YANG Data Model for Sync PHY

draft-jiang-ccamp-syncphy-yang-oo

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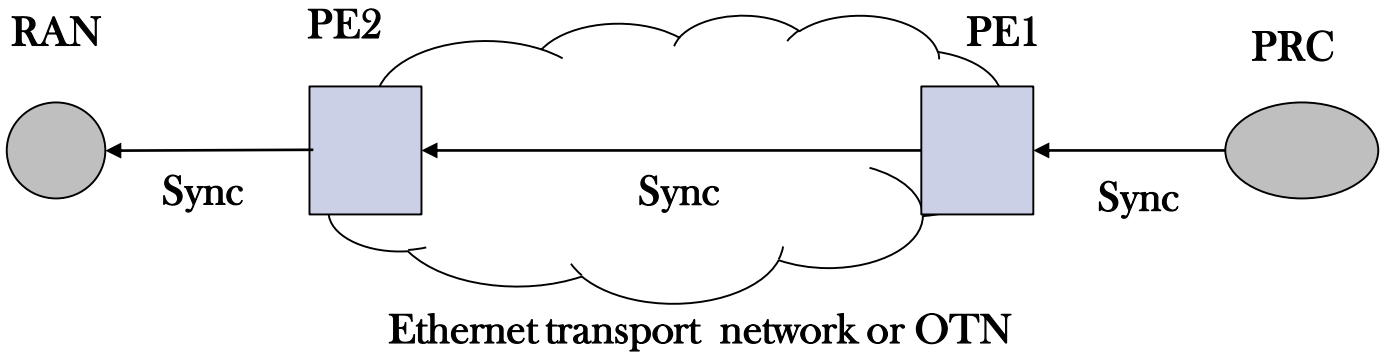
Backgrounds

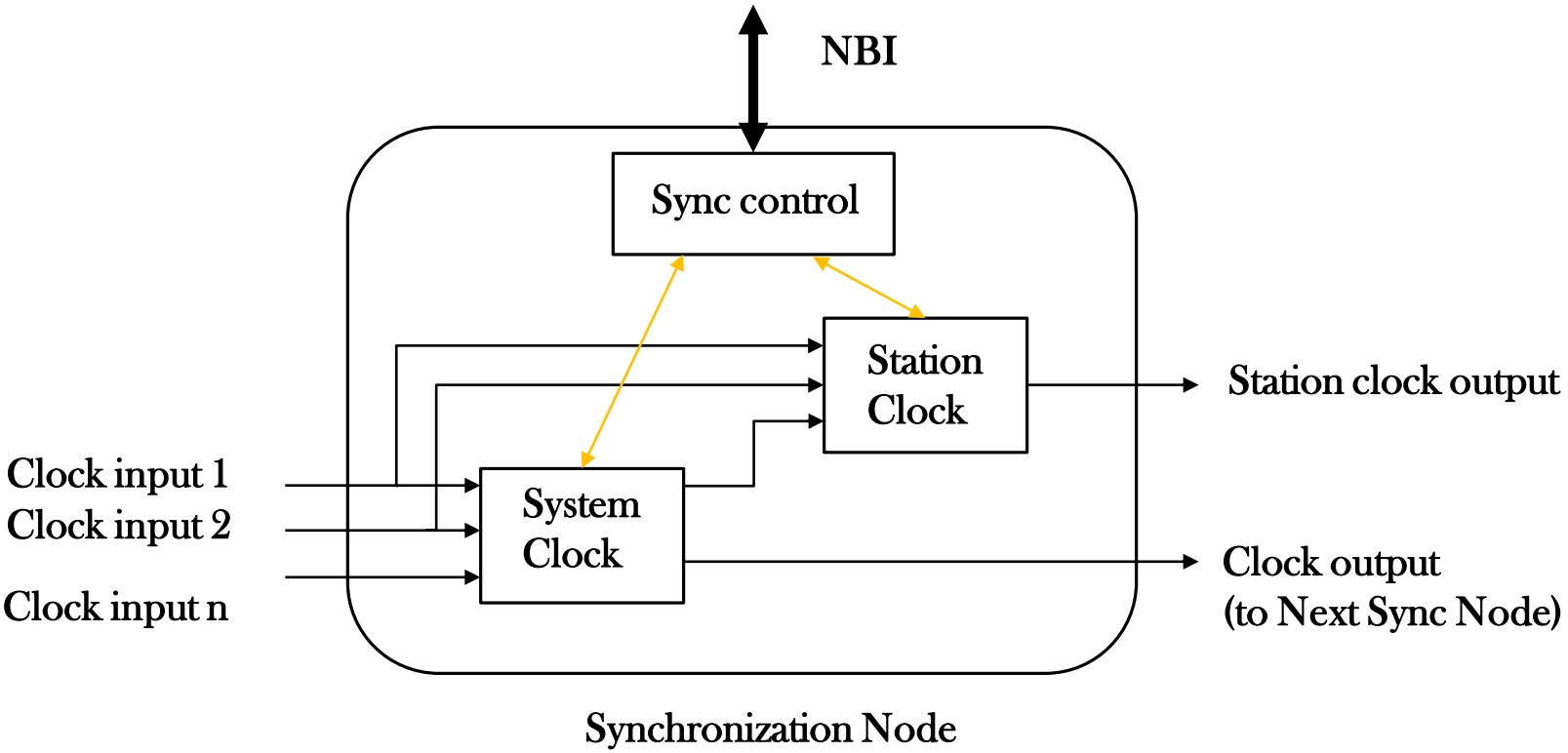
- Sync Ethernet and Sync OTN
  - The transference of clock signals over a physical layer link such as Ethernet, OTN and etc. This signal is transferred using master-slave mechanism and can be made traceable to an external primary reference clock (PRC).
  - In the event that the link between the master and the slave clock fail, the equipment should still be capable of maintaining operation (holdover) within prescribed performance limits
- ITU-T G.781 defines synchronization architecture and functions, and G.8264 further specifies the synchronization status message (SSM) protocol and formats.

Sync network Architecture



- Clock signals transferred across the network from PRC to mobile side (RAN).
- SSM messages with quality level information are transported in Ethernet or OTN networks.

Control & management of sync equipment



Constructs used in this I-D

- Sync Node, all the sync-node wide attributes are included in this container
- Port List, it includes all the port-specific sync attributes
- System clock, it includes all the system clock attributes
- Station clock, it includes all the station clock attributes

YANG Tree Diagram for Sync PHY

```
module: ietf-sync-phy
   +--rw sync-phy
     +--rw sync-node
     |  +--rw sync-network-option sync-network-option-enumeration
     |  +--ro local-quality-level quality-level-enumeration
     |  +--rw quality-level-enabled  boolean
     |  +--rw revertive-enabled  boolean
     |  +--rw wtr-time        uint8
     |  +--rw holdoff-time     uint16
     +--rw port-list
     |  +--rw name   if:interface-ref
     |  +--rw port-type   port-type-enumeration
     |  +--rw sync-enabled  boolean
     |  +--rw ql-overwrite-enabled boolean
     |  +--rw ql-overwrite-val quality-level-enumeration
     |  +--ro ql-in  quality-level-enumeration
     |  +--ro ql-out quality-level-enumeration
     |  +--rw ssm-transmit-enabled  boolean
     +--rw system-clock
     |  +--rw port-list
     |  |  +--rw name  if:interface-ref
     |  |  +--rw priority uint32
     |  +--ro selected-source if:interface-ref
     |  +--rw run-mode  run-mode-enumeration
     +--rw station-clock
      +--rw port-list
       |  +--rw name if:interface-ref
       |  +--rw priority uint32
       +--rw ql-min       uint8
       +--ro selected-source if:interface-ref
       +--ro out-source      if:interface-ref
```

Next Step

- Enhance this I-D with any new progress in the ITU-T
- Update it according to WG feedbacks

Thank You