Information Elements for Data Link Layer Monitoring

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Submitted as WG draft version 02 in Feb. 2013.

- Improved based on the comments from Pat Thaler.
  - Replaced with the references of current 802.1 documents.
  - Organized the frame formats in appendix.
  - Improved sub-section 2.2 “Data Center Bridging”

  - Changed the title as “Virtual Ethernet Technology Summary”
  - Removed sub-sections 2.3 “Multiple Path Ethernet Summary” and 2.4 “VXLAN Summary”

  - These points are not relevant to the data link layer monitoring.
2.2 Virtual Ethernet Technology

- Improved the sub-section in new draft.
  - Introduces the summary of Virtual Ethernet Port Aggregator (VEPA) [IEEE802.1Qbg] and Bridge Port Extension [IEEE802.1BR].
  - Summarizes the necessity of traffic monitoring for the relevant Ethernet frames.

- Further some improvements
  - Now, we received some comments from Pat Thaler, there seems some flaws and misunderstanding.
  - Next step: modify it after discussion on mail list
New Information Elements

- Added new Information Elements
  - `dot1qTagProtocolIdentification`  
    - The IE representing tag type is needed, since `dot1qVlanId` has several semantics, such as C-tag, S-tag, B-tag.
  - `dot1brEChannelTag` and `dot1brEChannelPriority`  
    - The IEs are needed, in the case of capturing Ethernet frame from Bridge port Extender on Controlling Bridge.

- Or all IEs about L2 header form are unnecessary
  - Because `dataLinkFrameSection` covers all of L2 header form.

- We needs further comments from L2 experts and IPFIX members.
Modification of Existing IEs

- Needs the discussion about in the case of multi-tagged frame
  - Which VLAN Id are represented by `dot1qVlanId`?
    - `dot1qVlanId` indicates outer tag
    - Or use the set of `dot1qVlanId` and `dot1qTagProtocolIdentification`

- Not yet improved the description about packet section IEs
  - `sectionOffset` and `sectionObservedOctets` are applied to existing IEs related to packet sections
  - Next step: modify these descriptions
Next Step

- Need more comments from L2 experts and IPFIX experts
- Improve sub-section 2.2 and new IEs based on the Pat Thaler’s comments after the discussion on mail list
- Submit next version in May 2013.