Microwave Radio Link
YANG Data Model

draft-ahlberg-ccamp-microwave-radio-link-00

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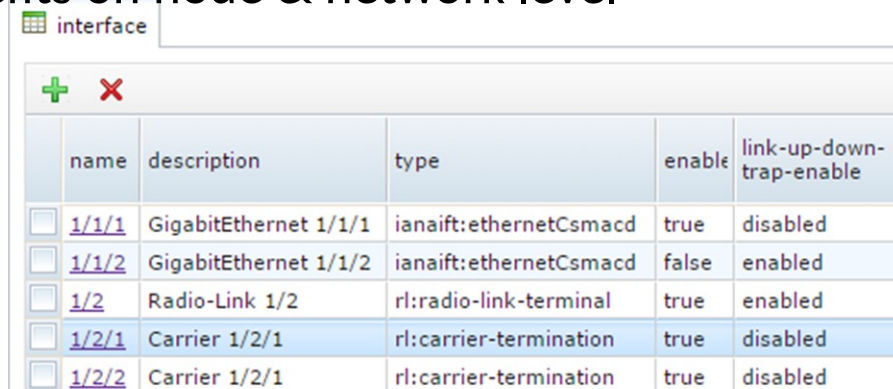
Agenda

- Background
- Why an IETF model?
- The ONF Model in comparison
- Overall structure
- Status & Next Steps
- Q&A

Background

- Increased focus on standardization of node NBIs in general
  - to simplify multi-vendor management,
  - remove the need for vendor/domain specific management, and
  - enable use of open source systems

- Strong push for Transport SDN, where MW is a subset
  - focus on Unified Management
  - open node NBIs are expected
  - ONF is the only active forum for MW so far

- Standardization of MW management is about to happen!

Why an IETF model?

- Leverage the strengths of YANG Model for Interface Management [RFC 7223]
  - **Augment** it with Microwave Radio Link specific extensions
  - **Alignment** with other types of interfaces in a microwave node (L2, L3, …)

- Allow for additional vendor/product specific extensions
  - Technology evolution and innovation is fast - standardization is slow
  - Standardize on an appropriate abstraction level

- Usability & system integration benefits on node & network level
  - Radio Link will become just another interface managed according to [RFC 7223]
  - Management systems likely to handle [RFC 7223] off-the-shelf

interface

|	name	description	type	enable	link-up-down-trap-enable
☐	1/1/1	GigabitEthernet 1/1/1	ianaift:ethernetCsmacd	true	disabled
☐	1/1/2	GigabitEthernet 1/1/2	ianaift:ethernetCsmacd	false	enabled
☐	1/2	Radio-Link 1/2	rl:radio-link-terminal	true	enabled
☐	1/2/1	Carrier 1/2/1	rl:carrier-termination	true	disabled
☐	1/2/2	Carrier 1/2/1	rl:carrier-termination	true	disabled

The ONF Model in comparison

- Addresses similar use cases with a focus on Unified Management

- SDN centric and based on the ONF CoreModel
  - Does not leverage YANG Model for Interface Management [RFC 7223]
  - Lack of alignment with other types of interfaces in a Microwave node

- Broader scope and very detailed
  - Historical PM data and Hardware / Entity data
  - Parameters which are product/implementation specific

Overall Structure
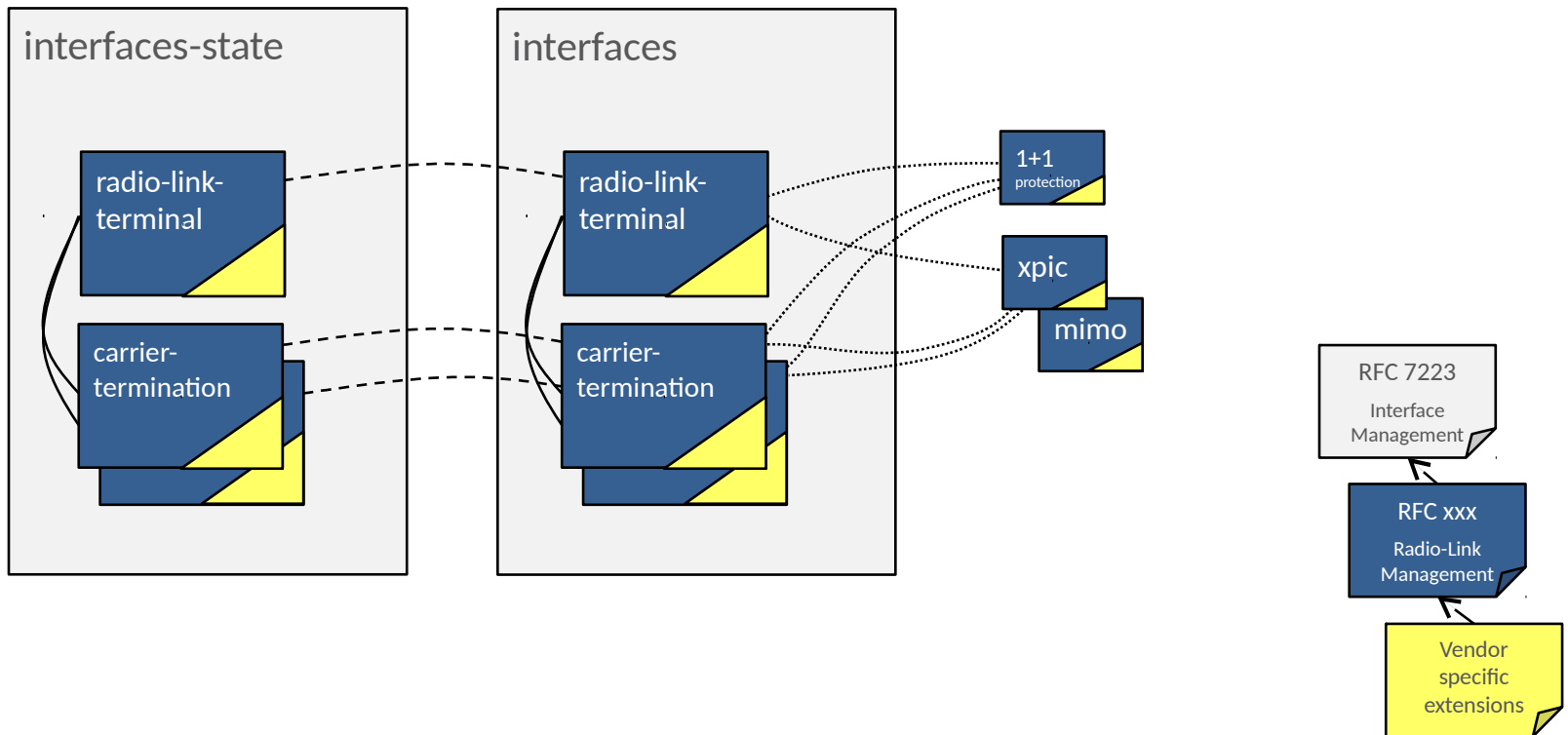
Interface Hierarchy
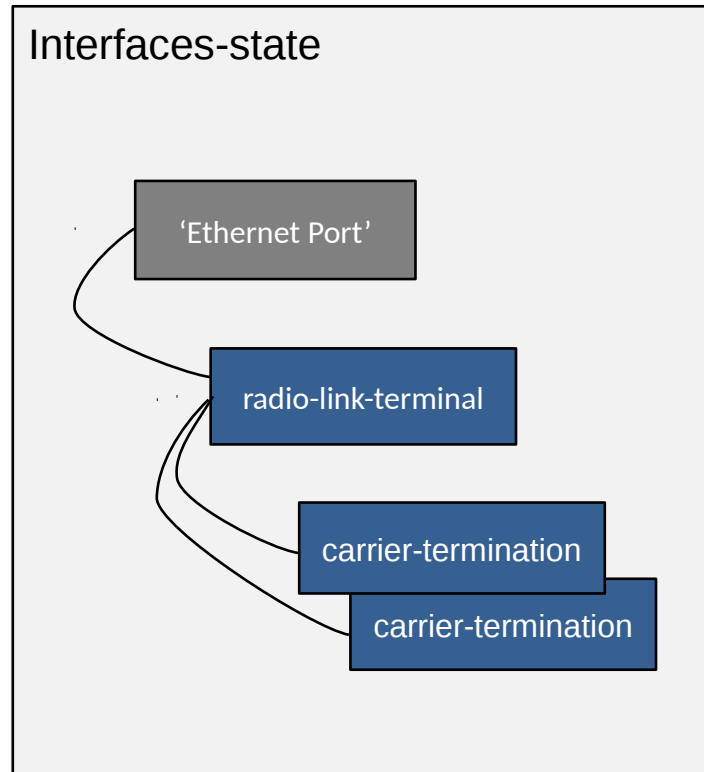
Status & Way Forward

- -00 version published today but heads up sent to the list
- Call for co-authors/contributors:
  already discussed offline with some WG members from
  - AT&T, Telefonica, Vodafone
  - Huawei, NEC, Aviat, Nokia

- Proposed draft a starting point for continued work
  - Does it support the necessary operator use cases?
  - Is the structure for bonding & protection generic enough to be standardized?
  - What belongs to the standardized model and to vendor/product specific extensions?
  - Terminology?

- Next Steps
  - Collect feedbacks from the working group
  - Keep the draft aligned with ongoing YANG modeling work
  - Get as soon as possible to WG status

Q&A