

A YANG Data Model for Layer 0 Types

draft-ietf-ccamp-rfc9093-bis-04

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Updates Since IETF 115

YANG model update:

- Added “supported-modes” presence container (issue [#126](#) in Optical Impairment **Closed**)
 - to allow profile in optical impairment draft there is no ambiguity here for empty list since a transceiver will support at least one mode. Two options here:
 - 1) leave as it is clarifying in the description that the list is empty when the server does not report the supported-modes (profile case)
 - 2) make the supported-modes a presence container and add a min-element 1 to the supported-mode list → chosen for alignment with the adopted profile solutions in all the model
- **Closed** Issue [#66](#) on RX power penalty
 - to extend the operative region of the receiver . The “extended operative region” would allow to use the transponders/transceivers in network where the deployed HW forces the power level to be less than minimum of operative region.
 - changed the definition of min-OSNR , using rx-ref-channel-power .
 - defined new data node rx-ref-channel-power : the channel power used as reference for defining penalties and min-OSNR
 - introduced the new list for power-penalty

leaf min-OSNR {

```
type snr;
units "dBm";
config false;
description
  "min OSNR measured over 0.1 nm resolution bandwidth:
  if received OSNR at Rx-power reference point
  (rx-ref-channel-power) is lower than MIN-OSNR,
  an increased
  level of bit-errors post-FEC needs to be expected";
}
```

leaf rx-ref-channel-power {

```
type dbm-t;
config false;
description
  "The channel power used as reference
  for defining penalties and min-OSNR";
}
```

list rx-channel-power-penalty {

```
config false;
description
  "Optional penalty associated with a received power
  lower than rx-ref-channel-power.
  This list of pair power and penalty can be used to
  sample the function penalty = f(rx-channel-power).";
leaf rx-channel-power {
  type union {
    type dbm-t;
    type empty;
  }
  units "dBm";
  config false;
  mandatory true;
  description "Received Power";
}
uses penalty-value;
}
```

grouping transceiver-capabilities {

```
description
  "This grouping is intended to be used for reporting the
  capabilities of a transceiver.";
```

container supported-modes {

```
presence
  "When present, it indicates that the modes supported by a
  transceiver are reported.";
description
  "The top level container for the list supported
  transceiver's modes.";
list supported-mode {
  key "mode-id";
  config false;
  min-elements 1;
  description "The list of supported transceiver's modes.";
  leaf mode-id {
    type string {
      length "1..255";
    }
    description "ID for the supported transceiver's mode.";
  }
  uses transceiver-mode;
} // list supported-modes
} // container supported-modes
} // grouping transceiver-capabilities
```

Open issues

- Tracking Open Issues, discussions and resolutions linked to YANG model <https://github.com/ietf-ccamp-wg/ietf-ccamp-layer0-types-ext-RFC9093-bis/issues>
- 1 issue closed since IETF-115
- Still 21 open issues: need to review the list and solve first the issues that create dependency for stable draft almost closed to LC (e.g. optical impairments)
- <https://github.com/ietf-ccamp-wg>

Administrative:

- We have weekly call associated with Optical Impairments aware Topology model on **Tuesday 2pm CET**

Next Steps

- Complete the Appendix A with the changes from RFC 9093 (issue [#40](#))
- Prioritizing and Fixing the remaining issues <https://github.com/ietf-ccamp-wg/ietf-ccamp-layer0-types-ext/issues>

backup

