Analysis for FlexE control model & A YANG Data Model for Flex Ethernet(FlexE)

draft-xiaobn-ccamp-flexe-yang-mod-03
draft-wang-ccamp-flexe-control-analysis-03

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- Updates
- Comments received
- Next step

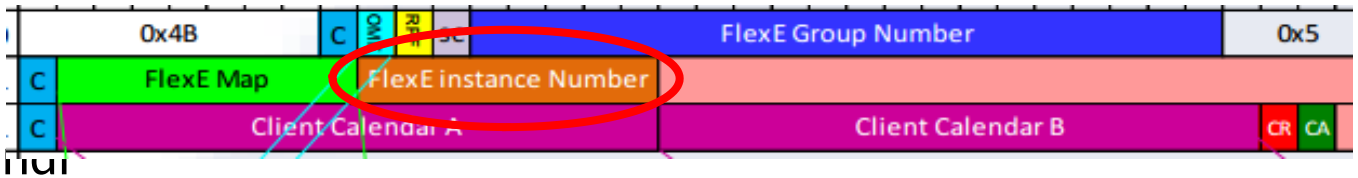
Updates

- Updates to FlexE Yang model
  - 50G Ethernet PHY type was added to the yang model draft.

- FlexE analysis draft was updated accordingly to help understand the FlexE modelli ng draft.

Comments received

- Whether model for FlexE instance is n eeded?
  - Yes. Case in point 1:
  - In FlexE IA 2.0, overhead of FlexE only indi cates FlexE instance number, PHY informa tion is included as part of instance numbe r. In addition, the allocation of slot, verific ation are configured at instance level.

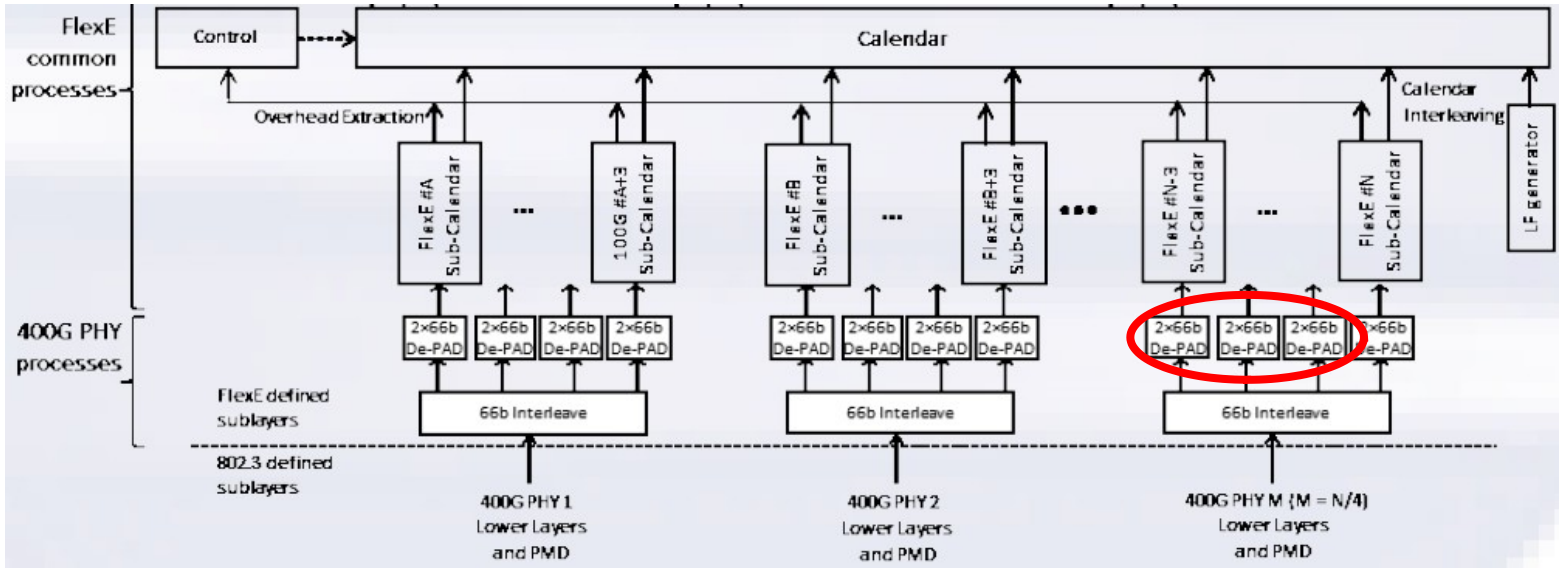



```
for FlexE = 1 to number_of_instances
  for trib_slot = 1 to number_of_trib_slots
    if AcCC == '1''0' and ExCC == '1''0'
      if AcCCA[FlexE][trib_slot] != ExCCA[FlexE][trib_slot]
        if ExCCA[FlexE][trib_slot].allocated
          nCCM[ ExCCA[trib_slot].trib_port ] = true
        if AcCCA[FlexE][trib_slot].allocated
          nCCM[ AcCCA[trib_slot].trib_port ] = true
```

  - In G.8023 Amd1, comparison for accepte d value and expected value is done at inst ance level instead of PHY level. The Expec ted configuration information is usually fr om NMS/Controller.

Comments received

- Whether model for FlexE instance is needed?
  - Case in point 2:
  - FlexE instance is not a logical construct, each FlexE instance has its own physical encapsulation pro cess. If FlexE instance model is not considered, there may result in the inconsistence between the source and sink equipments.
  - E.g., in static configuration mode, if one of the FlexE instance fails to be de-interleaved correctly, it will be replaced with replacement signal instead of normal signal. If the equipment is configured t o only verify at PHY level, it can not detect the fault of the instance, and locate where the fault ha ppens.



Comments received

- Whether model for FlexE instance is needed?
  - Case in point 3:
  - Unavailable slots are used especially in FlexE Aware transport mode. The intention is that when a 100G FlexE Instance of the FlexE Group is carried across the transport network, the mapping is abl e to compress the signal to less than the 100G FlexE Instance rate by dropping the unavailable cal endar slots. Usually, the unavailable slots are placed at the end of each relevant sub-calendar (the highest numbered slots)
  - E.g., 150G client flow, which is transmitted over one of bonded 200G PHYs, with 6 unavailable 5G s lots in the first FlexE instance and 4 unavailable 5G slots in the second FlexE instance on purpose.

```
+--rw flexe-instances
|  +--rw flexe-instance* [flexe-inst-num]

|  |  +--rw flexe-inst-num              uint8
|  |  +--rw unavb-sub-cal-slot-list* [sub-cal-slot-id]
|  |     +--rw sub-cal-slot-id    uint8
|  +--rw uneq-flexe-instance* [flexe-inst-num]
|     +--rw flexe-inst-num    uint8
```

Comments received

- Whether type calendar configuration A or B is needed?

  - It should be supported.
  - According to the definition in FlexE IA, in static configuration: “Such a configuration would simply transmit the A and B calendar configurations as fixed, always indicate the A calendar configuration as the calendar configuration in use”.

  - In order to ensure the consistency between two ends, it’s better to configure the type of cale ndar at both ends.

Next step

- Request WG adoption.

Thanks