

YANG Data Model for Passive Network Inventory

draft-ygb-ivy-passive-network-inventory-03

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Status update

- -03 version of the draft was published with adjustment to the front-page author list (reduce to 5 per IETF guideline)
- It was agreed on IETF-124, that the work for passive inventory modeling is in the scope of IVY
- Comments received from IETF-124, that the definition of “passive-inventory” needs clarification prior to WG adoption.
- The document is otherwise in stable state

Discussion: Definition of Passive Inventory

- -03 version contains the definition for passive infrastructure:
 - *"Passive infrastructure refers to the underlying infrastructure of a telecommunication network that is not actively detectable or manageable. It typically includes non-powered, non-communicating devices and components, such as cabinets, cables, connectors, splitters, antennas, distribution frames, etc., that are either hosted within an actively managed device or deployed along the physical pathway between active devices. Passive infrastructure serves as physical connections between active network devices, forming the backbone for network topology."*
- draft-ietf-ivy-network-inventory-yang defines network inventory as *"a collection of data for network devices and their components managed by a specific management system"*

Discussion: Definition of Passive Inventory

- Propose to add the following definition for passive inventory:

“Passive inventory contains a collection of inventory objects pertaining to network infrastructure that are not powered and have no direct management communication, and that are used to realize the underlying physical infrastructure carrying signals through a network. Passive inventory includes elements such as optical cables, fiber segments, splice points, closures, ducts, and supporting structures that do not perform active processing, forwarding, or control functions. These objects are maintained for purposes such as identification, location, connectivity, and lifecycle management.”

Next Step

- Addressing the definition of passive inventory
- Request WG adoption call
 - Good interest with substantial support, and there is also interest from external organizations (e.g. BBF) to reuse the model
- Other open issues, e.g. modeling passive devices as extended NE, do not block the WG adoption and can be addressed as part of the WG development process

Draft Logistics

- GitHub Repo:
<https://github.com/aguoietf/draft-ygb-ivy-passive-network-inventory>
- We plan to discuss weekly during the IVY DT discussion on Wed 10-11am ET

Thank You!

Backup Slides

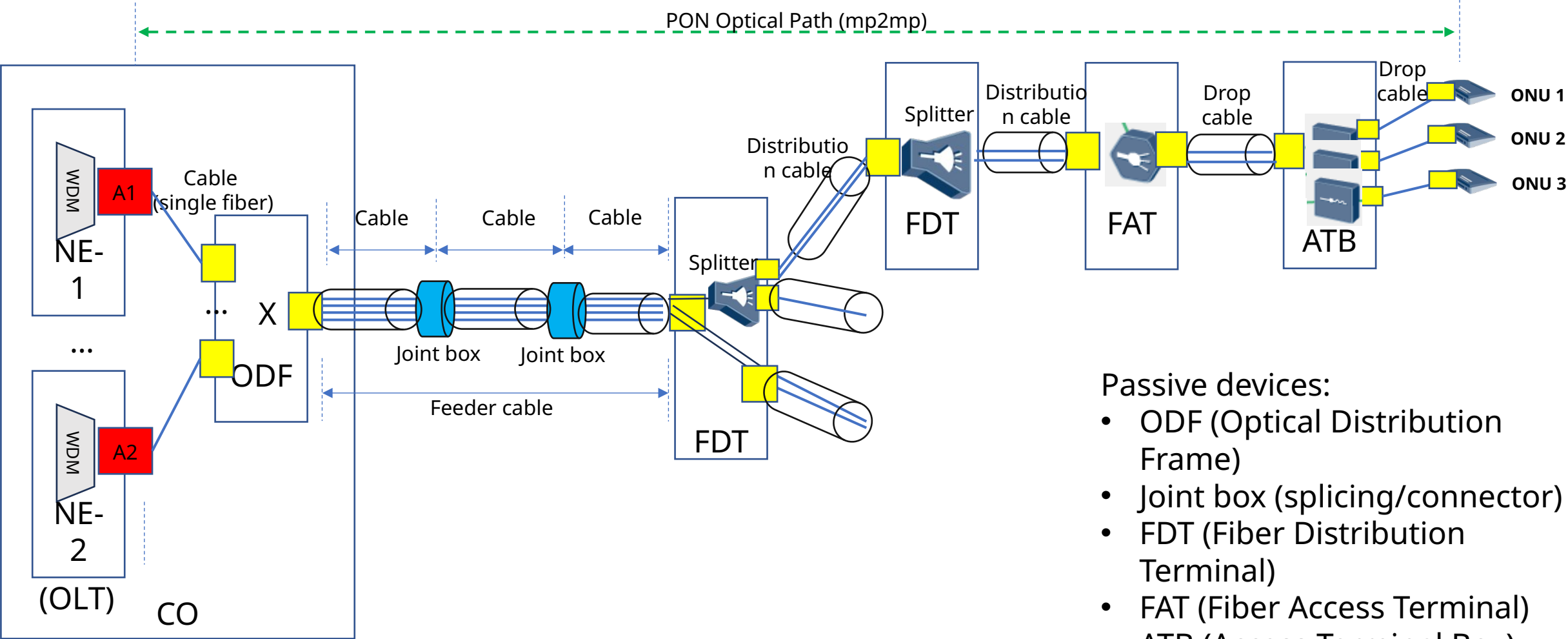
Open Issues & Discussion (1)

- Passive device modeling methodology (#6)
 - Option 1: modeled as a type of Network Element (NE)
 - Pro: unified inventory management by reusing the definition of NE and its list of components which can be generic
 - Con: NE typically associated with management capabilities while passive devices are not; different lifecycle between passive devices and NE
 - Option 2: modeled as a new inventory object (as-is)
 - Pro: optional for passive inventory, separate inventory repository and life-cycle management
 - Con: non-unified modeling of passive and active network inventory; only reuse the groupings for common parameter definitions
- Further discussion needed to determine which option to use

Other Open Issues & Discussion (3)

- Shorten the co-author list (#19)
- Define properties of passive devices / ports (#13, #12, etc.)
 - Technology-specific augmentation vs. all-in-one model
- Modeling of passive components not already functionally presented in (active) NEs
 - E.g. cables connecting the components within an NE (#5)

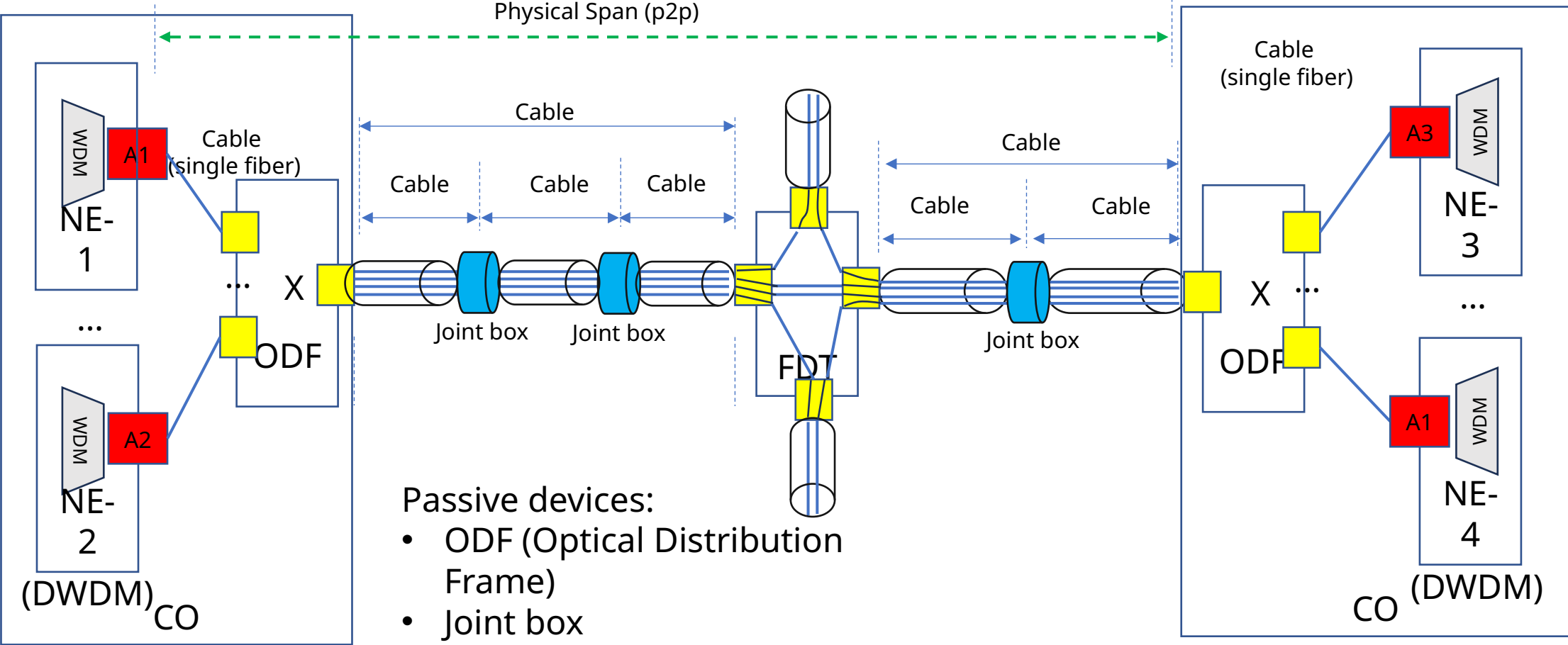
Passive Infrastructure - Access



Passive devices:

- ODF (Optical Distribution Frame)
- Joint box (splicing/connector)
- FDT (Fiber Distribution Terminal)
- FAT (Fiber Access Terminal)
- ATB (Access Terminal Box)
- Cable/cable segments

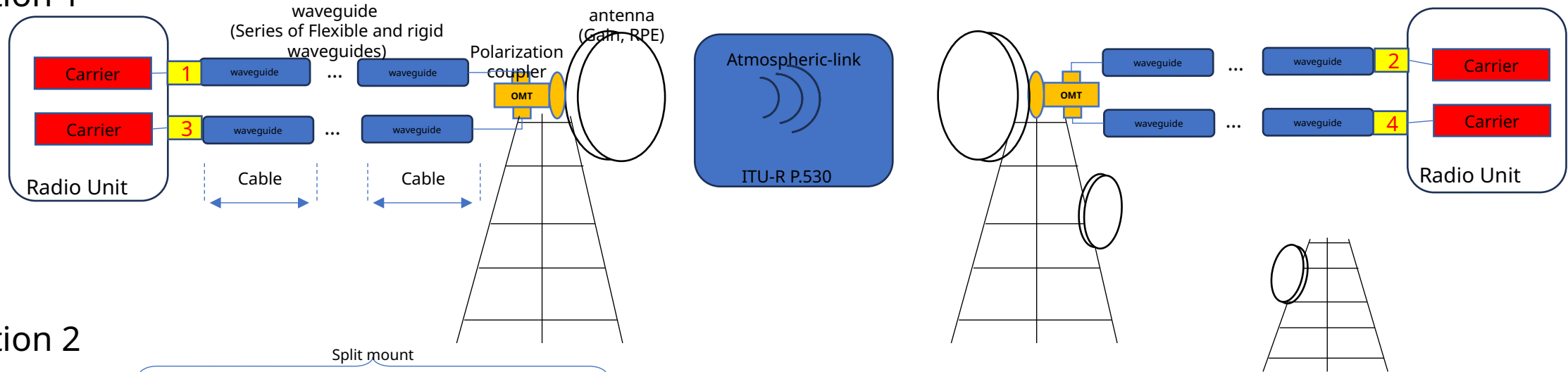
Passive Infrastructure – OTN/DWDM



- Passive devices:
- ODF (Optical Distribution Frame)
 - Joint box (splicing/connector)
 - FDT (Fiber Distribution Terminal)

Passive Infrastructure – Microwave (To be further discussed)

Option 1



Option 2

