New Strategies for System Design

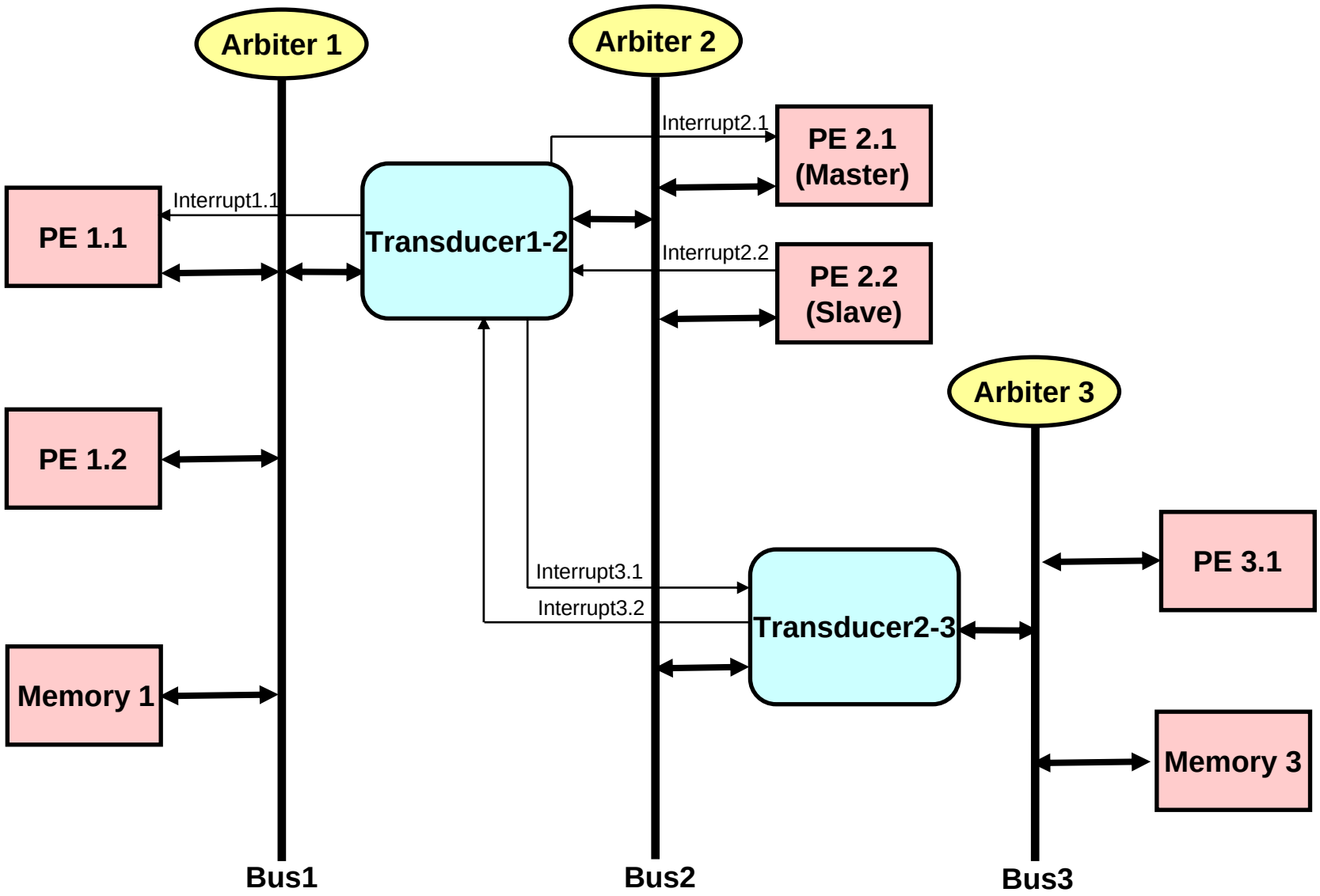
Daniel Gajski

Center for Embedded Computer Systems

University of California, Irvine

gajski@uci.edu

General System Model



How many components?

Minimal set for any design

(4 is enough?)

- Processing element (PE)
- Memory
- Transducer / Bridge
- Bus / Arbiter

How many models?

Minimal set for any methodology

(3 is enough)

- System specification model (application designers)
- Transaction-level model (system designers)
- Pin&Cycle accurate model (implementation designers)

How many tools?

Minimal set for any methodology

(2 is enough?)

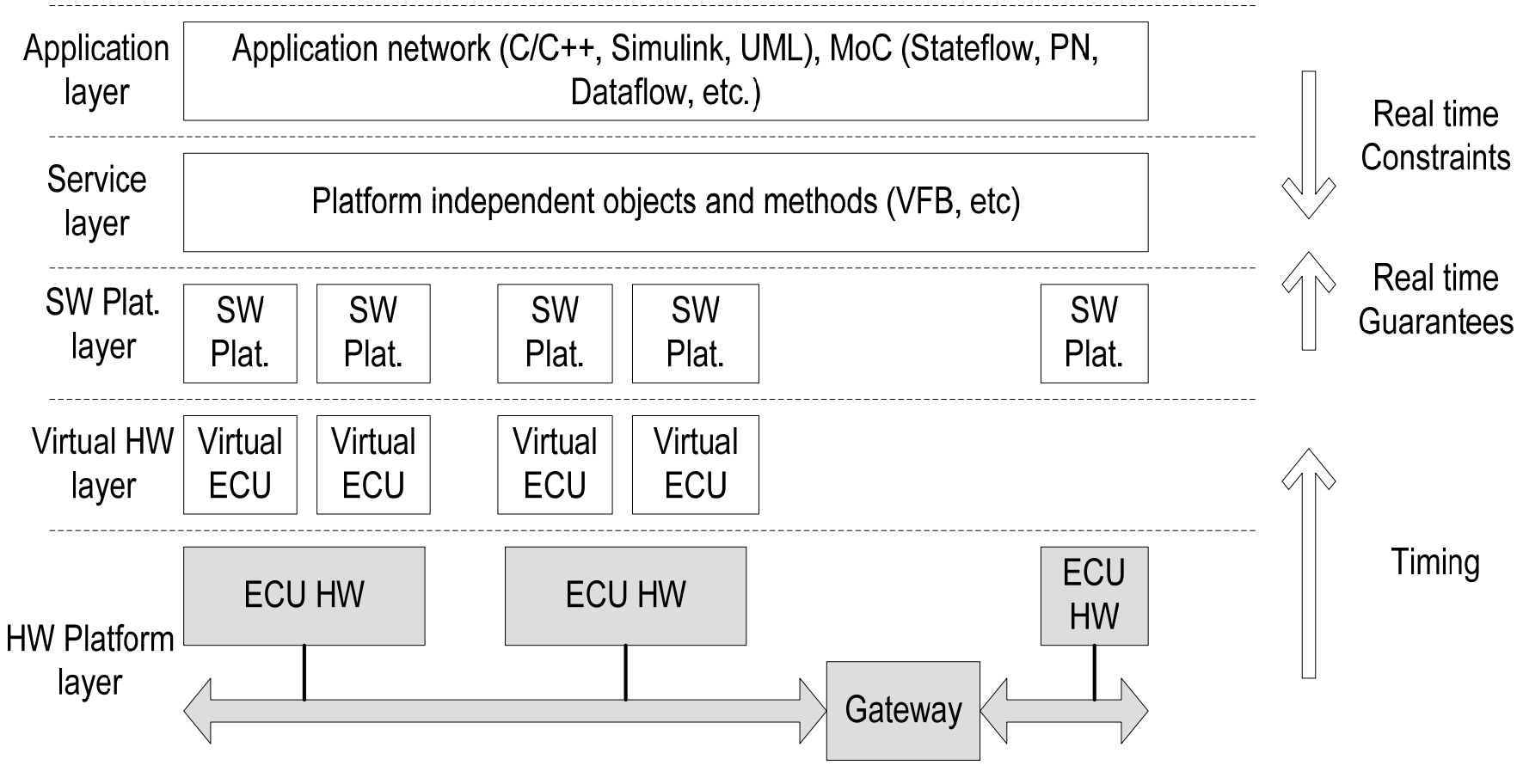
- Front-End (for application developers)
  - **Input: C, C++, Mathlab, UML, …**
  - **Output: TLM**
- Back-End (for SW/HW system designers)
  - **Input : TLM**
  - **Output: Pin/Cycle accurate Verilog/VHDL**

What is missing?

Software layers for complex applications

- Service layer
- SW platform layer

Service Architecture?



Thank You

Daniel Gajski

Center for Embedded Computer Systems (CECS)

www.cecs.uci.edu