

# 802.3az D1.1 Clause 22.2.1 Transmit Deferral during LPI

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# Introduction

- Question about Clause 22 and how carrier sense controls transmit deferral in LPI mode
- Does CRS need to be qualified by “LPI Enabled” signal?
- If so, what signal should be used?
- How should clause 22 be worded?

# Last meeting: use PLS\_CARRIER to defer transmit

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## Options for specifying

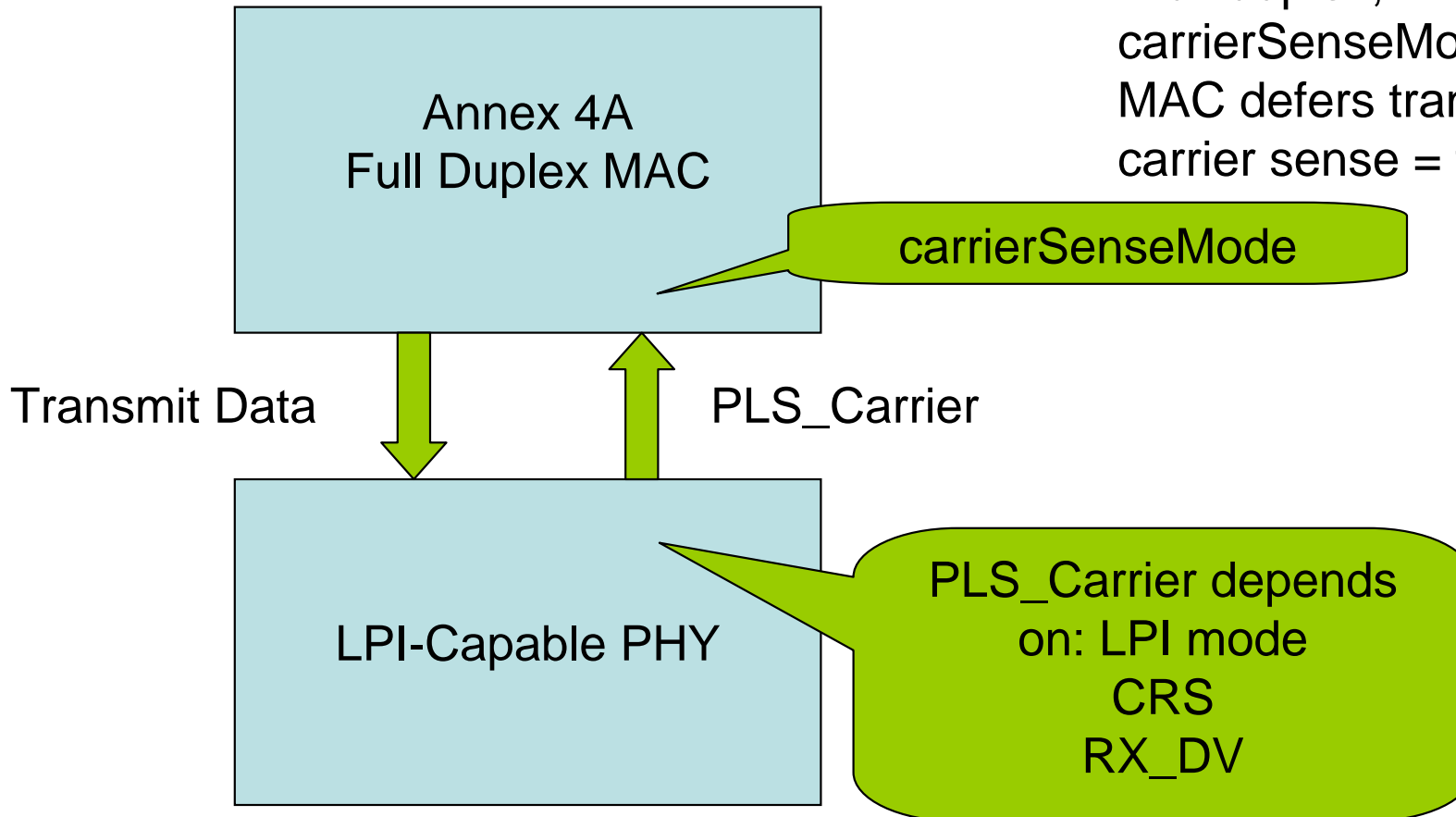
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- [1] Provide set of rules for Clients
  - Require LPI Client enforce ALPI timing
  - Require MAC Client enforce MA\_DATA timing
    - Places requirements on specifications outwith 802.3
- [2] Provide a TX LPI MII State Diagram
  - State Diagram controls timing
  - Use PLS\_CARRIER.indication to enforce MA\_DATA timing
    - Only supports full-duplex mode
- [3] Provide a LPI Control sublayer
  - LPI Control State Diagram controls all timing
- [4] Close the loop
  - Don't support xMII
    - Assume pervasive access
  - Don't support physical implementation of xMII
    - Add a new signal from the PHY to the RS across the xMII



# Will MAC defer transmit due to RX\_DV when in LPI?

- Full duplex, no LPI: MAC ignores carrier sense.
- Full duplex, with LPI: carrierSenseMode = true and MAC defers transmit when carrier sense = true



# How to avoid spurious transmit deferral

- D1.1 clause 22.2.1.1.3 is unclear
  - PLS\_Carrier is based on both LPI and traditional RX\_DV and CRS signals
  - Unclear which takes precedence
  - If MAC monitors PLS\_Carrier when LPI is configured, can some “half duplex” deferral occur?
- Solution?
  - Revise 22.2.1.1.3 so that PHY uses ONLY LPI if LPI is configured
  - Problem: “there is no LPI enable” from November meeting

# Summary

- Is an LPI Enabled variable needed?
- Can another variable be used?
- How can 22.2.1.1.3 be worded to make this clear?