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.
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

Synchronization Node

- Clock input 1
- Clock input 2
- Clock input n

Sync control

Station Clock

Clock output (to Next Sync Node)

Station clock output

NBI
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