

YANG data model for Flexi-Grid media-channels

draft-ietf-ccamp-flexigrid-media-channel-yang-01

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Updates Since the last version

- Created Github to manage all L0 models across WSON & Flexi-grid: <https://github.com/younglee-ietf/actn-wson-flexi-grid>
- Introduced a new ietf-layer0-types module (<https://github.com/younglee-ietf/actn-wson-flexi-grid/blob/master/ietf-layer0-types%402018-10-22.yang>) to define groupings that are used to both WSON and Flex-grid modules, e.g.,
 - Node types,
 - Application code based on ITU-T G.698.2
 - Wavelength Assignment Policy.
 - Client types, etc.
- Complete augmentation of TE-tunnel model is now available; in particular, on all modules that require Flexi-grid specific labels and bandwidth.

IETF-FLEXI-GRID-MEDIA-CHANNEL-YANG Model

<https://github.com/younglee-ietf/actn-wson-flexi-grid/blob/master/ietf-flex-grid-media-channel%402018-10-18.tree>

```
module: ietf-flex-grid-media-channel
augment /te:te/te:tunnels/te:tunnel:
  +--rw src-client-signal?  identityref
  +--rw dst-client-signal?  identityref
  +--rw fec-type?          identityref
  +--rw termination-type?  identityref
  +--rw bit-stuffing?      boolean
augment /te:te/te:globals/te:named-path-constraints/
  te:named-path-constraint/te:te-bandwidth/te:technology:
  +--:(flex-grid)
    +--rw bandwidth-type?  identityref
augment /te:te/te:tunnels/te:tunnel/te:te-bandwidth/te:technology:
  +--:(flex-grid)
    +--rw bandwidth-type?  identityref
augment /te:te/te:tunnels/te:tunnel/te:p2p-primary-paths/
  te:p2p-primary-path/te:te-bandwidth/te:technology:
  +--:(flex-grid)
    +--rw bandwidth-type?  identityref
augment /te:te/te:tunnels/te:tunnel/te:p2p-primary-paths/
  te:p2p-primary-path/te:p2p-reverse-primary-path/te:te-bandwidth/
  te:technology:
  +--:(flex-grid)
    +--rw bandwidth-type?  identityref
```

```
augment /te:te/te:tunnels/te:tunnel/te:p2p-secondary-paths/
  te:p2p-secondary-path/te:te-bandwidth/te:technology:
  +--:(flex-grid)
    +--rw bandwidth-type?  identityref
augment /te:te/te:globals/te:named-path-constraints/
  te:named-path-constraint/te:explicit-route-objects/
  te:route-object-exclude-always/te:type/te:label/te:label-hop/
  te:te-label/te:technology:
  +--:(flex-grid)
    +--rw (single-or-super-channel)?
      +--:(single)
        | +--rw central-frequency?  frequency-thz
        | +--rw slot-width?        frequency-ghz
      +--:(super)
        +--rw subcarrier-channels* [central-frequency]
          +--rw central-frequency  frequency-thz
          +--rw slot-width?        frequency-ghz
```

Current Status & Next Steps

- The draft depends on te-tunnel model stability, which should be soon attained.
- Other than the dependency of te-tunnel model, the model is ready for YANG doctor's review and WG LC.

YANG data model for Flexi-Grid Optical Networks

draft-ietf-ccamp-flexigrid-yang-02

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 - Node types,
 - Application code based on ITU-T G.698.2,
 - Wavelength Assignment Policy.
 - Client types, etc.
- Complete augmentation of TE-topology model is now available; in particular, on all modules that require Flex-grid specific labels and bandwidth types and supported b/w list.

IETF-FLEX-GRID-TOPOLOGY Model

(<https://github.com/younglee-ietf/actn-wson-flexi-grid/blob/master/ietf-flex-grid-topology%402018-10-18.tree>)

```
module: ietf-flex-grid-topology
augment /nw:networks/nw:network/nw:network-types/tet:te-topology:
  +--rw flex-grid-topology!
augment /nw:networks/nw:network/nt:link/tet:te/tet:te-link-attributes:
augment /nw:networks/nw:network/nw:node/nt:termination-point/tet:te:
  +--rw supported-payload-types* [index]
  | +--rw index      uint16
  | +--rw payload-type? string
  +--rw client-facing?      boolean
augment /nw:networks/nw:network/nw:node/tet:te/tet:te-node-attributes:
  +--rw flex-grid-node
  +--rw node-type? identityref
augment /nw:networks/nw:network/nw:node/tet:te/tet:tunnel-termination-point:
  +--rw supported-operational-modes* layer0-types:operational-mode
  +--rw configured-operational-modes? layer0-types:operational-mode
  +--rw supported-fec-types* identityref
  +--rw supported-termination-types* identityref
  +--rw supports-bit-stuffing? boolean
  +--rw is-tunable? boolean
  +--rw max-subcarrier-channel-num? uint8
  +--rw supports-flex-grid? boolean
augment /nw:networks/nw:network/nw:node/nt:termination-point/tet:te/tet:interface-switching-capability/tet:max-lsp-bandwidth/tet:te-
bandwidth/tet:technology:
  +--:(flex-grid)
  +--rw bandwidth-type? identityref
augment /nw:networks/nw:network/nw:node/tet:te/tet:te-node-attributes/tet:connectivity-matrices/tet:path-constraints/tet:te-
bandwidth/tet:technology:
  +--:(flex-grid)
  +--rw supported-bandwidth-list* identityref
```

Current Status & Next Steps



- The draft is stable and ready for YANG doctor's review and WG LC.

Thank You!