

Learning the Portable Stimulus Standard

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On behalf of the Accellera Systems Initiative

and the Accellera Portable Stimulus Working Group



Horizontal and Vertical Reuse with PSS

▶▶▶ Session 03

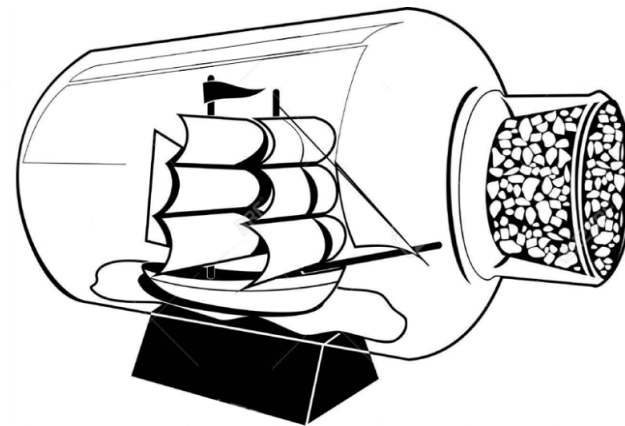
What You Will Learn

- ▶ The Two Layers of a PSS Model
- ▶ Applying PSS at the Block Level
- ▶ Vertical Reuse of PSS Models
- ▶ Defining the Target Implementation of a PSS Model
- ▶ Horizontal Reuse of PSS Models

Portable Stimulus is Layered

The
Abstract
Model

- *What* does it do?

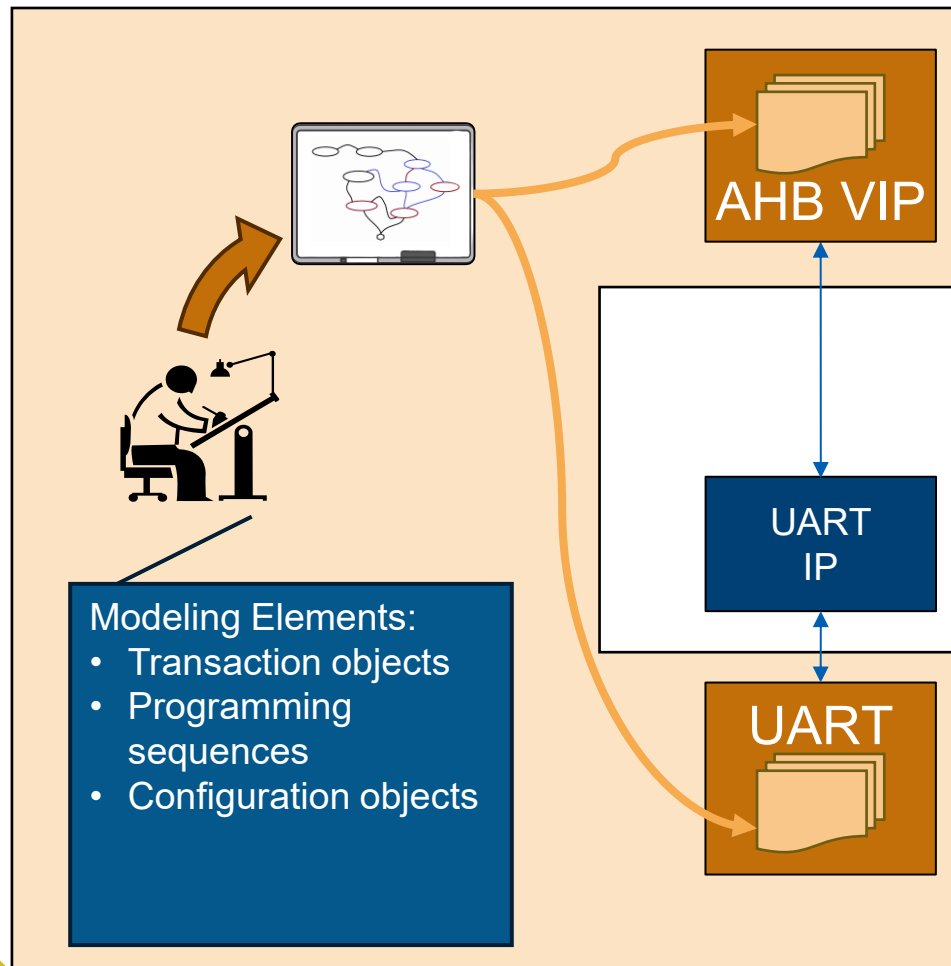


The
Realization
Layer

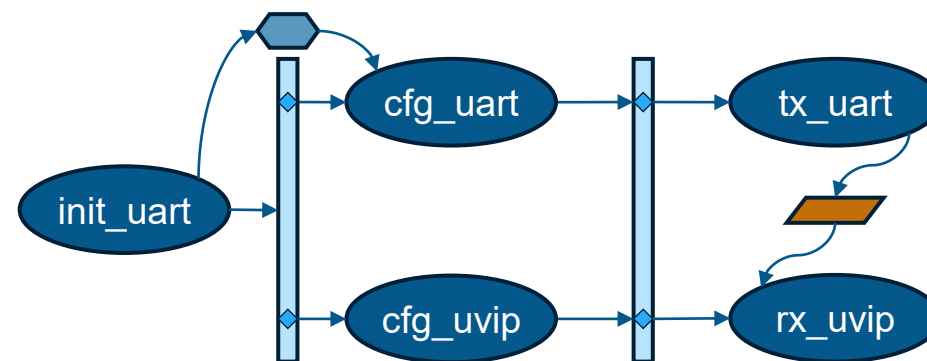
- *How* does it do what it does?



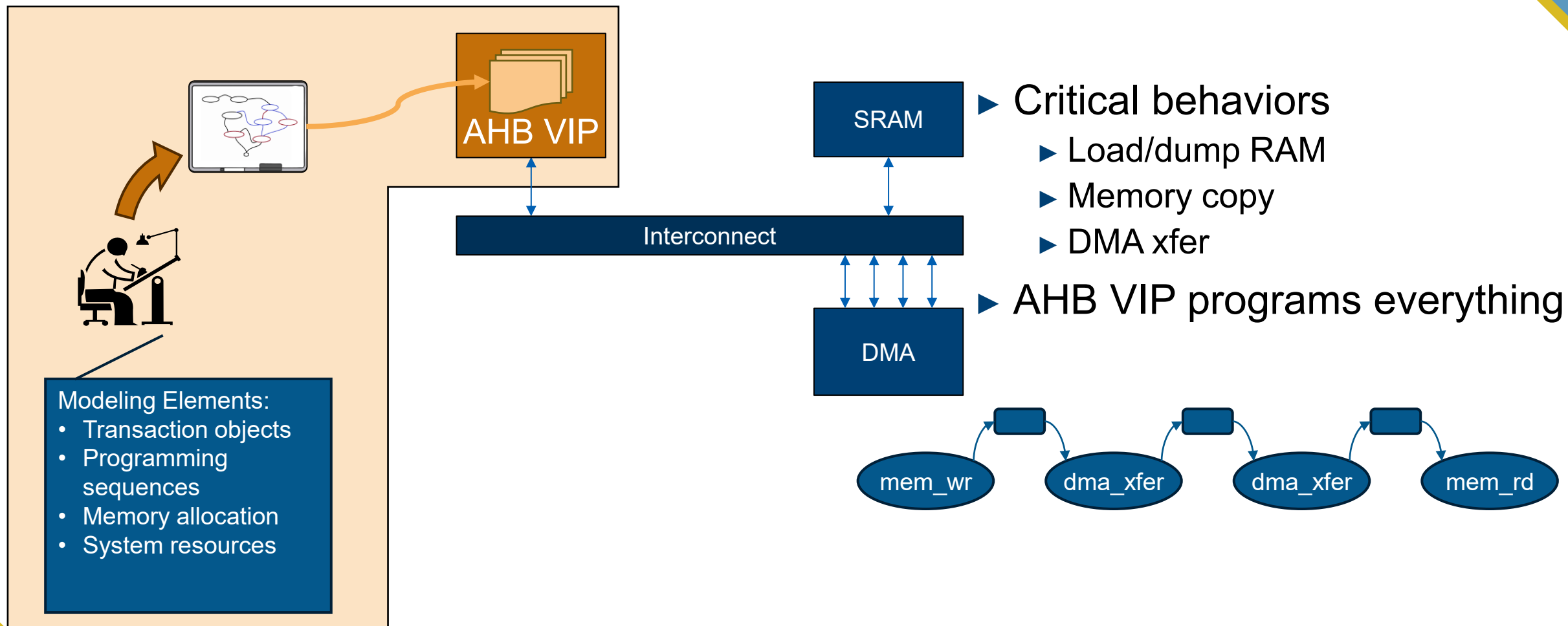
::: PSS at the Block Level



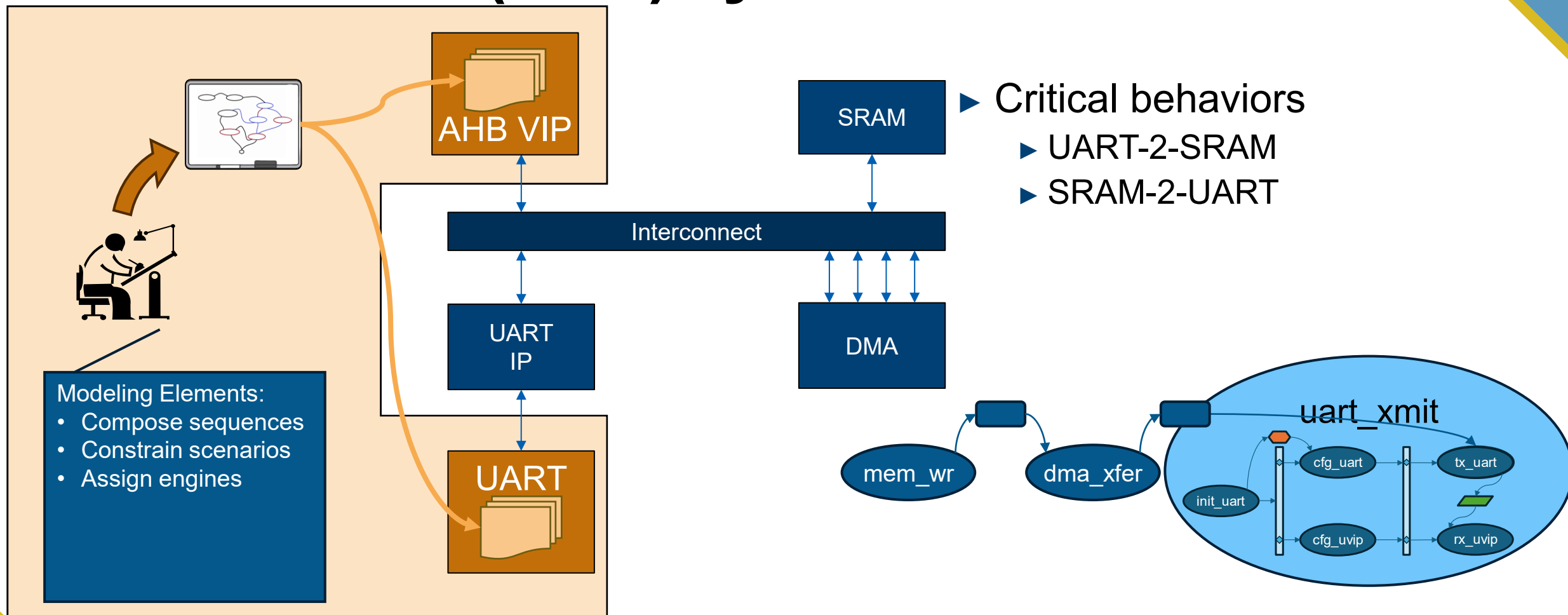
- ▶ Critical behaviors
 - ▶ Init, configure
 - ▶ tx, rx
- ▶ AHB VIP models the CPU
- ▶ UART VIP models “the world”



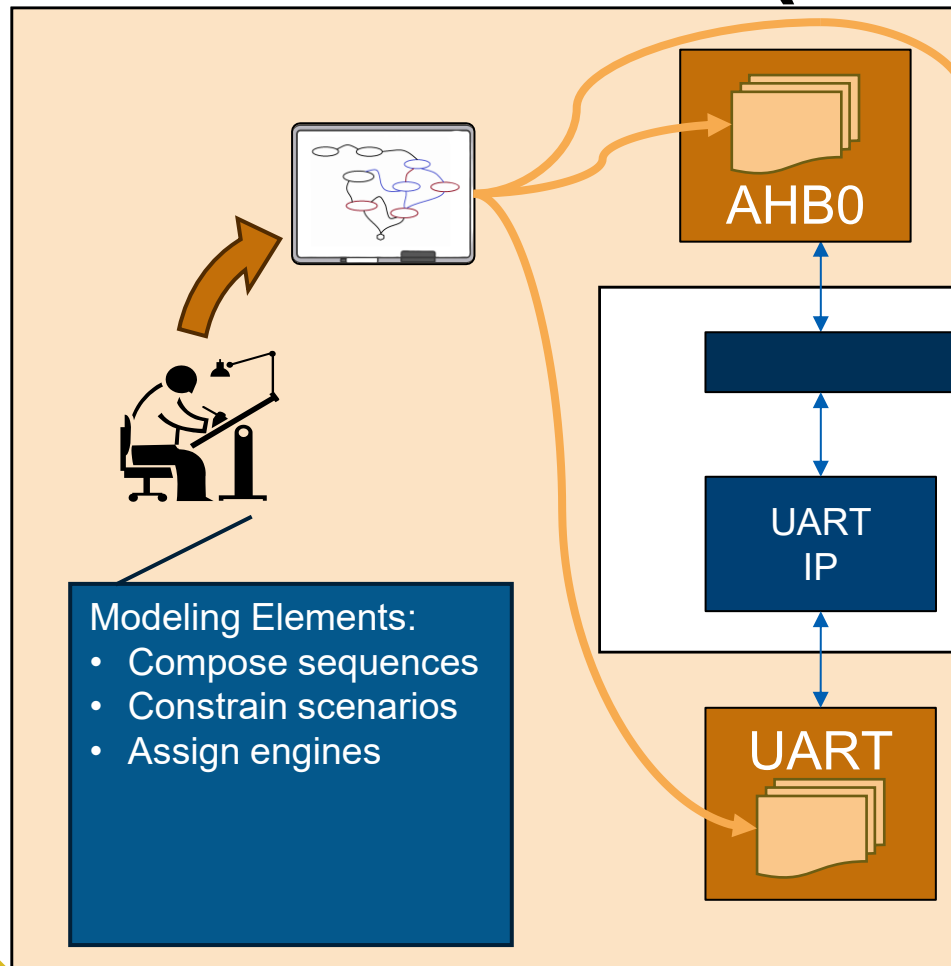
... PSS at the Block Level



:::: PSS at the (Sub)System Level

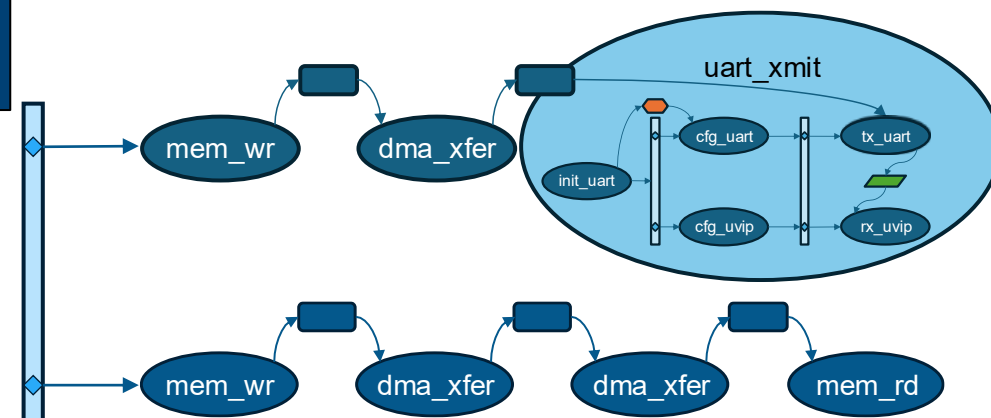


:::: PSS at the (Sub)System Level

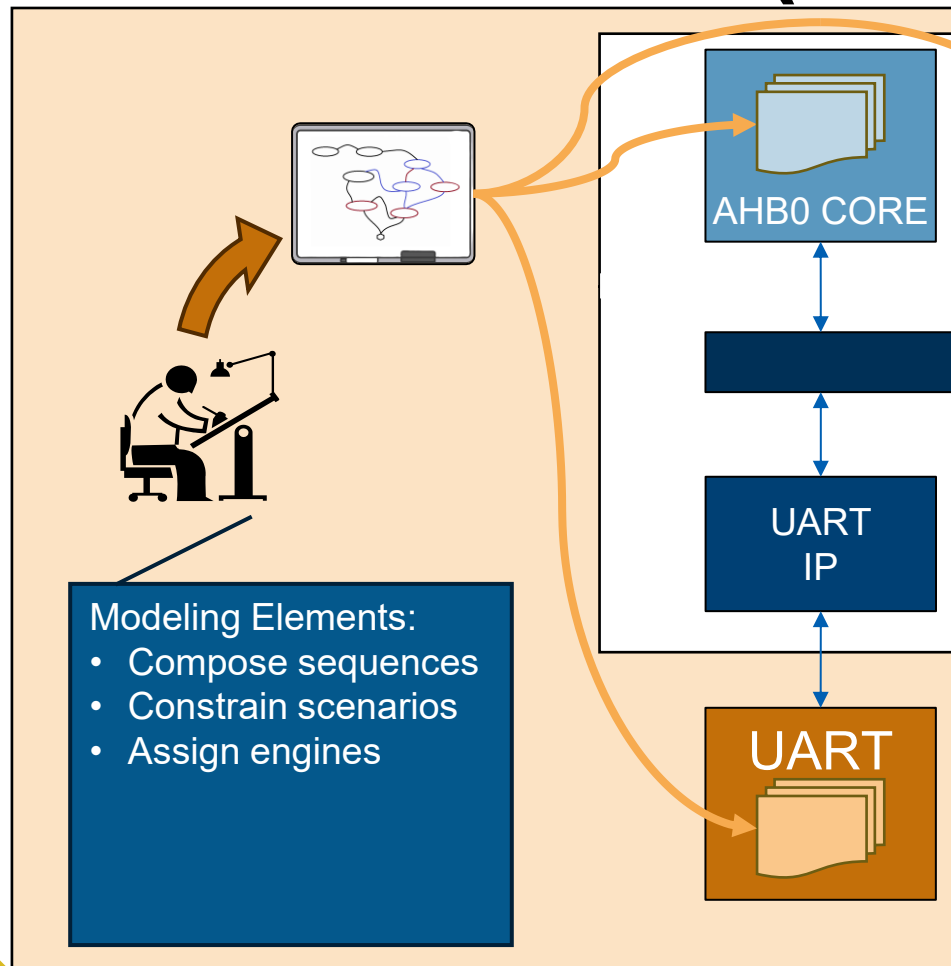


► Critical behaviors

- UART-2-SRAM
- SRAM-2-UART
- With traffic

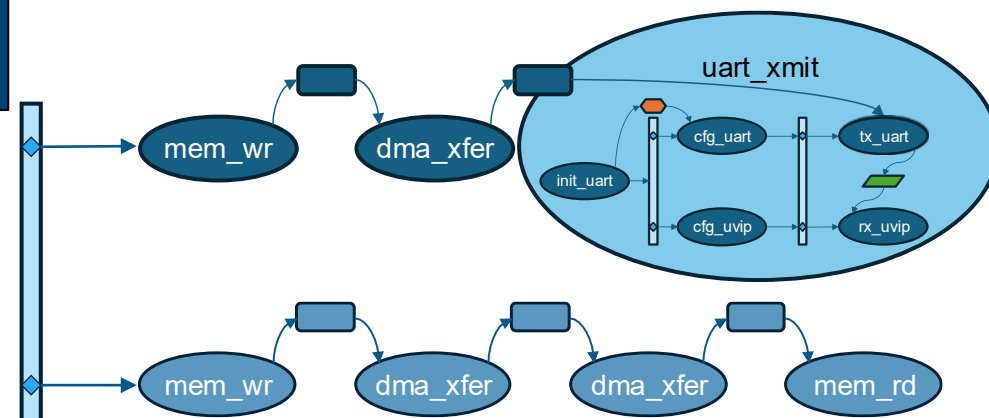


:::: PSS at the (Sub)System Level

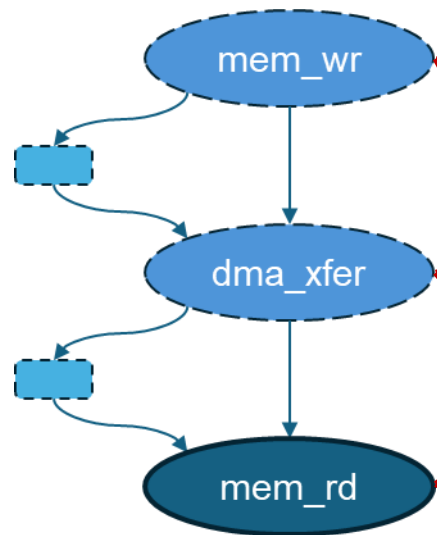


► Critical Behaviors

- UART-2-SRAM
- SRAM-2-UART
- With traffic



Realization: The Rubber Meets the Road

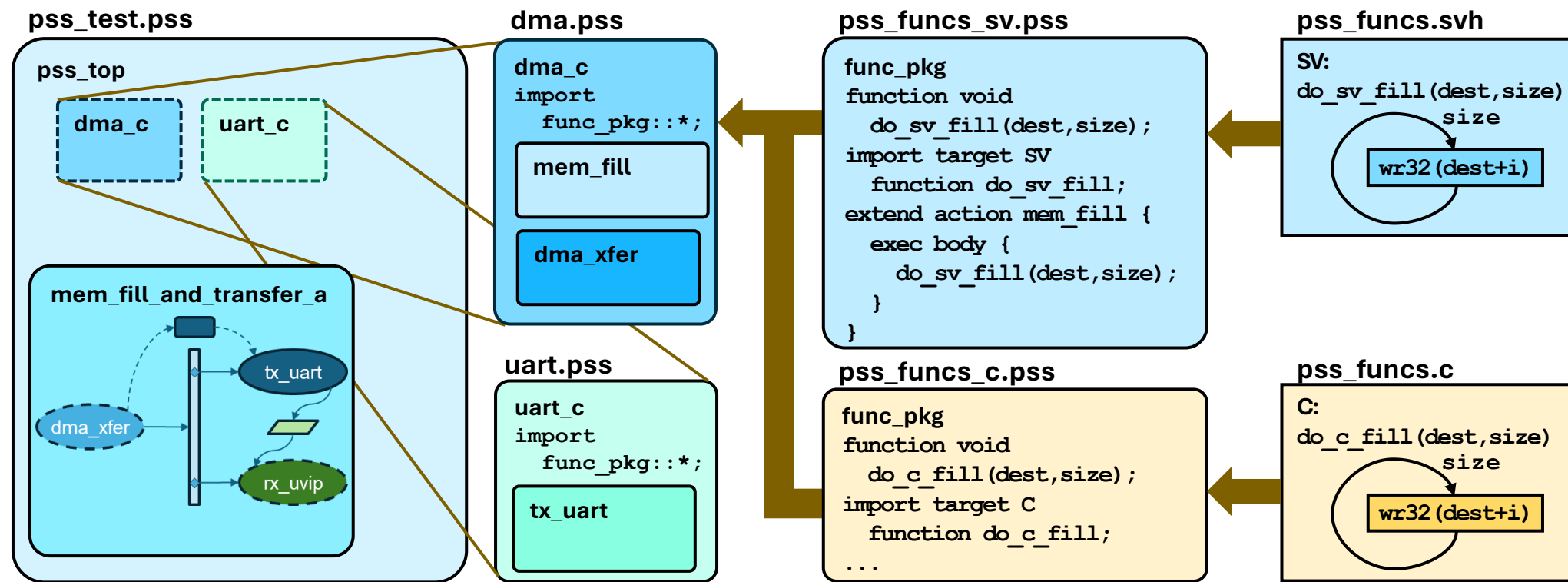


```
class mem_dma_seq extends
    uvm_sequence #(uvm_sequence_item);
    `uvm_object_utils(mem_dma_seq)

    virtual task body();
        do_mem_wr(wrdst,data,size);
        do_dma_xfer(wrdst,dmadst,size,1);
        do_mem_rd(dmadst,rdata,size);
    endtask
endclass
```

```
int main() {
    mem_wr(wrdst, data, size);
    dma_xfer(wrdst, dmadst, size, 1);
    mem_rd(dmadst, rdata, size);
    return 0;
}
```

PSS Provides Multiple Realizations of a Model





Thank You!

