Priority-based Flow Control and 802.3x

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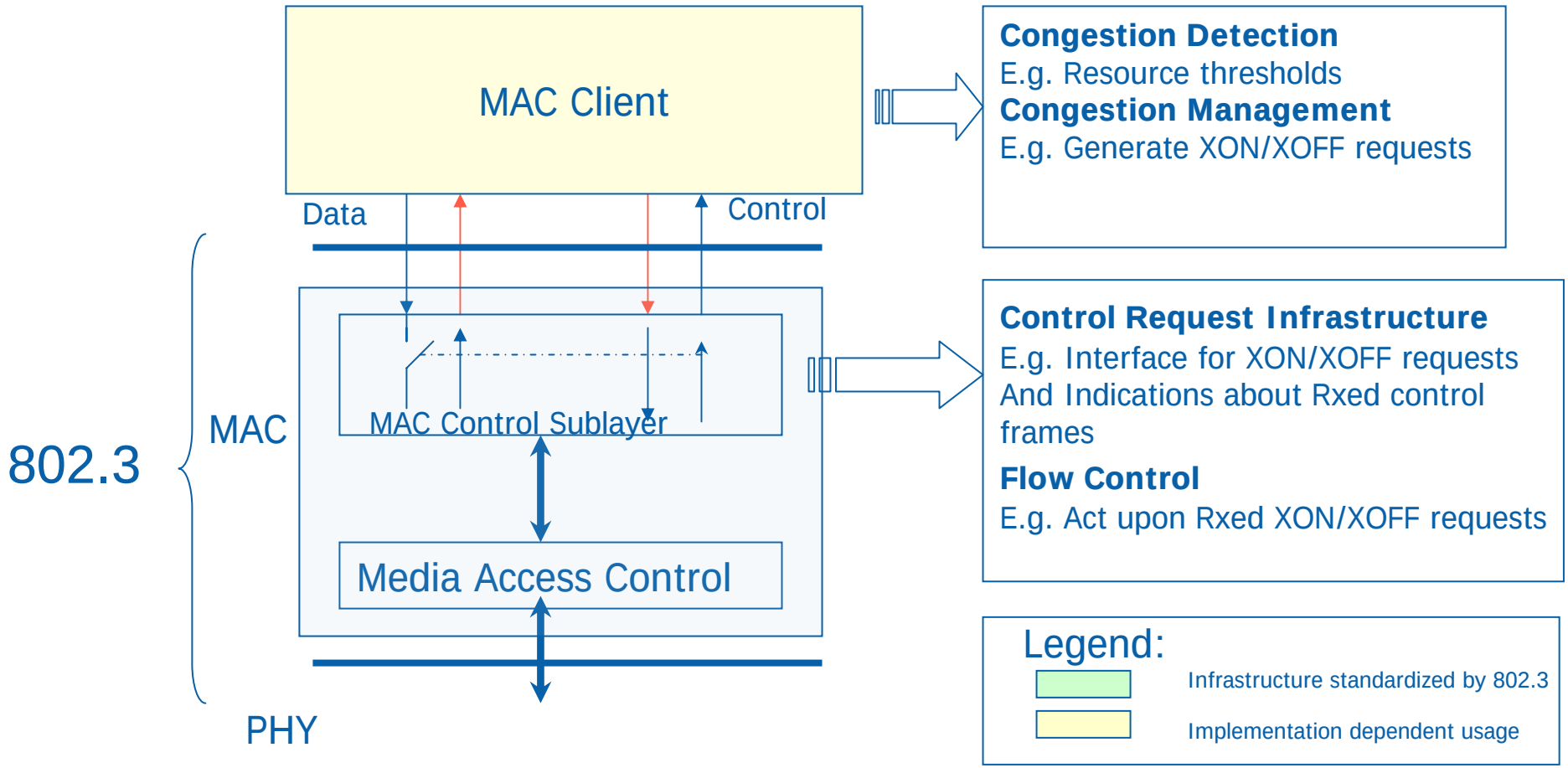
802.3x: Layer and Interfaces



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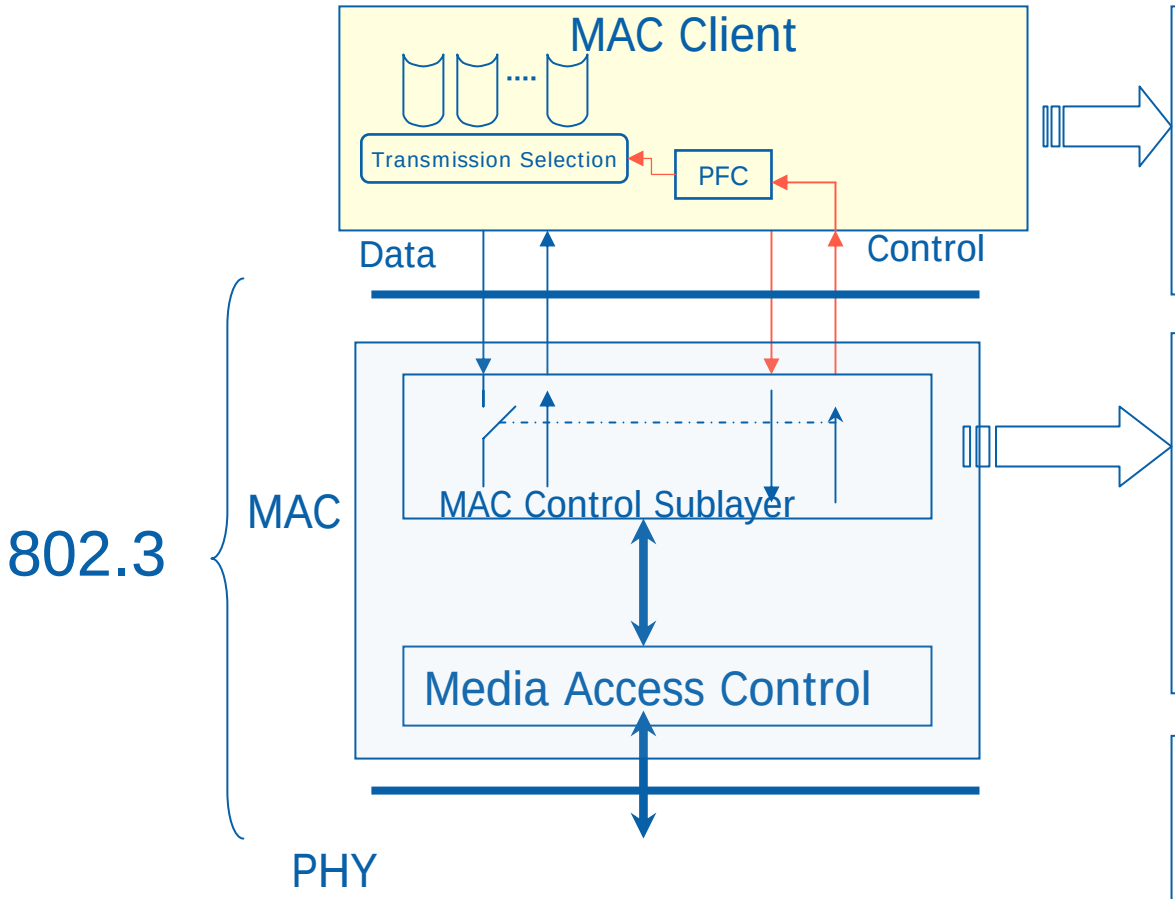
802.3 has frame format and transmission selection
MAC Client has control, but unspecified

802.3x: Layer and Interfaces



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

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