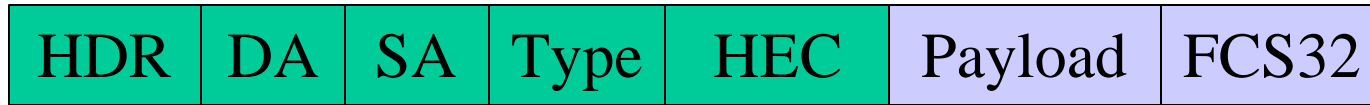


802.17 Proposed Frame Format

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Base Frame Format



- RPR Header 16 bits
- DA 48 bits
- SA 48 bits
- Type 16 bits
- HEC16 16 bits Calculated over previous fields
- Payload N bytes
- FCS32 32 bits Calculated over Payload

RPR Header Format

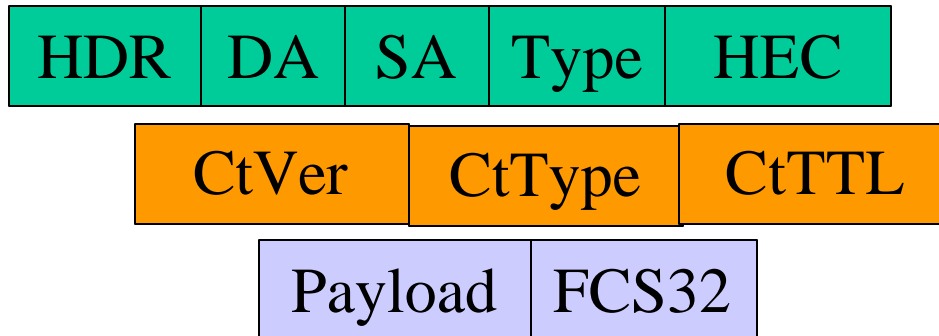
TTL	RI	Type	PRI	IOP
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- TTL 8 bits Remove Packet when TTL == 0
- RI 1 bit Ring ID
- Type 3 bits Indicates type of packet
 - Normal Data, Steering Data, Protection Ctrl, Generic Ctrl, BW Ctrl
 - Spares for the future
- PRI 3 bits Priority mapped from 802.1Q
- IOP 1 bit Indicates Packet is In or Out of Profile

Features

- TTL provides mechanism to avoid packets circulating forever
 - Decrement logic includes check to avoid modifying wrapped packets if the ring is in a wrapped state
 - Ring ID does not match local MAC RI
 - Decrement if the node has dropped into Passthru mode from normal operation
- HEC / FCS provide robust error control
 - HEC covers header and allows packets with good address and errored payload to be delivered
 - No need to recalculate FCS hop by hop
- IOP bit is marked for medium priority traffic that is out of profile
 - Subsequent stations will count the packets as part of the fairness algorithms

Generic Control Frame Format



- CtVer 8 bits Control Version
- CtType 8 bits Control Type
 - Topology discovery etc
- CtTTL 16 bits Control TTL

Customer Separation

- 802.17 has two objectives
 - The 802.17 MAC shall be payload agnostic
 - The 802.17 shall define an optional method for customer traffic separation
- Customer Separation field (CID) is analogous to the 802.1Q tag
 - CID is actually within the scope of 802.1 and not .17
 - From a layered architectural approach, CID does not belong in header
 - Used by the MAC Client or MAC Relay Entity
 - CID is not actually needed by the MAC for any operation
- Type field holds a value that indicates the existence of the CID
 - 802.17 to request type fields for Payloads that contain the CID field
- Layered approach conforms to both objectives

Customer Separation

- The client can be responsible for protecting the CID with a HEC if required.
 - Conforms to both objectives

Conclusions

- The frame format provided satisfies 802.17 objectives
 - PHY layer independence
 - Optional CID
- The frame format provided satisfied other requests from 802.17 members
 - Ability to deliver packets with errored payload