

# 2021-07-27 TAPI Meeting Notes

## Date

27 Jul 2021

## Attendees

- [Andrea Mazzini](#)
- [Ramon Casellas](#)
- [Nigel Davis](#)
- [Xiang YUN](#)
- [Karthik Sethuraman](#)
- [Hing-Kam Lam](#)
- [Ronald Zabaleta](#)
- [Huy Tran](#)

## Goals

- Admin
  - **TAPI 2.3 Release – Integration of Streaming and Fault Management**
  - Any update on liaison between TIP and ONF?
  - Brief update on tooling @ O-RAN
- Review of last updates for version 2.3 delivery
- Delivering RIA 1.1 ([ONF TAPI RIA](#))
  - Selection of UCs which review is necessary for RIA 1.1 delivery, e.g.
    - 0d – clarification on SAPI/DAPI vs. TxTI/ExT
    - 3d - Constrained Provisioning diversity based on SRG / Diverse Routing in SRG failure
    - 5d - Asymmetric service provisioning with 1+1 Protection with Diverse Service Provisioning (eSNCP)
    - ASON related UCs
    - 12a: Pre-calculation of the optimum path
    - 12b: Simultaneous pre-calculation of two disjoint paths
- Server constraints vs. multiple augment of (distinct) technology specific packages

## Agreed Items & Priority

- Below the list of the agreed items and related priority.
- An item is blocking when its resolution is necessary precondition for the delivery.

### TAPI 2.1.3 and RIA 1.1

1. OTU(+ODUCn) CEP/CSEP as single point for OTU/OTSiA ConnectivityService provisioning ([solved](#))
2. ENNI/INNI Asymmetric service provisioning for multi-domain scenarios, agree UCs ([solved](#))
3. Alarm / TCA notification ([blocking, 1](#))
  - a. Subscription
  - b. Notification contents
    - Probable Causes / Elementary alarms (e.g. ITU-T cZZZ fault causes), including TCA PM Parameters
4. OTS and OMS model ([solved](#))
5. Path Computation Use Cases ([blocking, 2](#))

### TAPI 2.3/2.4 and RIA 1.2

1. MEP/MIP model vs. direct inclusion of OAM parameters in the CEP ([solved](#))
  - a. ODU OAM
  - b. Photonic OAM
  - c. TCA provisioning
2. Physical impairments ([not blocking](#))
  - OFC is augmenting TAPI Link, others the AbstractStrand.
  - Type of amplifier, fibre attenuation, etc.
3. Photonic model capability ([not blocking](#))
4. Lifecycle management of ConnectivityService at every layer, necessary to identify UCs ([not blocking](#))
  - Lifecycle management of single ConnectivityService, necessary to identify UCs
5. 3R ([not blocking](#))
6. UNI Client interfaces modelling. DSR/ODU multiplexing over ODU ([not blocking](#))
7. RESTCONF Response codes for use cases ([not blocking](#))
8. TAPI OAS, action points to be assigned ([not blocking](#))
9. Routing Constraints ([not blocking](#))
10. Physical Route ([not blocking](#))

## Discussion items

5 mins  
Administrative

**Review of TR-547 1.1: Wed 28, 10:00-12:00 pm CEST (and tentatively also 29 and 30)**

- Invited Ramon, Nigel, Ronald, Pedro, Arturo. Please others interested to contact Andrea.

03 Aug 2021 TAPI weeky call

10 mins  
ONAP Update

Karthik Sethuraman informs that ONAP side are looking at TAPI for topology model, it it worth that TAPI team tries to attend ONAP.

- Shown diagram from <https://wiki.onap.org/display/DW/Proposed+Topology+IM+Sketch>, where "The topology model is *inspired* by TAPI."

10 mins  
ORAN Update

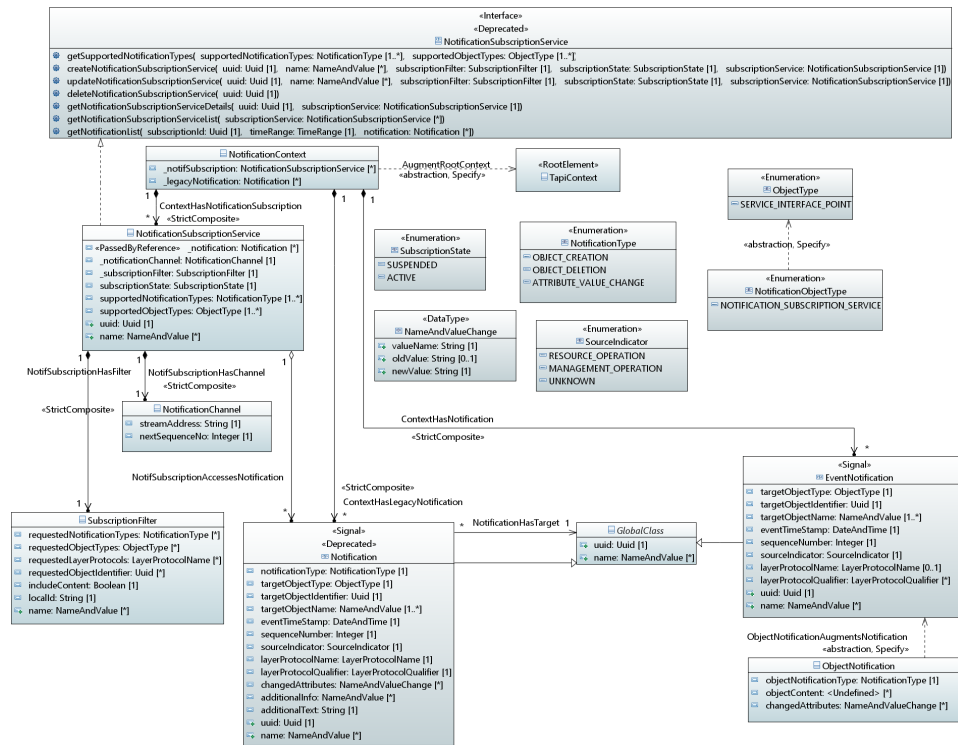
Nigel Davis informs that O-RAN specifications are centered on Papyrus/UML and they are considering Eagle tool for the automatic translation to Yang.

- O-RAN folks attended last IISOMI call, see [2021-07-23 IISOMI Meeting notes](#)
- Apparently some resources may be available to progress on the uml2yang tool.

90 mins  
Technical discussion

Andrea Mazzini presents current state of TapiNotification, TapiStreaming and TapiFM models.

Agreed a simplification, only one object, *ObjectNotification*, augments the new *EventNotification*, which is replacing the old *Notification* signal:

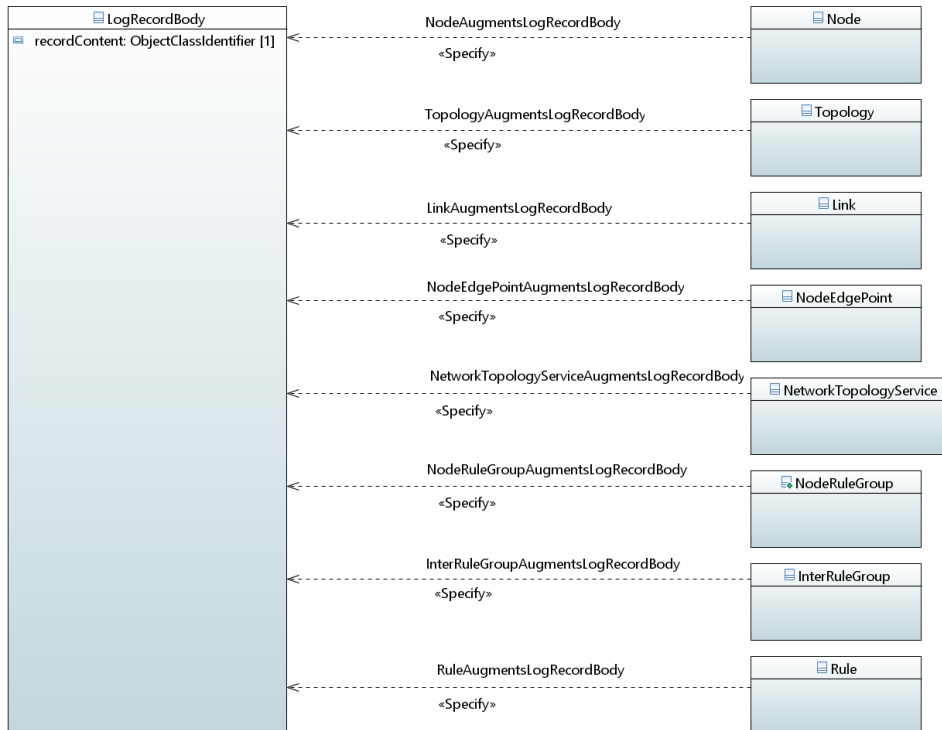


- Confirmed that for TAPI 2.3 the "object creation" model will still be different for Notification and Streaming.
  - Agreed that backward compatibility is assured by keeping the "deprecated" *Notification* signal.
  - Agreed to explore a more generic data type than name-value pair (which seems less interoperable) for the new object creation notification - this to al
  - Post meeting note, leaving the UML type as "undefined", the uml2yang translates to Yang:

```
leaf-list object-content {
  type string;
  description "The object content, e.g. all the attributes of a newly created object. The mapping is not specified.";
```

- Preliminary agreement that TAPI 2.4 object notification will fully align to Streaming augments:

Administrative  
ONAP Update  
ORAN Update  
Technical discussion



- [Ramon Casellas](#) indicates the JSON Patch (RFC 6902), which is a list of changes:

A JSON Patch document is a JSON [RFC4627] document that represents an array of objects. Each object represents a single operation to be applied to the target JSON document.

The following is an example JSON Patch document, transferred in an HTTP PATCH request:

```

PATCH /my/data HTTP/1.1
Host: example.org
Content-Length: 326
Content-Type: application/json-patch+json
If-Match: "abc123"

[
  { "op": "test", "path": "/a/b/c", "value": "foo" },
  { "op": "remove", "path": "/a/b/c" },
  { "op": "add", "path": "/a/b/c", "value": [ "foo", "bar" ] },
  { "op": "replace", "path": "/a/b/c", "value": 42 },
  { "op": "move", "from": "/a/b/c", "path": "/a/b/d" },
  { "op": "copy", "from": "/a/b/d", "path": "/a/b/e" }
]
  
```

- [Ramon Casellas](#) suggests the "anydata" (RFC 7950) for the object content:

#### 7.10. The "anydata" Statement

The "anydata" statement defines an interior node in the schema tree. It takes one argument, which is an identifier, followed by a block of substatements that holds detailed anydata information.

The "anydata" statement is used to represent an unknown set of nodes that can be modeled with YANG, except anyxml, but for which the data model is not known at module design time. It is possible, though not required, for the data model for anydata content to become known through protocol signaling or other means that are outside the scope of this document.

An example of where anydata can be useful is a list of received notifications where the specific notifications are not known at design time.

