Priority-based Flow Control and 802.3x

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802.3x: Layer and Interfaces

**MAC Client**
- Data
- Control

**MAC Control Sublayer**
- MAC Client Control
- MAC Client Data

**Media Access Control**
- MAC Control Sublayer
- PHY

**Control Request Infrastructure**
- E.g. Interface for XON/XOFF requests
- And Indications about Rxed control frames

**Flow Control**
- E.g. Act upon Rxed XON/XOFF requests

**Congestion Detection**
- E.g. Resource thresholds

**Congestion Management**
- E.g. Generate XON/XOFF requests

**Legend:**
- Infrastructure standardized by 802.3
- Implementation dependent usage

802.3 has frame format and transmission selection
MAC Client has control, but unspecified
802.3x: Layer and Interfaces

MAC Client

Transmission Selection

PFC

Congestion Detection
E.g. Resource thresholds

Congestion Management
E.g. Generate XON/XOFF, PFC requests

Control Request Infrastructure
E.g. Interface for XON/XOFF requests
And Indications about Rxed control frames

Flow Control
E.g. Act upon Rxed XON/XOFF requests

Legend:
- Infrastructure standardized by 802.3
- Implementation dependent usage

802.1 to specify PFC frame, transmission selection and control
802.3 maintains link FC frame and TS
Few thoughts

• Leaving link level FC in 802.3 and Priority-based Flow Control in 802.1 – Is it necessary to keep it separate?

• Option 1:
  – Enhance 802.3 to handle PFC packets and enhance MAC-Client interface to support PFC
  – Provide FC and PFC request generation and response at queue level in 802.1

• Option 2:
  – Should we combine link Flow Control and Priority-based Flow Control in 802.1?
  – Migrate 802.3 functionality to 802.1
  – Deprecate 802.3x clause (31B) from 802.3
    • But, it appears – there are more 802.3 protocols that use same EtherType (EPON?)

• Option 3:
  – Leave Annex 31B in 802.3
  – Implement PFC functionality in 802.1
  – Do not consolidate these functions in documentation