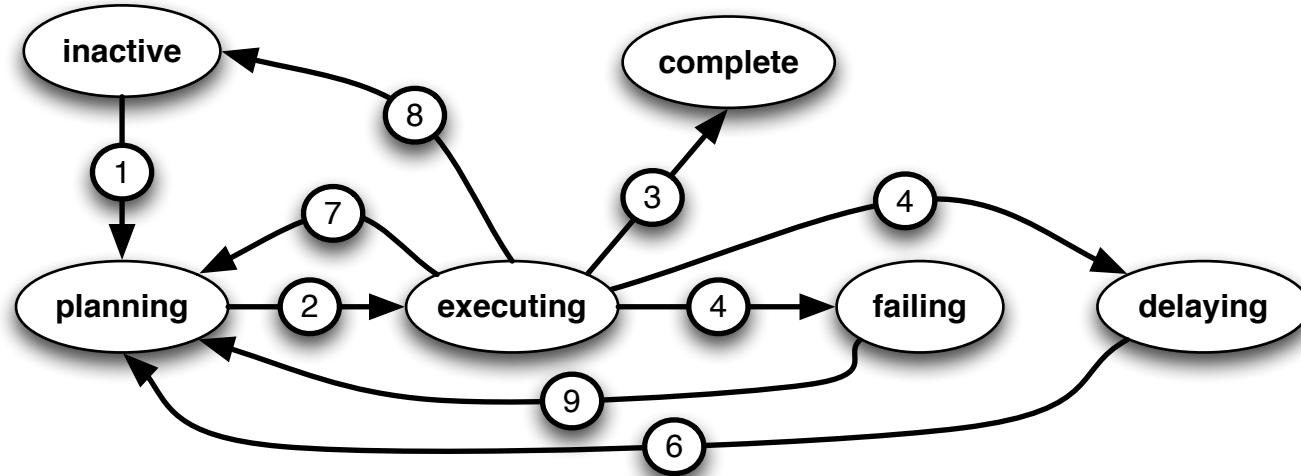


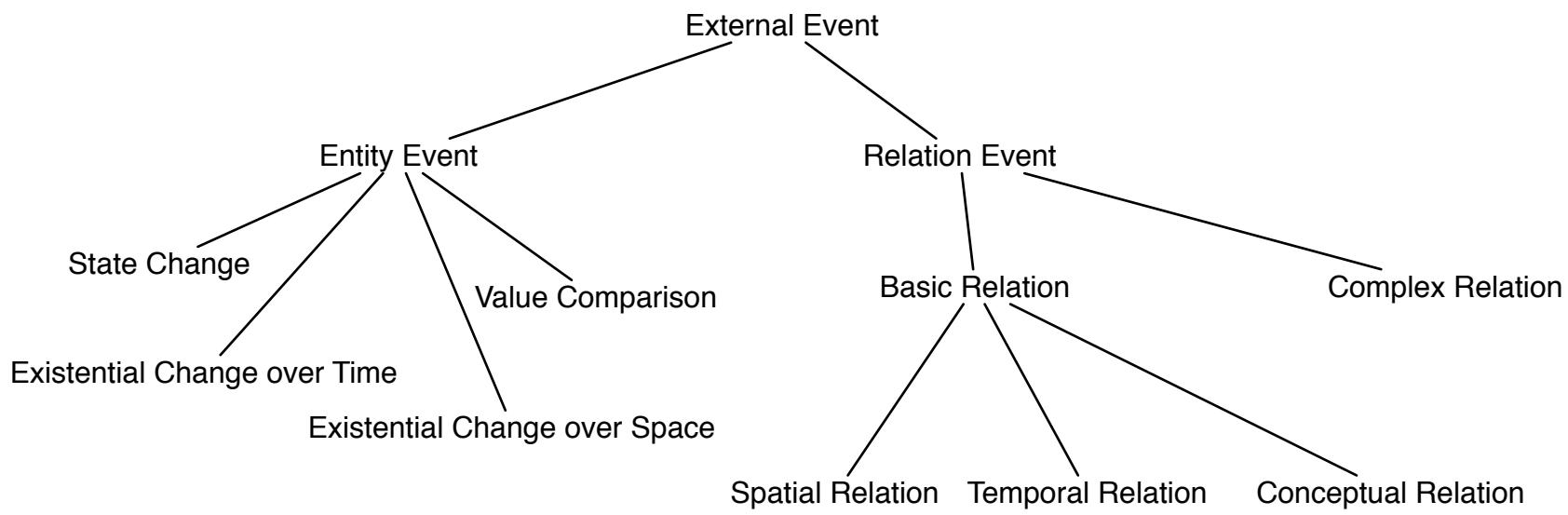


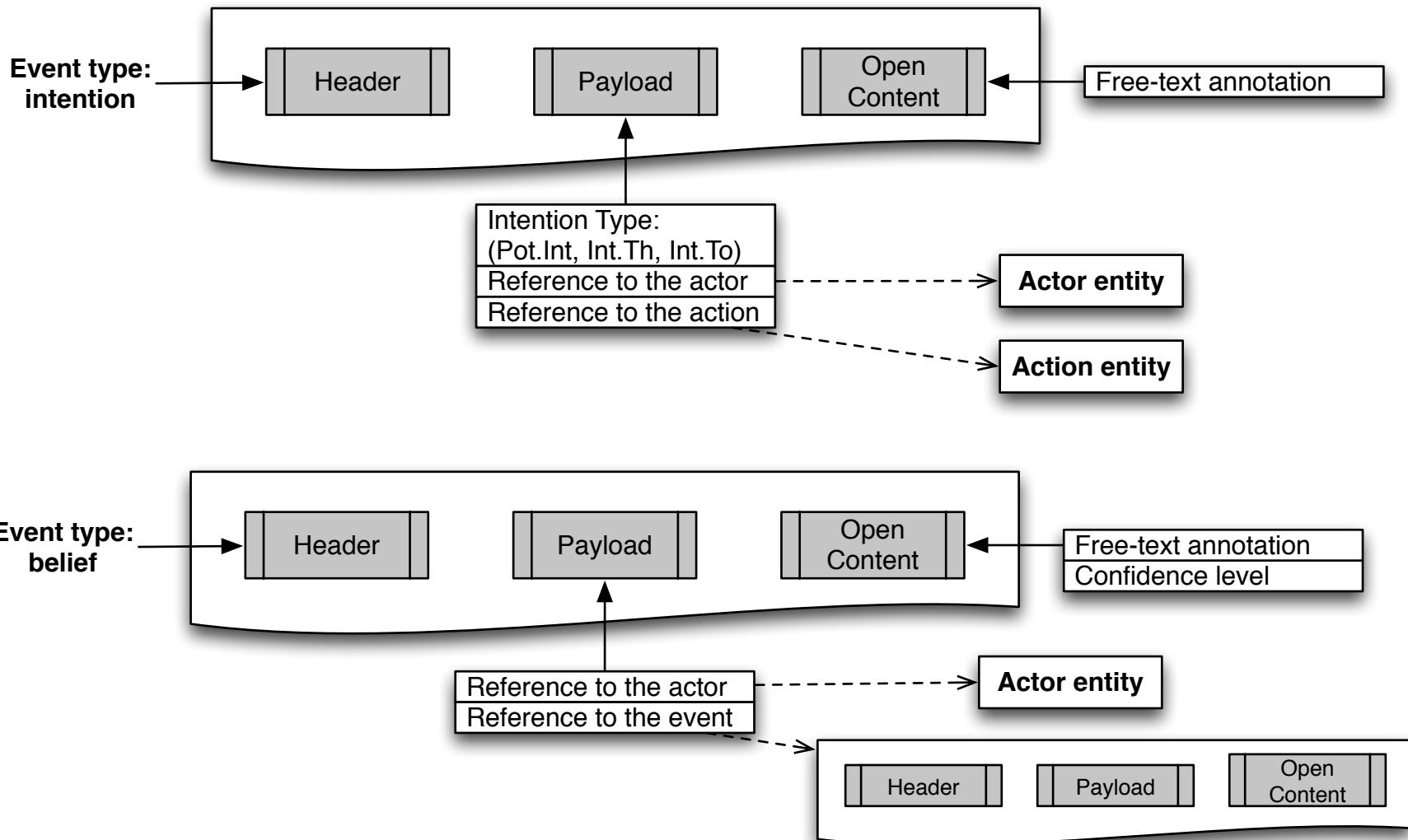


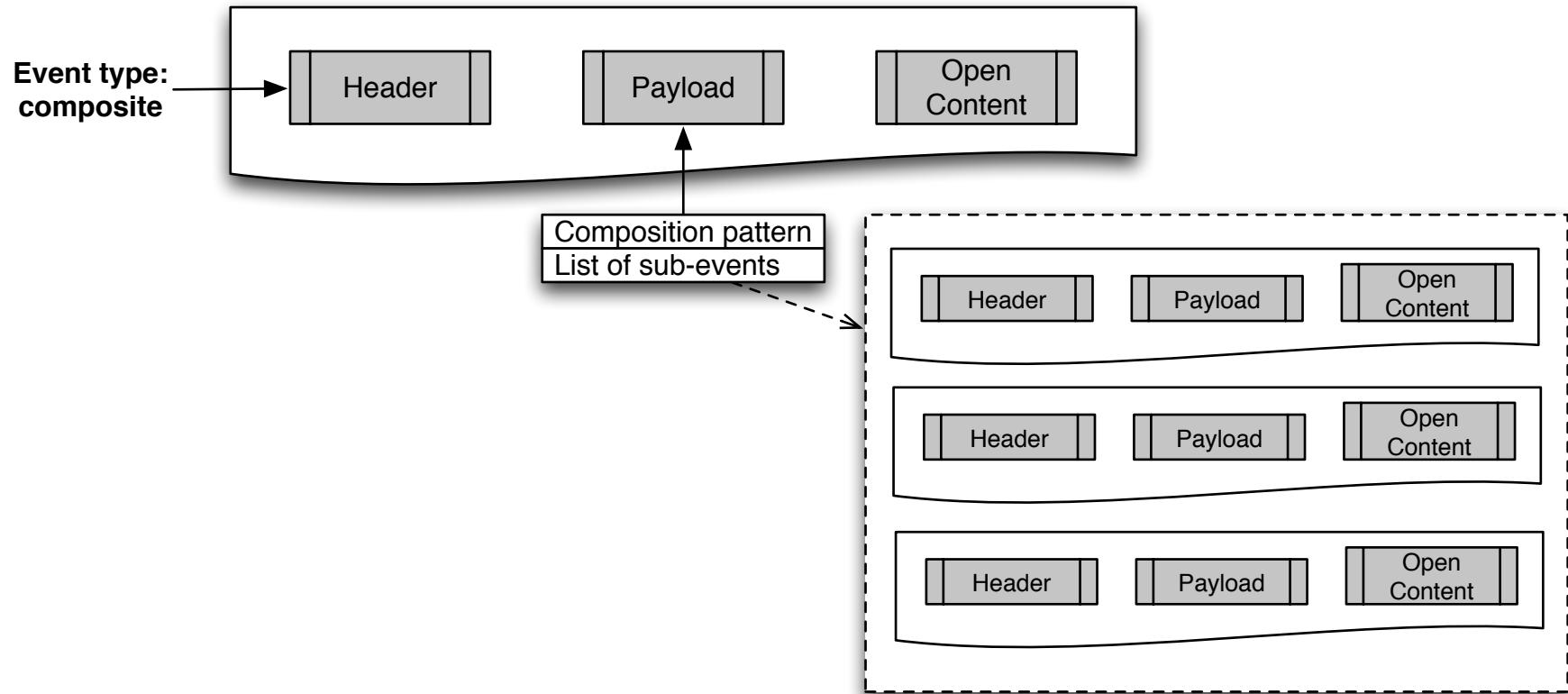


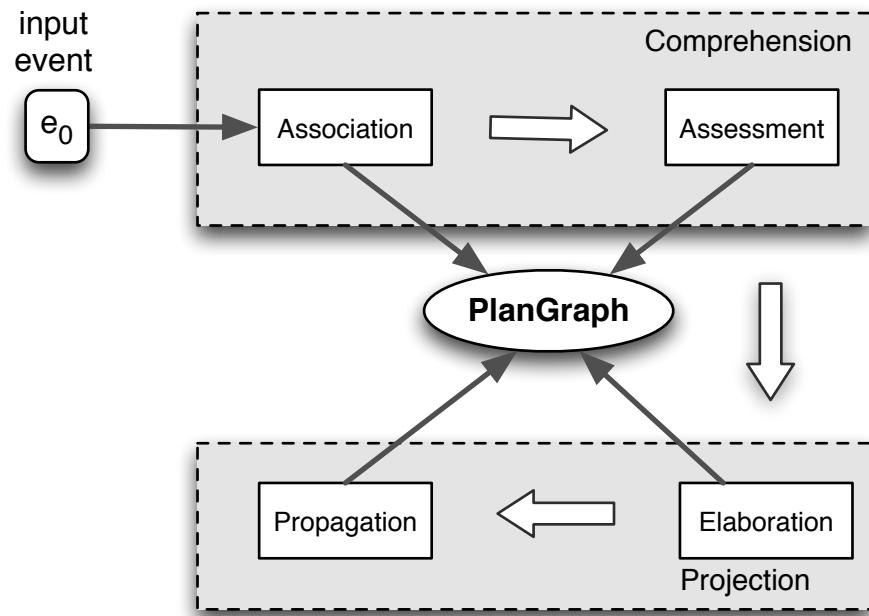


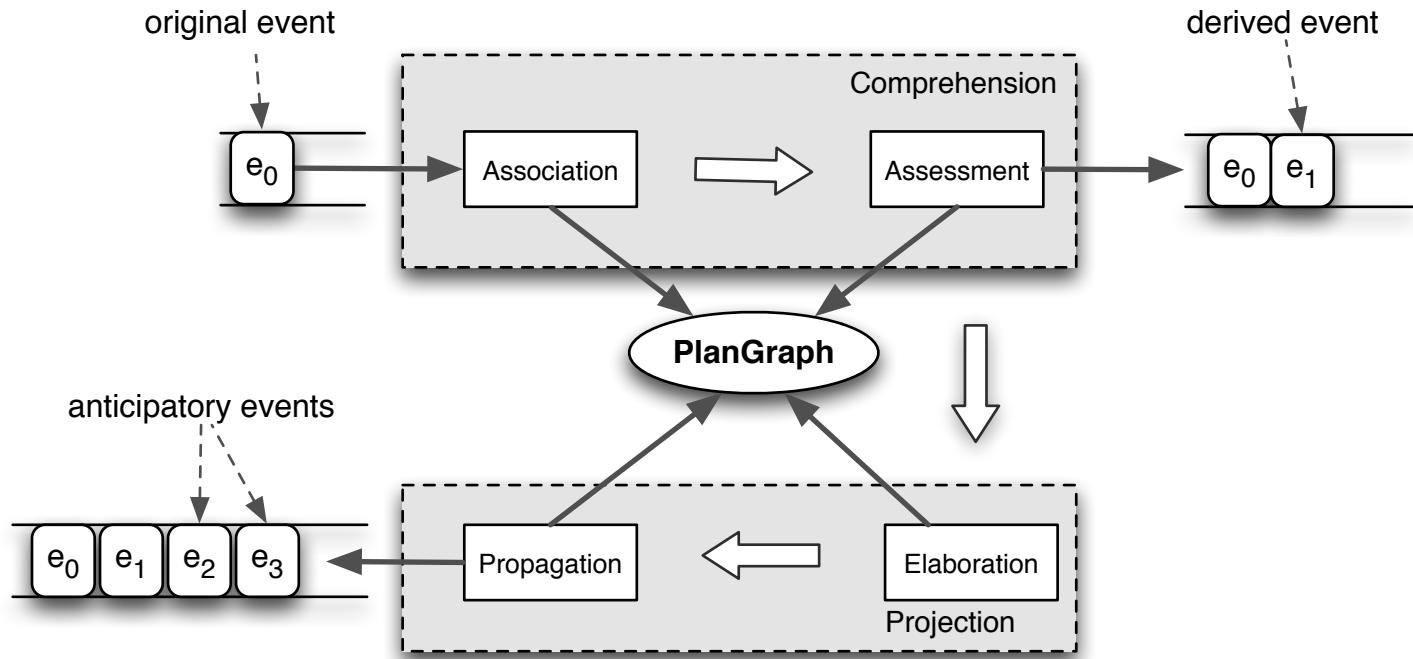


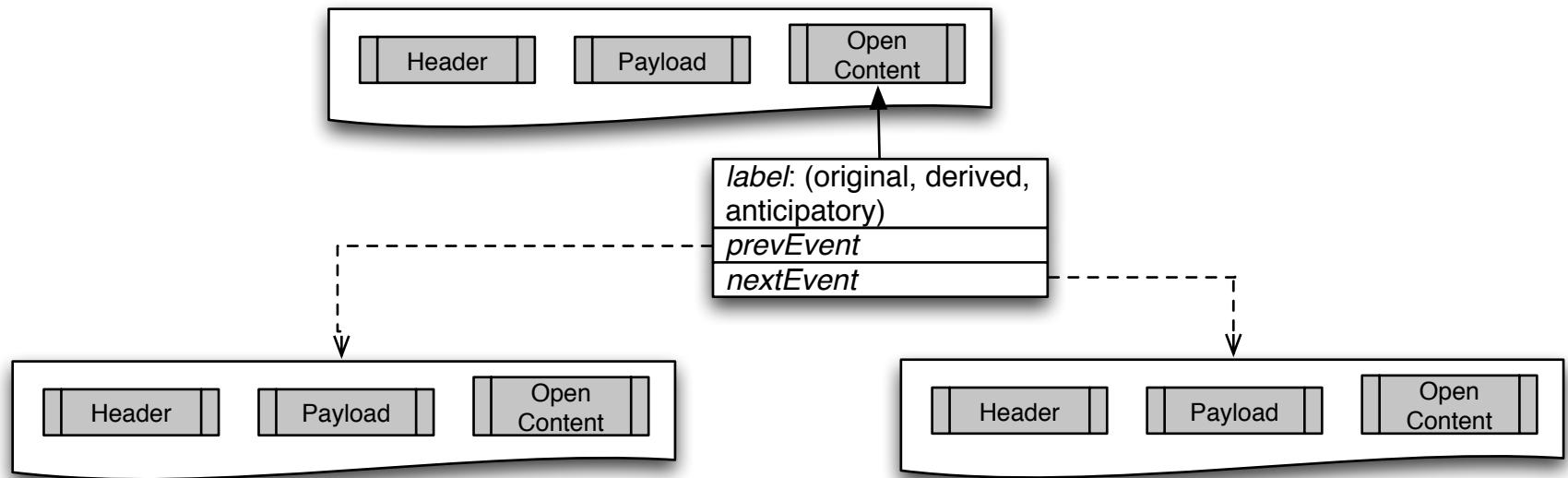


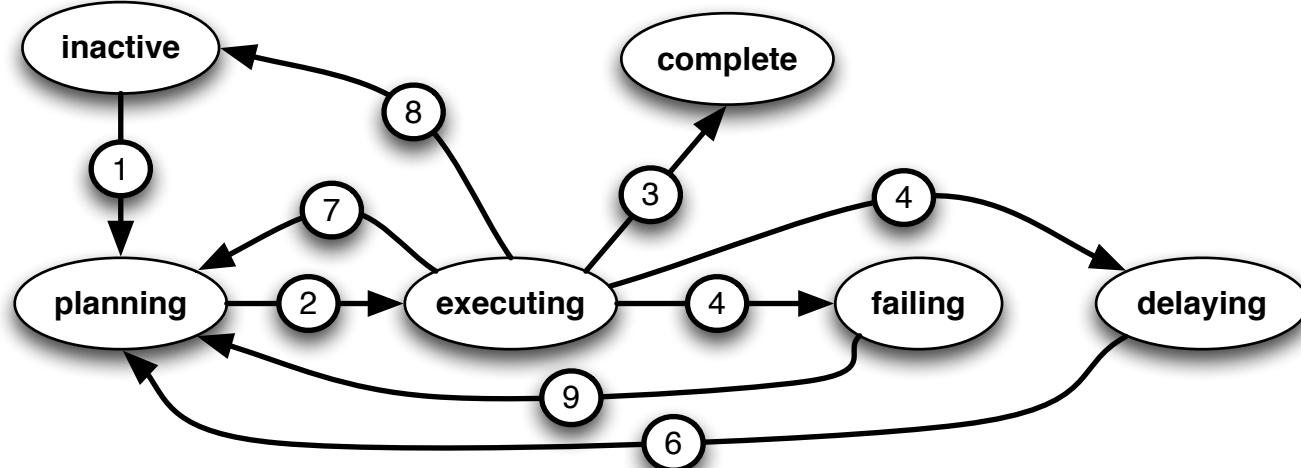




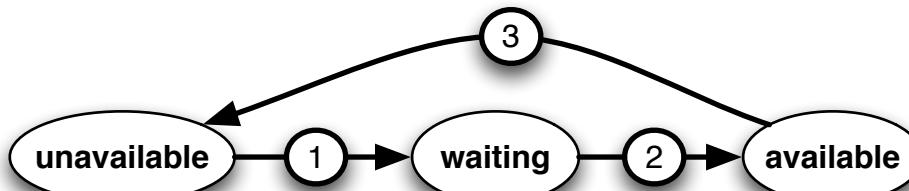




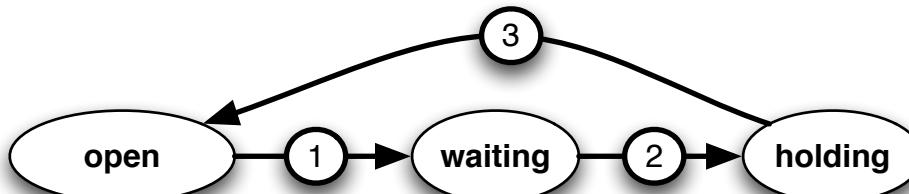




(a) state transitions of an activity



(b) state transitions of a resource



(c) state transitions of a condition

previous values

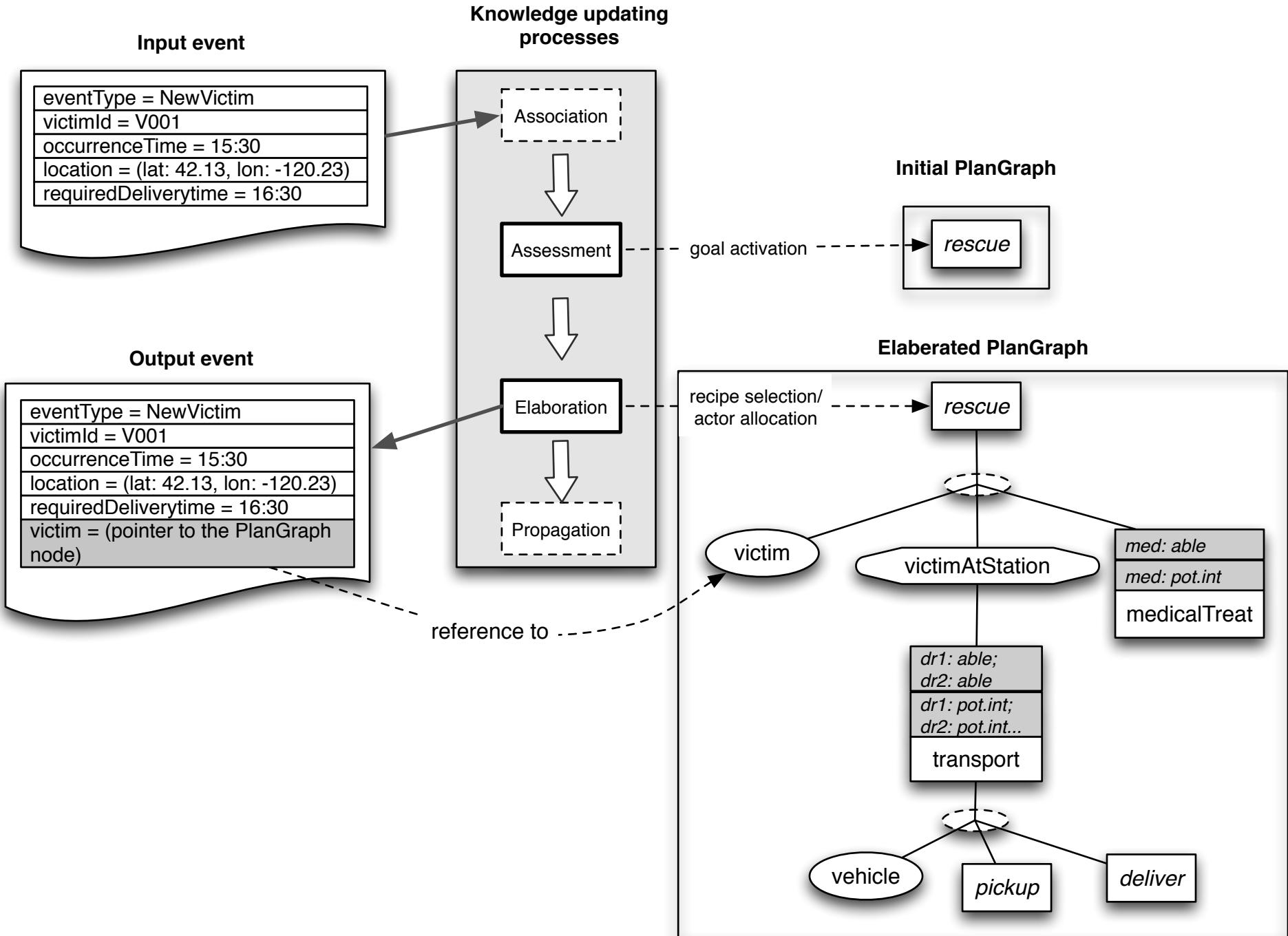
<i>unavailable</i>	<i>waiting</i>	<i>available</i>	<i>delay</i>
0.01	0.97	0.01	0.01

current values

<i>unavailable</i>	<i>waiting</i>	<i>available</i>	<i>delay</i>
0.019	0.009	0.108	0.864

cartesian product

<i>from</i> \ <i>to</i>	<i>unavailable</i>	<i>waiting</i>	<i>available</i>	<i>delay</i>
<i>unavailable</i>	0.00019	0.00009	0.00108	0.00864
<i>waiting</i>	0.01843	0.00873	0.10476	0.83808
<i>available</i>	0.00019	0.00009	0.00108	0.00864
<i>delay</i>	0.00019	0.00009	0.00108	0.00864



Input event

Knowledge updating processes

Output event

eventType = Intention
occurrenceTime = 15:35
actorId = dr1
actionId = transport
intentionType = Int.To

Association

Assessment

Elaboration

Propagation

PlanGraph

reference to
reference to

eventType = Intention
occurrenceTime = 15:35
actorId = (pointer to the actor node of dr1)
actionId = (pointer to the action node of transport)
intentionType = Int.To

victim

victimAtStation

dr1: able;
dr2: able
dr1: int.to;
dr2: pot.int...

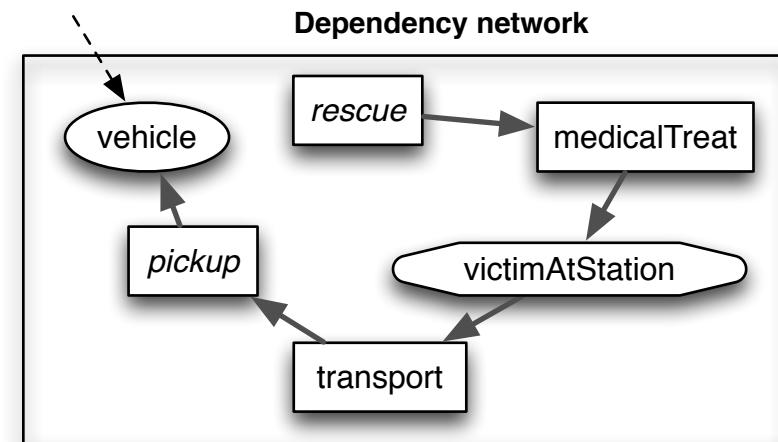
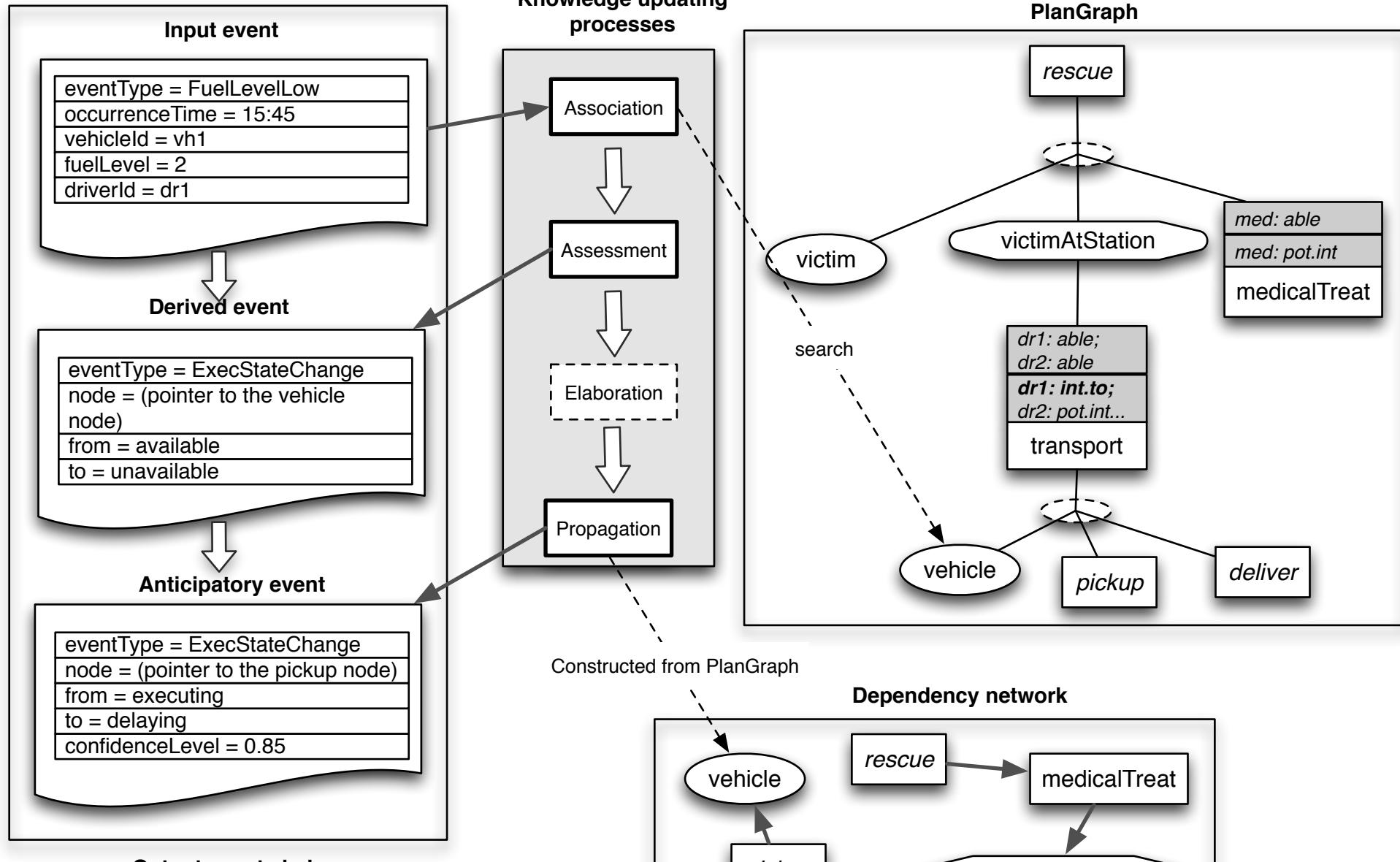
transport

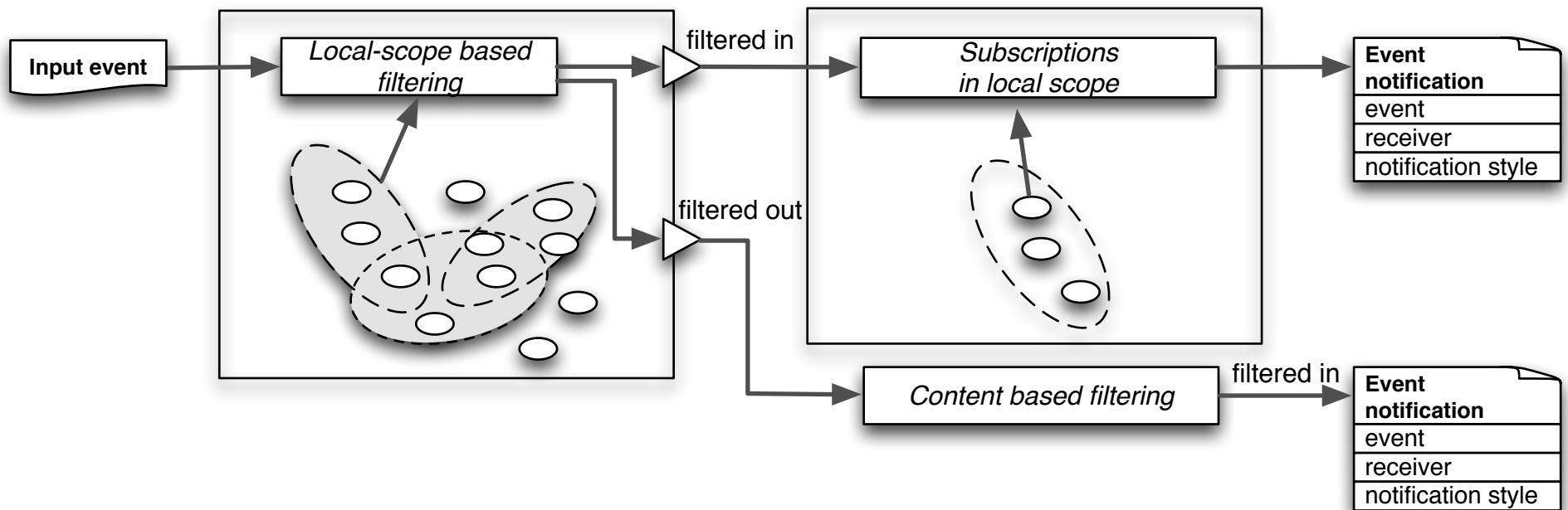
vehicle

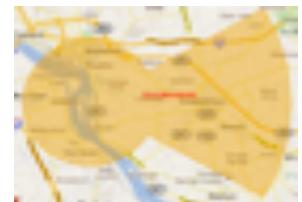
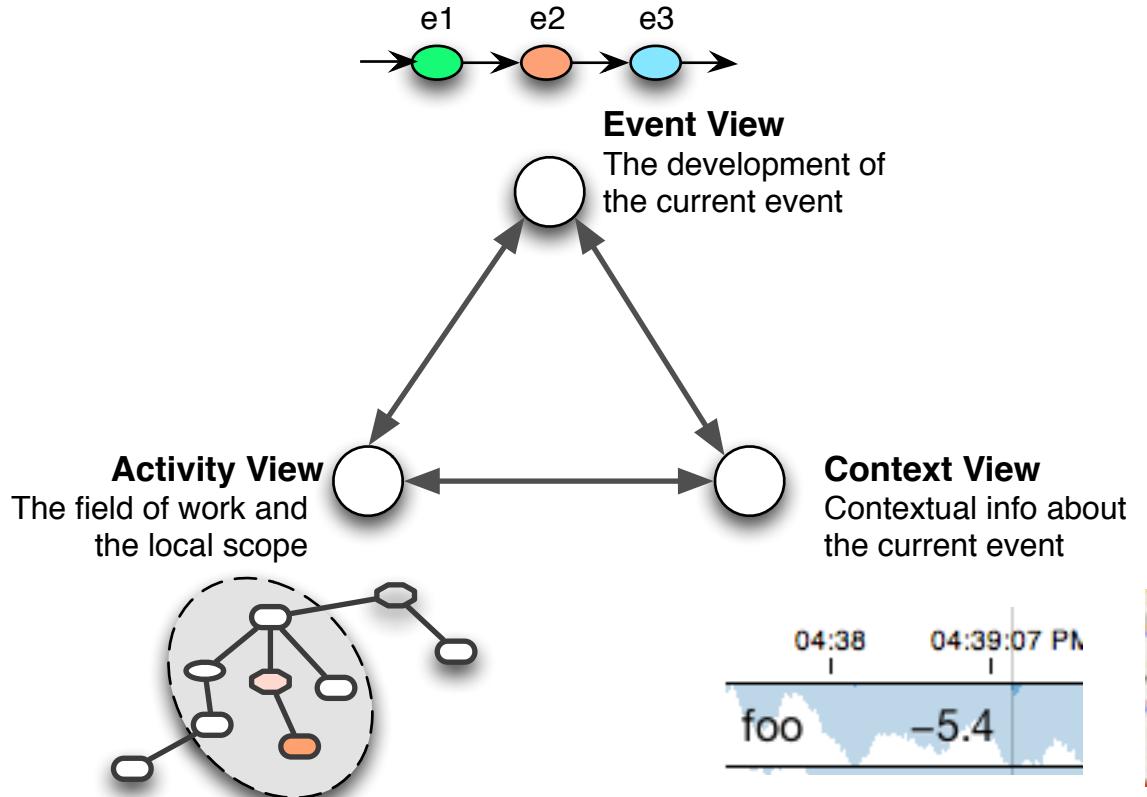
pickup

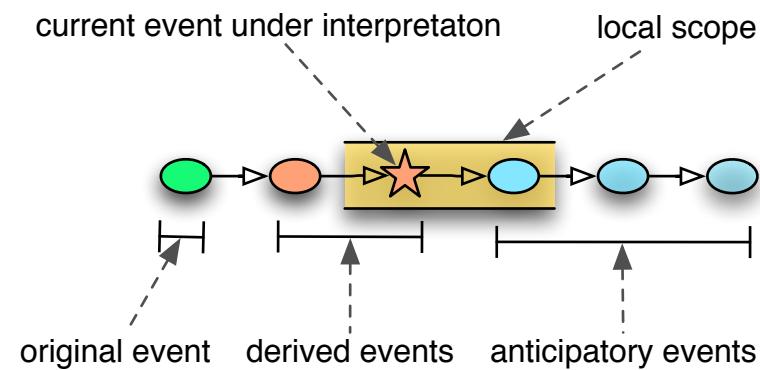
deliver

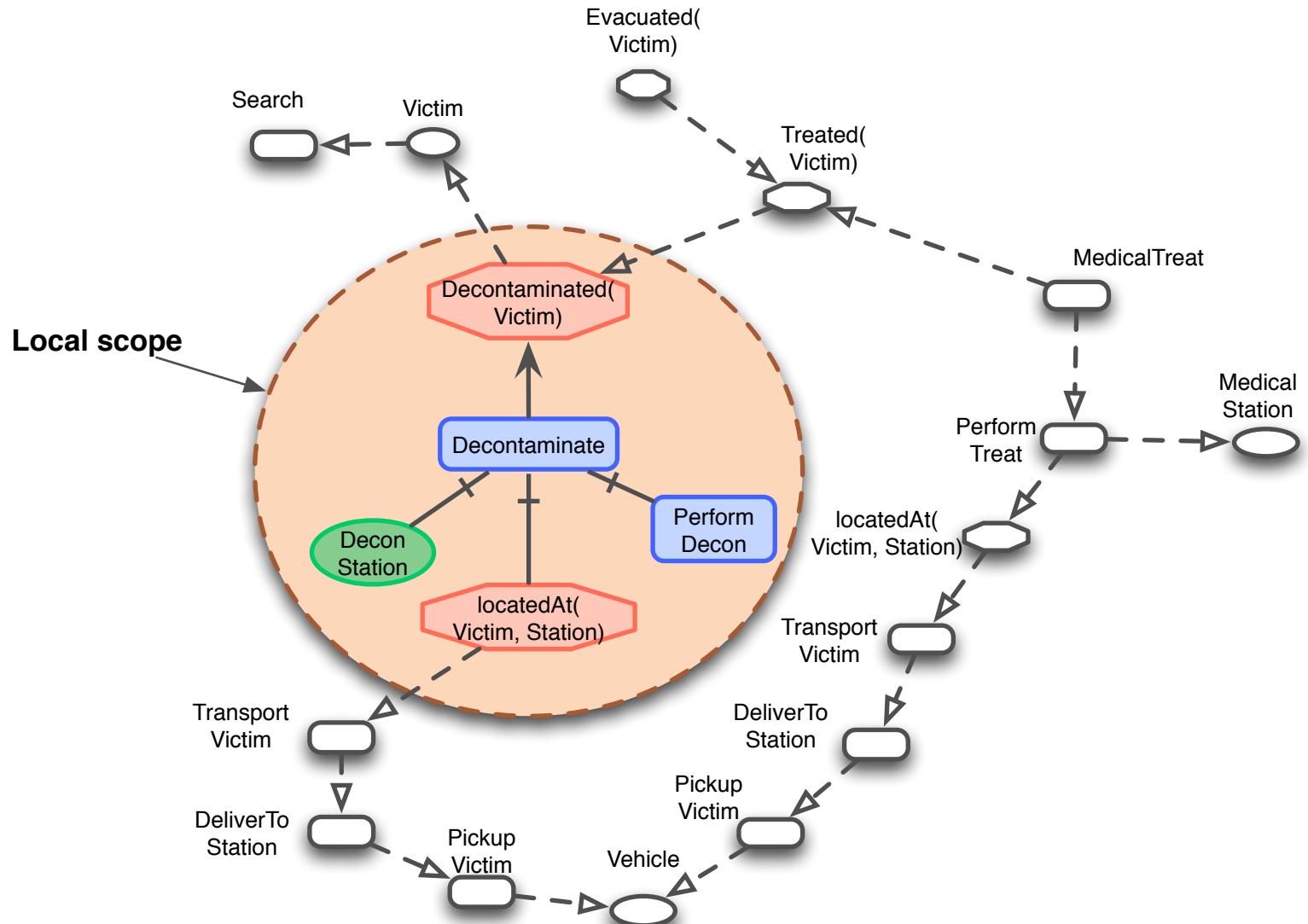
med: able
med: pot.int
medicalTreat

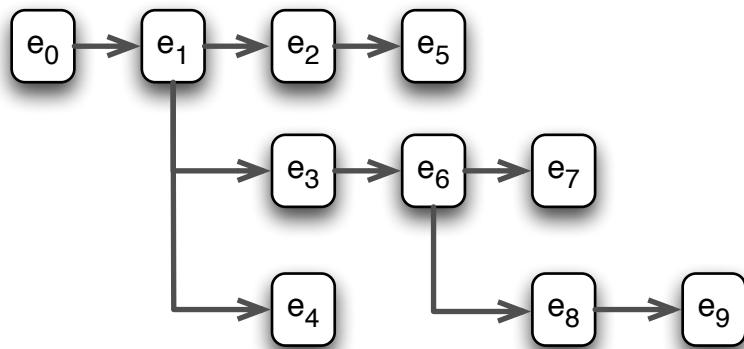
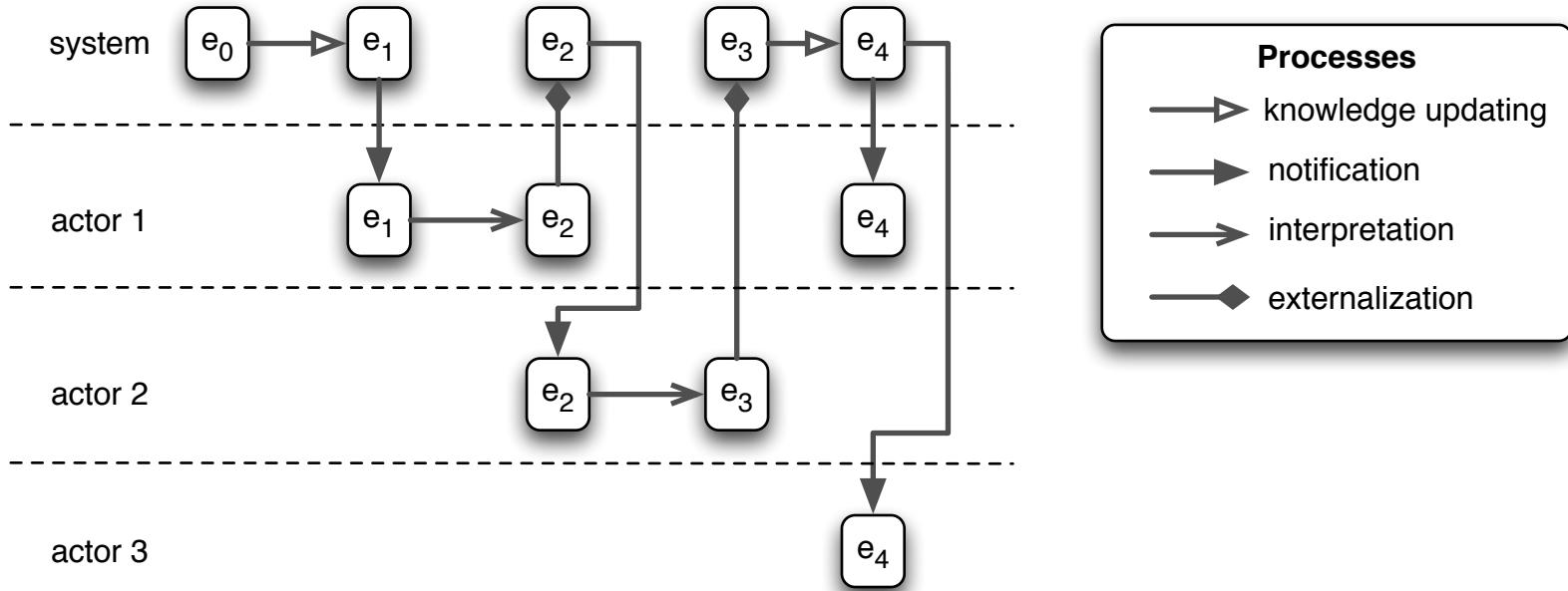


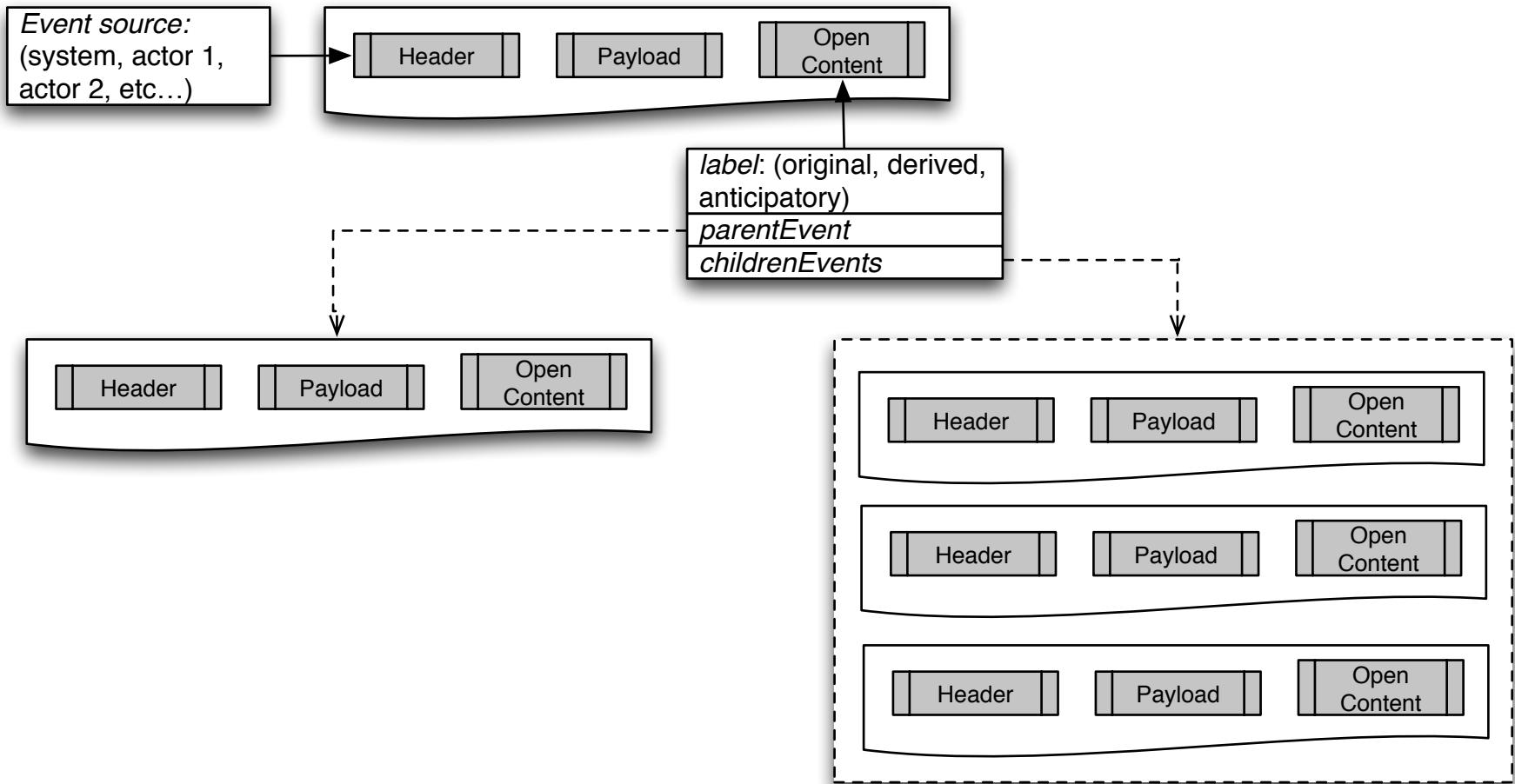


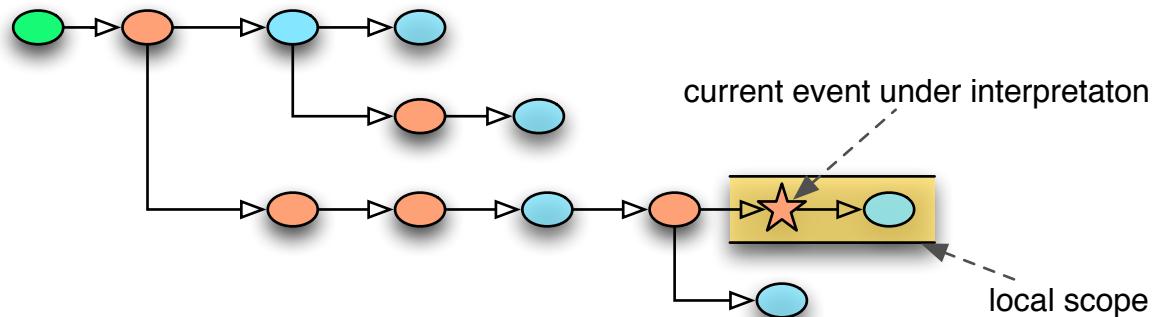




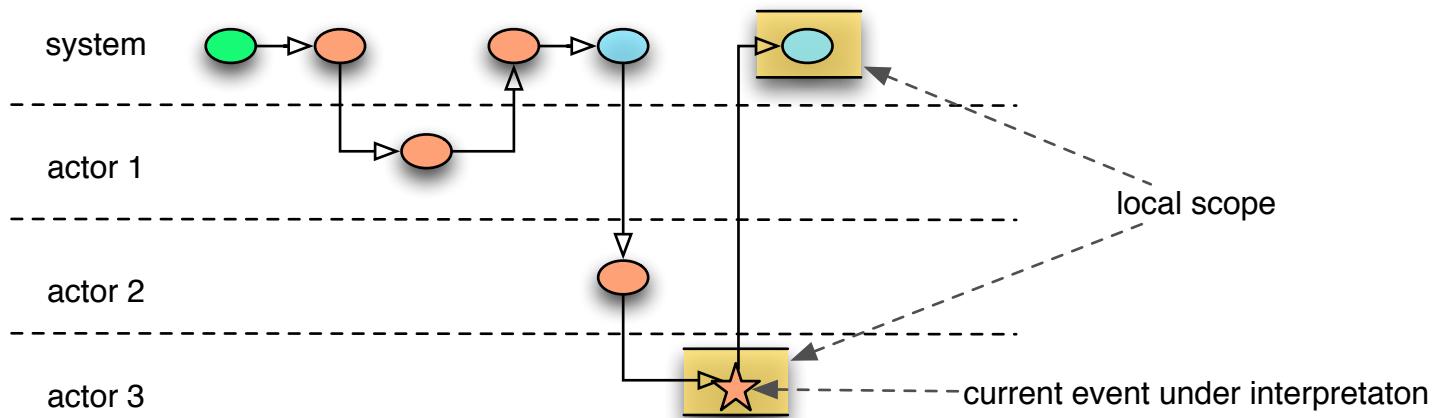




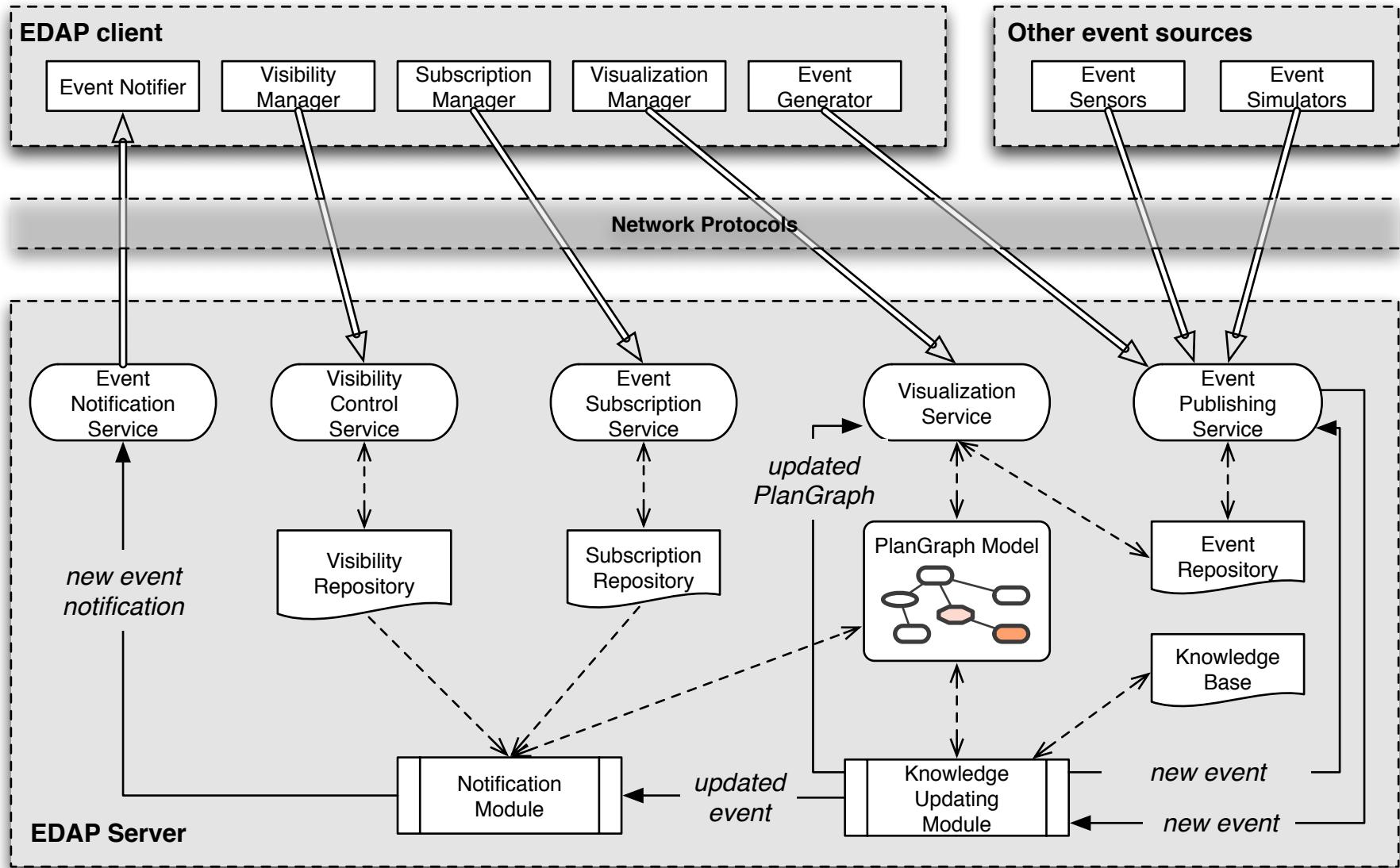




(a) the whole event propagation tree



(b) the active event propagation chain



→ Network protocols

→ Message passing

←→ Data access

Event table
eventId
eventType
occurrenceTime
detectionTime
eventSource
eventComposition
payload
openContent

Event Development table
label
parentEventId
currentEventId

```
<Event id="event01">
    <Payload>
        <Property name="intentionType" type="string">
            <Value>Int.Th</Value>
        </Property>
        <Property name="actor" type="string">
            <Value>actor01</Value>
        </Property>
        <Property name="action" type="string">
            <Value>action03</Value>
        </Property>
    </Payload>
</Event>
```

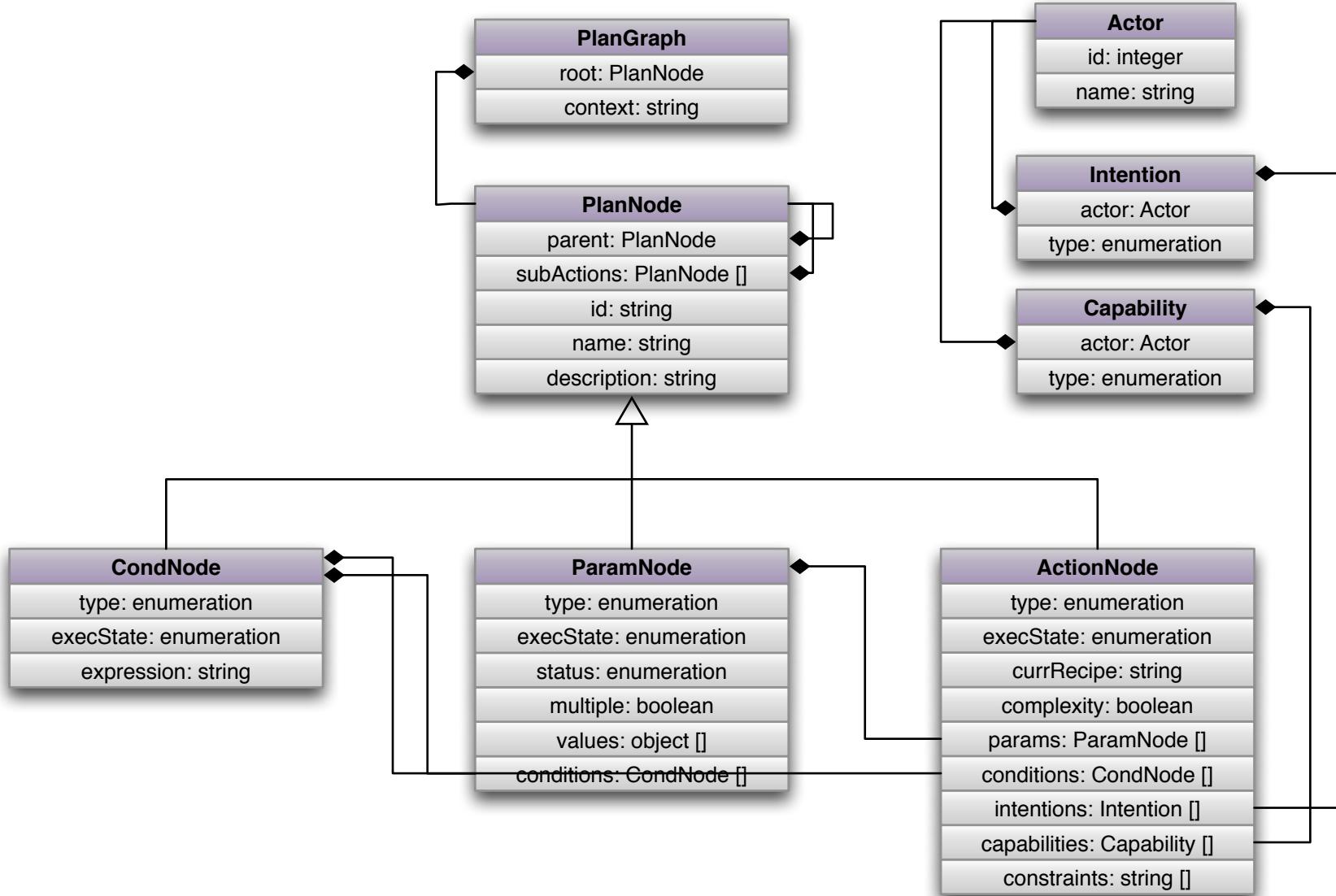
Subscription table
subscriptionId
userId
notificationStyle
active
eventPattern

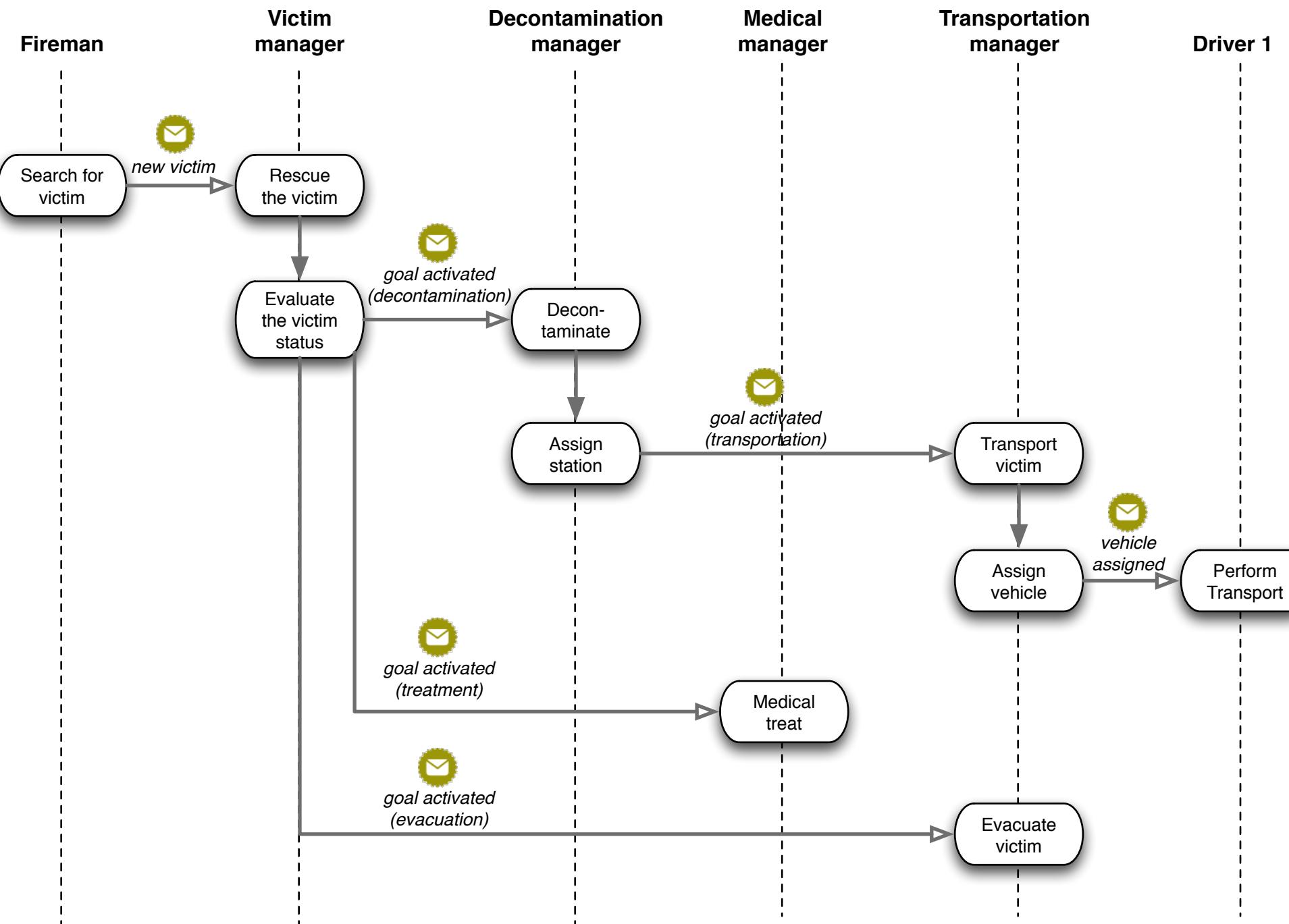
```
<Subscription id="sub01">
    <EventPattern type="all">
        <Filter type="eventType">
            <Value>ExecutionStateChange</Value>
        </Filter>
        <Filter type="eventContent">
            <Expression>[entityType] = 'action' and
                [to] = 'delaying'</Expression>
        </Filter>
        <Filter type="localScope">
            <Intention>Int.That</Intention>
        </Filter>
    </EventPattern>
</Subscription>
```

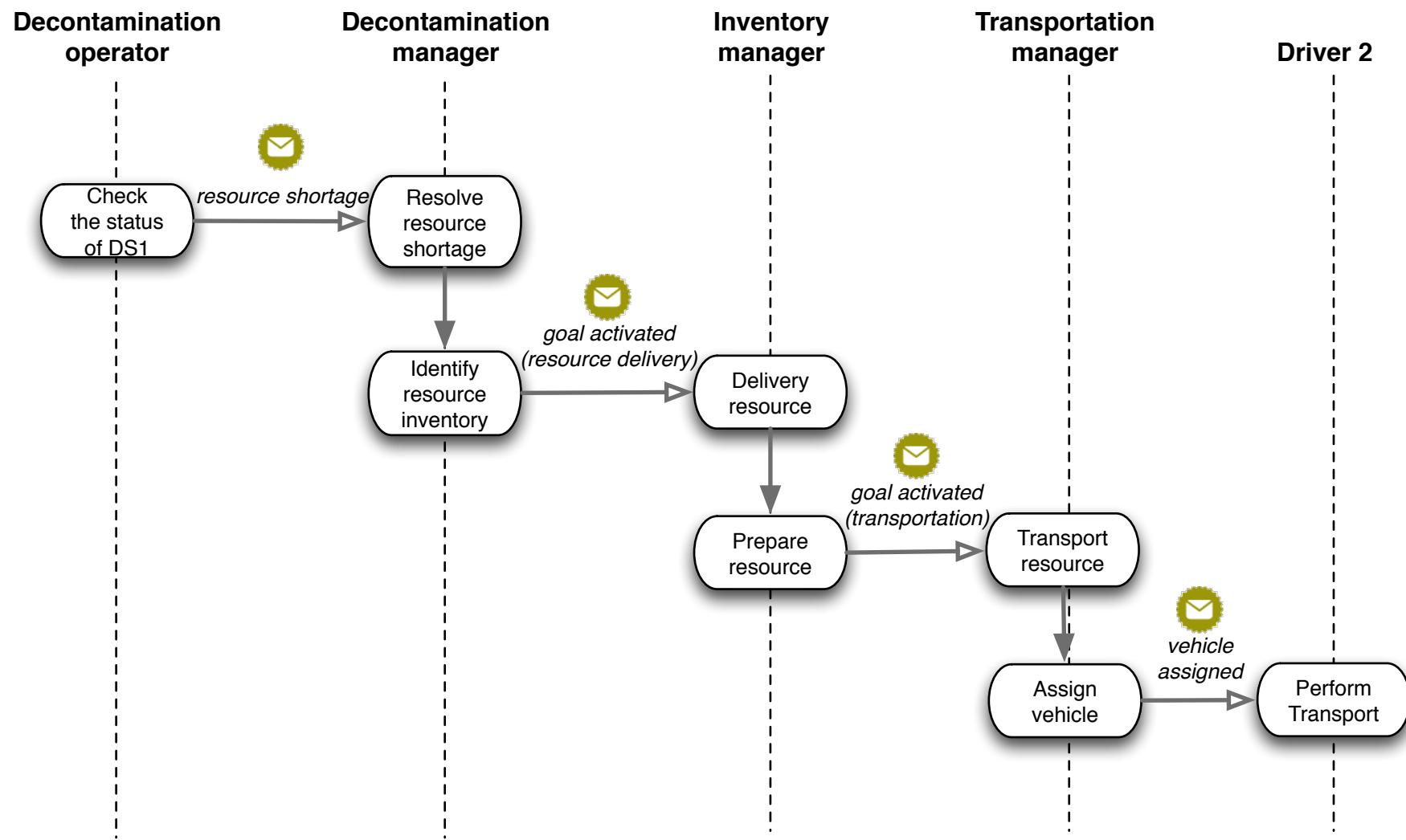
Visibility policy table	
policyId	
userId	
active	
eventPattern	
receiverPattern	
attributeList	

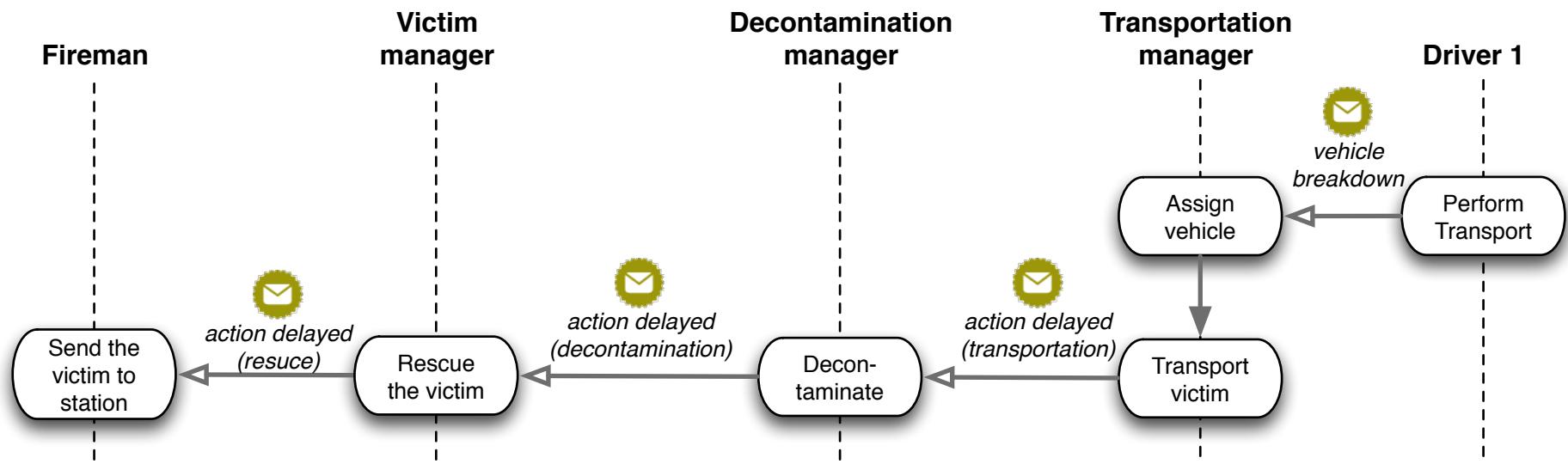
```
<Visibility id="vis11">
    <ReceiverPattern type="all">
        <Filter type="attribute">
            <Expression>[role] = 'driver'</Expression>
        </Filter>
        <Filter type="localScope">
            <Capability>Workable</Capability>
        </Filter>
    </ReceiverPattern>
</Visibility>
```

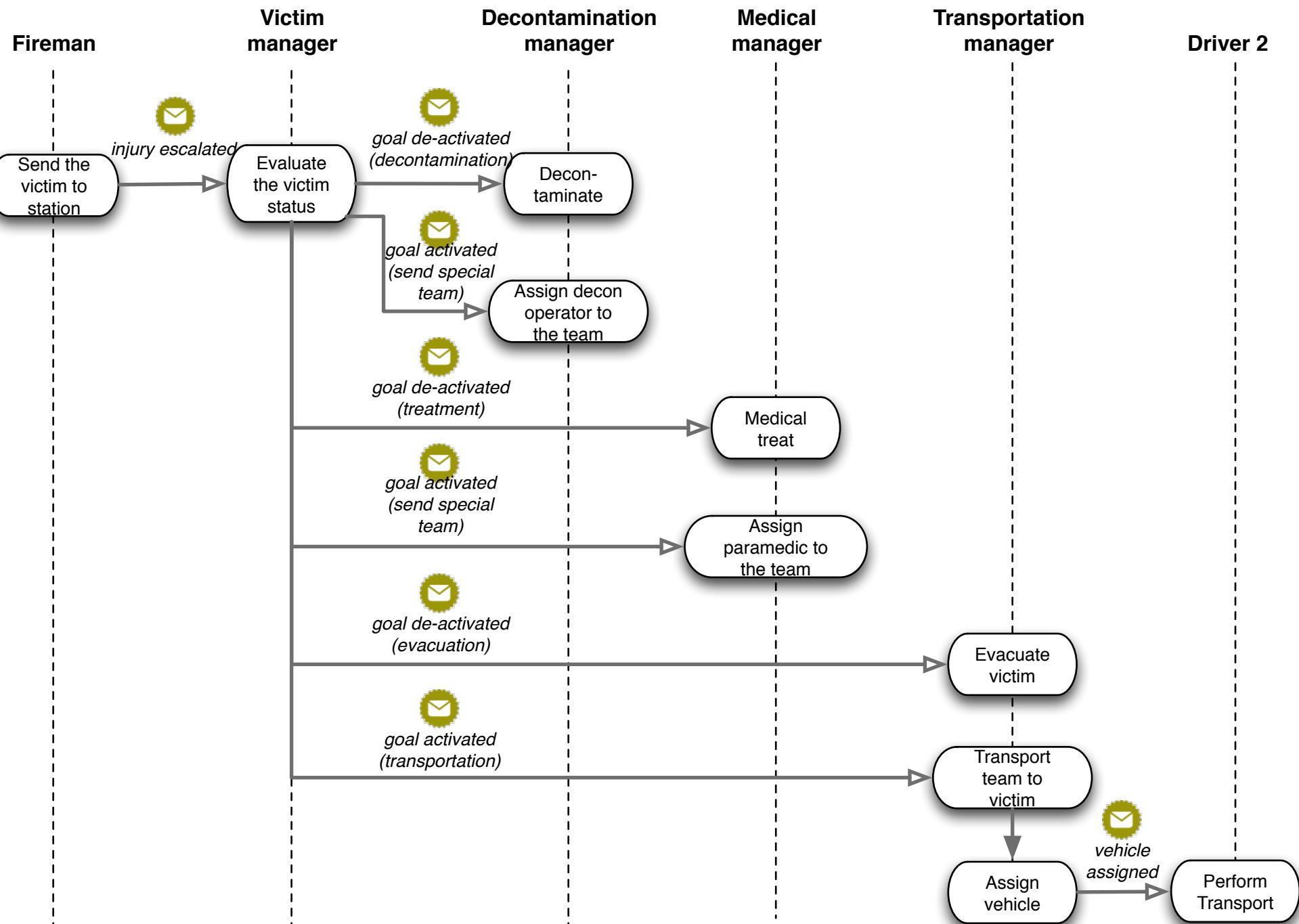
```
<Visibility id="vis11">
    <AttributeList>
        <Attribute name="victimName" />
        <Attribute name="location" />
        <Attribute name="injuryInfo" />
    </AttributeList>
</Visibility>
```

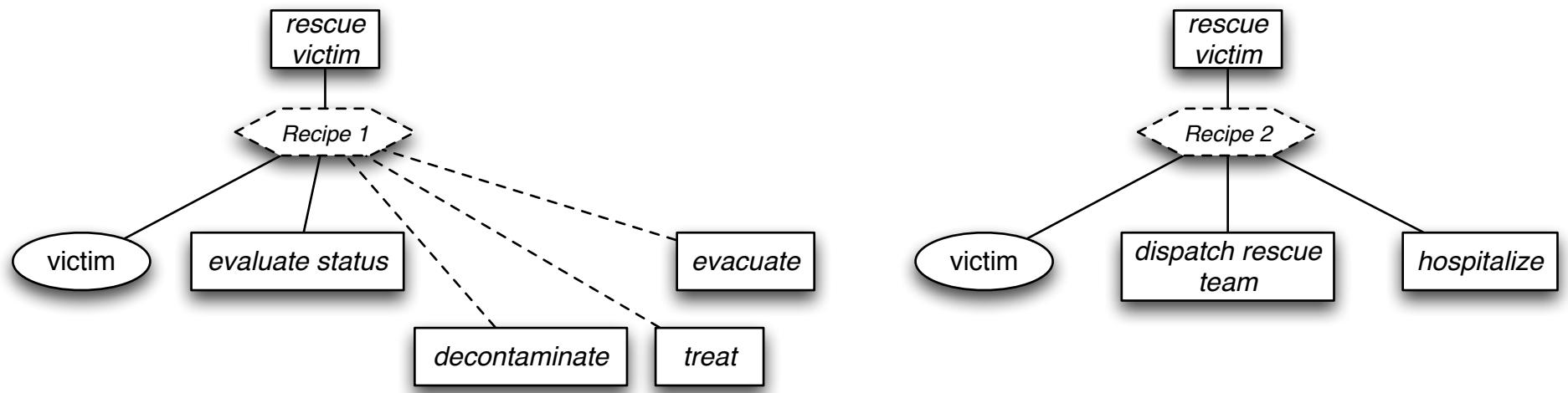




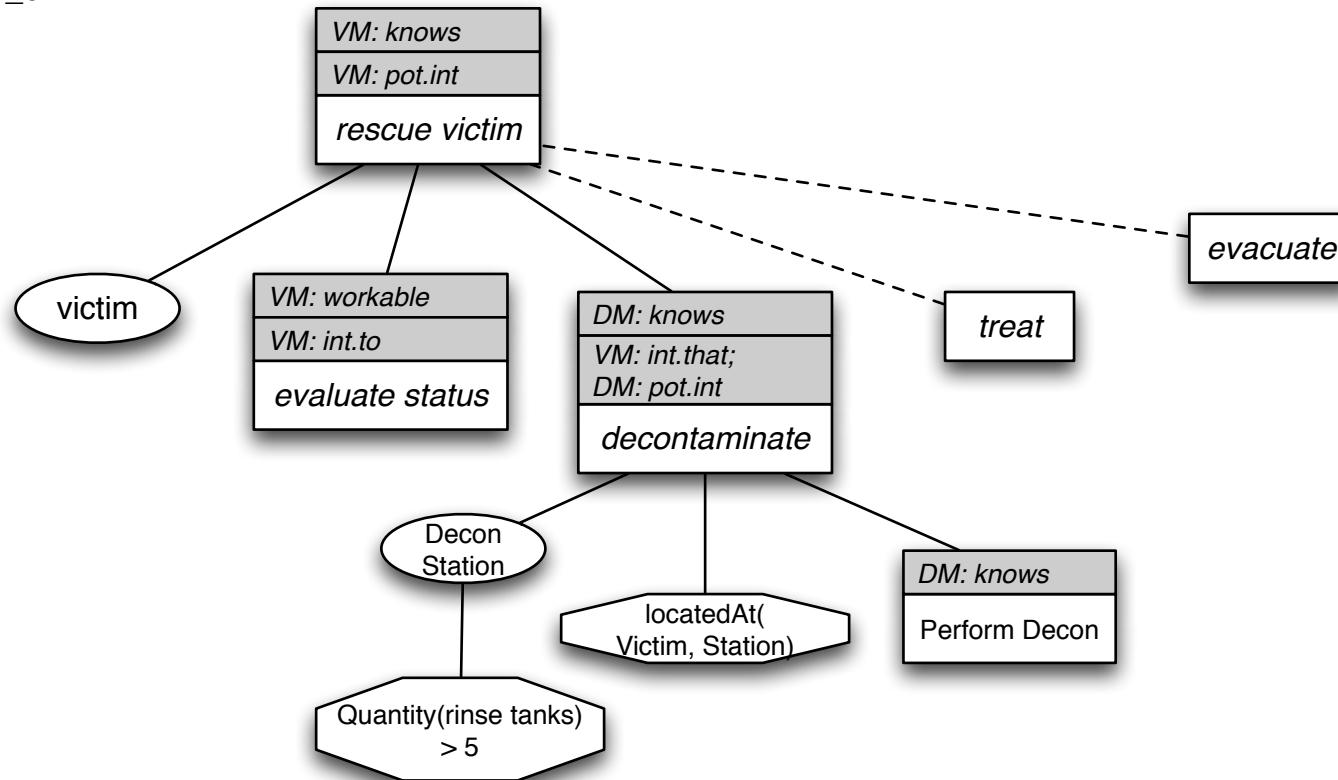




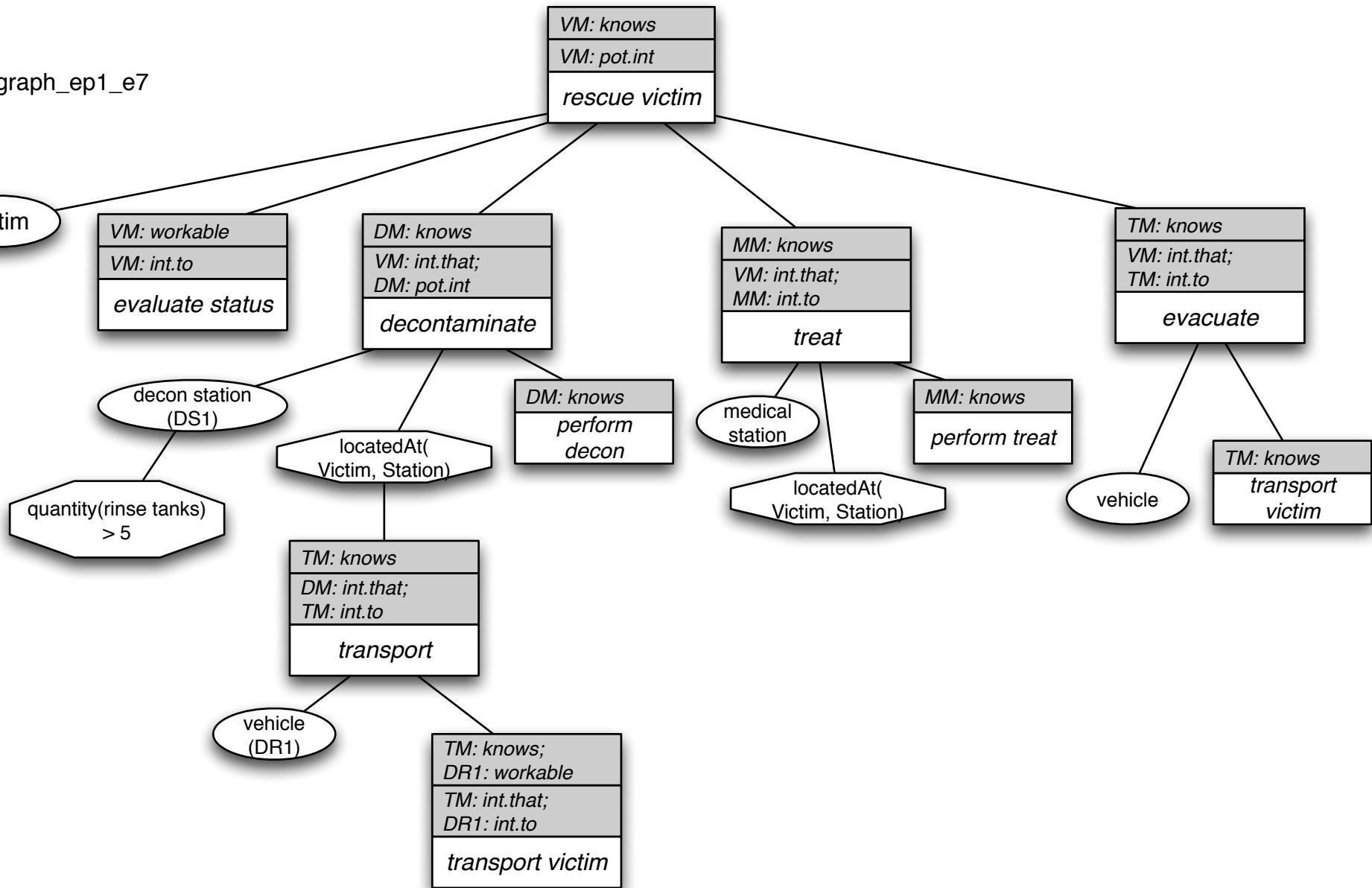




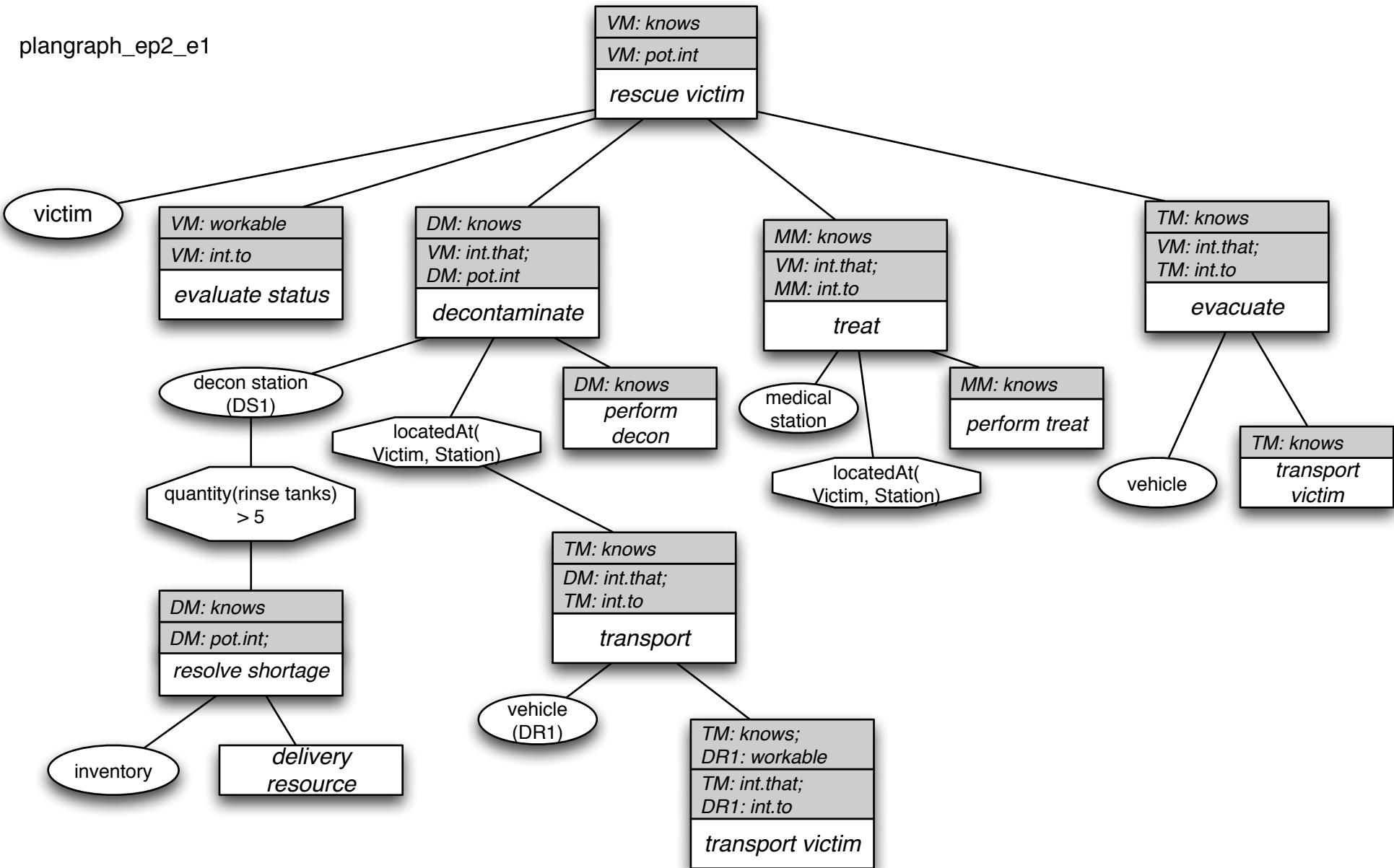
plangraph_ep1_e2



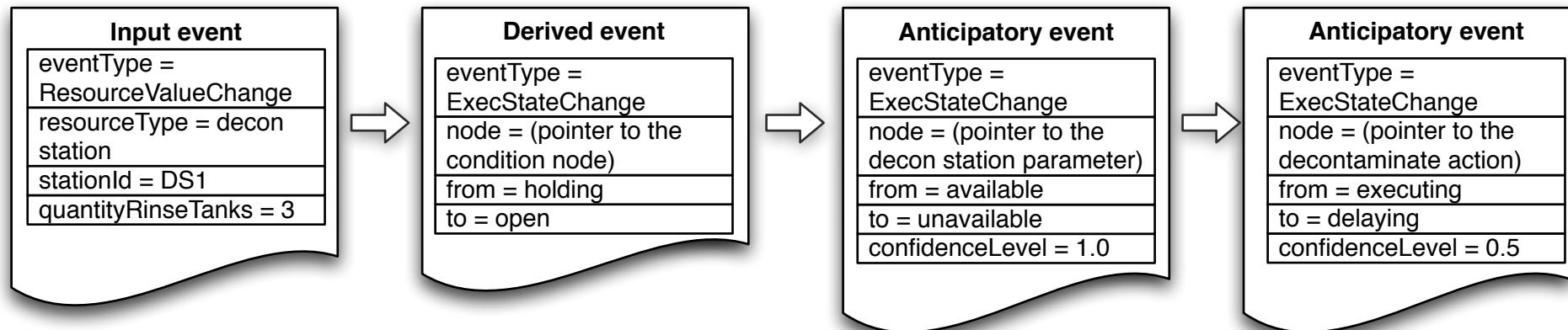
plangraph_ep1_e7

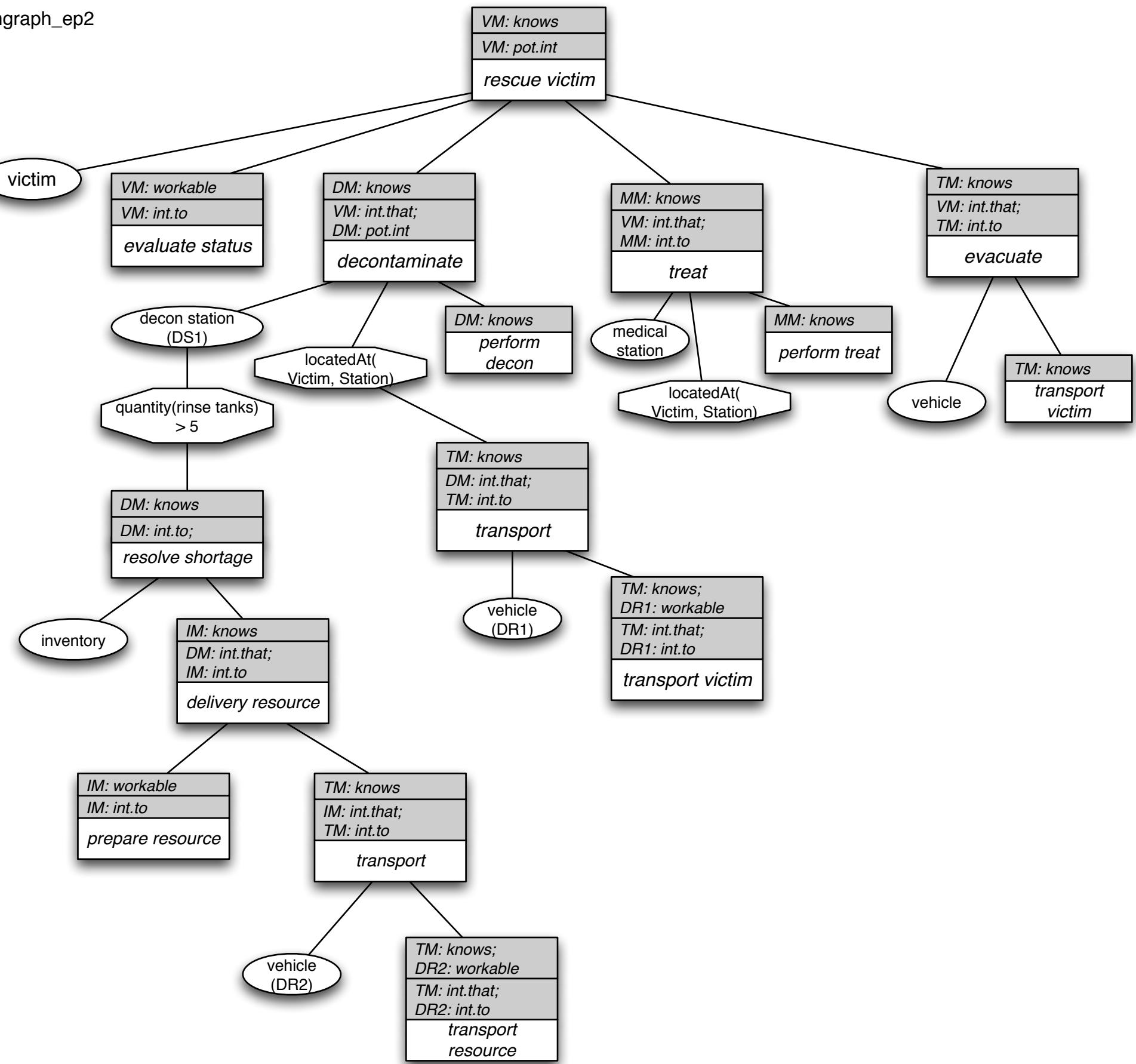


plangraph_ep2_e1

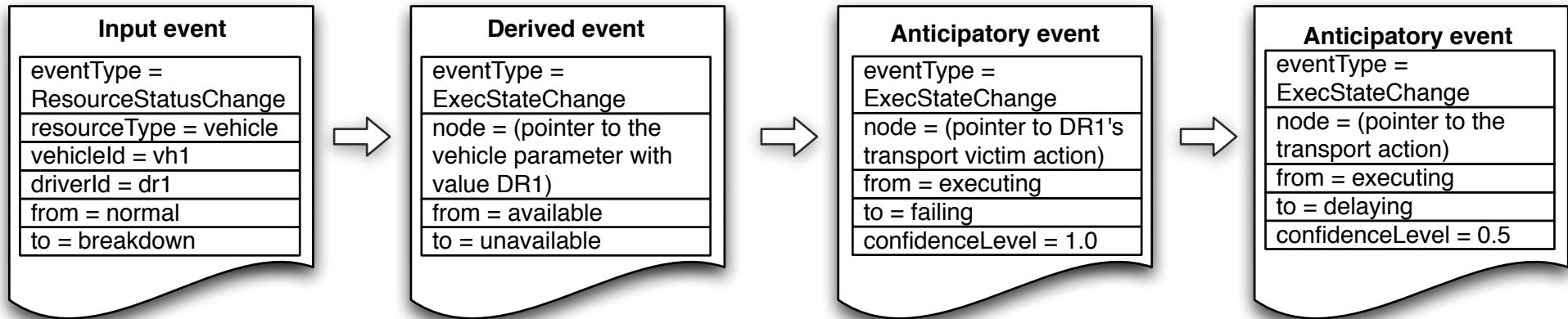


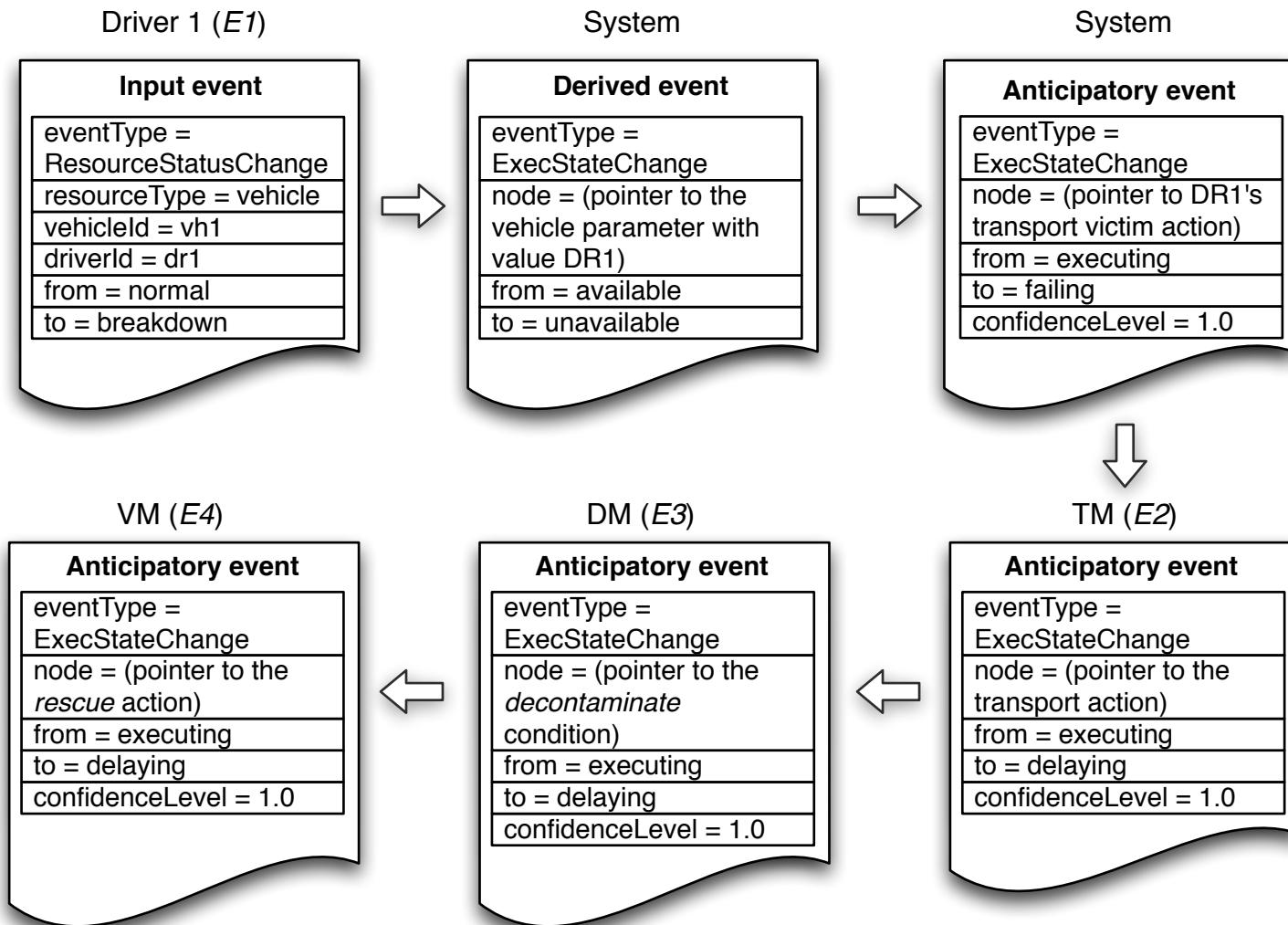
eventchain_ep2_e1



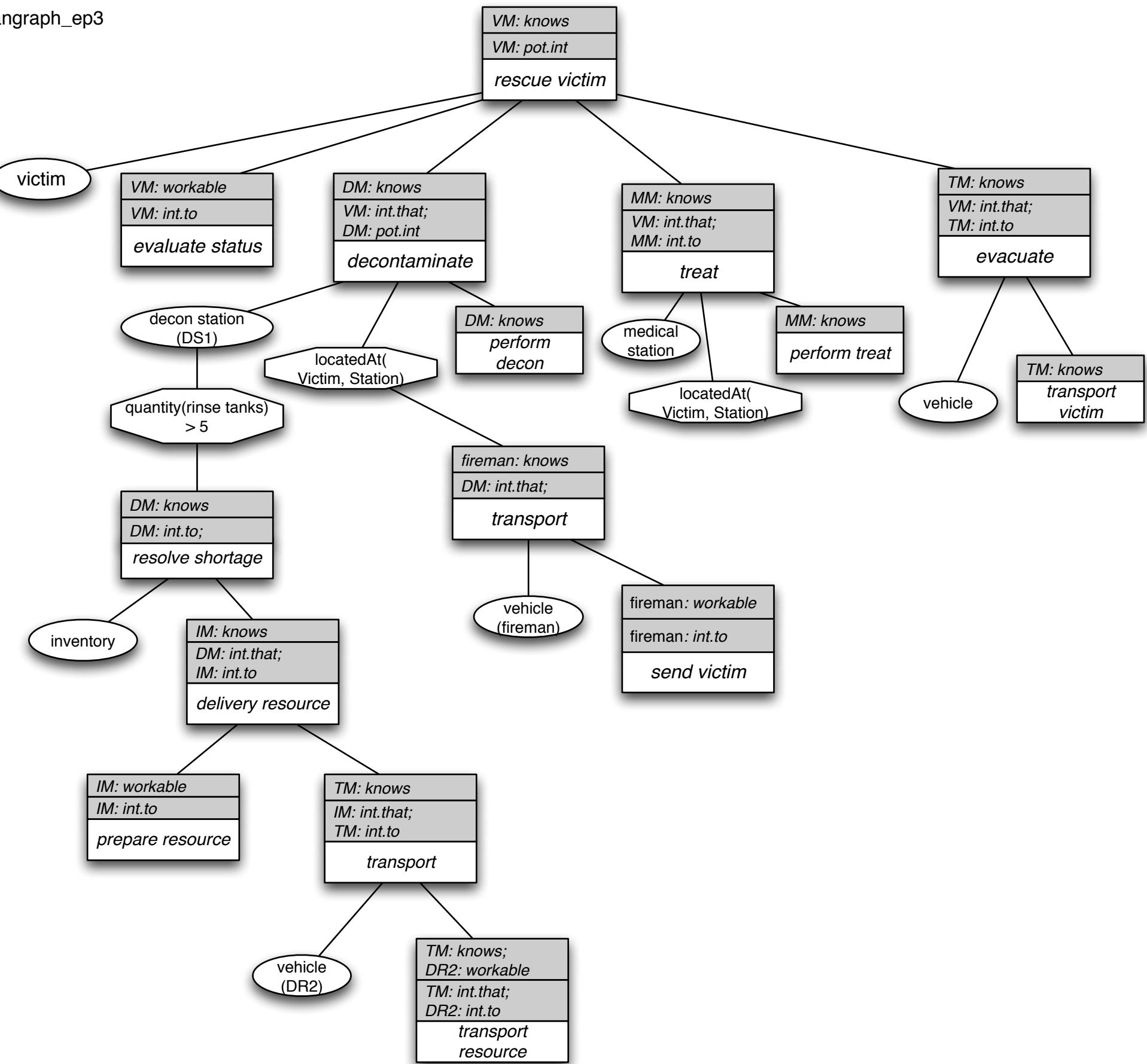


eventchain_ep3_e1

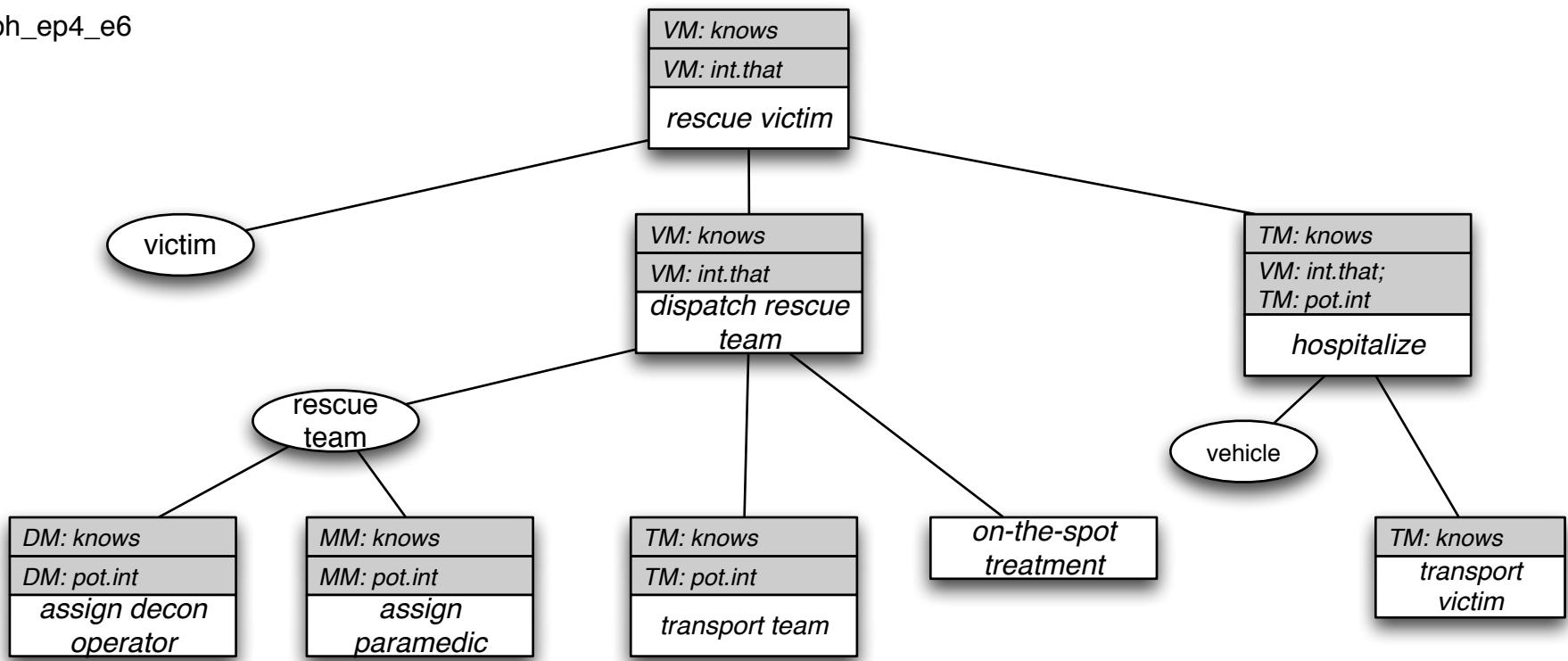




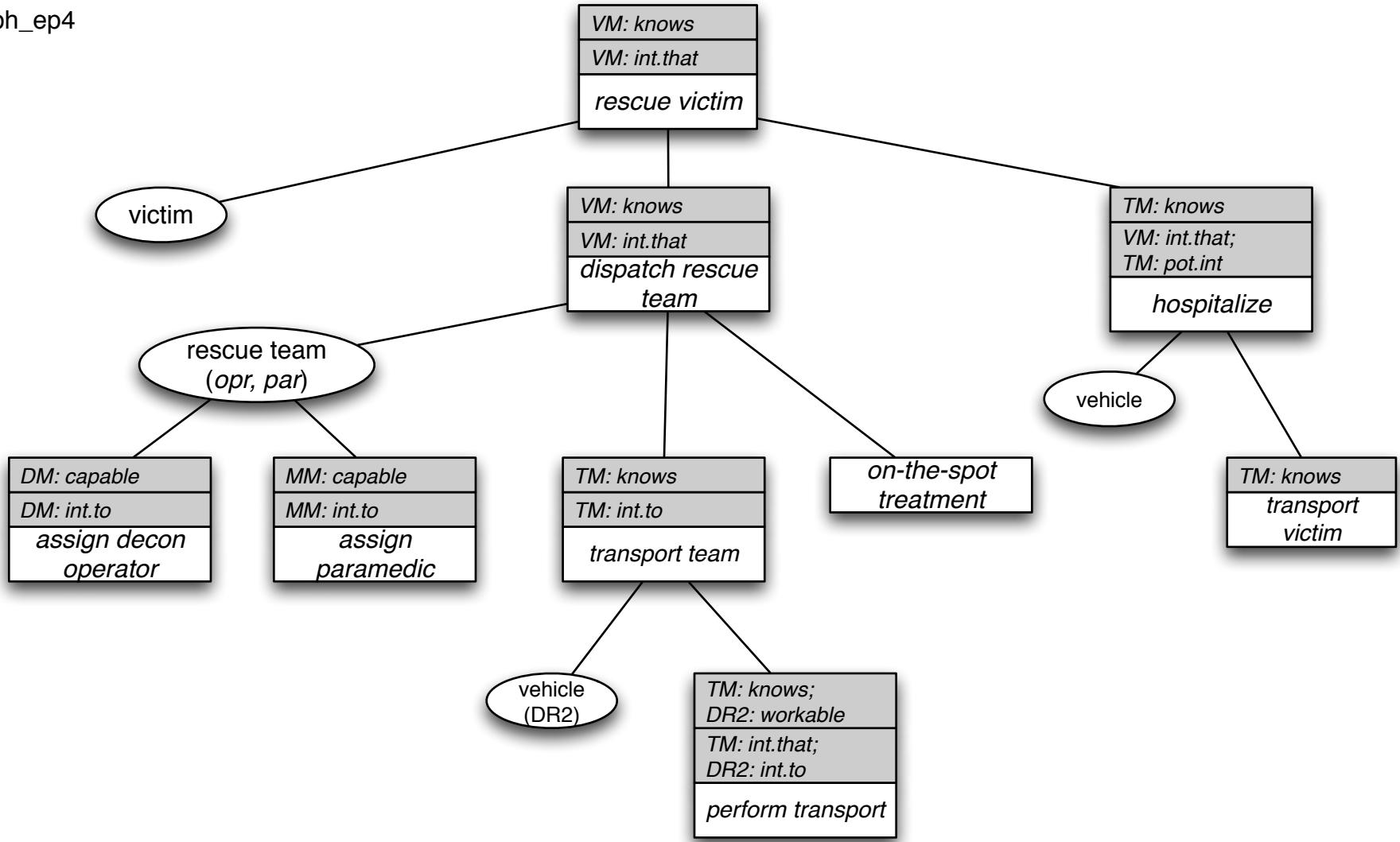
plangraph_ep3



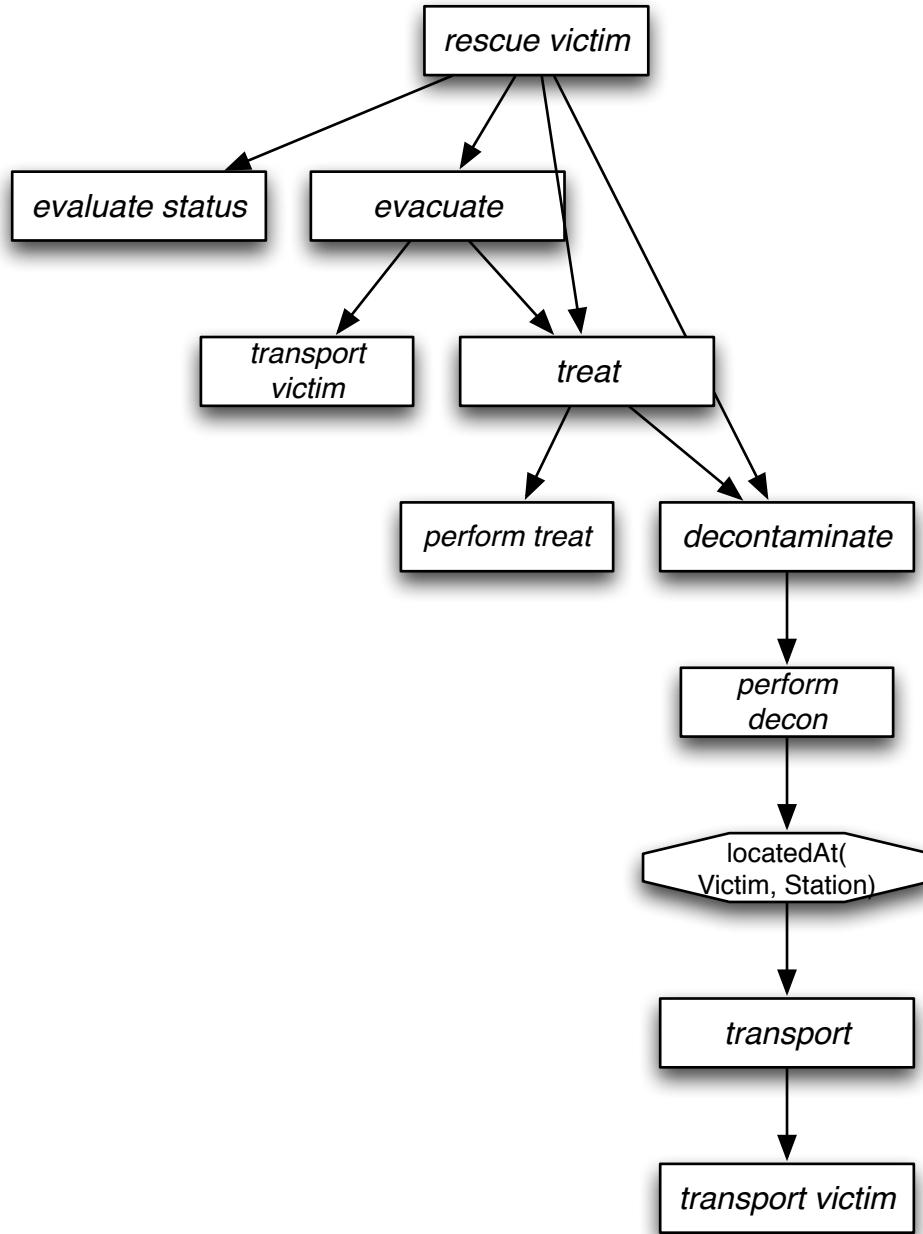
plangraph_ep4_e6



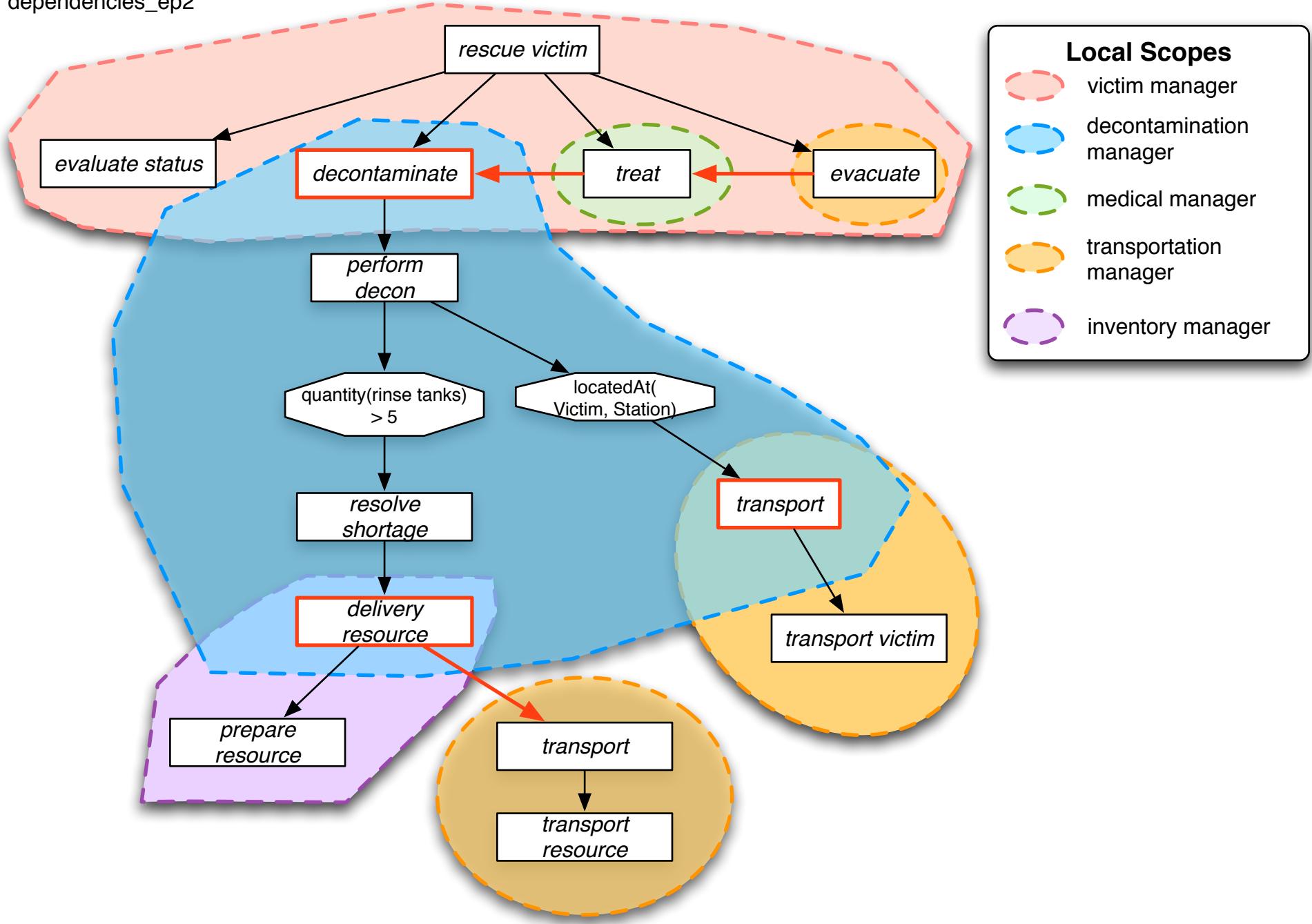
plangraph_ep4



dependencies_ep1



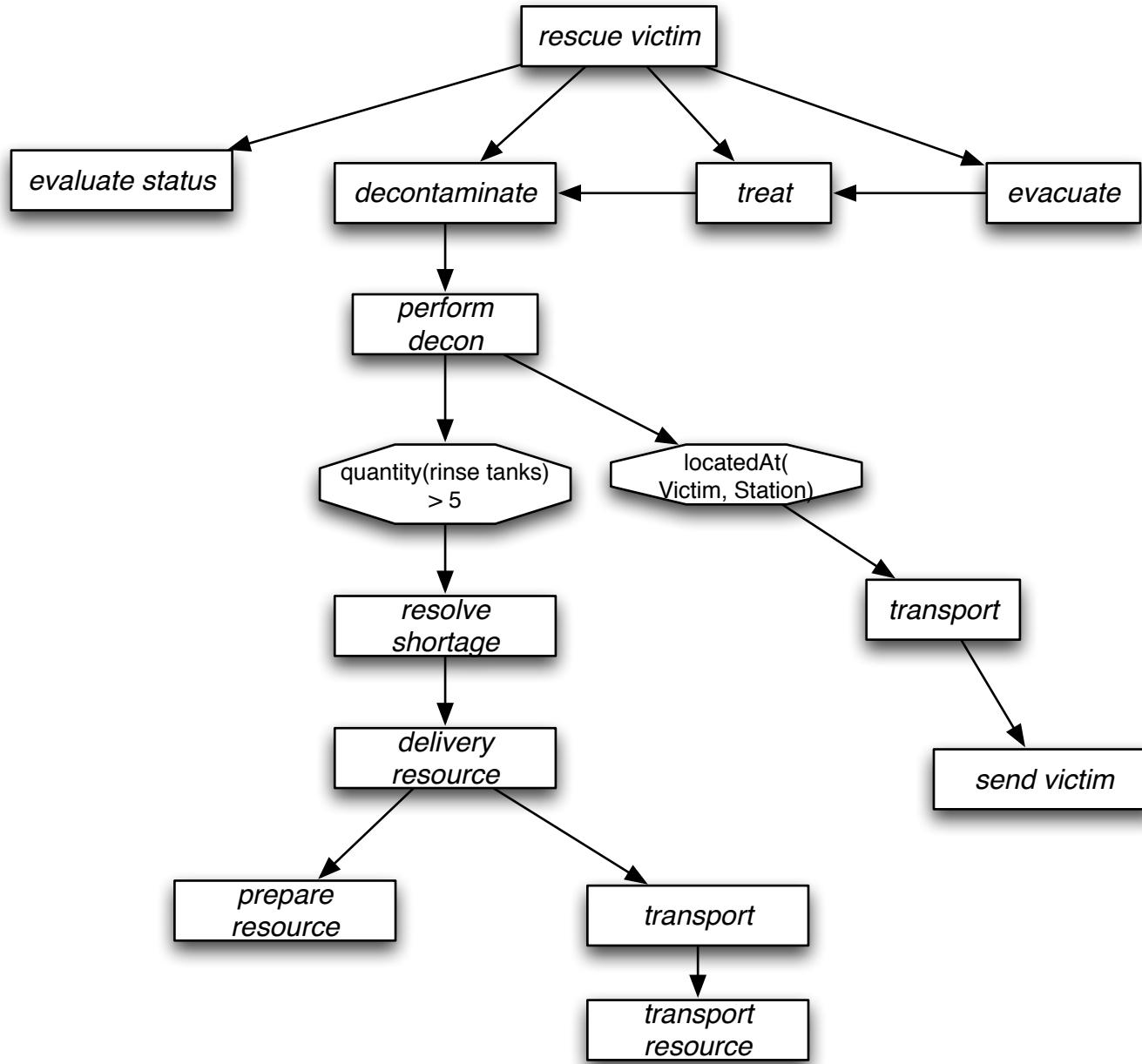
dependencies_ep2



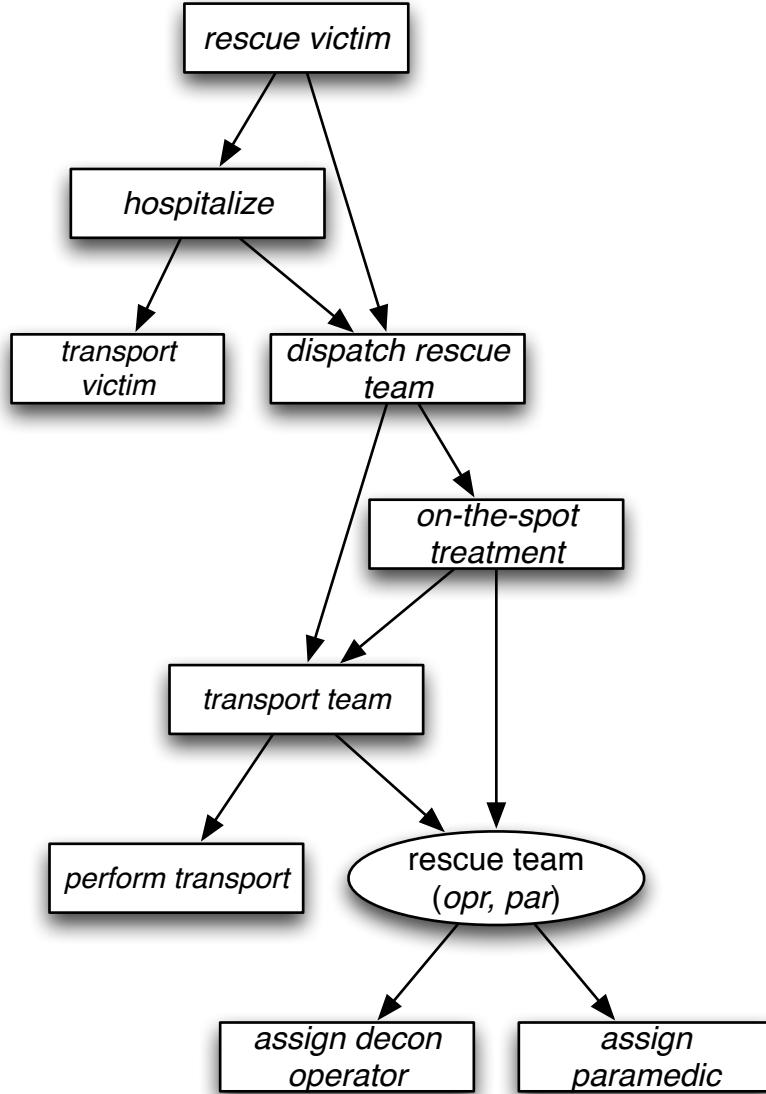
Local Scopes

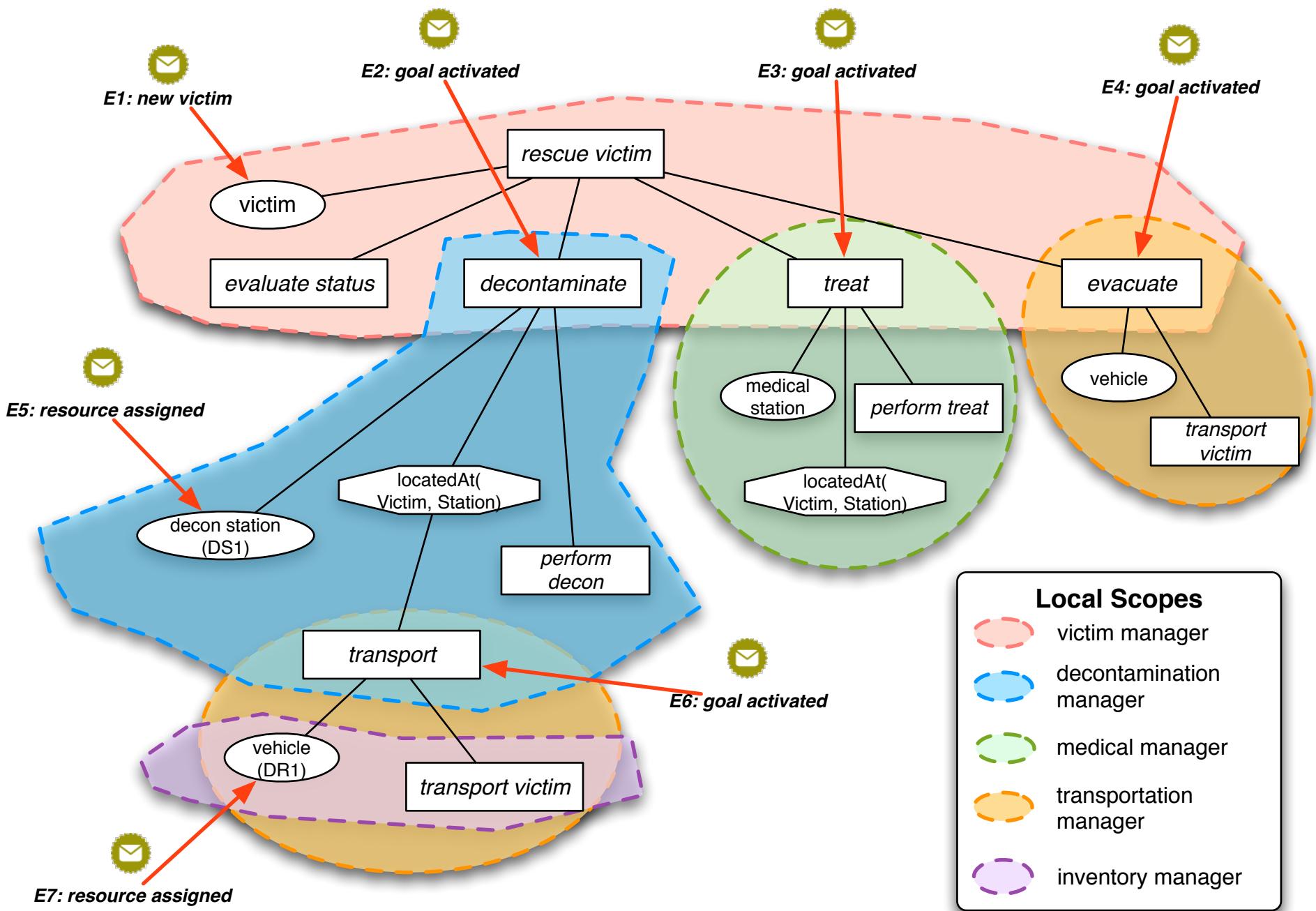
- victim manager
- decontamination manager
- medical manager
- transportation manager
- inventory manager

dependencies_ep3

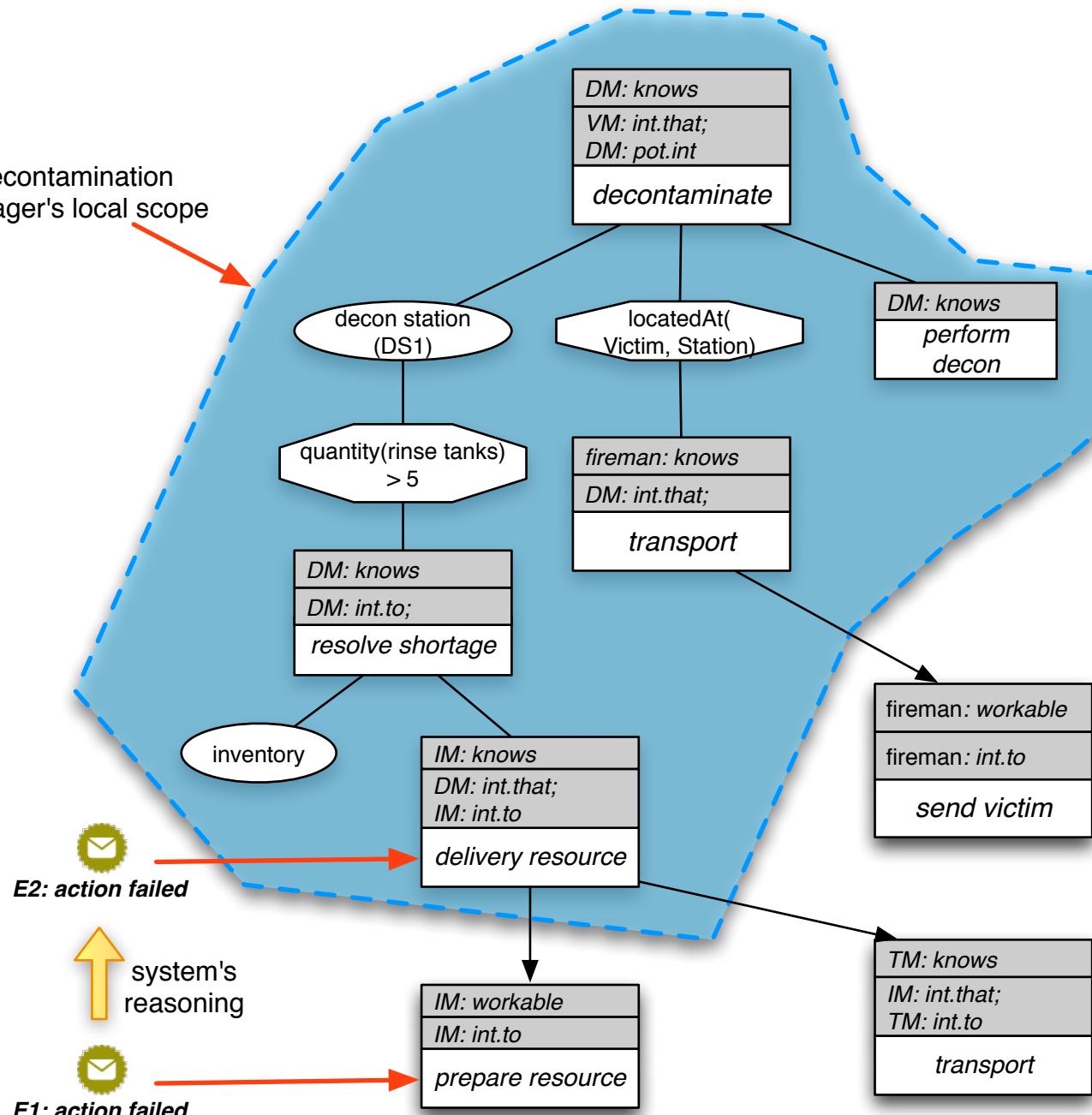


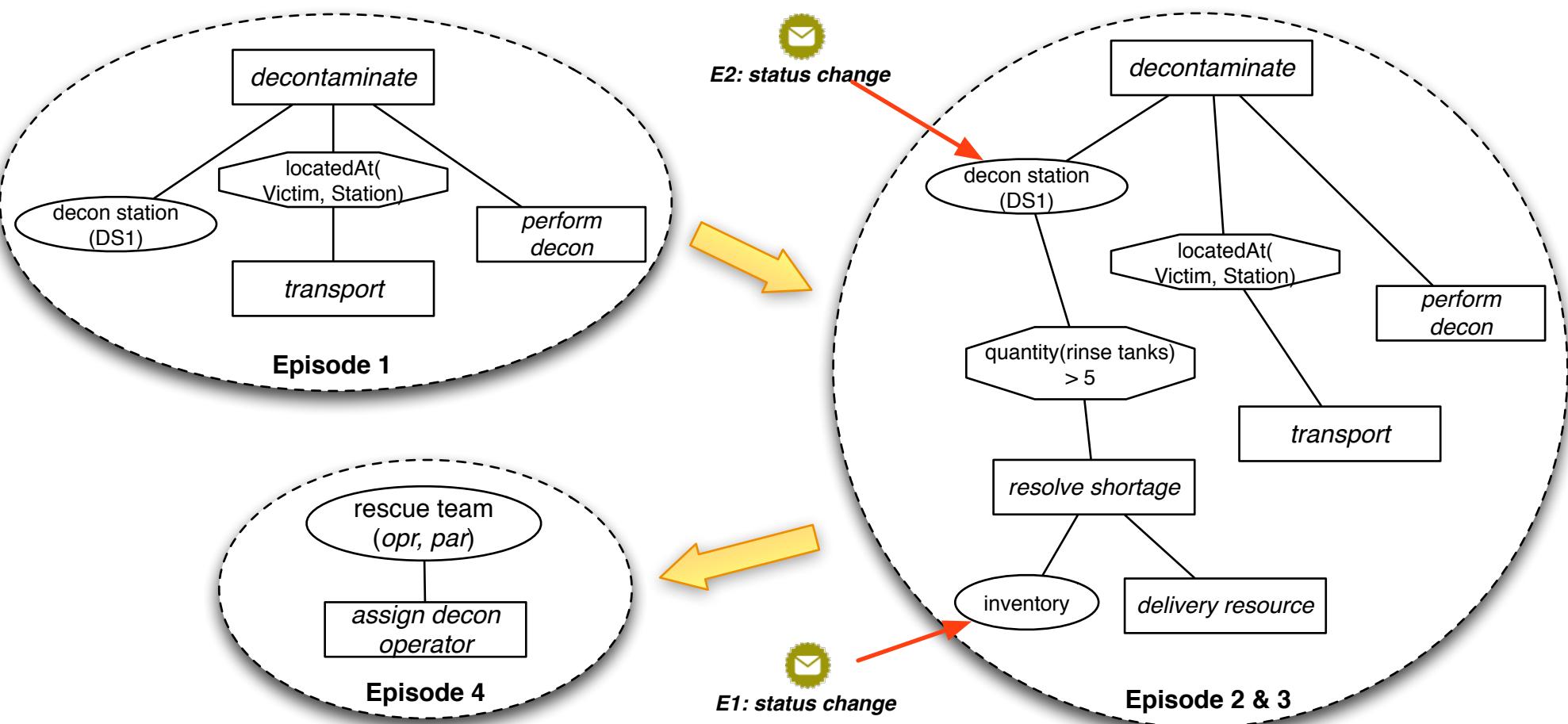
dependencies_ep4

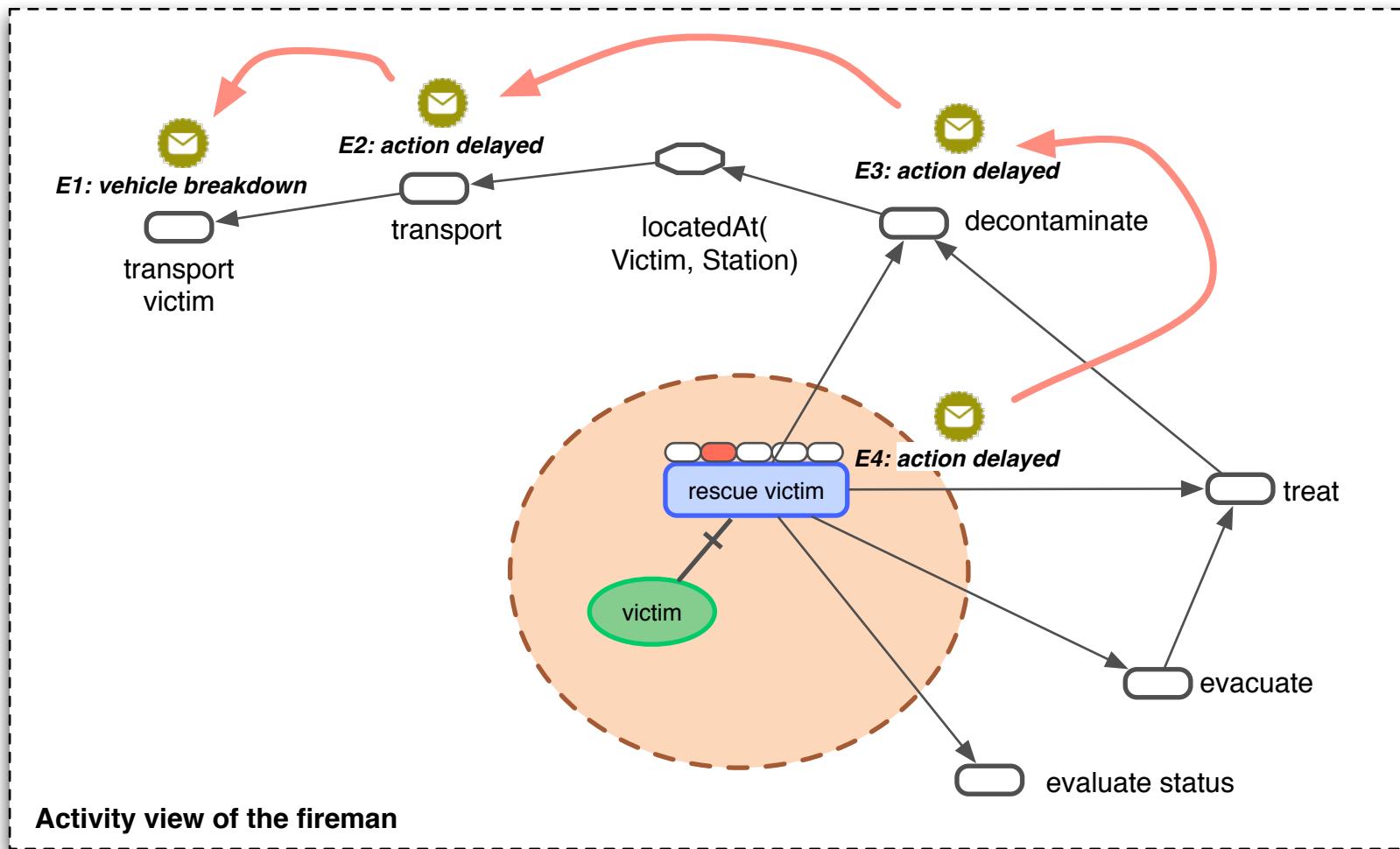




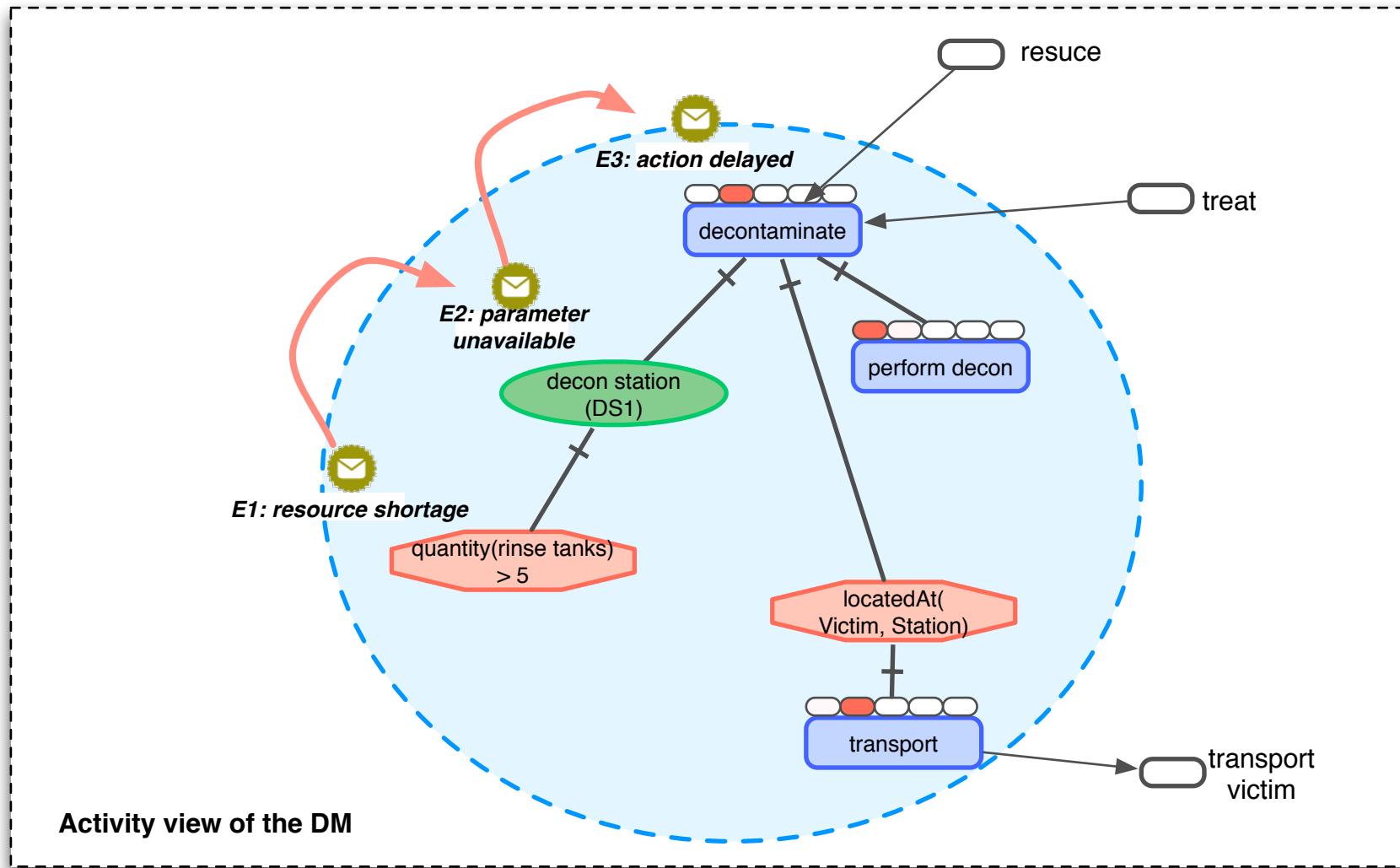
decontamination
manager's local scope

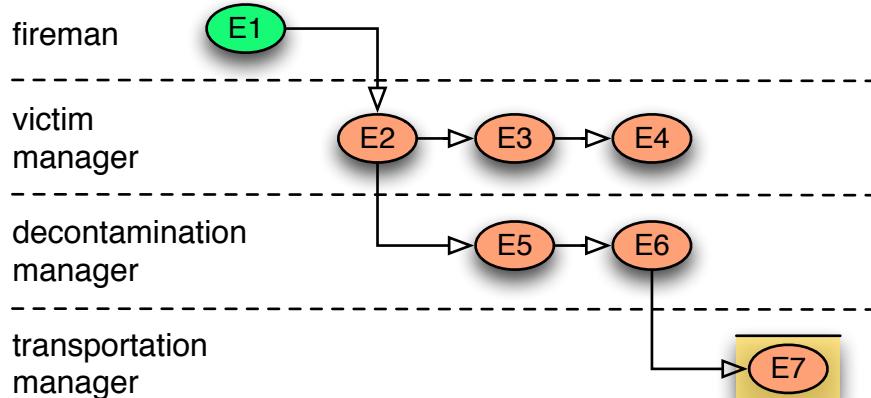




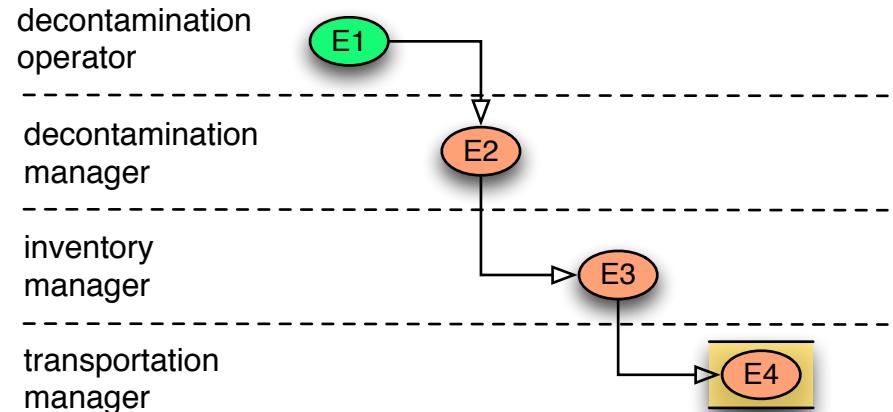


Activity view of the fireman

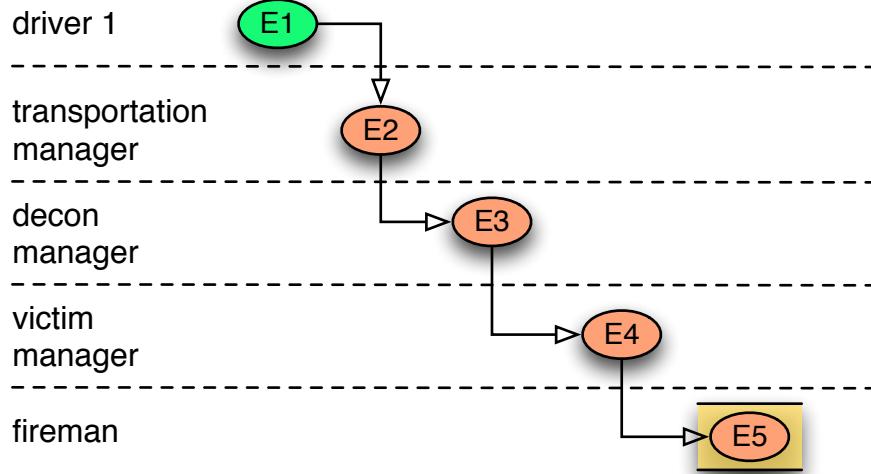




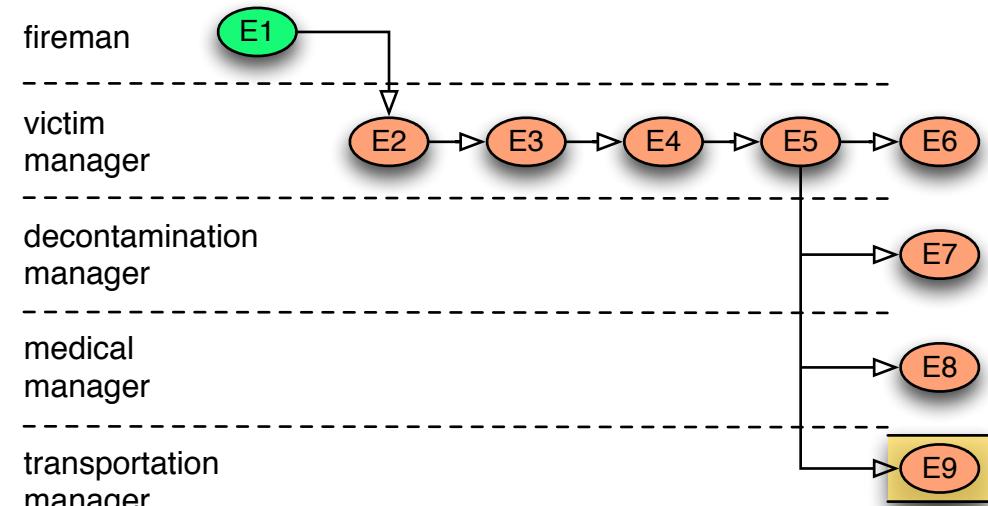
(a) E7 in Episode 1



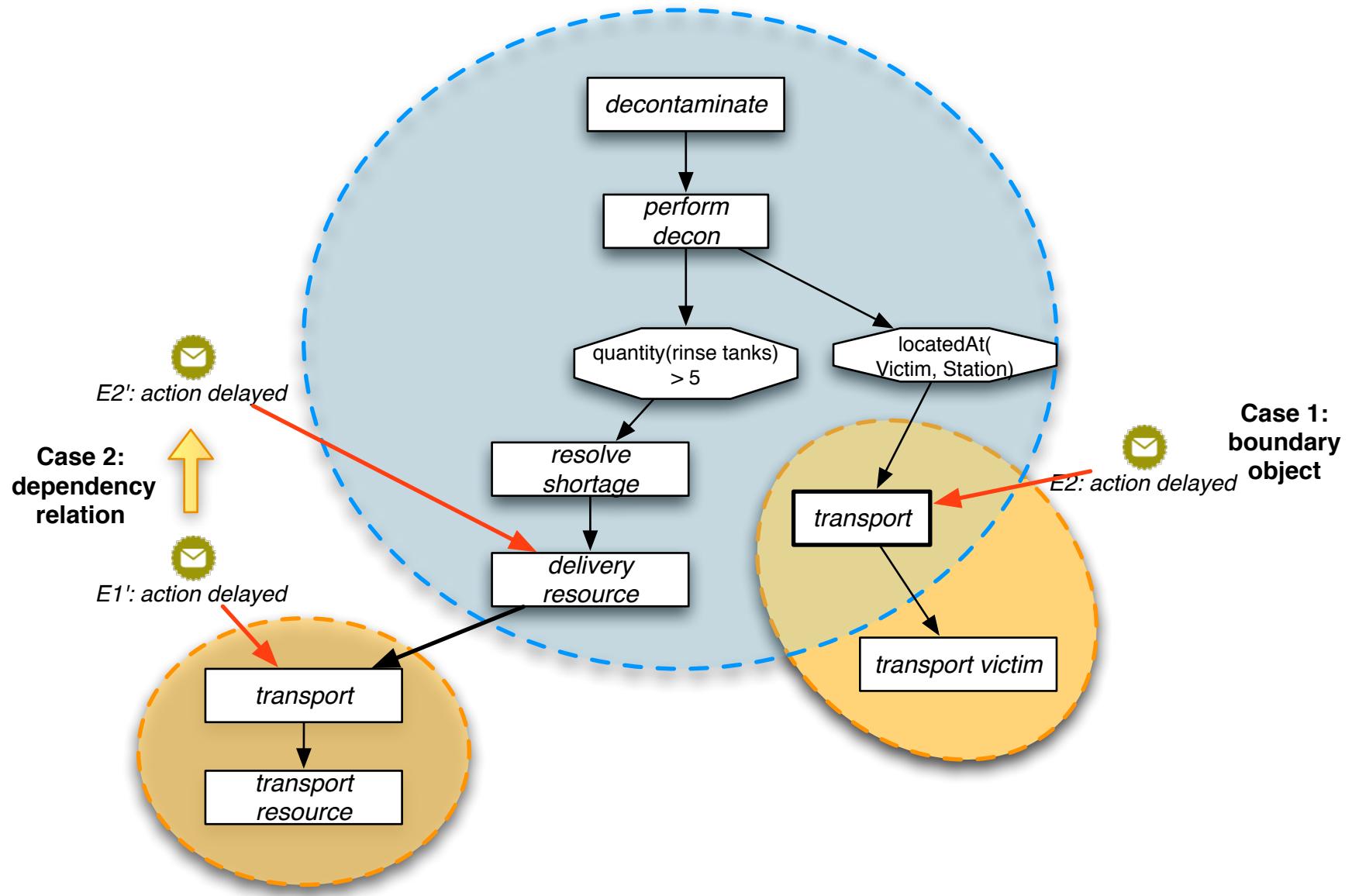
(b) E4 in Episode 2

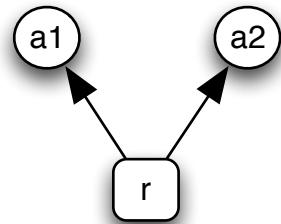


(c) E5 in Episode 3

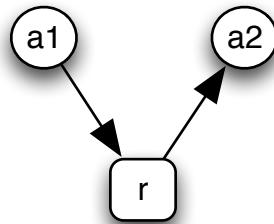


(d) E9 in Episode 4

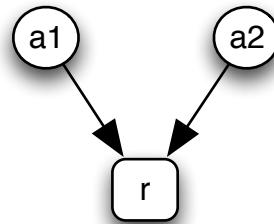




Shared Resource



**Producer/
Consumer**



Common Object

Actions

Resources

