1904.2 Coverage Gap Analysis

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Draft gap analysis

- What needs to be added to the draft to progress to D1.0
  - Draft should be technically complete.
  - No TBDs
  - No missing features that we know we need
- What needs to be added to progress to D2.0
  - Only two months between D1.0 and D2.0
  - Focus on removing bugs and typos and improving clarity and consistency

- After D1.0, no new features that are not already listed in this presentation

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
7. Add 7.5 on L3 encapsulation or leave L3 encapsulation out.
8. Consistent reference to CTE (singular or plural)
9. Consistent reference to CTE rule types

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) - KN
- □ Combined OLT and ONU (ONU is UMT-unaware) use case – KN, PK
  - – OAM+OMCI
  - – OAM+OAM
- □ L2 encap example - ?

Description of a behavior

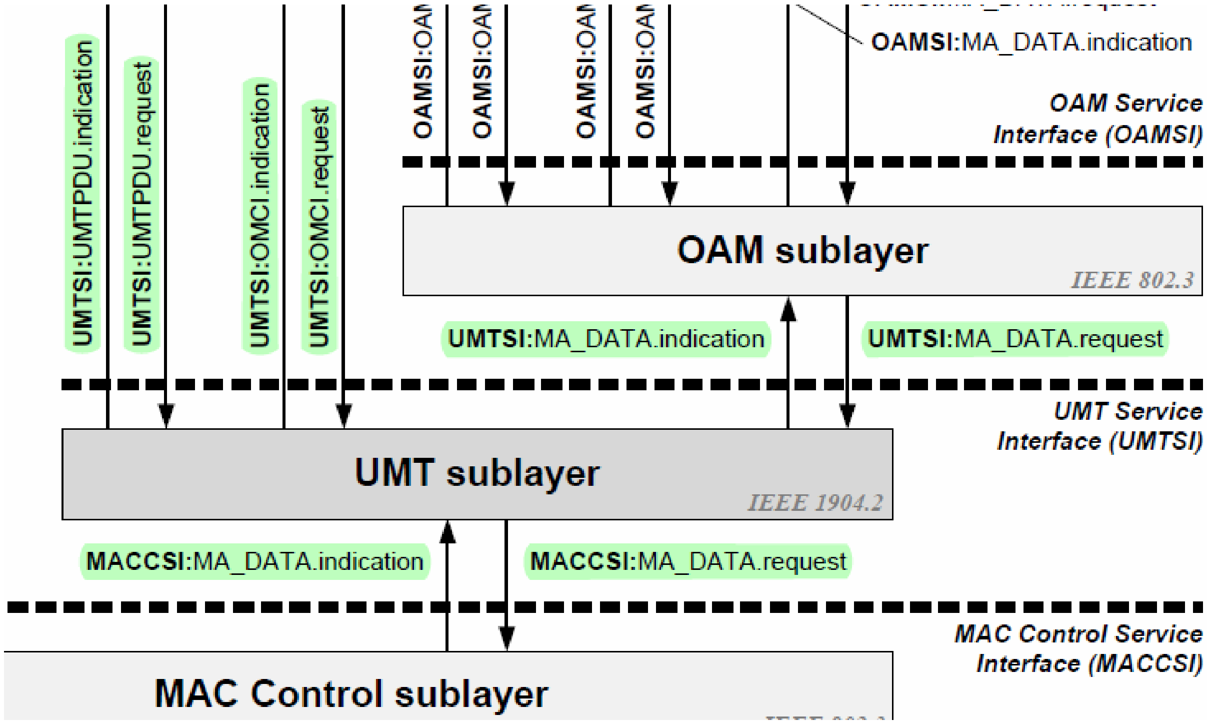
- Various standards, such as 802.x or 1904.x rely on several alternative mechanisms to describe behavior of a model
  - **State diagrams** – a good way to illustrate both timing relationships between various device's states as well as actions taken in each state
  - **Computer program** (or pseudo-code)
    - Example: Ethernet MAC specification in 802.3 clause 4 and annex 4A uses Pascal
  - **Just text** [and pictures]
  - **Rules**
    - A form of pseudo-code, but configurable/provisionable for specific situations.
    - Used for models that can exhibit thousands of different behaviors/modes
    - Instead of showing 100s or 1000s of separate state diagrams, one for each mode, the behavior is described via small number of primitive elements:
      - In 1904.2, 6 conditions + 4 actions + 17 operands (fields)
      - These elements maybe combined in many different ways – a decision left to standard users (vendors, operators)
      - Only few representative examples of rules are shown in the spec.

Potential material for 6.2 and 6.3

- Semantics of primitives

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)?

- Suggestion by Kevin:

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

Needs additional discussion.

Thank You

From TF2 April mtg minutes

- Jennifer Santulli explains
  - need to get draft to completion
  - Balloting 6 months
  - Already approved for 2 year ext. (ending in Dec 2020)
  - Next extension request needs to show that we are complete enough to make the deadline
  - We think a 1 year extension will be adequate
  - Aug/mid-Oct deadline for submission of PAR extension, advise Dec so we have milestones to demonstrate (Oct 13)
  - Advise push up by 1 month to make it clear to the board that we can make the deadline
  - Want to provide the timeline chart as an example of proof
  - Start invitation in mid-late November
  - 30 days for invitation – need to start in Nov.