AXI Stream Interface

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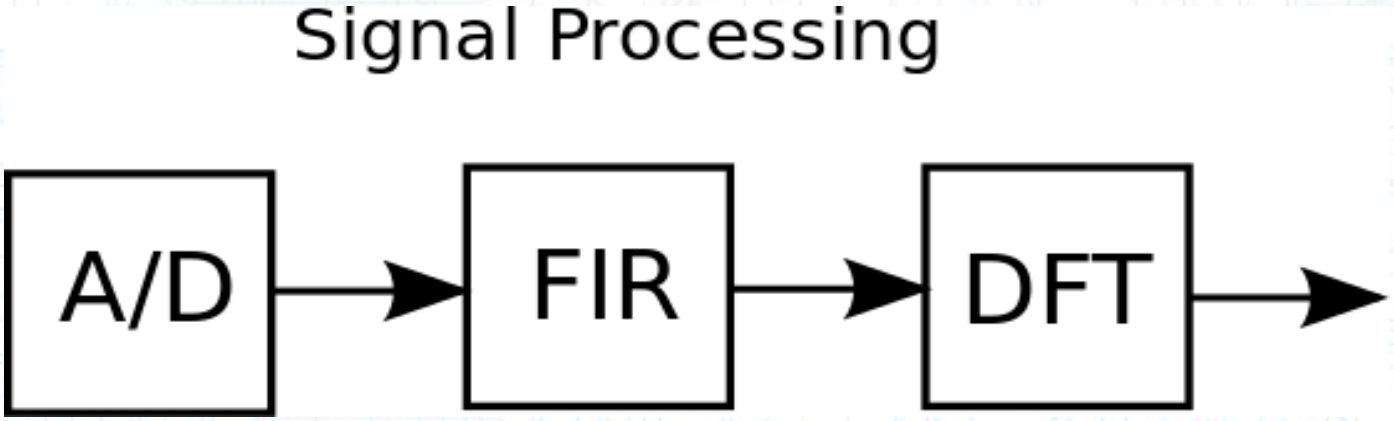
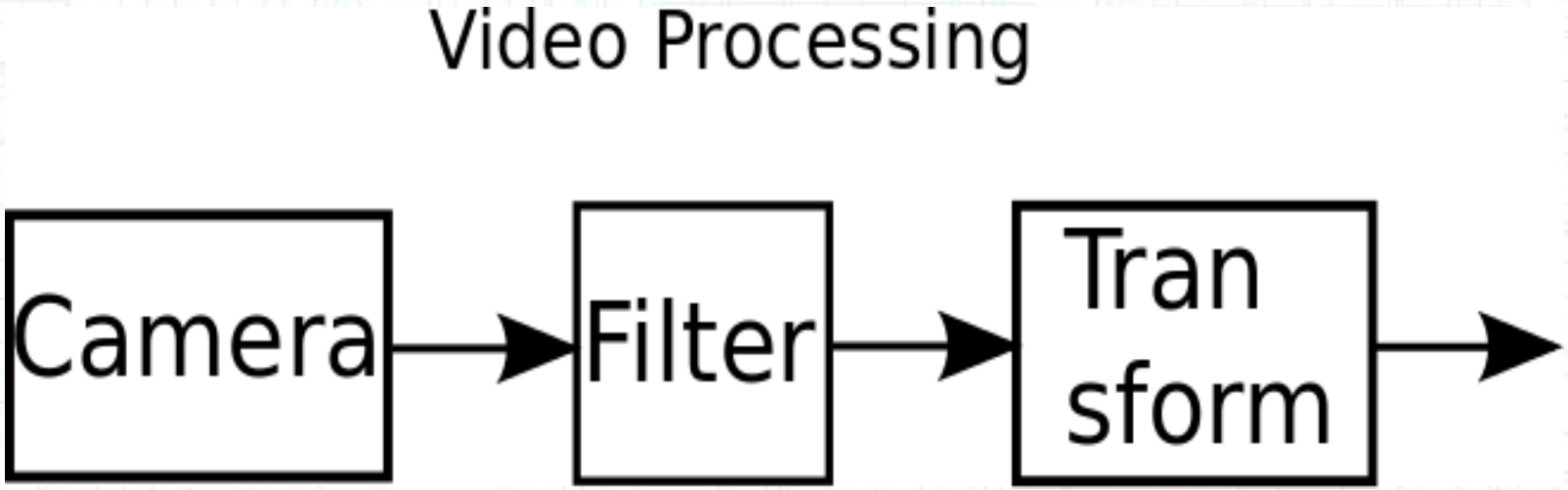
Two Types of AXI Interfaces

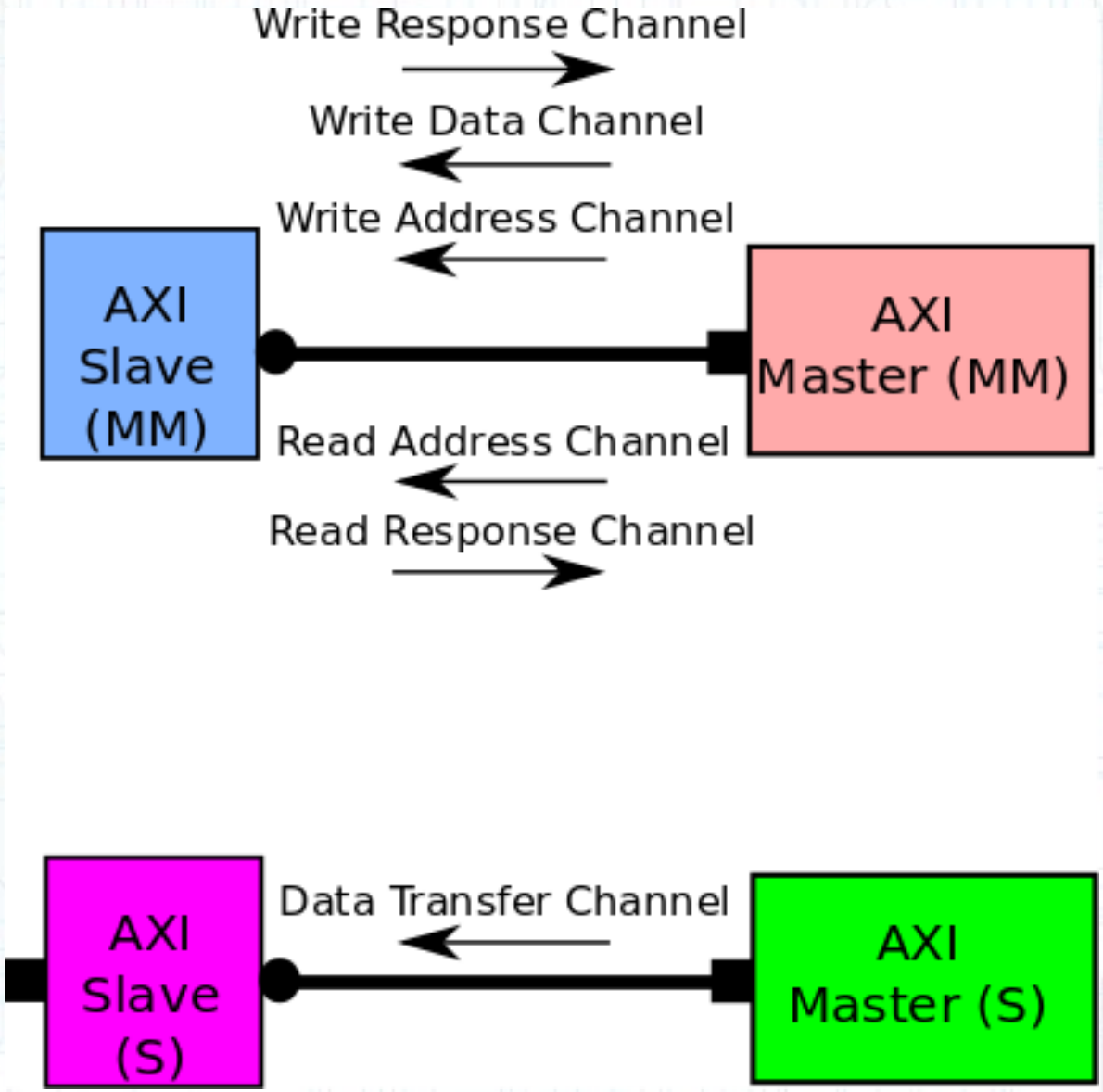
- Memory Mapped
  - ...so far.
  - Read/Write transactions contain destination address
  - Not always necessary …
    - Data flow applications
- Streaming
  - Very simple
  - One AXI channel, One way!

Example Data Flow ...

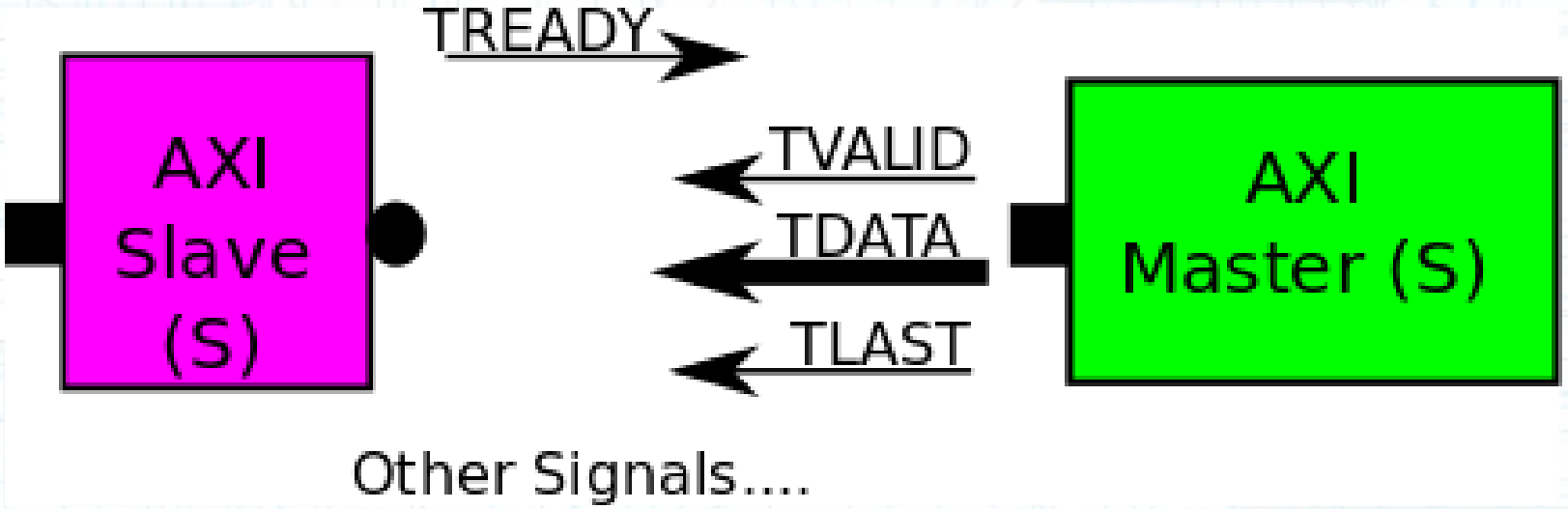




AXI MM vs. AXI S

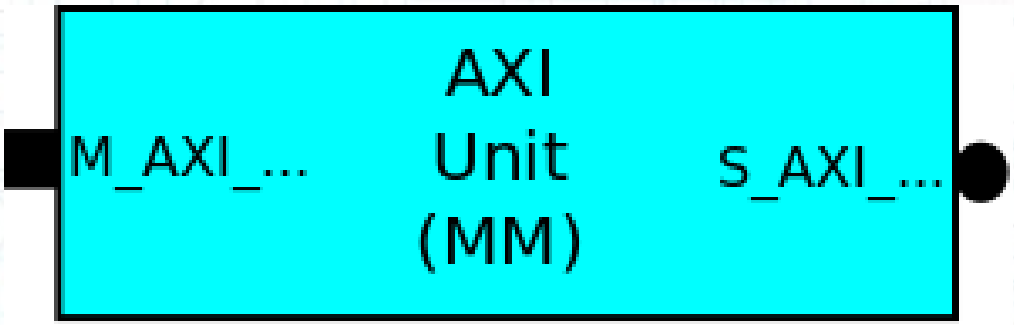


One AXI Channel

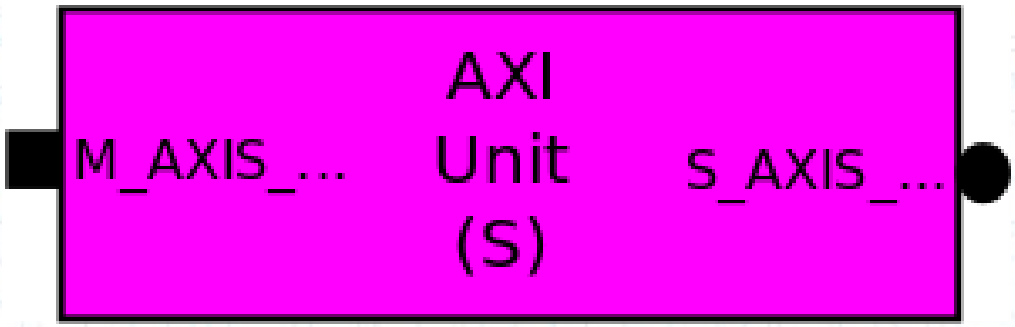


AXI Ports Naming Style

- Memory Mapped



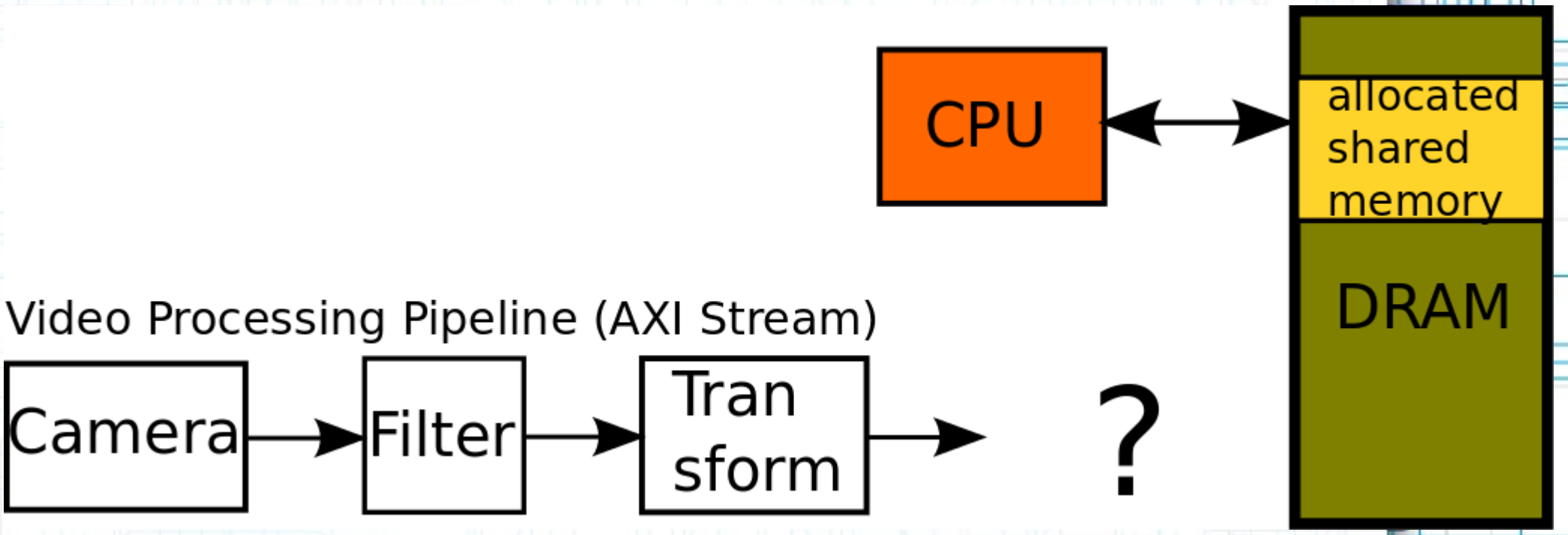
- Stream



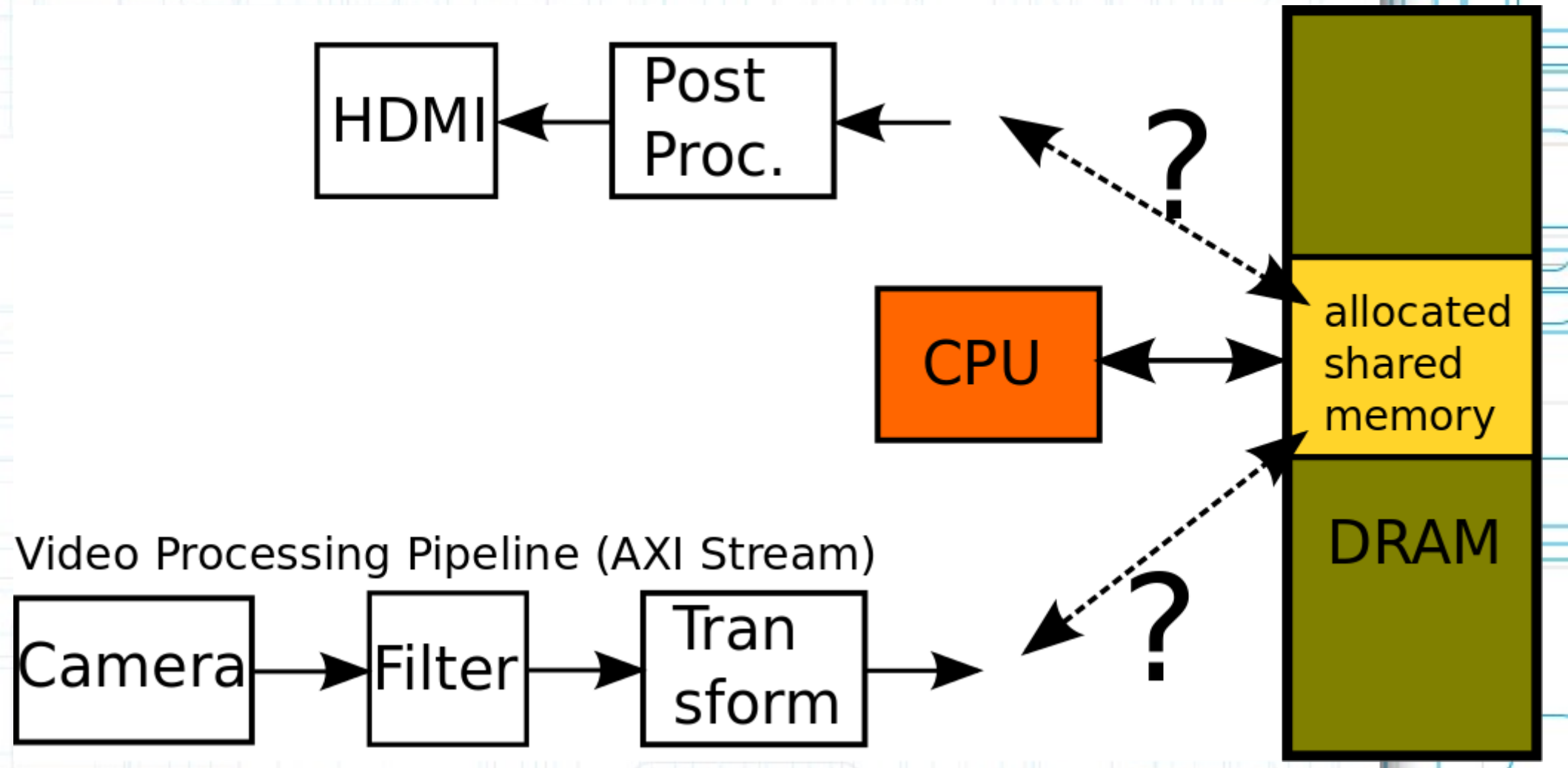
- Signal names:
  - e.g. S_AXI_awid, M_AXI_aready ….

AXI S to AXI MM (1)

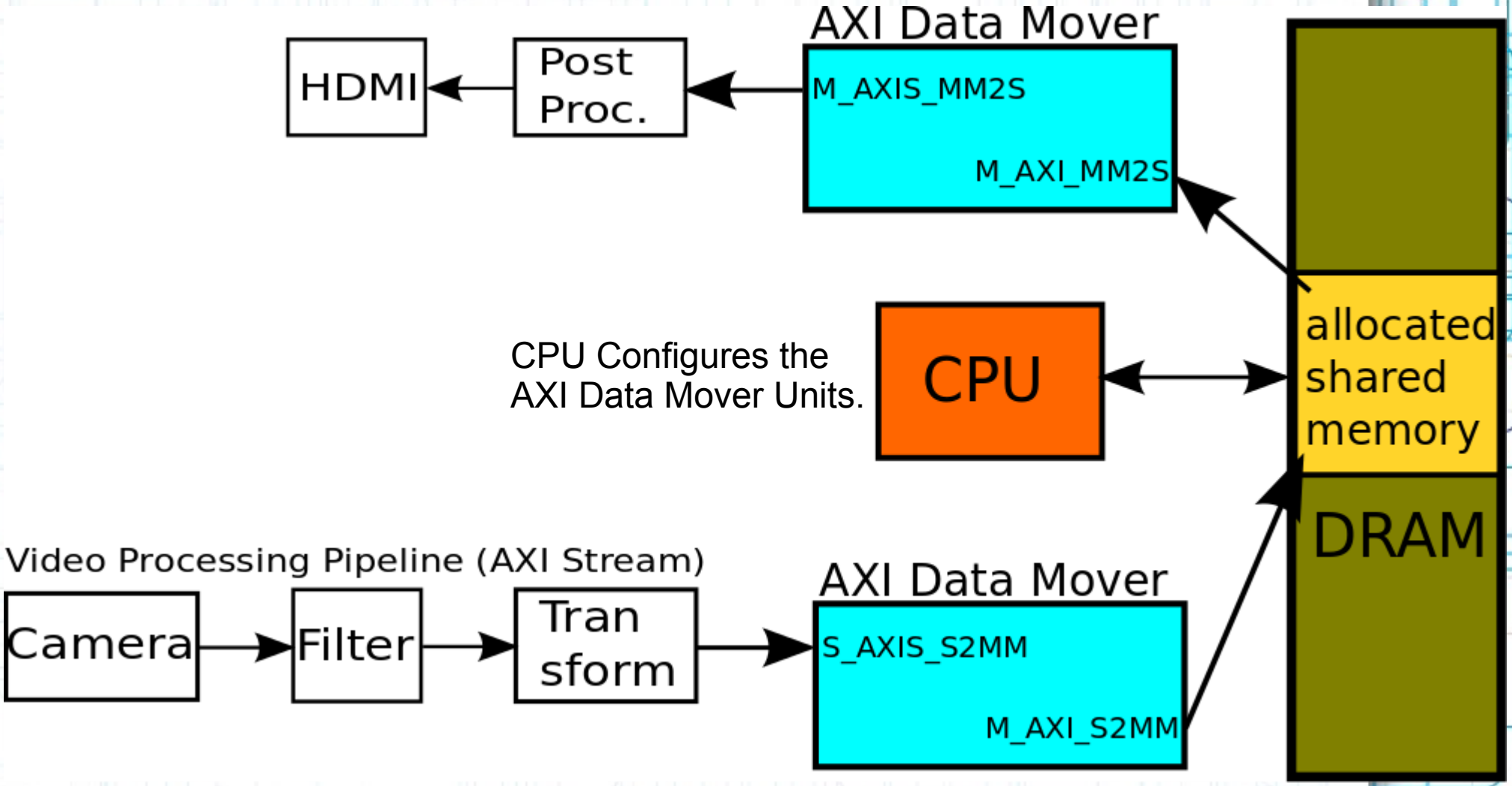
- Output of AXI stream interface
  - Should be finally stored in memory



AXI S to AXI MM (2)



AXI Data Mover



AXI Data Mover (2)

- Gets configured by the Host CPU
- Interrupts when a transfer task is done (e.g. a frame is transferred completely)
- Gets triggered by the Host CPU

- Customized Versions:
  - **AXI Central DMA engine**
  - **AXI Video DMA**
- Further details later...

Thanks ...

This is a personal hobby! But I would like to thank

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- Prof. Norbert Wehn of TU Kaiserslautern

Latest Material ...

My personal web sites :

www.green-electrons.com

www.googoolia.com