

EDROOM UAH EXPLORER

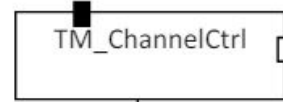
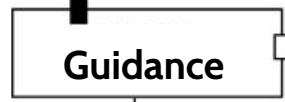
Eduardo Jiménez Cerezuela

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1. Escenarios a añadir al Modelo EDROOM
2. Definición de la clase Procolo a añadir al Modelo EDROOM
3. Diseño de la interfaz de la clase componente CCGuidance
4. Diseño del comportamiento de la clase componente CCGuidance

1. Escenarios a añadir al Modelo EDROOM

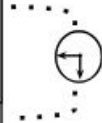
Timing
Event



EvGuidance (GuidanceTimer)



FDoGuidance



EvGuidance

Timer Programming

FInvokeTxTMList()

STxTM

CDTMList

FTxTMList()

FReplyTMQueued()

STMQueued

Escenario
EvGuidance

EvGuidance_DeadLineMark

Escenario EvAcceptedTC

EvAcceptedTC



Explorer Manager

FInvokeTxTMList

STxTM

CDTMList

STMQueued

GToReboot()

Yes

No

Yes

No

FwdGuidanceTC()

EvToReboot

EvGuidanceTC

EvPrioTC

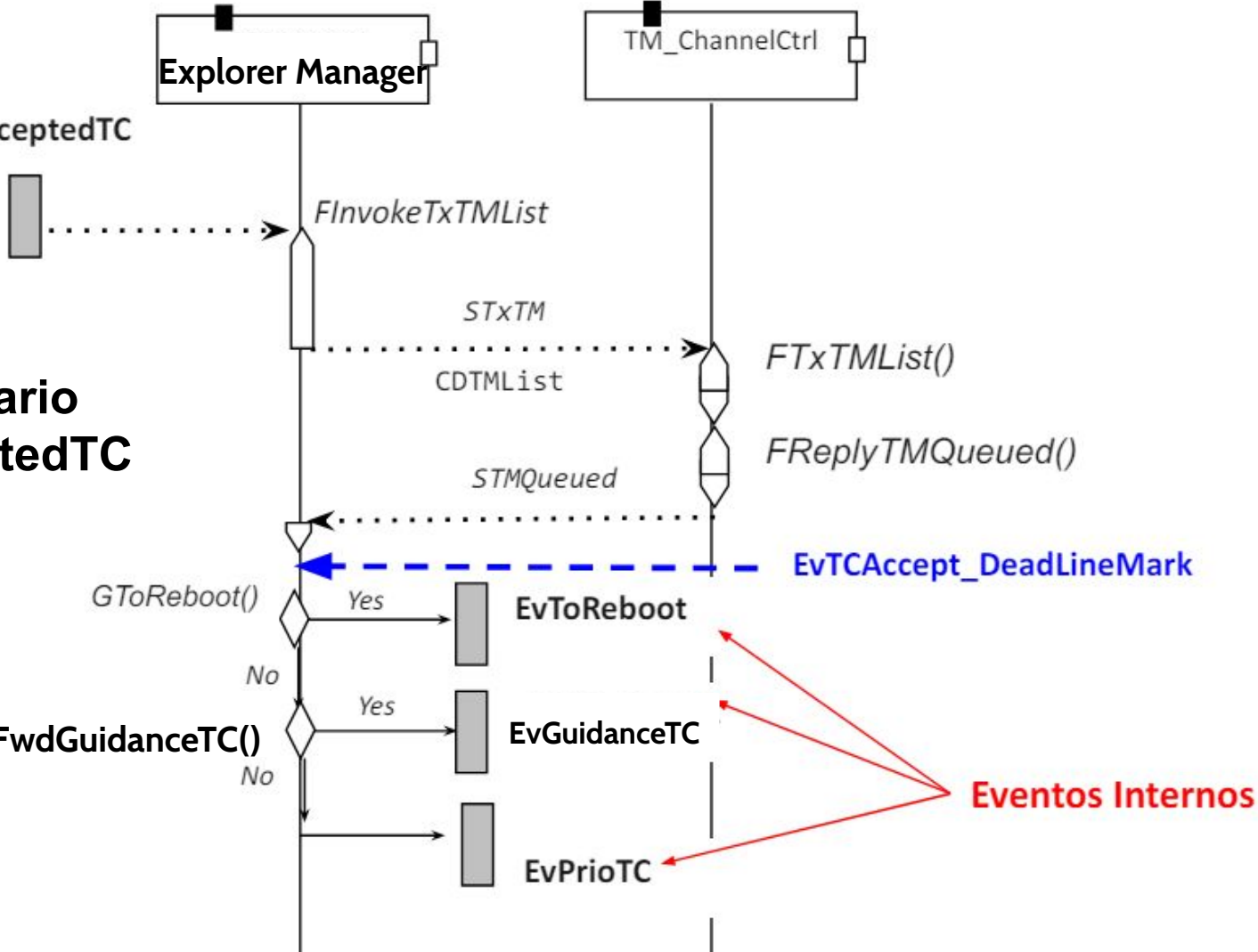
TM_ChannelCtrl

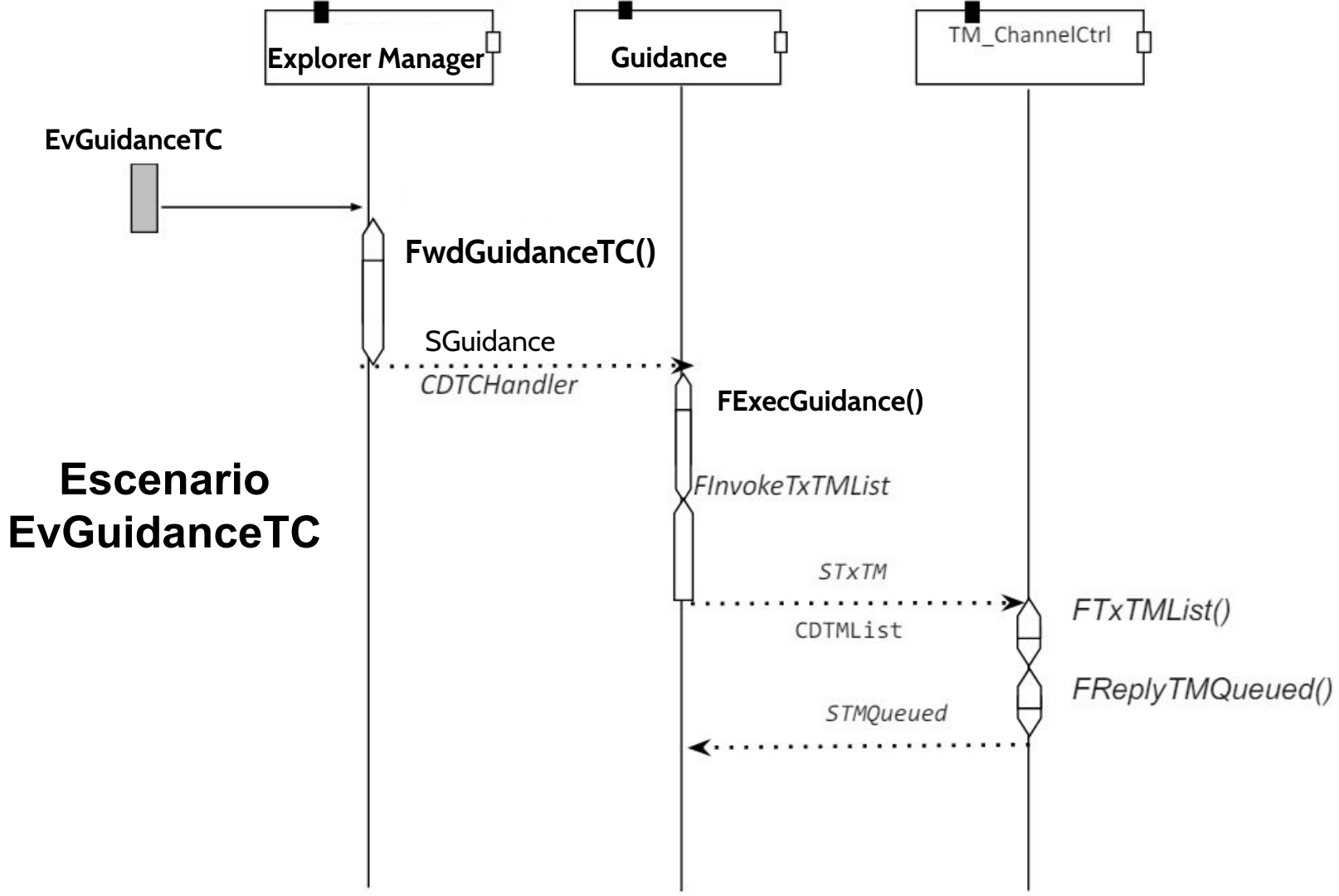
FTxTMList()

FReplyTMQueued()

EvTCAccept_DeadLineMark

Eventos Internos





2. Definición de la clase Procolo a añadir al Modelo EDROOM

CPGuidanceCtrl



In/Out

Signal

Data

In

SGuidance

CDTCHandler

Name:

Design | Analysis

Input Messages : Output Messages: Protocol Brief

SGuidance

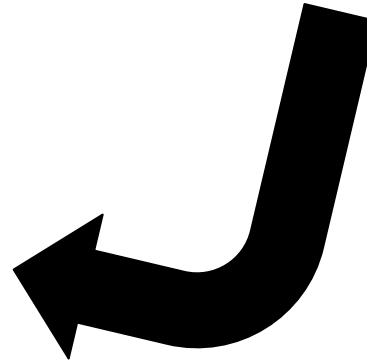
Message Edition Box

Signal Name:

Data Class :

☐ Synchronous Invoke ☒ Asynchronous

☐ Synchronous Reply To ---->



3. Diseño de la interfaz de la clase componente CCGuidance

CCGuidance

Guidance



GuidanceTimer



TMChannelCtrl



Puerto nominal

UAHExplorer

ExplorerManager

Mng

Guidance

BSGTExec

TM_ChannelCtrl

Timer

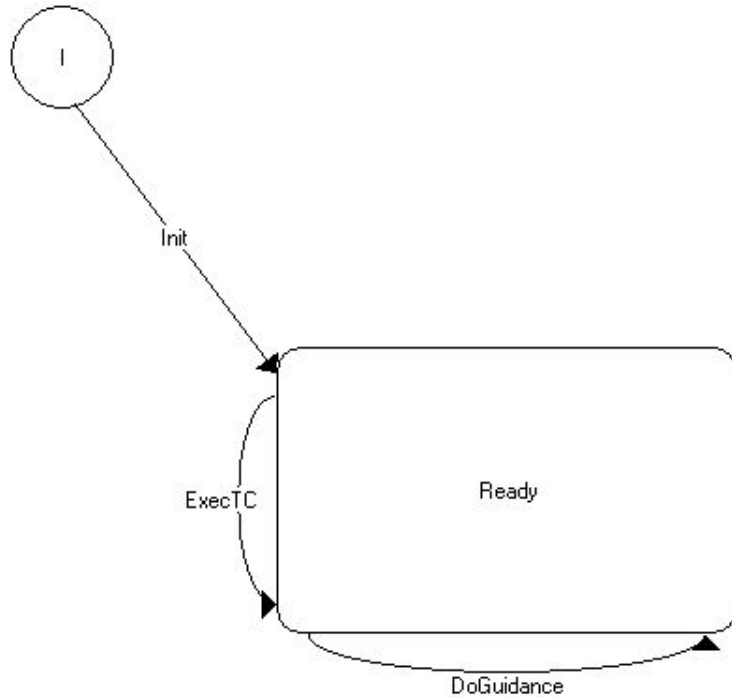


Puerto conjugado

Puerto
Timer
Interno

4. Diseño del comportamiento de la clase componente CCGuidance

Máquina de estados para CCGuidance

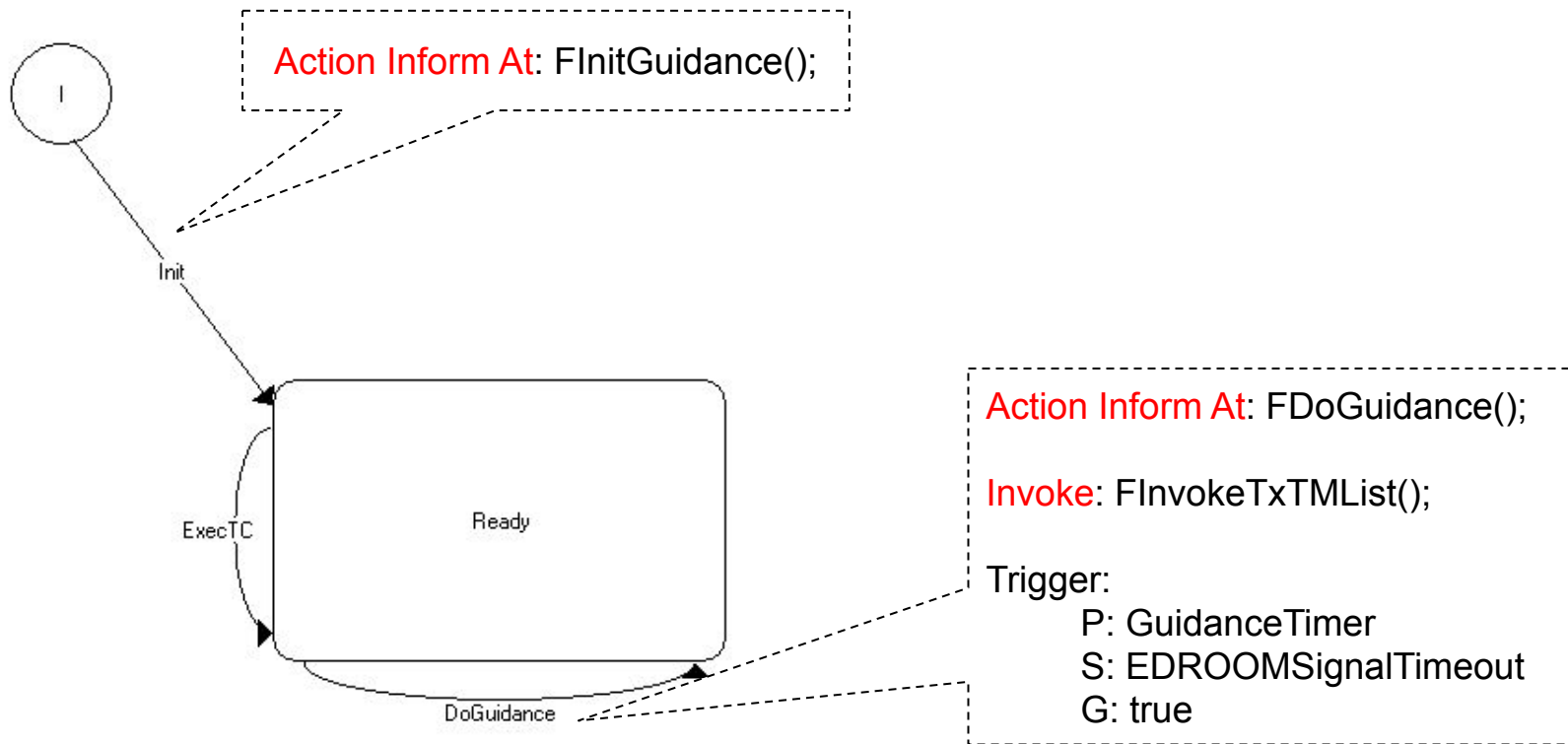


Vars:

Pr_time VNextTimeout;
CDTMList VCurrentTMLList;



Máquina de estados para CCGuidance

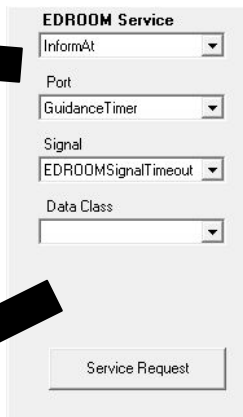


Funciones para la máquina de estados en CCGuidance

```
FInitGuidance(){  
    Pr_Time time;  
    time.GetTime(); // Get current monotonic time  
    time+=Pr_Time(1,0); // Add X sec + Y microsec  
    VNextTimeout=time;  
    GuidanceTimer.InformAt(time);  
}
```

```
FDoGuidance(){  
    Pr_Time time;  
    VNextTimeout+= Pr_Time(1,0); // Add X sec + Y microsec  
    time=VNextTimeout;  
    PUSService129::GuidanceControl();  
    GuidanceTimer.InformAt(time);  
}
```

```
void FInvokeTxTMLList(){  
    CDTMLList * pSTxTM_Data = EDROOMPoolCDTMLList.AllocData();  
    *pSTxTM_Data=VCurrentTMLList;  
    VCurrentTMLList.Clear();  
    MsgBack=TMChannelCtrl.invoke(STxTM,pSTxTM_Data, &EDROOMPoolCDTMLList);  
}
```



EDROOM Service

InformAt

Port

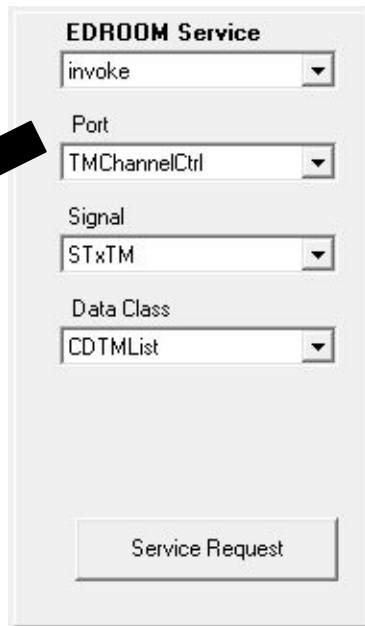
GuidanceTimer

Signal

EDROOMSignalTimeout

Data Class

Service Request



EDROOM Service

invoke

Port

TMChannelCtrl

Signal

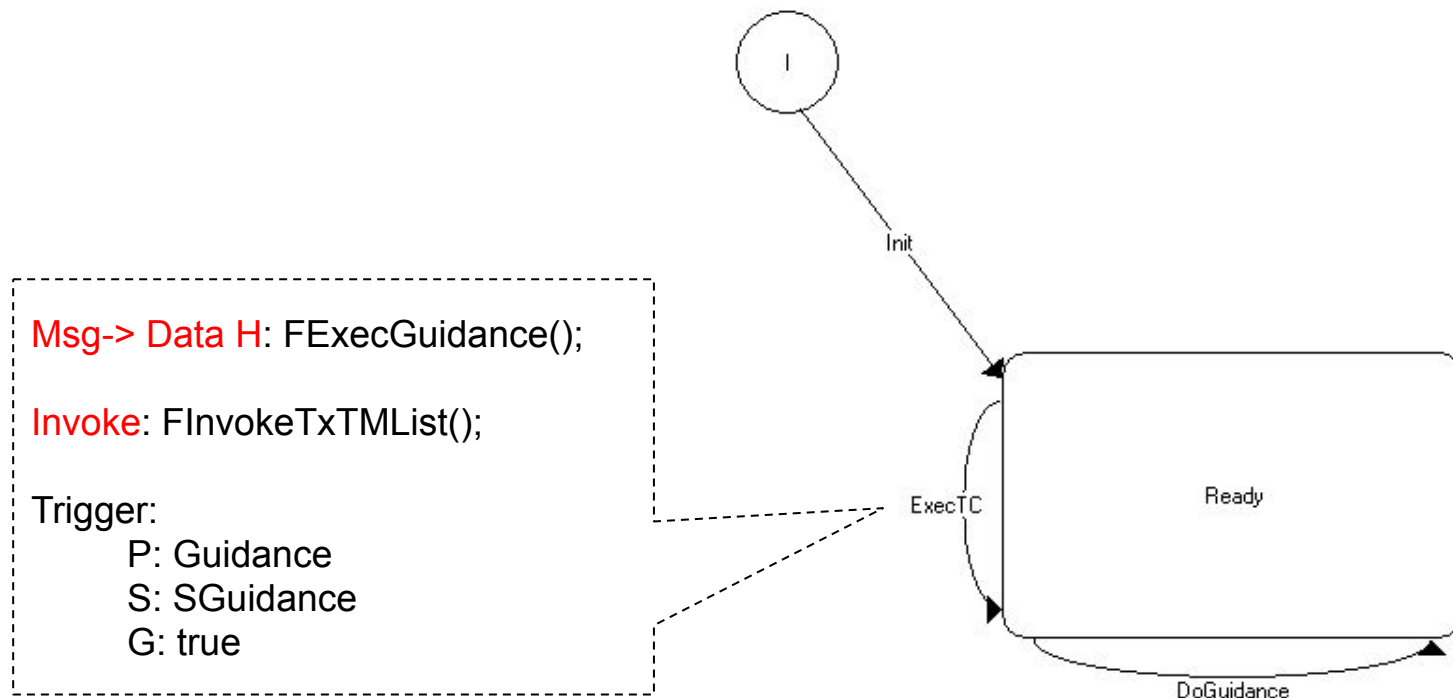
STxTM

Data Class

CDTMLList

Service Request

Máquina de estados para CCGuidance



Funciones para la máquina de estados en CCGuidance

EDROOM Service

InformAt

Port

GuidanceTimer

Signal

EDROOMSignalTimeout

Data Class

Service Request

```
FExecGuidance(){  
    CDTCHandler & varSGuidance = *(CDTCHandler *) Msg->data;  
    CDEventList TCExecEventList;  
    PUS_GuidanceTCExecutor::ExecTC(varSGuidance,VCurrentTMLList,TCExecEventList);  
}
```

```
void FInvokeTxTMLList(){  
    CDTMLList * pSTxTM_Data = EDROOMPoolCDTMLList.AllocData();  
    *pSTxTM_Data=VCurrentTMLList;  
    VCurrentTMLList.Clear();  
    MsgBack=TMChannelCtrl.invoke(STxTM,pSTxTM_Data, &EDROOMPoolCDTMLList);  
}
```

EDROOM Service

invoke

Port

TMChannelCtrl

Signal

STxTM

Data Class

CDTMLList

Service Request

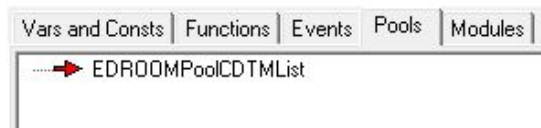
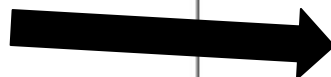
Máquina de estados para CCGuidance

POOL

Name: EDROOMPoolCDTMList:

DataClass: CDTMLList

Element Number=10

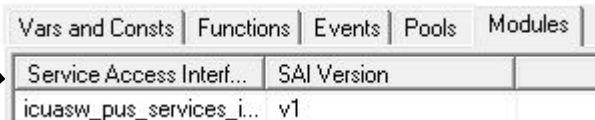
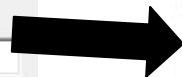


Required MICROBS Service Access Interface (SAI)

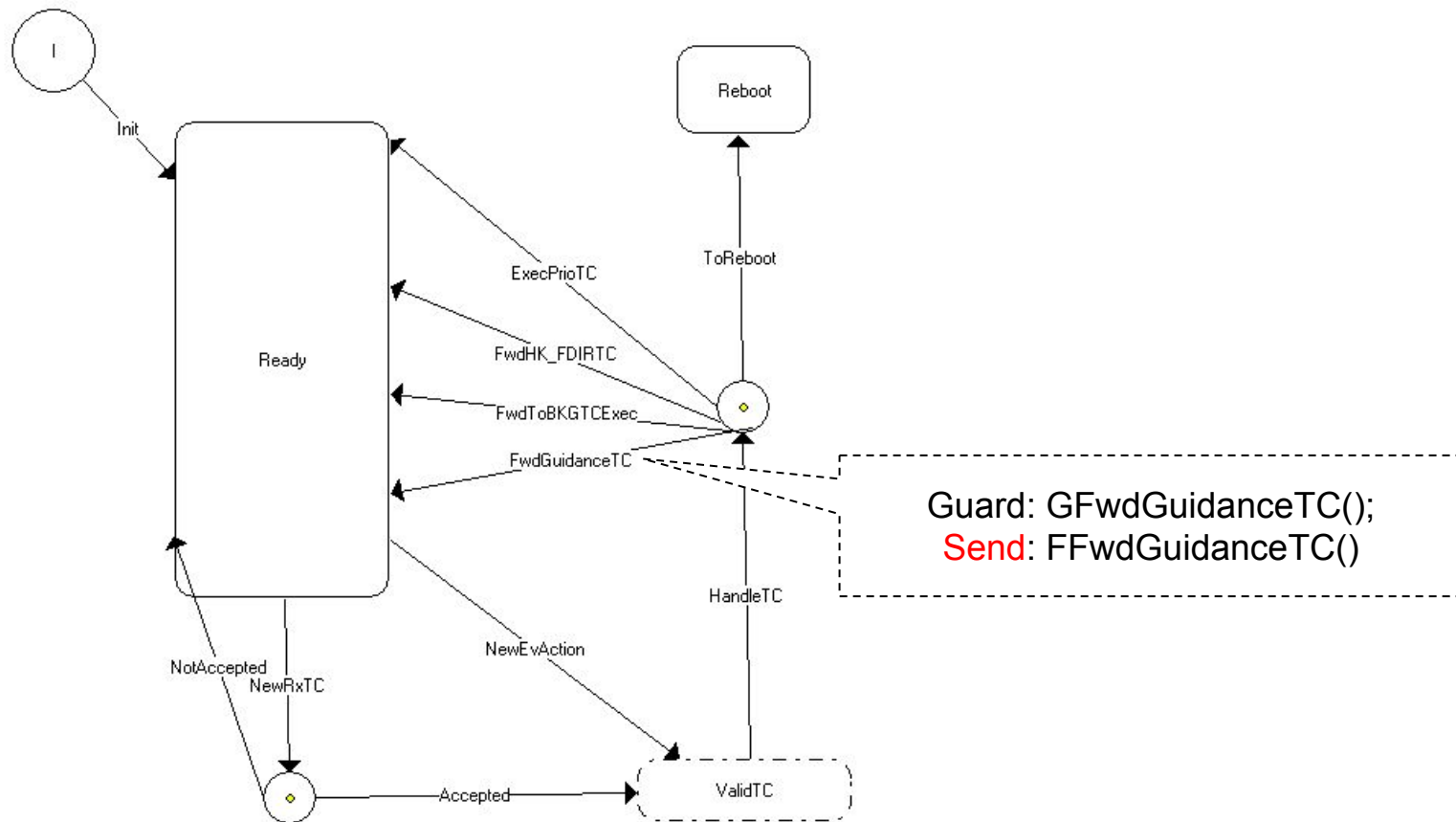
SAI Version

icuasw_pus_services_iface

v1

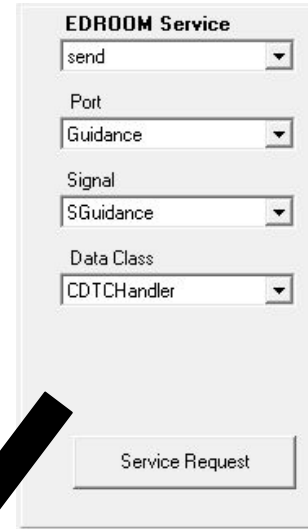


Máquina de estados para CCExplorerManager



Funciones para la máquina de estados en CCExplorerManager

```
bool GFwdGuidanceTC(){  
    return VCurrentTC.IsGuidanceTC();  
}
```



The image shows a dialog box titled "EDROOM Service". It contains four dropdown menus: "send" (with "send" selected), "Port" (with "Guidance" selected), "Signal" (with "SGuidance" selected), and "Data Class" (with "CDTCHandler" selected). At the bottom right of the dialog is a button labeled "Service Request". A large black arrow points from this button towards the code block below.

```
void FFwdGuidanceTC(){  
    CDTCHandler * pSGuidance_Data = EDROOMPoolCDTCHandler.AllocData();  
    *pSGuidance_Data=VCurrentTC;  
    Guidance.send(SGuidance, pSGuidance_Data, &EDROOMPoolCDTCHandler);  
}
```