

OAM Reference model

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IEEE 1914.1
Next Generation Fronthaul Interface
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OAM Reference model

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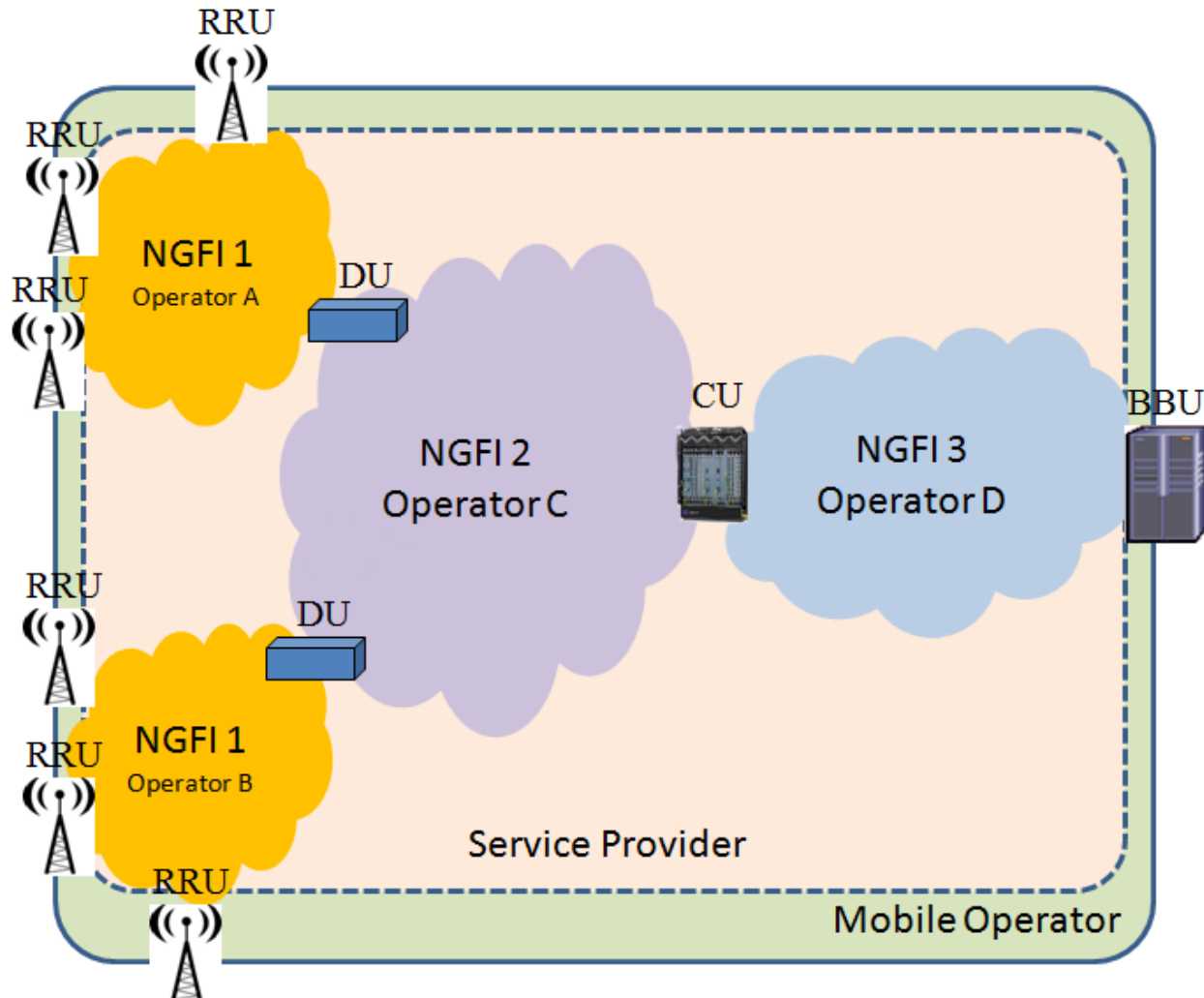
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Introduction

- During the last f2f meeting (Beijing, 01/2017) it was agreed to add an OAM section to the IEEE 1914.1 standard.
- The first clause in the section should include a reference model with the different players relevant to OAM functions
- This contributions presents a reference model.
- The OAM reference model is based on the NGFI architecture presented in [tf1_1701_cai-tazi_NGFI-architecture-considerations_2.pdf](#)
- The OAM tools shall provide support for monitoring the performance parameters presented in slide 7 of [tf1_1702_cai_tazi_NGFI_COS_specification_1.pdf](#)
- Additional maintenance tools shall be defined per CoS

OAM reference model



OAM players

Mobile Operator: The entity obtaining the NGFI service from a Service Provider. It owns or controls all the elements necessary to sell and deliver services to an end user.

Service Provider: The organization providing NGFI Service to a Mobile Operator. It owns or controls the end to end network.

Operator: The organization who monitors and maintains the operation of a communications of one portion of the network.

Note that the Service Provider may be also the Operator. Furthermore, the Mobile Operator may own the whole network in which case it will be the only player.

OAM performance monitoring tools

The following per CoS parameters shall be monitored:

- **Packet Delay**
 - This parameter may be required as two way packet delay (RTT) and for some cases (e.g. timing accuracy due to asymmetric delay) as a one way packet delay
- **Packet Delay Variation**
 - May also be required as one or two way
- **Frame Loss Ratio**
 - Is a “ratio” good enough, or we want to require an accurate count ?
- **Availability**
 - Define available/unavailable declaration parameters
 - Note: For Mobile Backhaul MEF defined additional High Loss Interval (HLI) and Consecutive HLI (CHLI)

OAM maintenance tools

The following per CoS maintenance tools shall be defined:

- **Continuity Check**
 - Define the minimum and maximum CC transmission rate according to the CoS required performance
- **Alarms**
 - Which alarms shall be monitored and reported ?
 - Examples: Loss of Continuity (LOC), Remote Defect Indication (RDI), Alarm Indication Signal (AIS)
- **Maintenance tools**
 - Loopback: Are there any recommended or required fields ?
 - Link Trace ? Not very popular.

Motion #___

- Agree on the reference model for the OAM section using as a baseline tf1_bruckman_oam_reference_model_fm_1.
- Mover: Leon Bruckman
- Seconder:
- Yes: ___ No: ___ Abstain: ___ (technical motion needs $\geq 2/3$)