

draft-wilton-netmod-intf-ext-yang-01  
draft-wilton-netmod-intf-vlan-yang-01

Rob Wilton

[rwilton@cisco.com](mailto:rwilton@cisco.com)

IETF 94 – Yokohama, NETMOD  
WG

# Recap

Two drafts:

## 1. Interface extensions draft

- Defines common interface configuration for configuring network devices:

E.g. MTU, Link flap mitigation, loopback, L2 encapsulation, Sub-interfaces

## 2. Interface VLAN draft

- Defines a flexible encapsulation for classifying Ethernet/VLAN tagged traffic to sub-interfaces
- Features/forwarding can be applied to the sub-interfaces *just like any other if:interface.*

# Changes from 00 to 01

- Added common base identity 'sub-interface' for sub-interfaces in general
- Added Ethernet specific sub-interface identity 'EthSubInterface'
  - Derives from ianaift:l2vlan and 'sub-interface' identity
- Sub-interface augmentation (conditional on the locally defined sub-interface identity) now has mandatory parent leaf
- Hence uses/requires Yang 1.1

# General modelling question:

Q. How to best define interface augmentations?

- Need to apply to the appropriate set of interface types
- The same leaf (and namespace) should be applicable to appropriately defined new interface types in future
- It would be nice if the same configuration leaves could also be used on vendor specific defined interface types

# Current YANG

```
augment "/if:interfaces/if:interface" {  
    when "if:type = 'ianaift:ethernetCsmacd' or  
        if:type = 'ianaift:sonet' or  
        if:type = 'ianaift:atm' or  
        if:type = 'ianaift:otnOtu'" {  
        description  
            "All interface types that support loopback configuration.";  
    }  
    if-feature "loopback";  
    description "Augments the IETF interface model with loopback  
        configuration for all interfaces that support it.";  
  
    leaf loopback {  
        type identityref {  
            base loopback;  
        }  
        description "Enables traffic loopback.";  
    }  
}
```

# Proposed YANG

```
identity phy-interface {
  description "Base type for physical interfaces;
}

augment "/if:interfaces/if:interface" {
  when "derived-from(if:type,
                    'ietf-if-cmn',
                    'phy-interface') or
        if:type = 'ianaift:ethernetCsmacd' or
        if:type = 'ianaift:sonet' or
        if:type = 'ianaift:atm' or
        if:type = 'ianaift:otnOtu'" {
    description
      "All interface types that support loopback configuration.";
  }
  if-feature "loopback";
  ... no change, as per previously ...
}
}
```

# Comments/Opinions?

Choices:

1. Could not restrict configuration to specific interface types at all?
2. Phy-interface identity solves problem for future (and vendor specific) interface types

But doesn't help with existing IANA defined interface types

3. Could define a new set of common standard interface types that inherit both from property specific identities and also the base IANA types?
4. Or modify IANA types to inherit from property identities?

# Summary

- Seeking more reviews please and support for adoption as WG items
- L2VPN YANG will end up requiring these drafts (or direct equivalent) to model attachment circuits
- But Interface VLAN draft still needs consent from IEEE 802.1Q WG chair
- Any questions (on either draft)?