Backplane Test Points and Fixtures

Charles Moore: Avago Technologies
Pavel Zivny: Tektronix
Mike Dudek: QLogic

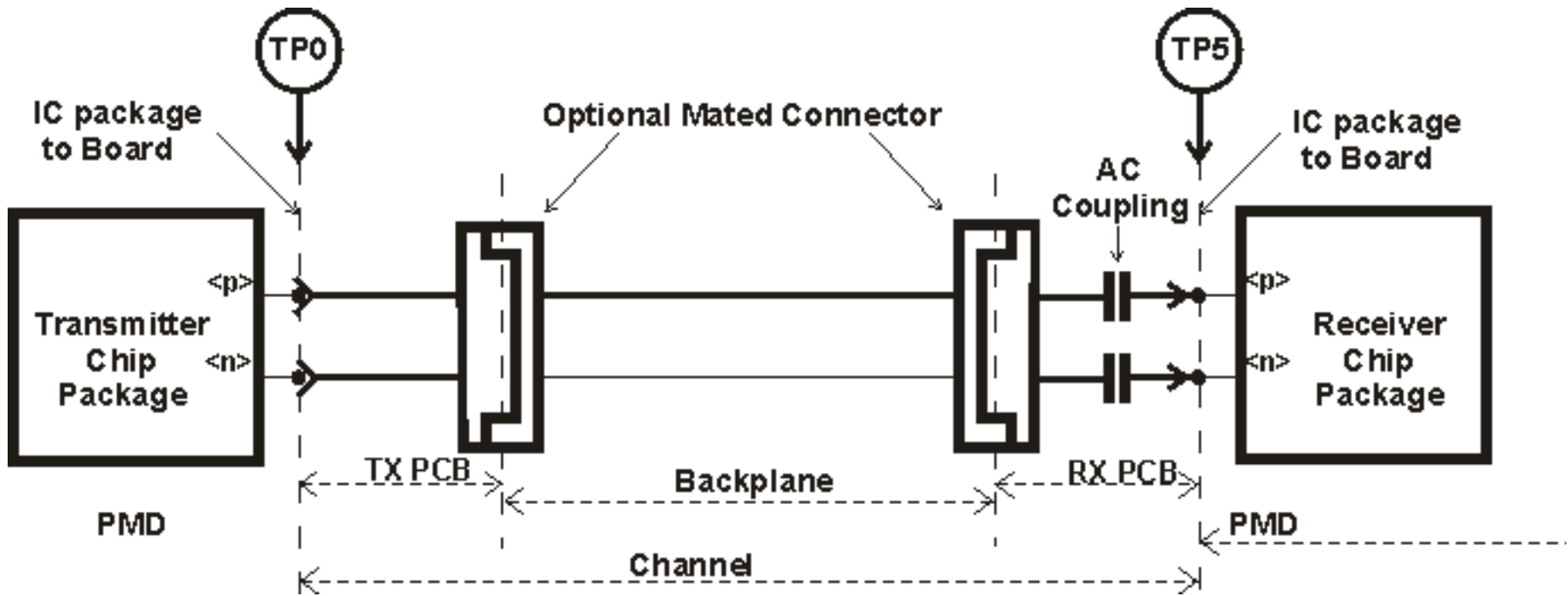**zivny_01 2012/03 IEEE 802.3bj**

Purpose and content

Purpose

- 802.3bj backplane test points iteration
  - Clarify the TP0 vs. TP0A and TP5 vs. TP5A
  - RX (TP5) test board change

Content

- Test Points for backplane proposal

- Test Fixtures

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Link Block Diagram

Considerations:

- TP0 and TP5 are defined; rationale on next slide
- TP0 and TP5 are not used for verification

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Test fixtures for both cables and PHYs

- We have used test fixtures in the past to measure cables and host ports. We will continue to use them although connectors and insertion characteristics may change.

- We can no longer test PHYs as though the tester is connected directly to the part, the effects of losses in the channel connecting the part under test and the tester must be taken into account. This was done in IEEE802.3ba, Clause 85 for both the receiver and the transmitter but the channel, the host trace, was part of what was measured.

  For IEEE802.3bj KR we will need to specify the PHY at or near the PMD IC package (TP0 and TP5).

- To test the Rx and Tx IC package we will need a specified channel and a spec which takes it into account. The Rx and Tx test fixture channels need to be specified.

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TX test and for RX test:
fixtures, verification points TP0A, TP5A
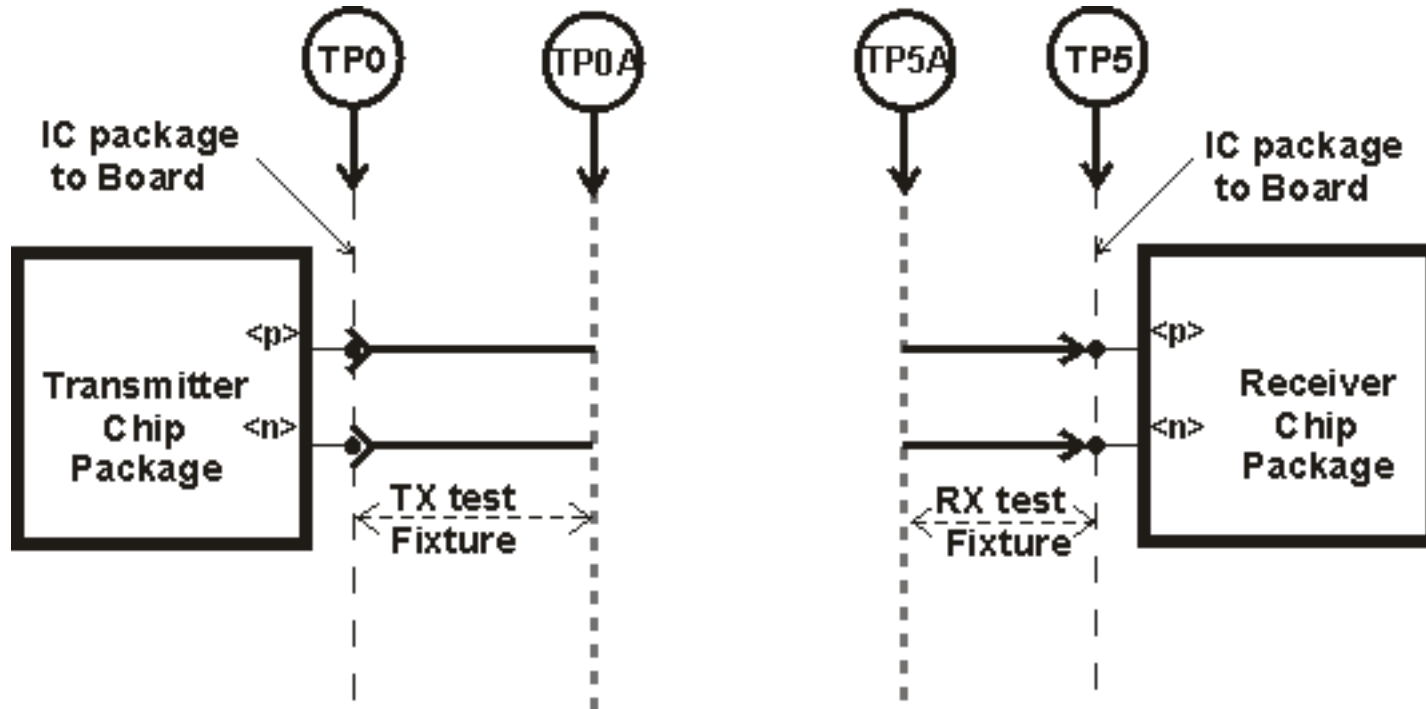
- TX and RX IC characteristics verified at TP0A resp. TP5A

- No de-embed from TP0A to TP0, nor from TP5A to TP5

- AC-Coupling is part of the instrumentation, not part of the fixture

Conclusion

- Follow example of 802.3ap and 802.3ba CR:
  specify the PHY at or near the PMD IC package (TP0 and TP5)

- Verify the PHY performance at TP0A and TP5A

- No de-embedding of the test fixtures

Thank you.