

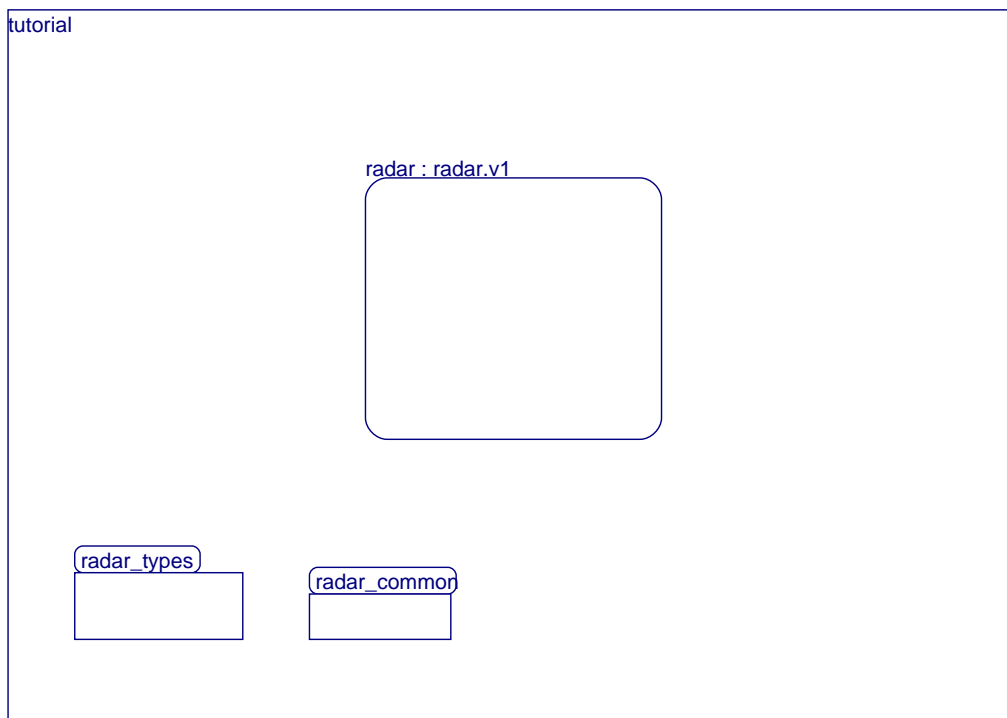
1. PROJECT

ROOT_OBJECTS

```
--|C:\Projets\Stood\Stood54dev\radar\Design\radar|--,  
--|C:\Projets\Stood\Stood54dev\radar\Design\radar_common|--,  
--|C:\Projets\Stood\Stood54dev\radar\Design\radar_types|--
```

END

1.1. AADL Diagram



2. SYSTEM radar IS

2.1. DESCRIPTION

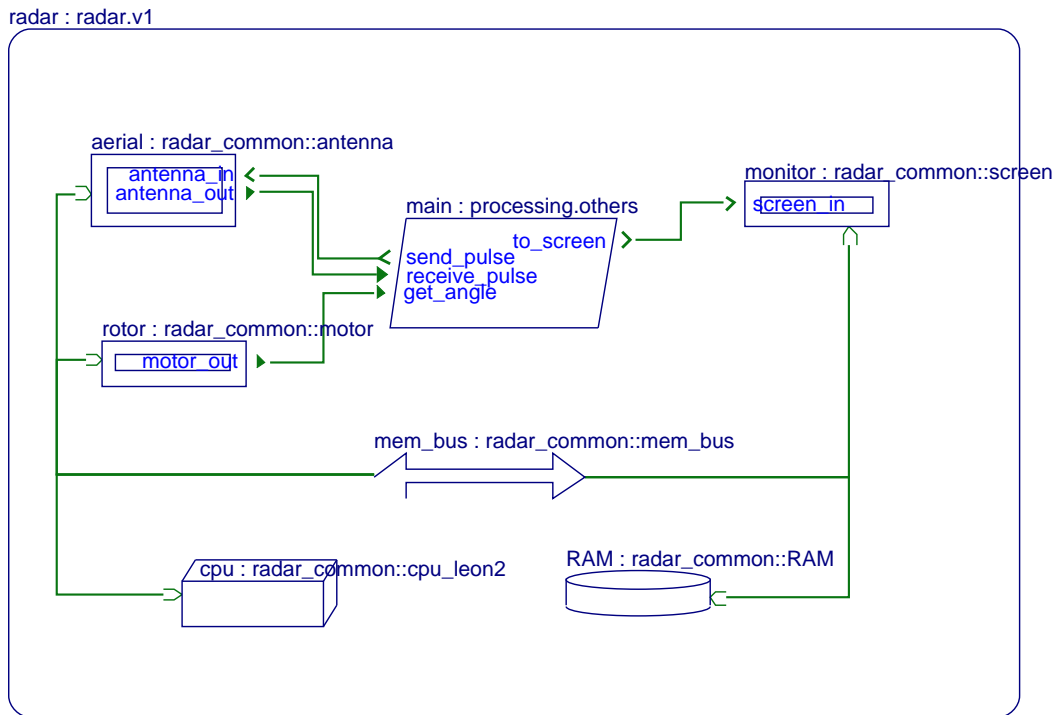
2.1.1. PROBLEM

2.1.1.1. Statement of the Problem (text)

Radar System

2.1.2. SOLUTION

2.1.2.1. AADL Diagram



3. DEVICE aerial IS

3.1. DESCRIPTION

3.1.1. PROBLEM

3.1.1.1. Statement of the Problem (text)

The antenna device simulates radar environment. Direct pulse is triggered by receiving a signal from the transmitter. Internal logics evaluates echo pulse delay and triggers signal sending to the receiver.

3.1.2. SOLUTION

4. DEVICE rotor IS

4.1. DESCRIPTION

4.1.1. PROBLEM

4.1.2. SOLUTION

5. DEVICE monitor IS

5.1. DESCRIPTION

5.1.1. PROBLEM

5.1.2. SOLUTION

6. PROCESSOR cpu IS

6.1. DESCRIPTION

6.1.1. PROBLEM

6.1.1.1. Statement of the Problem (text)

The processor represent an abstraction of hardware and software (OS) that is responsible for scheduling and executing the threads (It may include functionalities provided by operating systems such as scheduling protocol in our case).

6.1.2. SOLUTION

7. BUS mem_bus IS

7.1. DESCRIPTION

7.1.1. PROBLEM

7.1.1.1. Statement of the Problem (text)

The bus ensures communications between the antenna and the main process stored in memory

7.1.2. SOLUTION

8. MEMORY RAM IS

8.1. DESCRIPTION

8.1.1. PROBLEM

8.1.1.1. Statement of the Problem (text)

The memory hosts the address space of the main process.

8.1.2. SOLUTION

9. PROCESS main IS

9.1. DESCRIPTION

9.1.1. PROBLEM

9.1.1.1. Statement of the Problem (text)

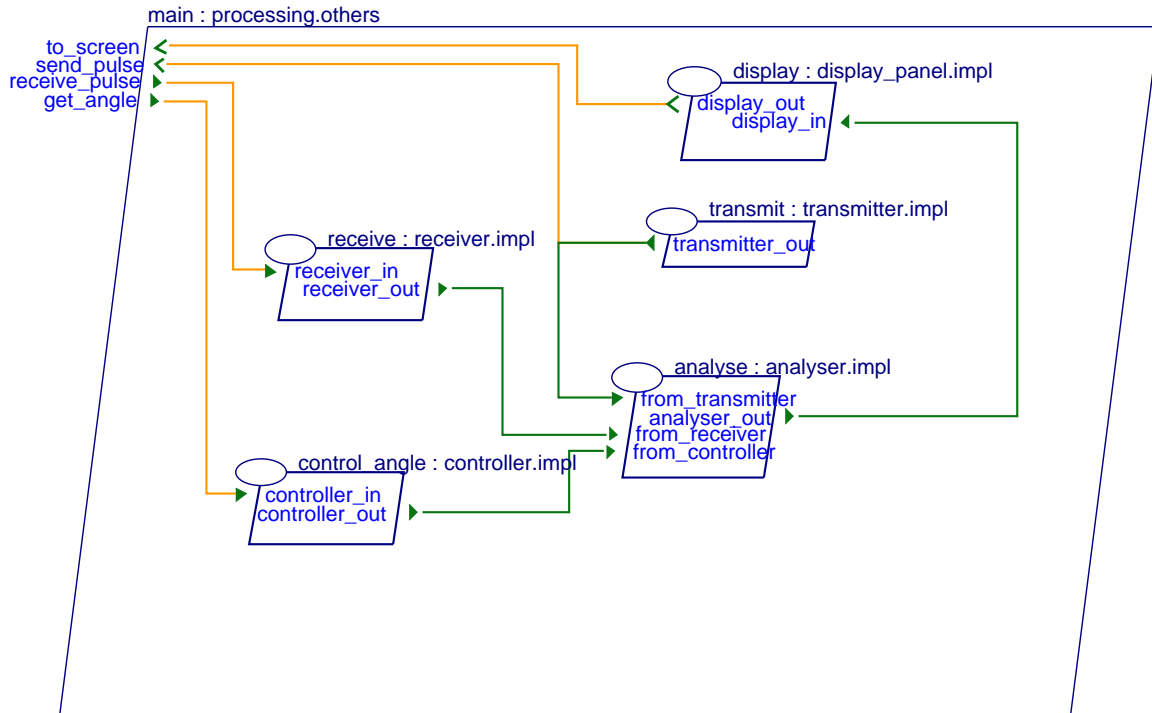
The main process is responsible for signals processing :

Pattern:

transmitter -> antenna -> receiver -> analyser -> display

9.1.2. SOLUTION

9.1.2.1. AADL Diagram



10. THREAD receive IS

10.1. DESCRIPTION

10.1.1. PROBLEM

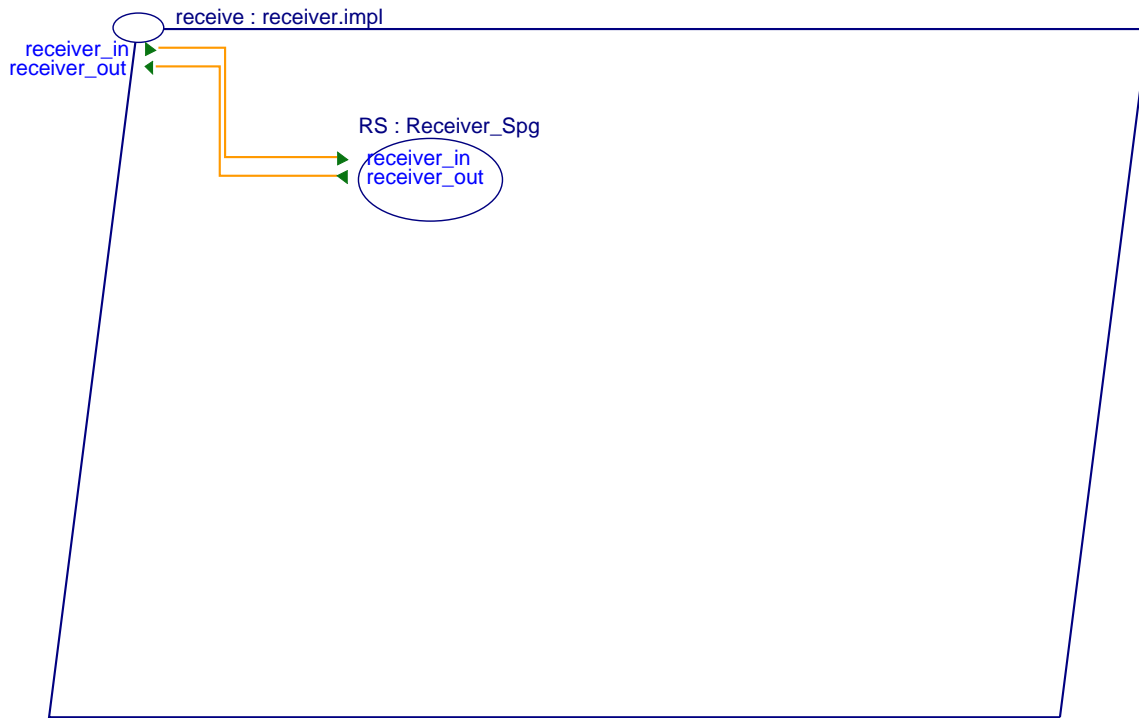
10.1.1.1. Statement of the Problem (text)

 Receiver Thread --

This thread receives radar echos from the antenna.

10.1.2. SOLUTION

10.1.2.1. AADL Diagram



11. SUBPROGRAM RS IS

11.1. DESCRIPTION

11.1.1. PROBLEM

11.1.2. SOLUTION

12. THREAD analyse IS

12.1. DESCRIPTION

12.1.1. PROBLEM

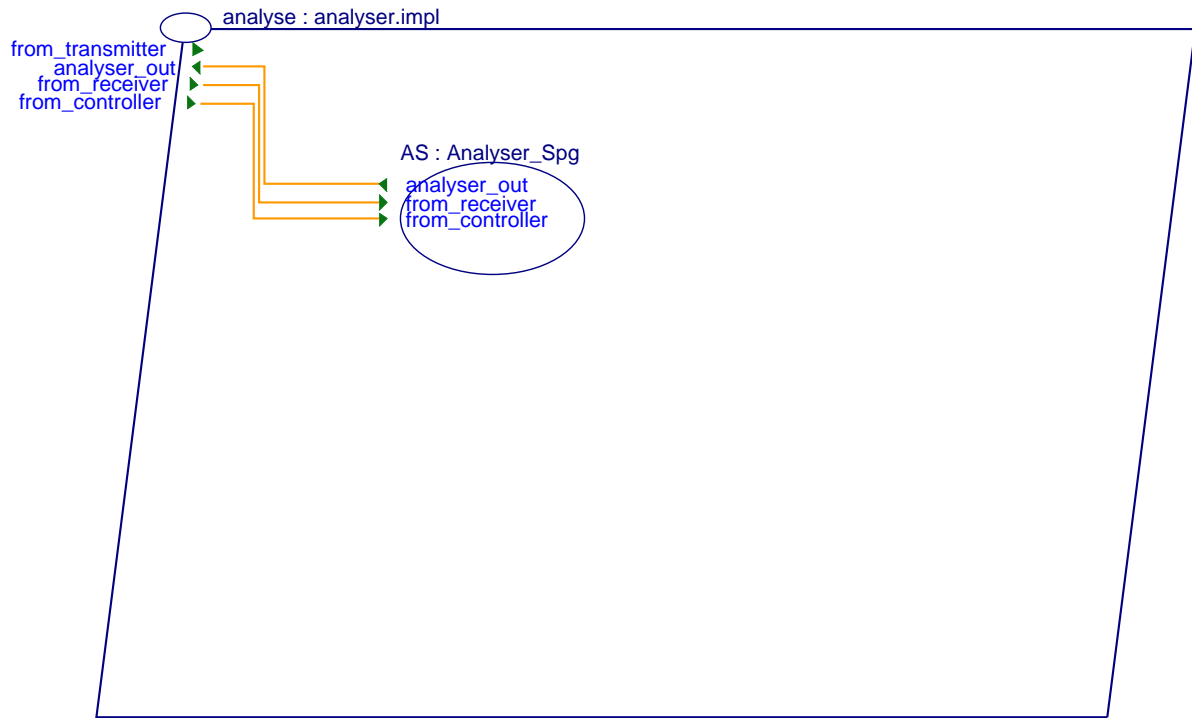
12.1.1.1. Statement of the Problem (text)

Analyser thread --

This thread compares transmitted and received signals to perform detection, localisation and identification.

12.1.2. SOLUTION

12.1.2.1. AADL Diagram



13. SUBPROGRAM AS IS

13.1. DESCRIPTION

13.1.1. PROBLEM

13.1.2. SOLUTION

14. THREAD display IS

14.1. DESCRIPTION

14.1.1. PROBLEM

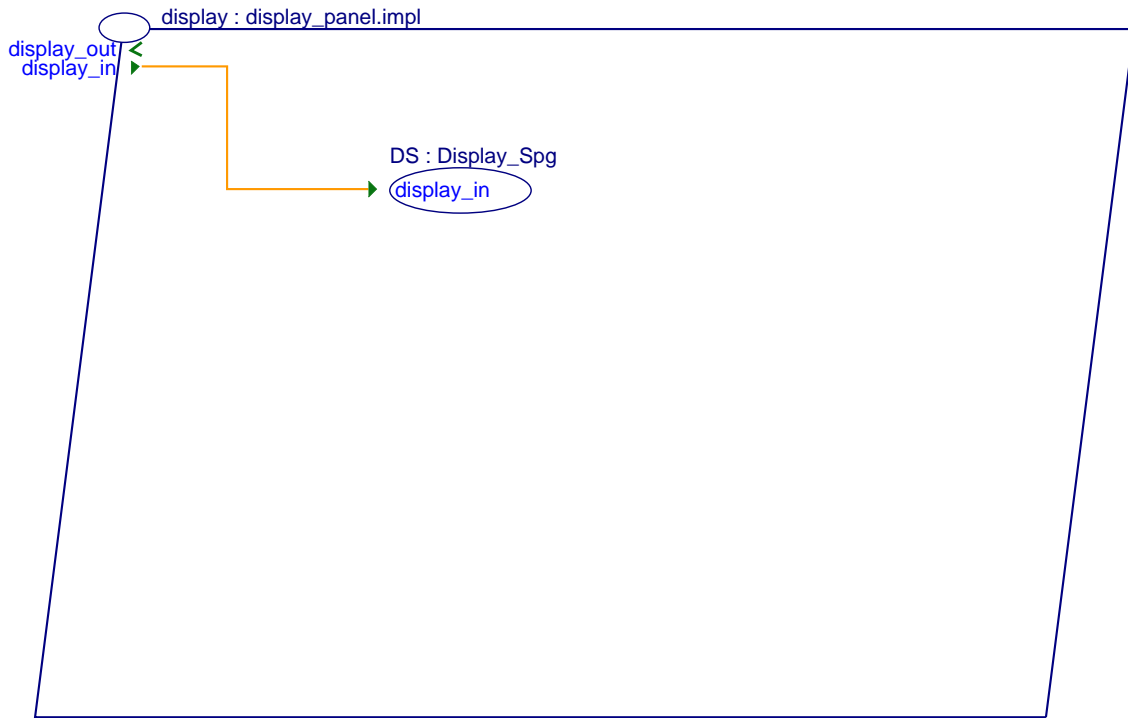
14.1.1.1. Statement of the Problem (text)

 Display_Panel thread --

This thread is responsible for formatting and displaying processed signals

14.1.2. SOLUTION

14.1.2.1. AADL Diagram



15. SUBPROGRAM DS IS

15.1. DESCRIPTION

15.1.1. PROBLEM

15.1.2. SOLUTION

16. THREAD transmit IS

16.1. DESCRIPTION

16.1.1. PROBLEM

16.1.1.1. Statement of the Problem (text)

 Transmitter thread --

16.1.2. SOLUTION

17. THREAD control_angle IS

17.1. DESCRIPTION

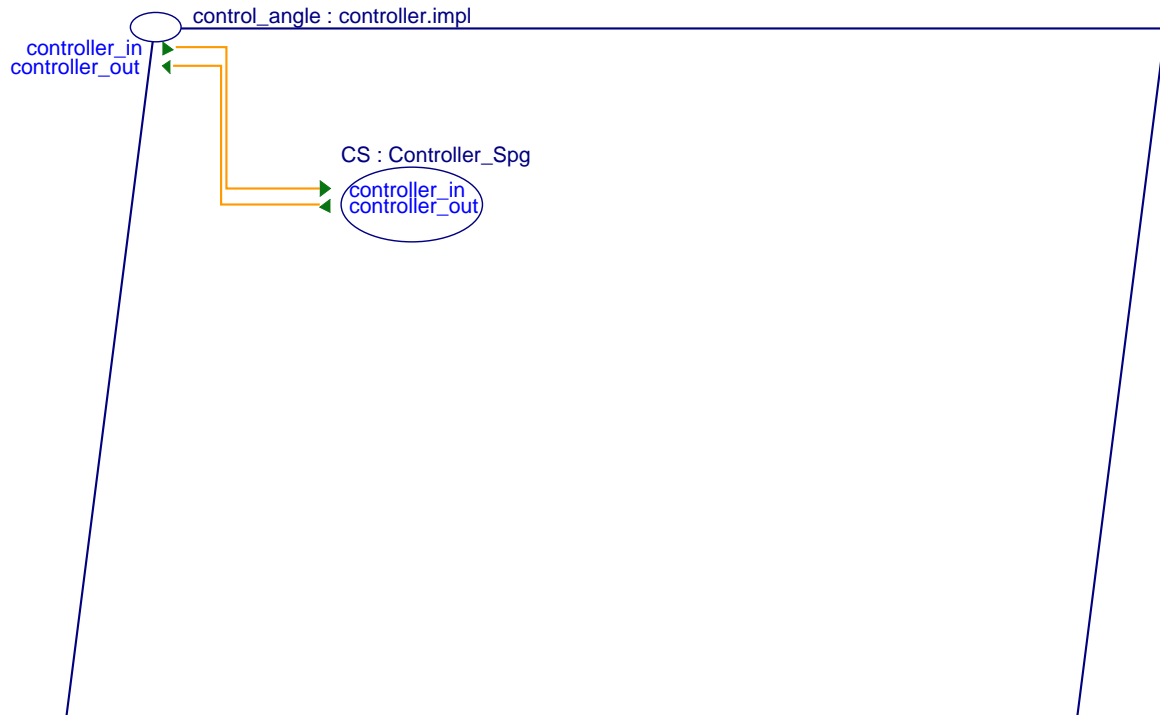
17.1.1. PROBLEM

17.1.1.1. Statement of the Problem (text)

Controller thread --

17.1.2. SOLUTION

17.1.2.1. AADL Diagram



18. SUBPROGRAM CS IS

18.1. DESCRIPTION

18.1.1. PROBLEM

18.1.2. SOLUTION

19. PACKAGE radar_common IS

20. PACKAGE radar_types IS