PCS ARCHITECTURE

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Rev 1.00

Clause 101 PCS

- As of D0.2, it is anticipated that the EPoC PCS is going to include both TDD and FDD features
- Based on discussions we had in York, UK, it is likely that TDD and FDD will not get implemented in a single SoC due to power constraints, large die size, as well as lack of clear drive for such two-mode chipsets
- TDD and FDD specific features, e.g., Data Detector, FEC encoder, etc., will be interleaved in the document structure, making is harder for an implementer to choose which features to pick and for any reader to separate logically.
- In this presentation, I suggest to separate the TDD PCS and FDD PCS into separate subclauses, while keeping the RS shared between both modes

Current outline (L2 only)

- 101.1 Overview
- 101.2 Reconciliation Sublayer (RS) for EPoC
- 101.3 Physical Coding Sublayer (PCS) for EPoC
- 101.4 EPoC_PMD_Name PMA
- 101.5 Power-saving capabilities
- 101.6 TimeSync capability
- 101.7 PICS

Suggested outline (L2 & selected L3)

- 101.1 Overview
- 101.2 Reconciliation Sublayer (RS) for EPoC
- 101.3 Physical Coding Sublayer (PCS) for FDD EPoC
- 101.4 Physical Coding Sublayer (PCS) for FDD EPoC
- 101.5 EPoC_PMD_Name PMA
- 101.6 Power-saving capabilities
- 101.7 TimeSync capability
- 101.8 PICS
  - 101.8.1 Mode selection PICS
  - 101.8.2 PICS common to FDD and TDD
  - 101.8.3 FDD-specific PICS
  - 101.8.4 TDD-specific PICS

* changes are marked in red

Discussion

- Separation into TDD and FDD specific subclauses will help build a complete and much cleaner picture of the PCS operation for EPoC, especially data flow, interaction of individual functions, and their relationship
- It is not clear at this time what PMA will eventually include and whether it is a mode independent
  - It may eventually also be removed from Clause 101 and moved into Clause 100 to be discussed together with PMD
- PICS should be structured as follows:
  - Selection of the operation mode (TDD/FDD)
  - PICS common for FDD and TDD modes
  - FDD specific PICS
  - TDD specific PICS

THANK YOU !