# AADL Textual Instance Model
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# Textual Instance Model Implementation

Available in nightly build of OSATE

- Invoke “Generate textual instance” in context menu on aaxl2 instance file

Syntax objective: compact, readable

- Size: 20-25% of XMI representation
- References into declarative model (grey)
  - References to unnamed elements (property association, mode transition, SOM)

```
system s_i_Instance : dummy::s.i {
    in out dataAccess dacc : dummy::s:dacc
    in dataPort inp : dummy::s:inp {
        Data_Model::Data_Representation => Integer : Base_Types::Integer:property#0
    }
    out eventPort outp : dummy::s:outp
    device sense : dummy::s.i:sense {
        out dataPort reading : dummy::sensor:reading
    }
    som "No Modes"
}
```

# Declarative Example

```
package dummy
public
    with Base_Types;
    system s
        features
            inp: in data port Base_Types::Integer;
            outp: out event port;
            dacc: requires data access myd;
    end s;
    system implementation s.i
        subcomponents
            sense: device sensor;
    end s.i;

    device sensor
        features
            reading: out data port myd;
    end sensor;

    data myd

    end myd;

end dummy;
```

# Connections and Flows

```
complete portConnection "SM_Motor.Step_Completion -> SM_ACT.Step_Completion" :
SM_Motor.Step_Completion -> SM_ACT.Step_Completion {
    SM_Motor.Step_Completion -> SM_ACT.Step_Completion : CasePositionControl::SMS.Original:c4 in parent
}
complete portConnection "SM_PCS_App.SM_PCS.Commanded_Position -> SM_ACT.Commanded_Position" :
SM_PCS_App.SM_PCS.Commanded_Position -> SM_ACT.Commanded_Position {
    SM_PCS_App.SM_PCS.Commanded_Position -> SM_PCS_App.Commanded_Position :
      CasePositionControl::SMS_App_Process_SMPC.original:CmdedPosition in SM_PCS_App
    SM_PCS_App.Commanded_Position -> SM_ACT.Commanded_Position :
      CasePositionControl::SMS.Original:SendPositionChangeCommand in parent
    Deployment_Properties::Actual_Connection_Binding => ( reference ( DMA ) ) : CasePositionControl::SMS_
    Communication_Properties::Timing => immediate : CasePositionControl::SMS.Original:SendPositionChange(
}
flow flowsink ( Desired_Position -> ) : CasePositionControl::SMS:flowsink
```