802.1Qcc:
Integrating Clause 99 TLVs into MSRP

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TalkerAdvertise (v0 in 802.1Q-2014)

- MRP attribute shall be unchanged during declaration
  - Change in length or value octets is a new attribute
- MSRP uses list of mandatory “structures” per type

- Cannot add optional structure to a type
Proposal for TalkerAdvertiseV1

- New AttributeType (e.g. 5)
  - Specified translation to/from v0
- FirstValue is a list of “sub” TLVs from clause 99
  - TLV can be optional at declaration, but unchanged after
- Example FirstValue:

<table>
<thead>
<tr>
<th>TLV</th>
</tr>
</thead>
<tbody>
<tr>
<td>StreamIdentifier TLV</td>
</tr>
<tr>
<td>StreamPacket TLV</td>
</tr>
<tr>
<td>StreamRank TLV</td>
</tr>
<tr>
<td>TrafficSpecification TLV</td>
</tr>
<tr>
<td>NetworkSpecification TLV</td>
</tr>
</tbody>
</table>
Specifying TLVs in Clause 99

- YANG is a good fit for clause 99 (abstract model)
- For TLV, protocol vs clause 99 question has two parts

<table>
<thead>
<tr>
<th>Type (11)</th>
<th>Octet</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Length (8)</th>
<th>Octet</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>EUI48</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>UniqueID</td>
<td>9</td>
<td>2</td>
</tr>
</tbody>
</table>

**Figure 99-8 — Stream Identifier TLV**

- Type and Length:
  - SRP doesn’t use sub-TLVs;
  - Clause 99 works there
  - IS-IS & RSVP use sub-TLVs;
    - Own type enumeration
    - 2-octet Type/Length

- Value (elements):
  - Arguably best in clause 99;
  - Ensure consistency
  - Helps protocol independent APIs
Essentially Three Options

1. Type/Length and Value in clause 99
   - This exists in Qcc D0.3

2. Value in clause 99, Type/Length in each protocol
   - E.g. MSRP sub-TLV type numbers in clause 35, not 99
   - Editor recommends this for next Qcc draft

3. Protocol decides Type/Length and Value
   - Clause 99 limited to YANG only
   - Value is different for each User/Network protocol
Thank You