

aspect CreateMission depends on Locatable, Initialize, ResourceAllocation, NetworkedCommand, BlockingQueue, Map, OptimalResourceSearch, WorkflowEngine

structural view

Mission

CreateMissionReceiver

CreateMissionCommand

*ResourceAllocation instantiation*

ITask → Mission

IResource → Initialize.Vehicle

IResource → Initialize.Worker

+ initialize(Crisis cr)  
- Mission getMission(Crisis cr)

WaitForCreateMissionStep

+ performStep()

Crisis cr  
MissionKind k  
String d  
+ CreateMissionCommand  
create(Location l, MissionKind k)  
+ execute()

*Initialize instantiation*

Initialize.Mission → Mission

Initialize.MissionKind → MissionKind

*BlockingQueue instantiation*

IElement → Mission

Queue → ReceiverQueue

ReceiverQueue

*Map instantiation*

Map.IData → CreateMissionReceiver

Map.IKey → Crisis

Map.IValue → ReceiverQueue

*Locatable instantiation*

Locatable → CreateMissionCommand

*NetworkedCommand instantiation*

IRemoteCommand → CreateMissionCommand

message view initialize instantiates Map.add

Advice

caller: Caller

target: Create  
MissionReceiver

initialize(cr)

Pointcut

caller: Caller

target: Create  
MissionReceiver

initialize(cr)

create()

add(cr, q)

create()

q: ReceiverQueue

I: CommandListener

message view execute instantiates Map.getValue, BlockingQueue.insert

Advice

caller: Caller

target: Create  
MissionCommand

execute()

Pointcut

caller:  
Caller

target: Create  
MissionCommand

execute()

*Binding*  
caller → \*  
Caller → \*  
target → \*

: CreateMission  
Receiver

newMission := create(k, d, l, 300)

q := getValue(cr)

insert(newMission)

newMission:  
Mission

q: ReceiverQueue

message view performStep

instantiates getValue, take, getKind, initRequiredResources, findFittest, allocateResources, launch

caller:  
Caller

target: WaitFor  
CreateMissionStep

performStep()

Pointcut

caller:  
Caller

target: WaitFor  
CreateMissionStep

performStep()

Advice

: CreateMission  
Receiver

q := getValue(cr)

m := take()

kind := getKind()

initRequiredResources(m)

solution := findFittest()

allocateResources(solution)

newWorkflow := getWorkflow()

launch(newWorkflow, m)

q: ReceiverQueue

m: Mission

kind:  
MissionKind

theEngine:  
WorkflowEngine

*Binding*  
caller → \*  
Caller → \*  
target → \*