1904.2 Coverage Gap Analysis

Straightforward topics

1. ~~Replace "UMT" with a more accurate term~~
2. ~~Add section 6.5 on OAM loopback~~
3. ~~Add section 5.2.3 on UMTPDU format with OMCI subtype~~
4. ~~Add section 7.3 Support of OMCI to describe OMCI protocol-specific behavior~~
5. ~~Add all PICS~~
6. Add section 7.4 on L2 encapsulation behavior
    1. Glen
7. Add 7.5 on L3 encapsulation or leave L3 encapsulation out.
    1. Glen
8. Consistent reference to CTE (singular or plural)
    1. Kevin
9. Consistent reference to CTE rule types
    1. Kevin

Big ticket items

1. ~~Decide what examples (use cases) to present in annex 7A. There can be dozens or hundreds of different configurations. We should only show 4-6, IMO.~~
   - ~~Currently, we only show "*OAM over UMT use case, UMT-unaware end points*"~~

2. ~~Sections **6.2 Receive path specification** and **6.3 Transmit path specification**~~
   - ~~Existing text is bad. It just shows some disconnected examples of individual ingress/egress entrance/exit rules. These rules in isolation don't help. A much better way is to show matching entrance and exit rules combined per specific use case (as is done in 7A.1).~~
   - ~~How to specify Rx and Tx path through UMT sublayer?~~
   - ~~Alternative Question: what is missing in Rx and Tx path spec?~~

Annex 7A examples

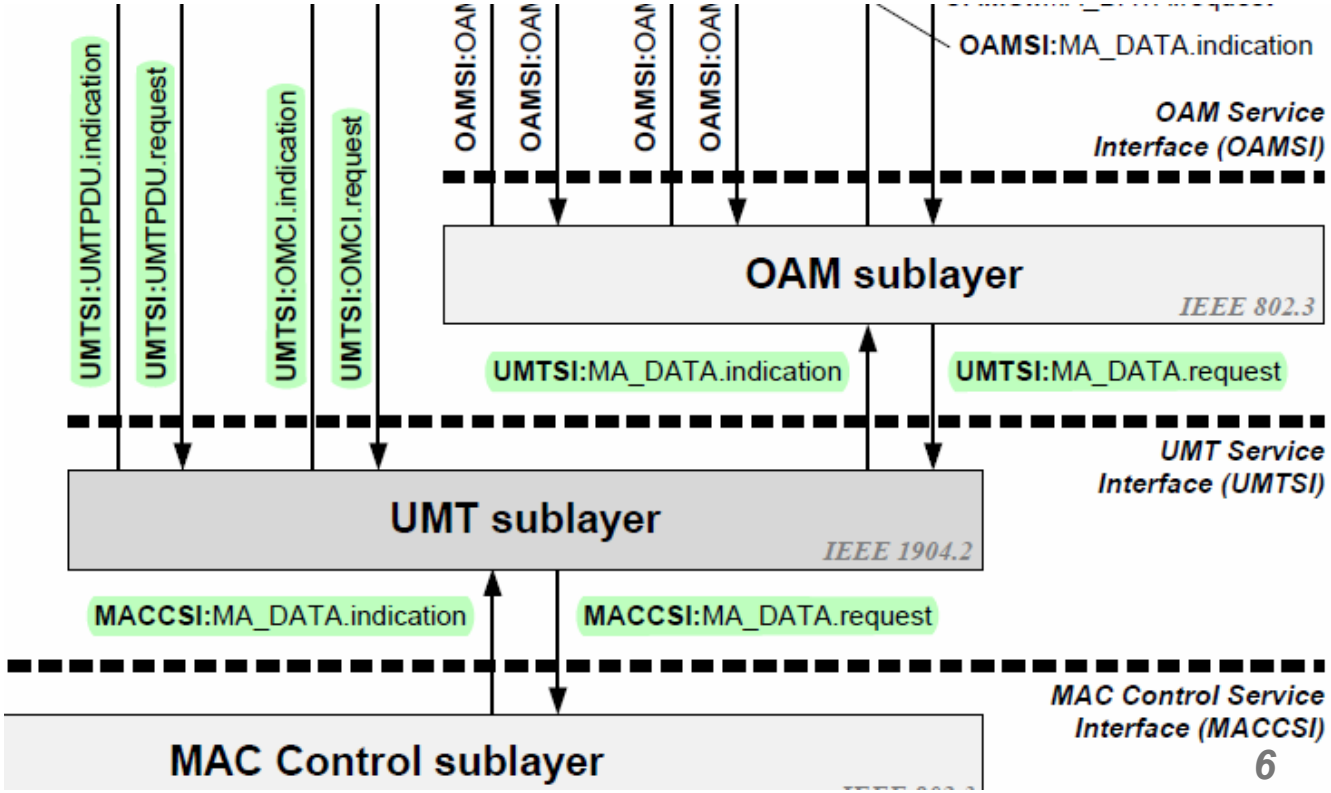
- ~~*OAM over UMT use case, UMT-aware end points -GK*~~
- ~~*OAM over UMT use case, UMT-aware end point + UMT-unaware end point - GK*~~
- ~~OMCI example (1 or more cases) - PK~~
- Combined OLT and ONU (ONU is UMT-unaware) use case – KN, PK
  - OAM+OMCI – Done, needs fixes
- Glen to contribute use case of managing EPON with mix of UMT-aware and UMT-unaware ONUs
- L2 encap example - ?

Potential material for 6.2 and 6.3

- Semantics of primitives
  - ~~OMCI~~
  - VLC PDU
  - Reference to MA_DATA in 802.3

UMT Management

- Operators need to have ability to query UMT-related statistics from UMT-aware devices.
- Examples:
  - Frames/Bytes matched per rule
  - Frames/Bytes not matched by any rule (i.e., passed as is)
  - Frames/Bytes transmitted/ received per interface
    - UMTSI:UMTPDU
    - UMTSI:OMCI
    - UMTSI:MA_DATA
    - MACCSI:MA_DATA



Two approaches to statistics gathering

1. **Assume other management-related standards will define UMT-related management attributes**
   - For example, SIEPON defined extOAM attributes for all sublayers and clients in EPON
   - Statistics will be read using extOAM-over-UMT or OMCI-over-UMT.
   - Add a single paragraph stating that management attributes are out-of-scope for 1904.2

2. **Make 1904.2 self-contained and define all relevant management attributes in this standard.**
   1. Requires additional UMTPDU request/response definitions for reading the attributes
   2. Can work for devices that don't support either OAM or OMCI. Do we care about such devices (i.e., from among all sublayers, we only can query UMT stats)?

1. Define all attributes in 1904.2
    1. Glen to provide proposed list of attributes
2. Add a statement that existing extOAM PDU or NetConf/SNMP can be used to read/write those attributes

Needs additional discussion.

Thank You