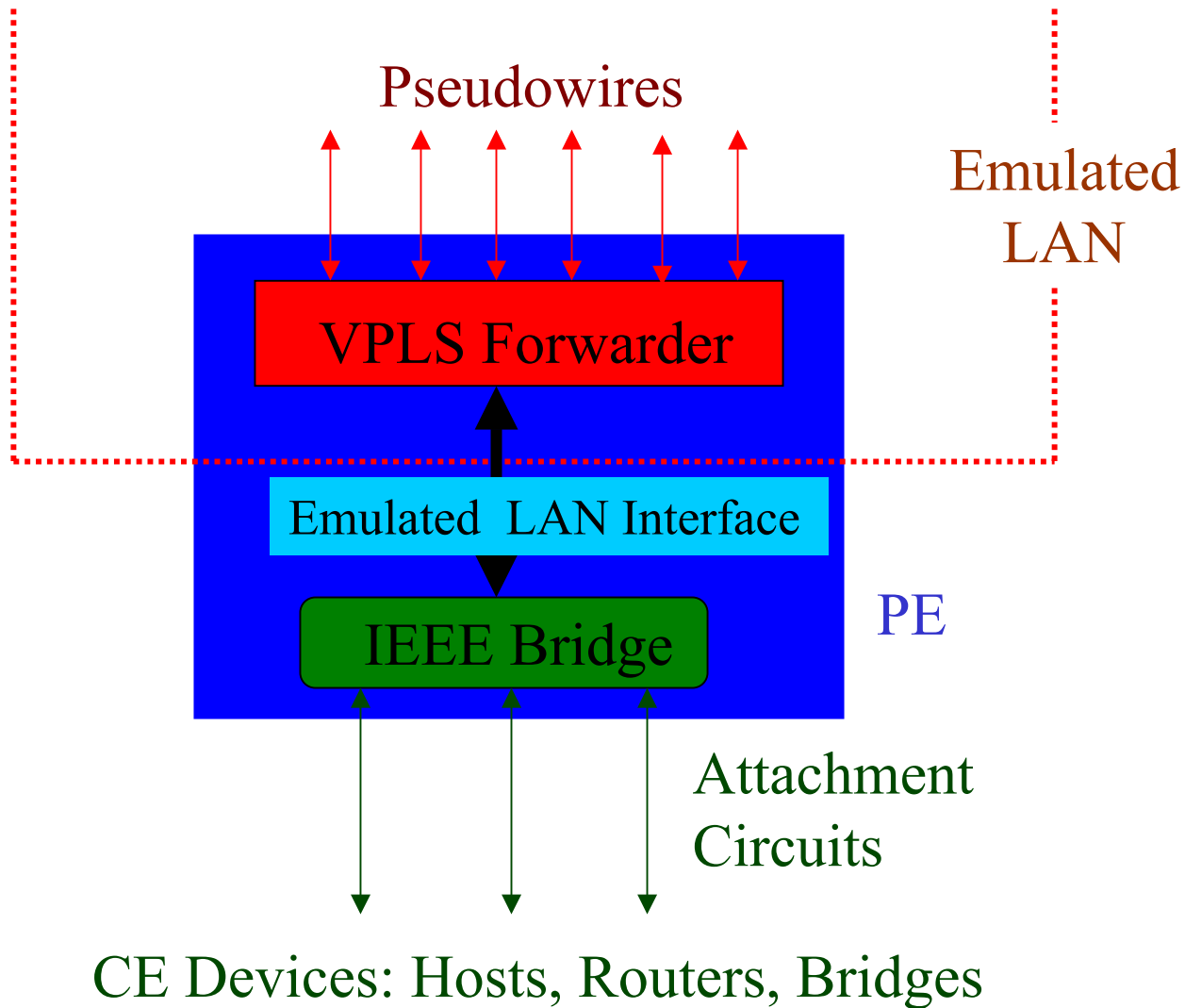


# VPLS Architectural Model



# Bridge Architectural Features

- PE contains “standard” bridge:
  - attaches to all CEs,
  - *one* interface to Emulated LAN
- “Standard” bridge features are application dependent:
  - Attach hosts/routers only
  - Attach general layer 2 switched network
- Operation spec’ed by IEEE

# VPLS Forwarder

## Architectural Features

- *One external interface:*
  - to bridge
- Multiple internal interfaces:
  - PWs to other VPLS forwarders
- Forwarding rules:
  - MAC learning from internal interfaces only
  - Receive on PW, send on external interface (only),
  - Receive on external interface, send on one or more PWs, per MAC learning

# Issues

- In implementation, Bridge and Forwarder can share a MAC table
- Snoop customer BPDUs to ensure fast timeout of MAC entries when customer SPT changes
- BPDUs sent over VPLS, but VPLS lacks presumed LAN properties:
  - Sequential delivery
  - Reliability
  - Non-duplication
  - Low latency
- Send BPDUs over control connection?