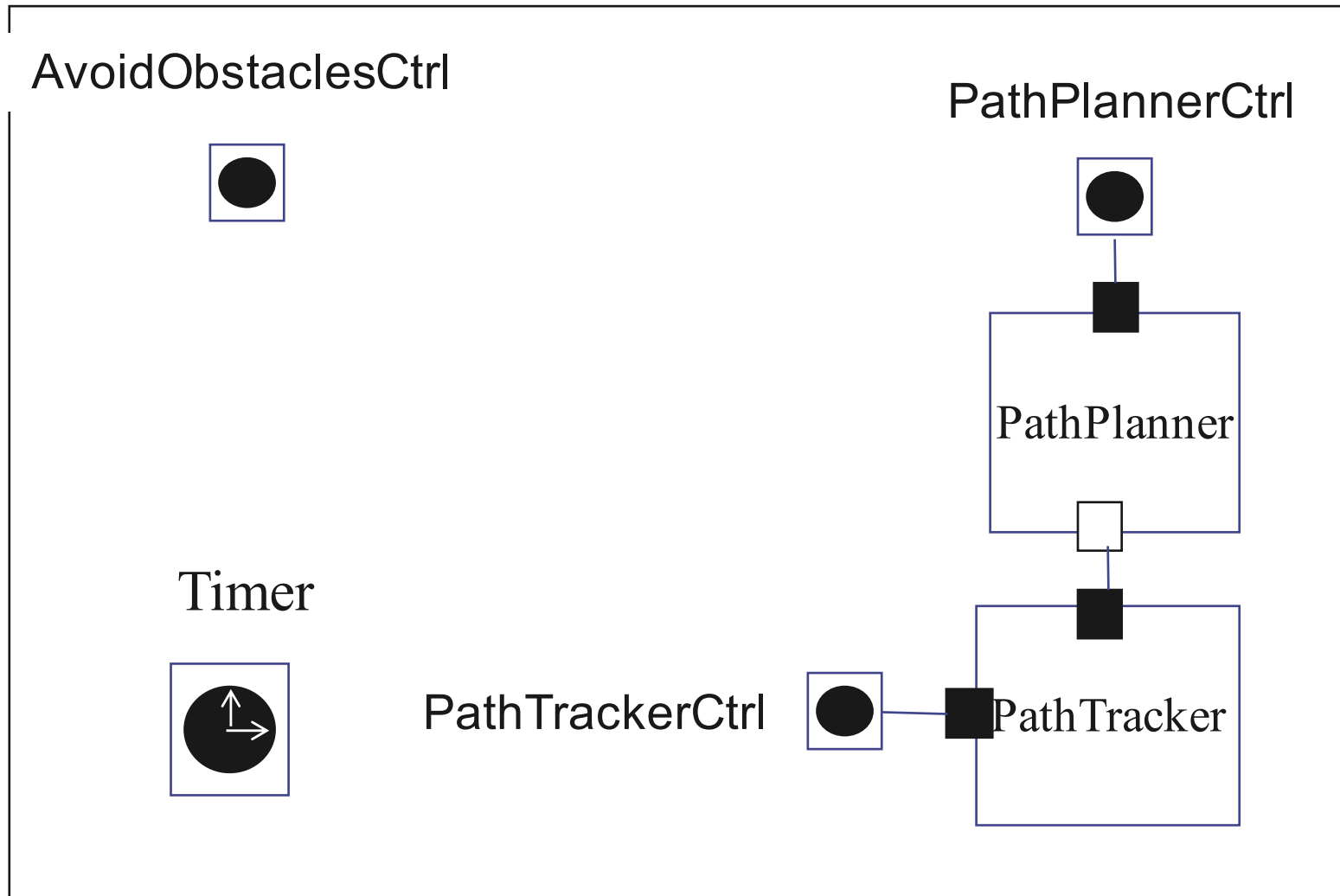


# Práctica 6\_1

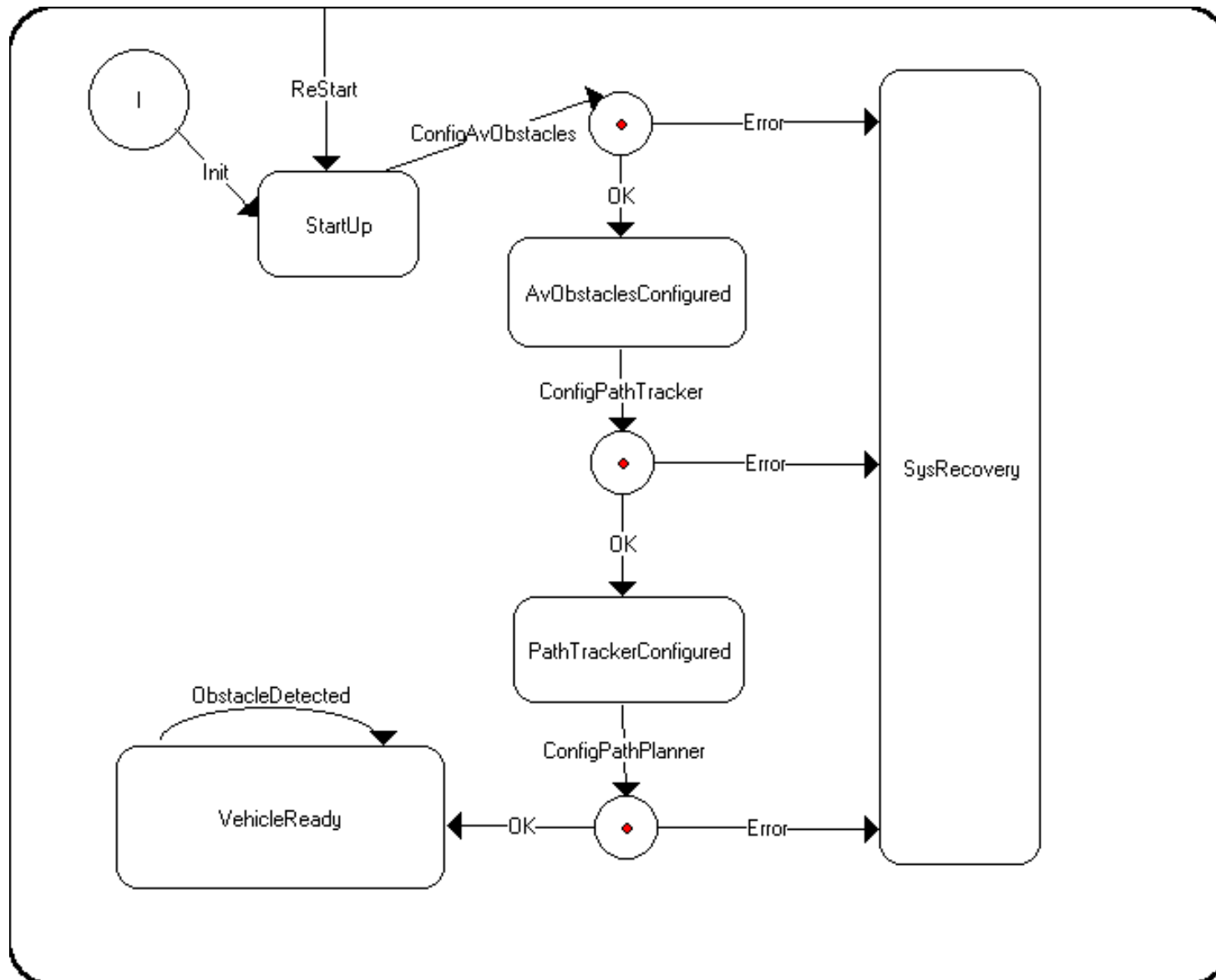
Óscar Rodríguez Polo  
Dpto. de Automática. ATC.

# Situación inicial

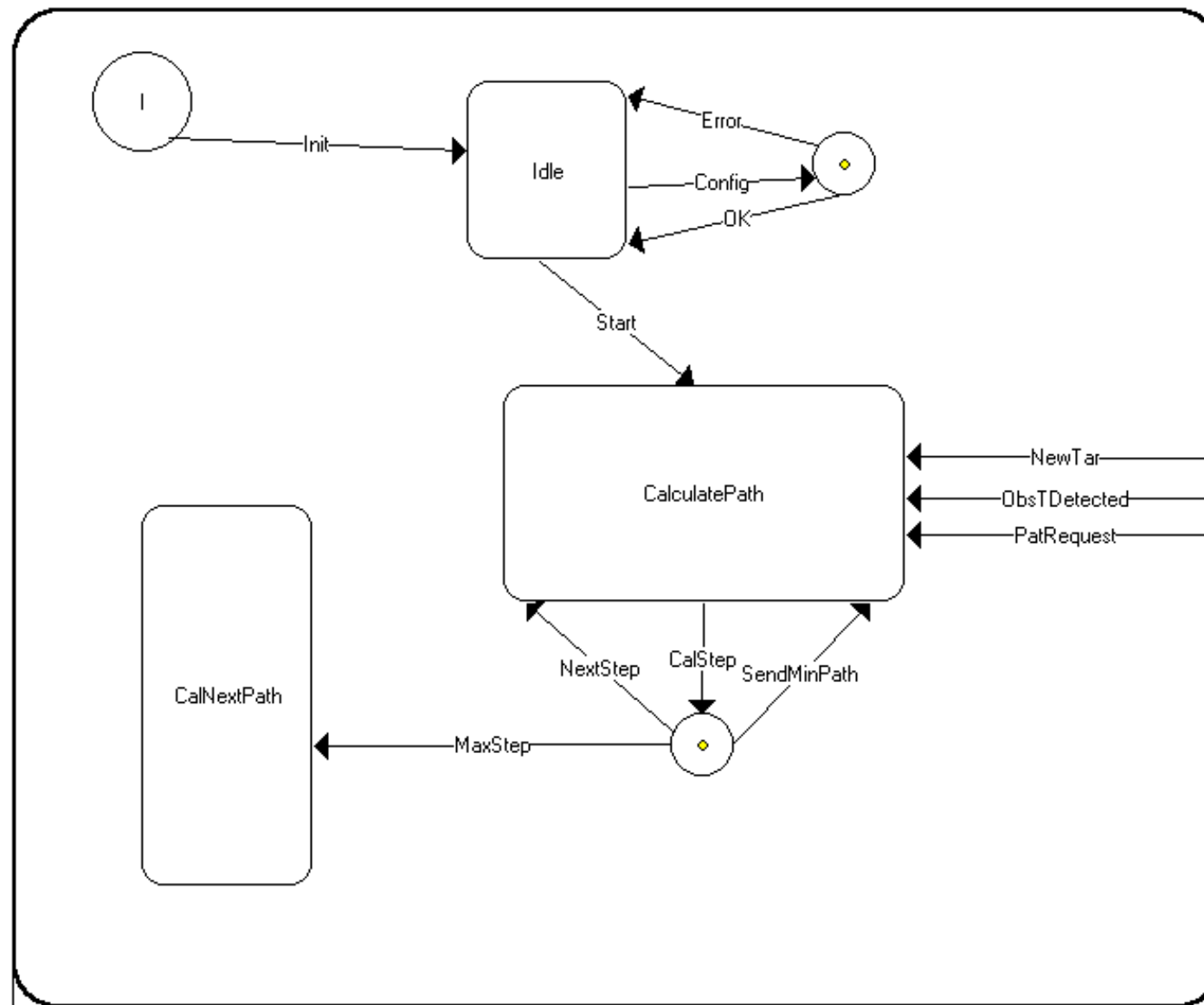
## Vehicle



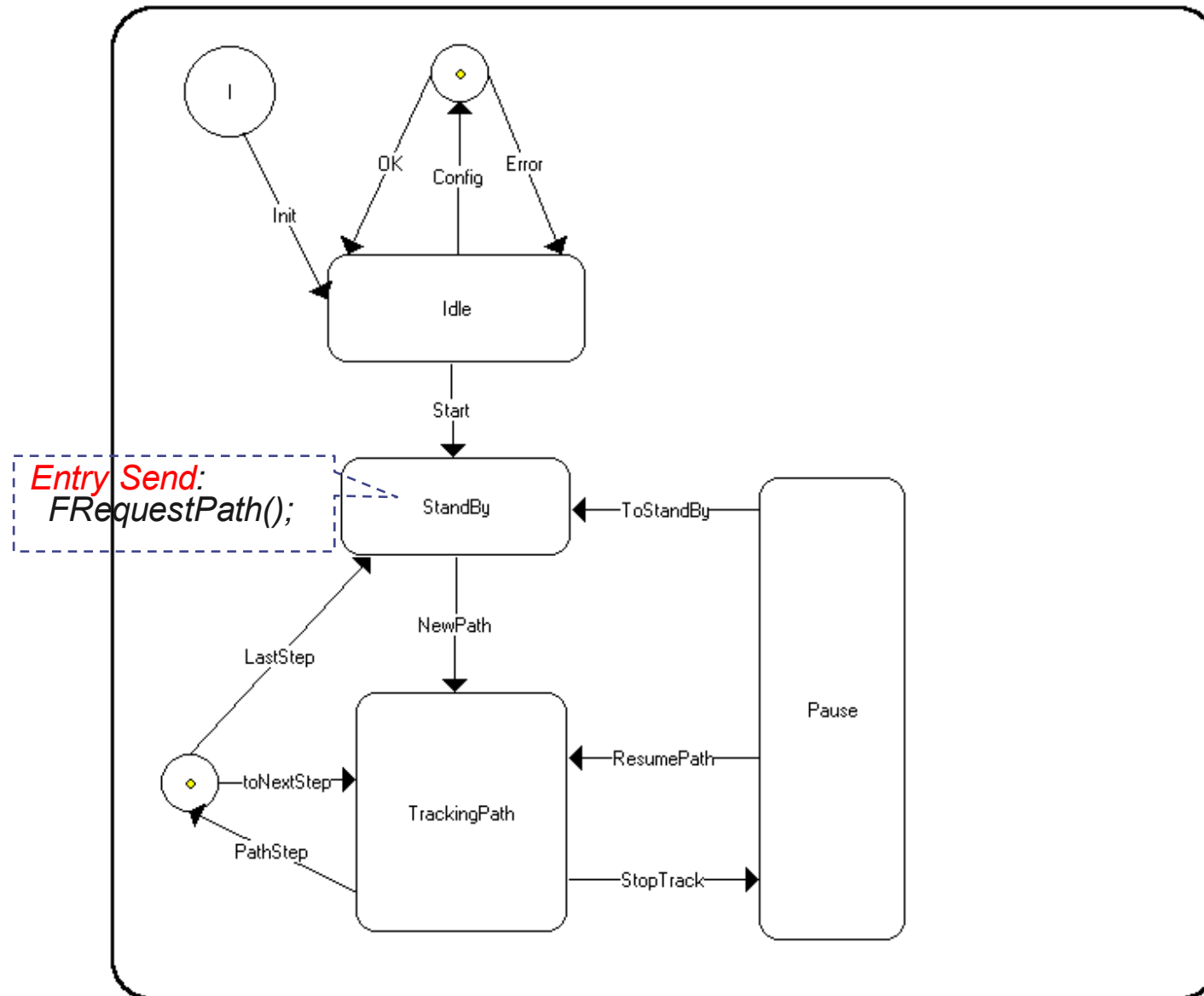
# Vehicle::Behaviour



# CCPathPlanner::Behaviour

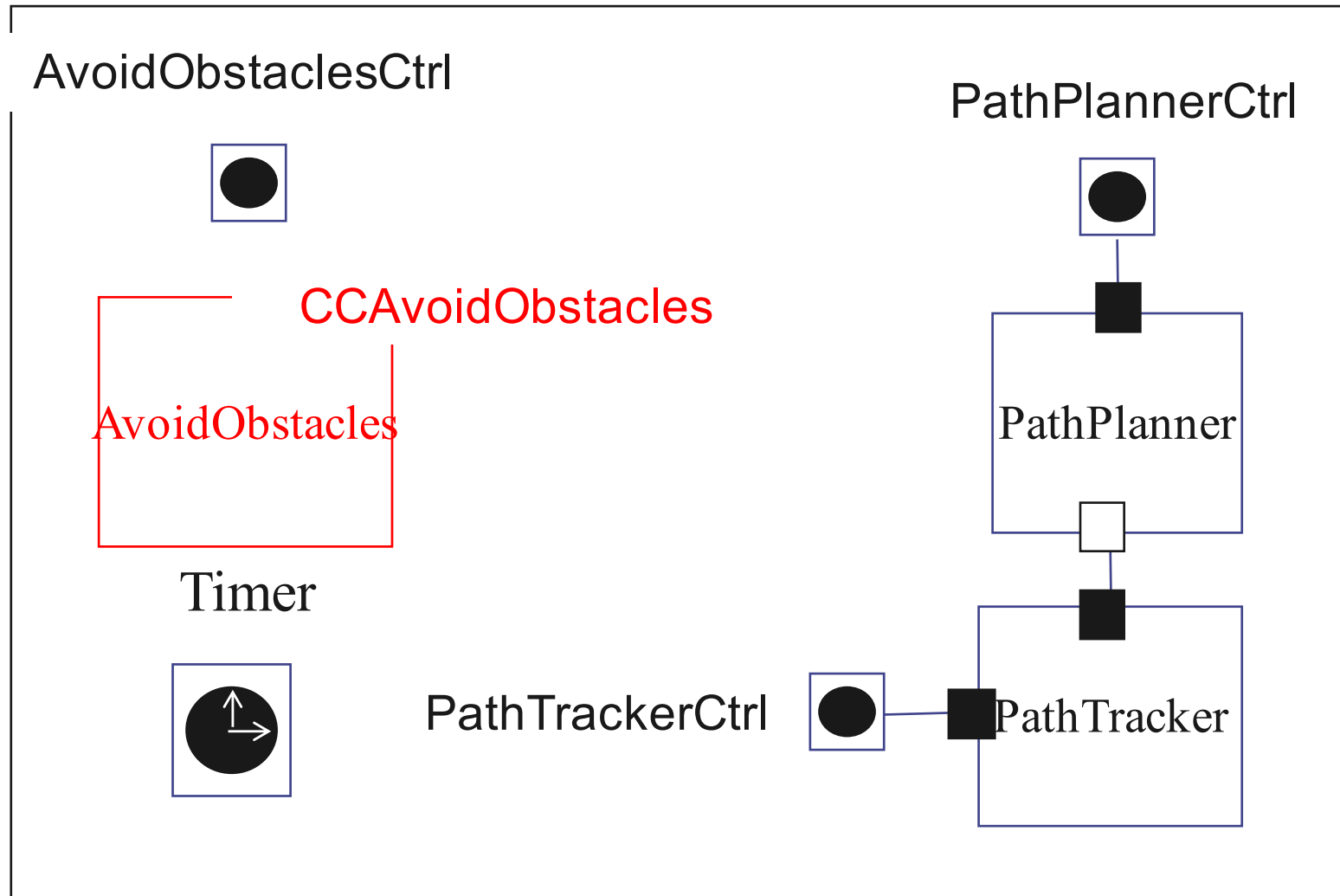


# CCPathTracker::Behaviour



# Trabajo a Realizar

## Vehicle



# Trabajo a Realizar

---

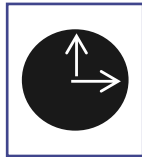
CCAvoidObstacles

:CPAvoidObstaclesCtrl



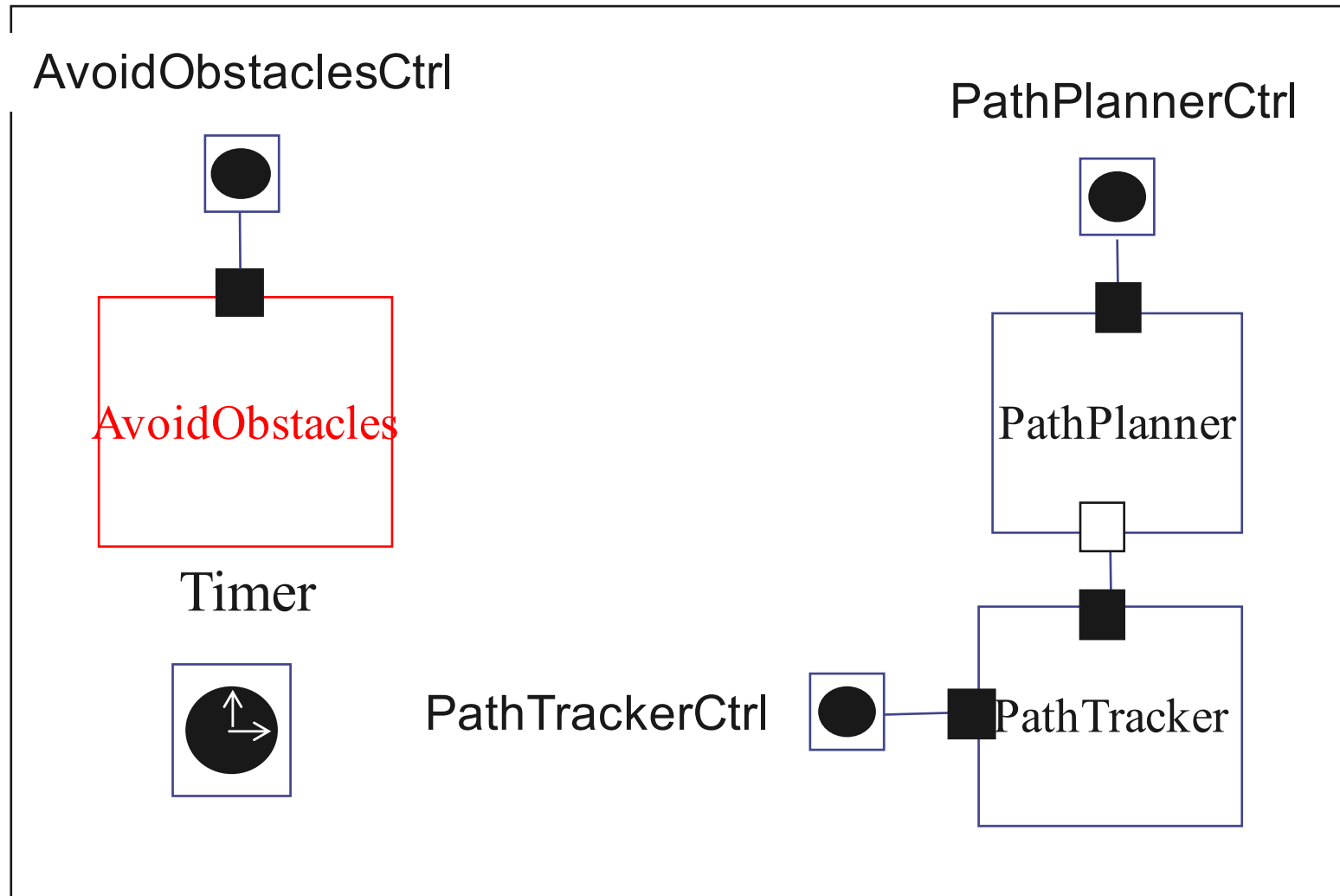
AvoidObstaclesCtrl

Timer



# Trabajo a Realizar

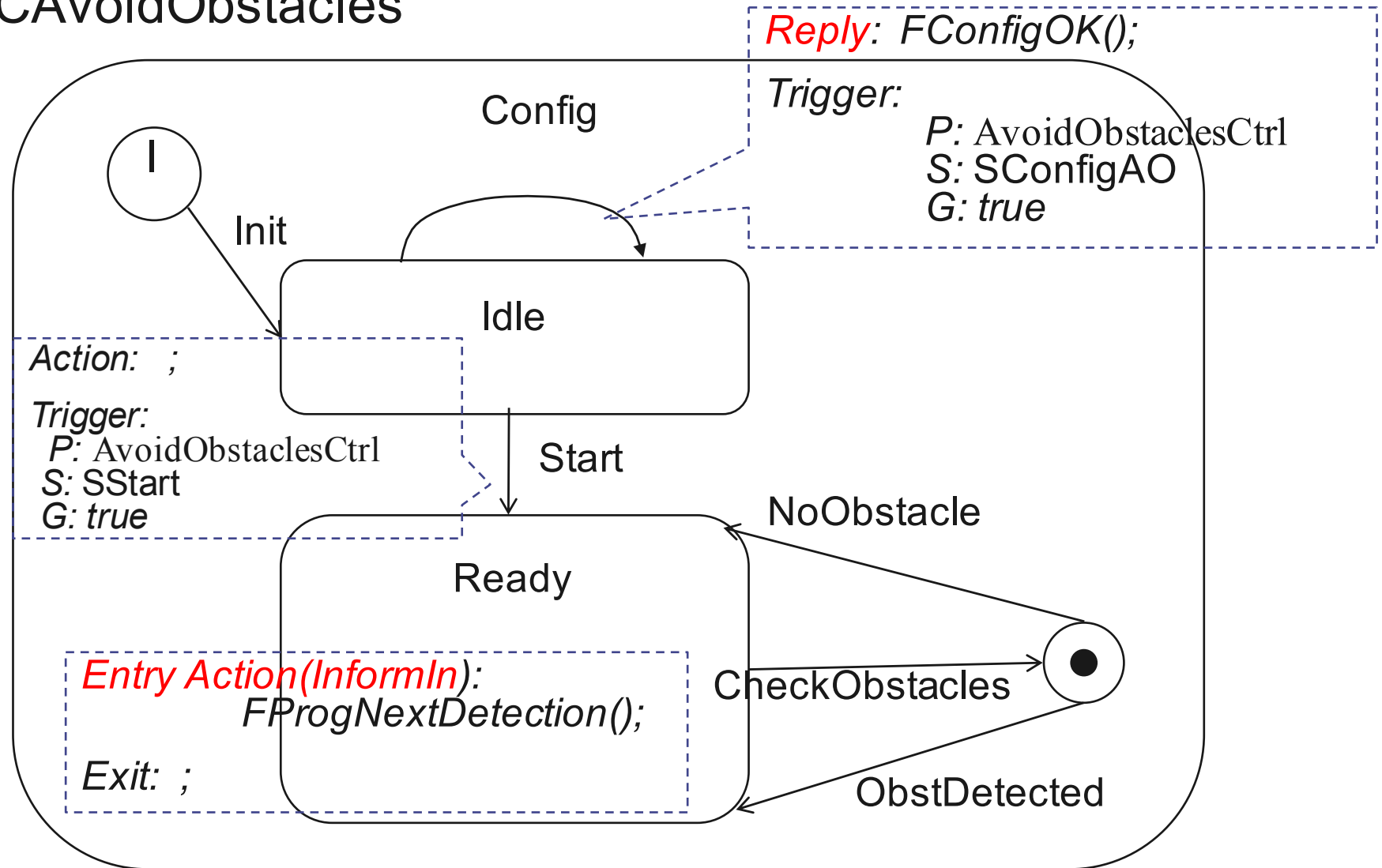
## Vehicle





# Trabajo a Realizar

## CCAvoidObstacles



# Trabajo a Realizar

---

## CCAvoidObstacles

```
void FConfigOK (){  
    Msg->reply(SConfigOK);  
}
```

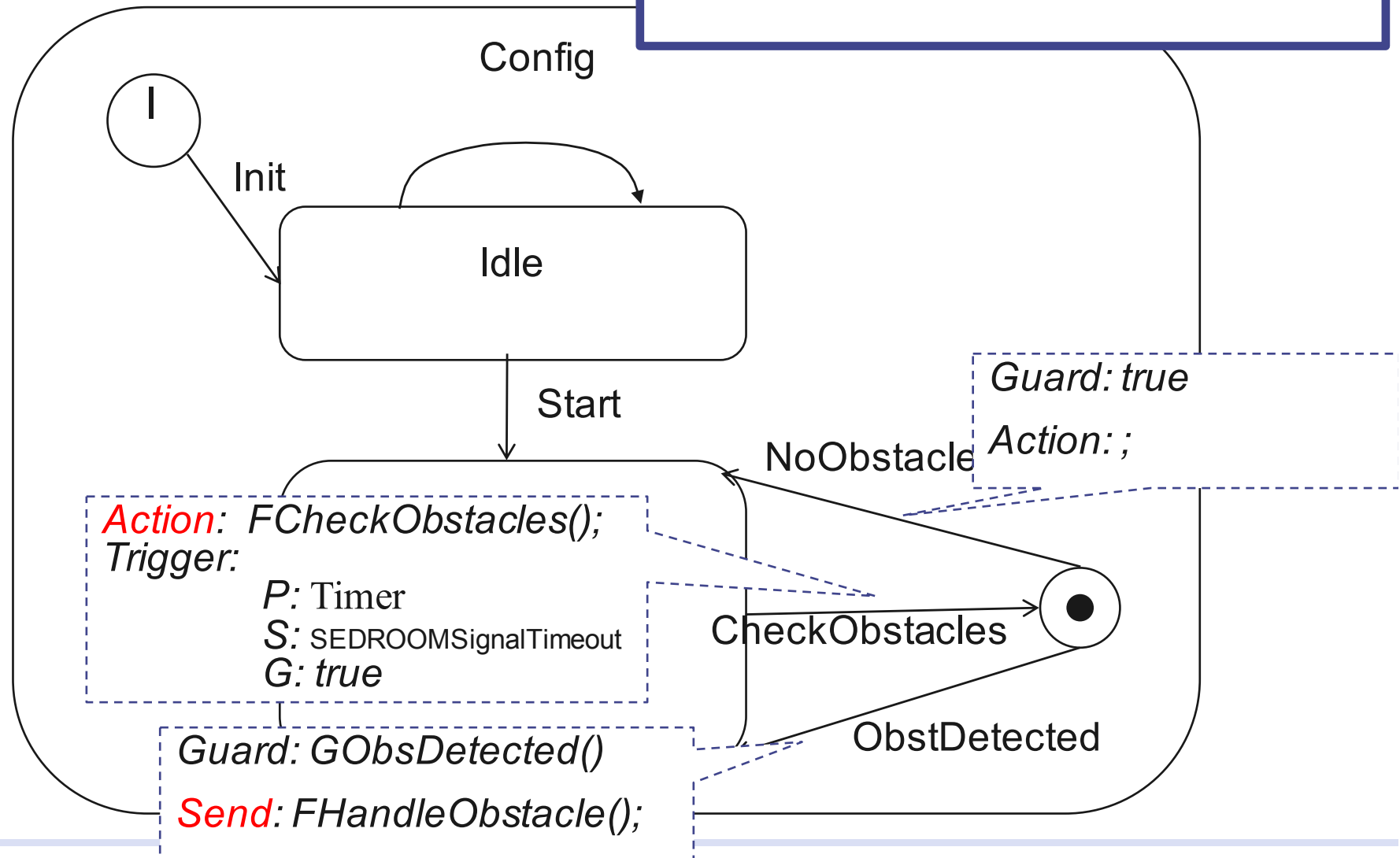
```
void FProgNextDetection (){  
    Pr_Time interval;  
    interval=Pr_Time(0,50000);  
    Timer.InformIn(interval);  
}
```

# Trabajo a Realizar

CCAvoidObstacles

Vars:

*TEDROOMBool VObsDetected;*



# Trabajo a Realizar

## CCAvoidObstacles

```
void FCheckObstacles (){  
    io_ctrl_check_obstacles();  
    VObsDetected=sensors_check_obstacles();  
}
```

**Module MESP SWI: io\_ctrl\_iface (v1)**

**Module MESP SWI: sensors\_iface (v1)**

```
TEDROOMBool GObsDetected(){  
    return (VObsDetected);  
}
```

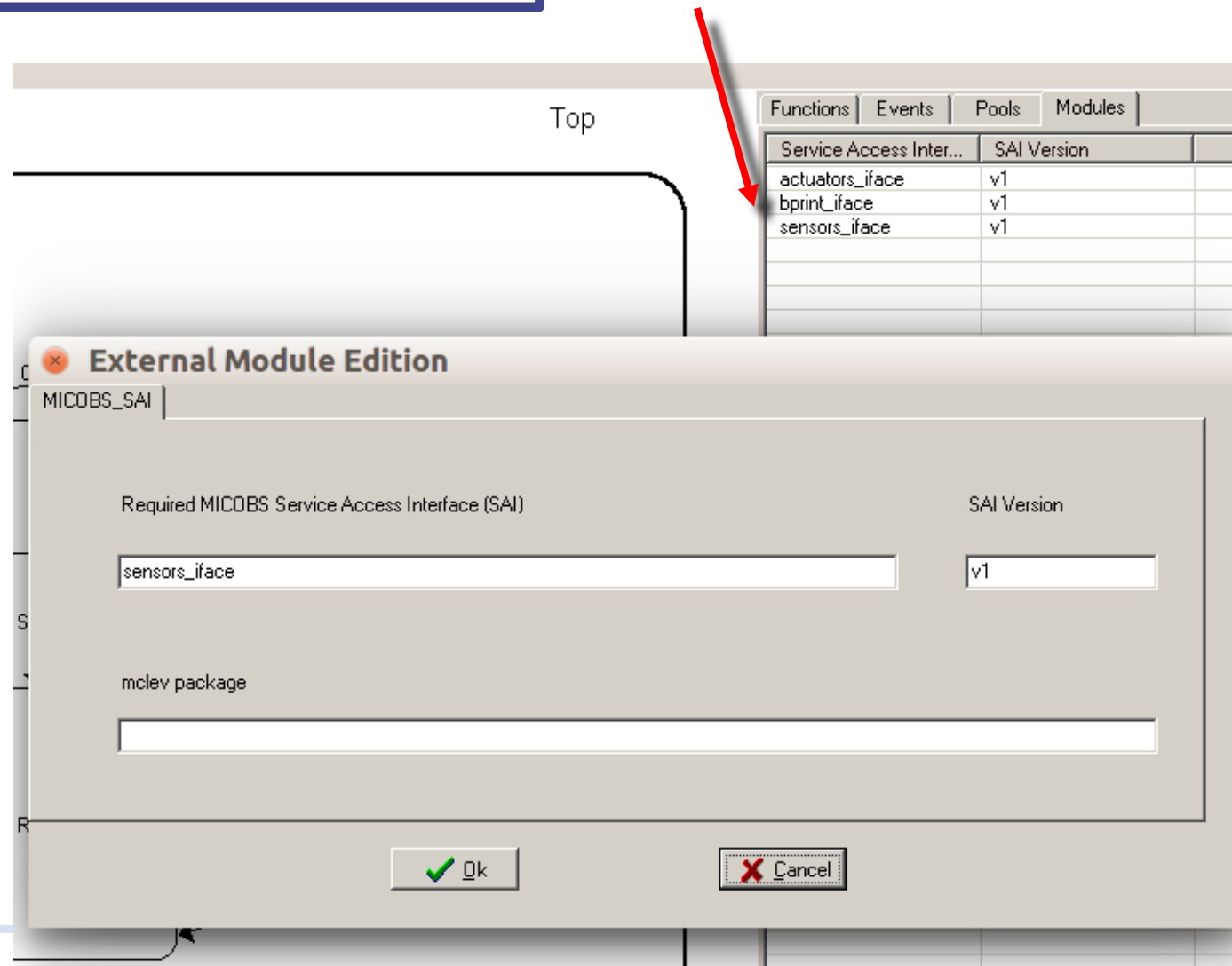
```
void FHandleObstacle(){  
    io_ctrl_detect_obstacle();  
    actuators_halt();  
    AvoidObstaclesCtrl.send(SObstacleDetected);  
}
```

**Module MESP SWI: actuators\_iface(v1)**

# Añadir módulos externos

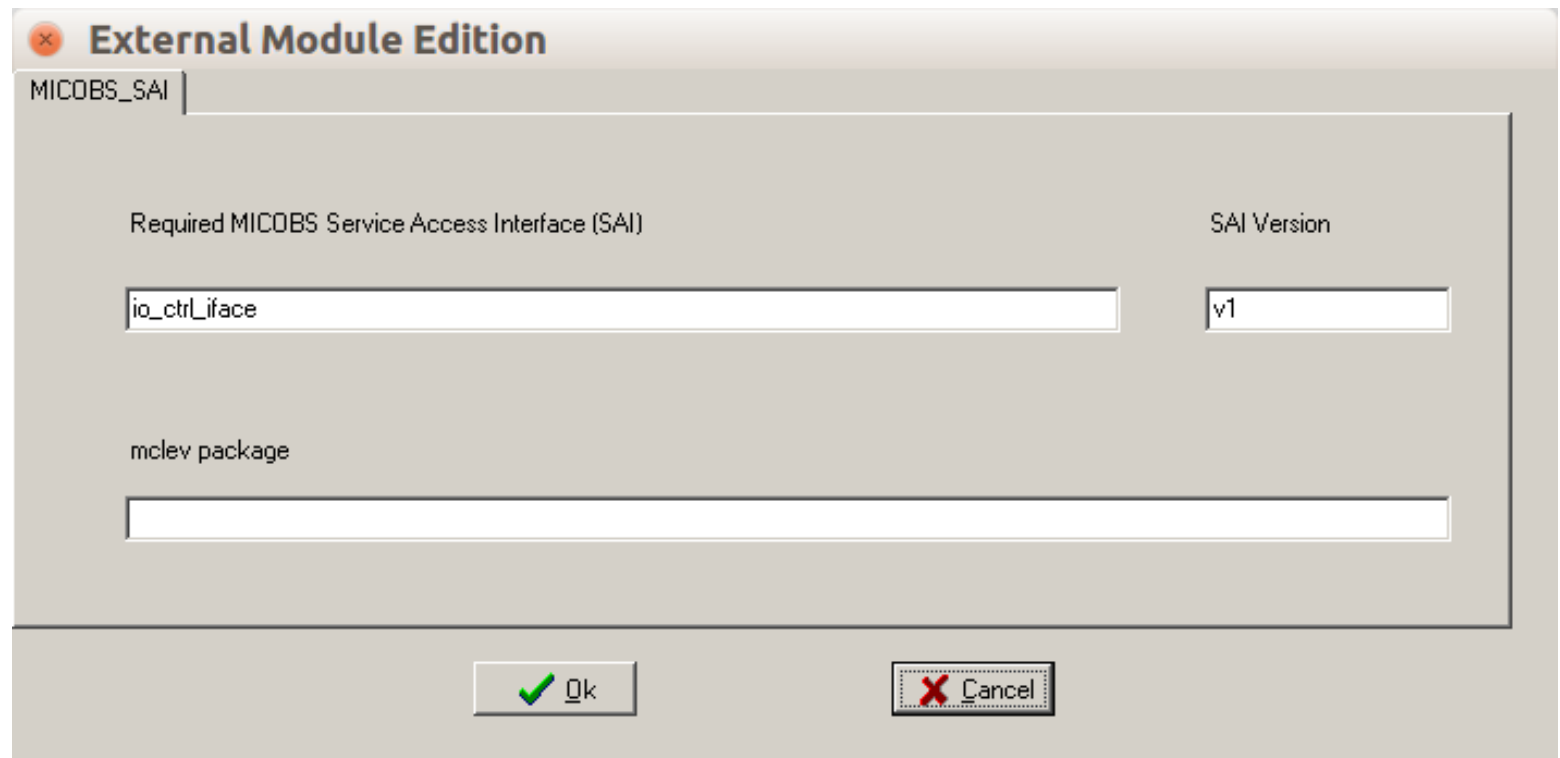
**Module MESP SWI:** *sensors\_iface* (v1)

*New MESP SWI*



# Añadir módulos externos

**Module MESP SWI:** *io\_ctrl\_iface* (v1)



The image shows a software dialog box titled "External Module Edition". It has a tab labeled "MICOBS\_SAI". Inside the dialog, there are two input fields: "Required MICOBS Service Access Interface (SAI)" containing the text "io\_ctrl\_iface" and "SAI Version" containing the text "v1". Below these, there is a label "mcleve package" followed by an empty input field. At the bottom of the dialog, there are two buttons: "Ok" with a green checkmark icon and "Cancel" with a red X icon.

Required MICOBS Service Access Interface (SAI)	SAI Version
io_ctrl_iface	v1

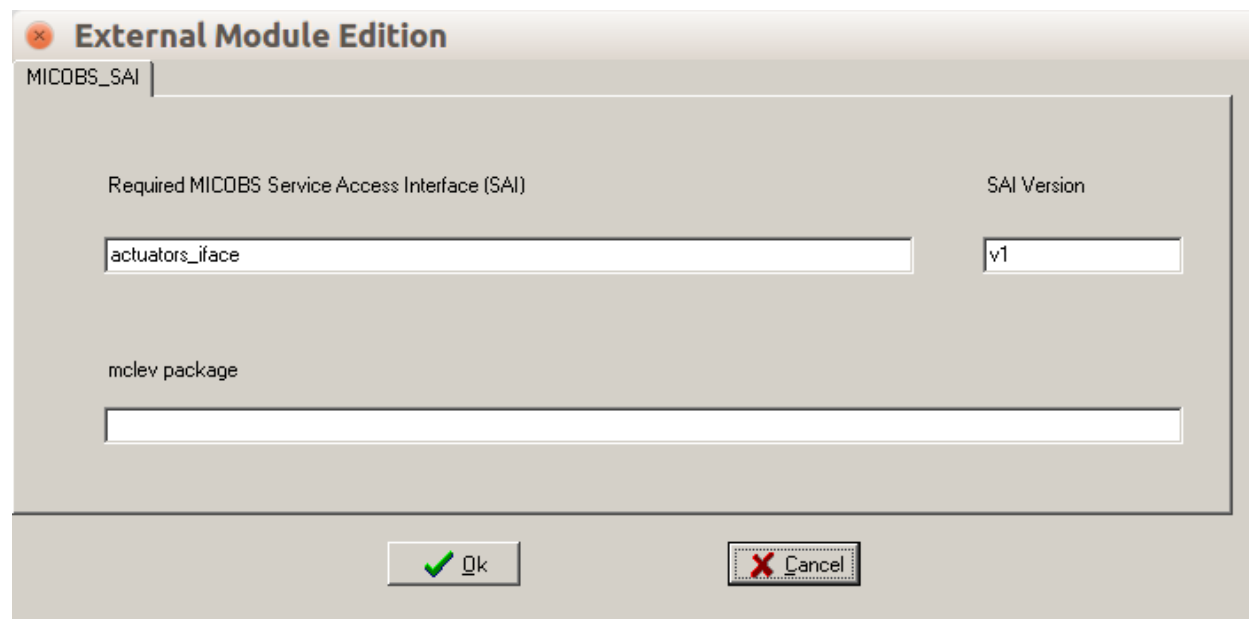
mcleve package

Ok Cancel

# Añadir módulos externos

---

**Module MESP SWI:** *actuators\_iface(v1)*



The image shows a software dialog box titled "External Module Edition". It has a tab labeled "MICOBS\_SAI". Inside the dialog, there are two input fields. The first is labeled "Required MICOBS Service Access Interface (SAI)" and contains the text "actuators\_iface". The second is labeled "SAI Version" and contains the text "v1". Below these fields is a label "mcleb package" followed by an empty text box. At the bottom of the dialog, there are two buttons: "Ok" with a green checkmark icon and "Cancel" with a red X icon.









Required MICOBS Service Access Interface (SAI)	SAI Version
actuators_iface	v1

mcleb package

Ok Cancel

# Añadir vuestros archivos al proyecto

---

- ▼  leon3\_bprint
  - ▼  include
    - ▶  leon3\_bprint.h
    - ▶  leon3\_types.h
    - ▶  leon3\_uart.h
  - ▼  src
    - ▶  leon\_bprint.c
    - ▶  leon3\_uart.c

No copies directorios!!!  
Problemas con metadatos  
de SVN  
Copiad archivo a archivo



# Interpretación mensajes

---

- Mensajes

sss (cada 's' es un step calculado)

. (. chequeo de obstáculos)

MAX ( se alcanza el máximo de steps)

x (el tracker pide un path al planner)

+n (step n aplicado del path recibido)

OBST (obstáculo detectado)

# Salida esperada

---

basic hw checking		
power on sensors		MAX
power on actuators		
	+2	
Power off all subsystems	x	
Restart in 10 seconds-----		
	+0..s..s..s	
basic hw checking		
power on sensors	+1..s..s..	
power on actuators		
		OBST
Power off all subsystems		
	s..s..s	
Restart in 10 seconds-----	x	
basic hw checking		
power on sensors	+0..s..s..	
power on actuators		
Error in Planner Config		OBST
Power off all subsystems		
	s..s..s	
	x	
Restart in 10 seconds-----		
basic hw checking	+0..s..s..s	
power on sensors		
power on actuators	+1..s..s..s	
..s..s..s		
		MAX
+0..s..s..s..s		
	+2	
+1..s..s..s..s	x	
	+0..s..s..s..s	