



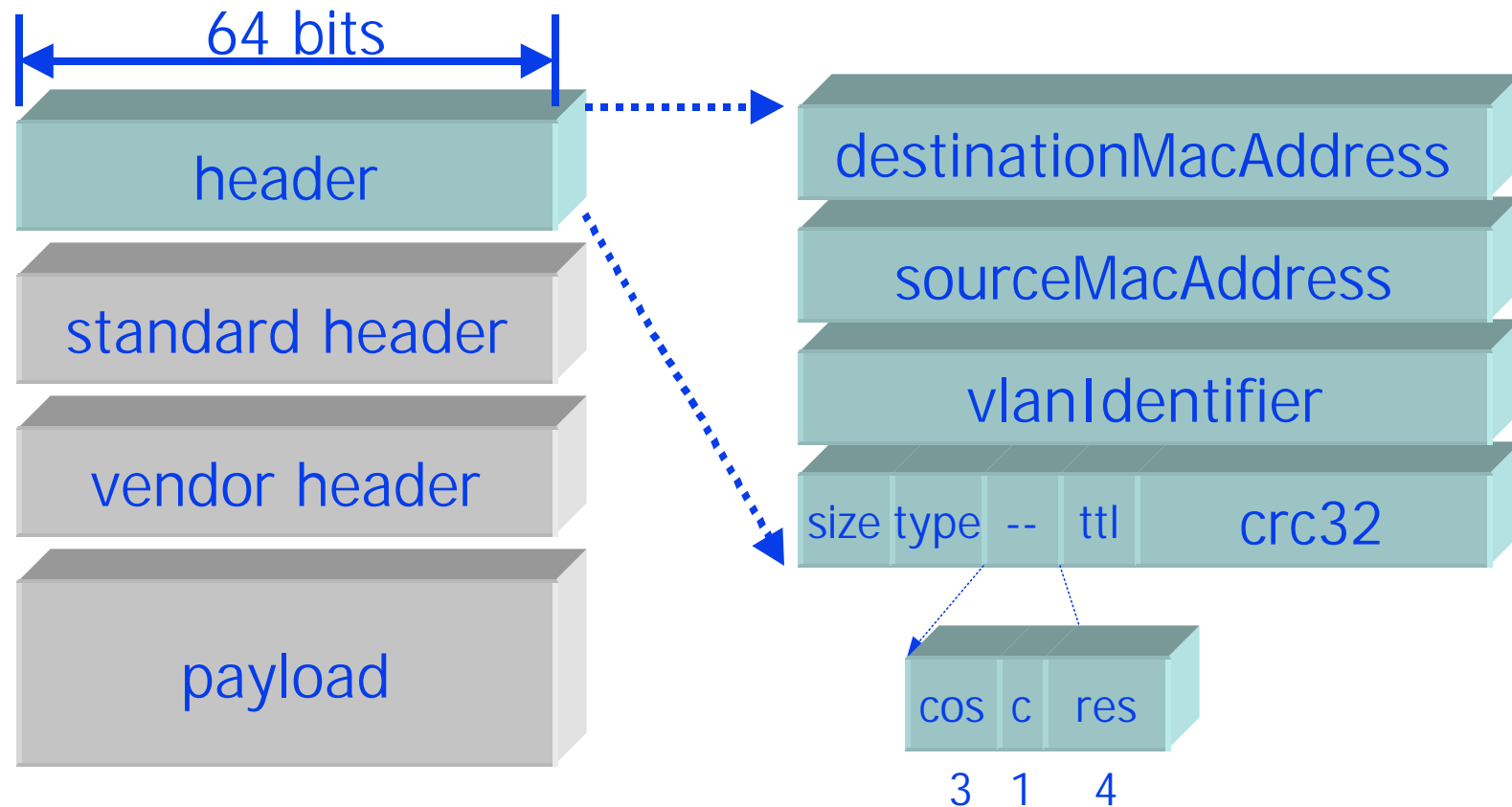
802.17 presentations

- Prepared for 802.17, September 2001
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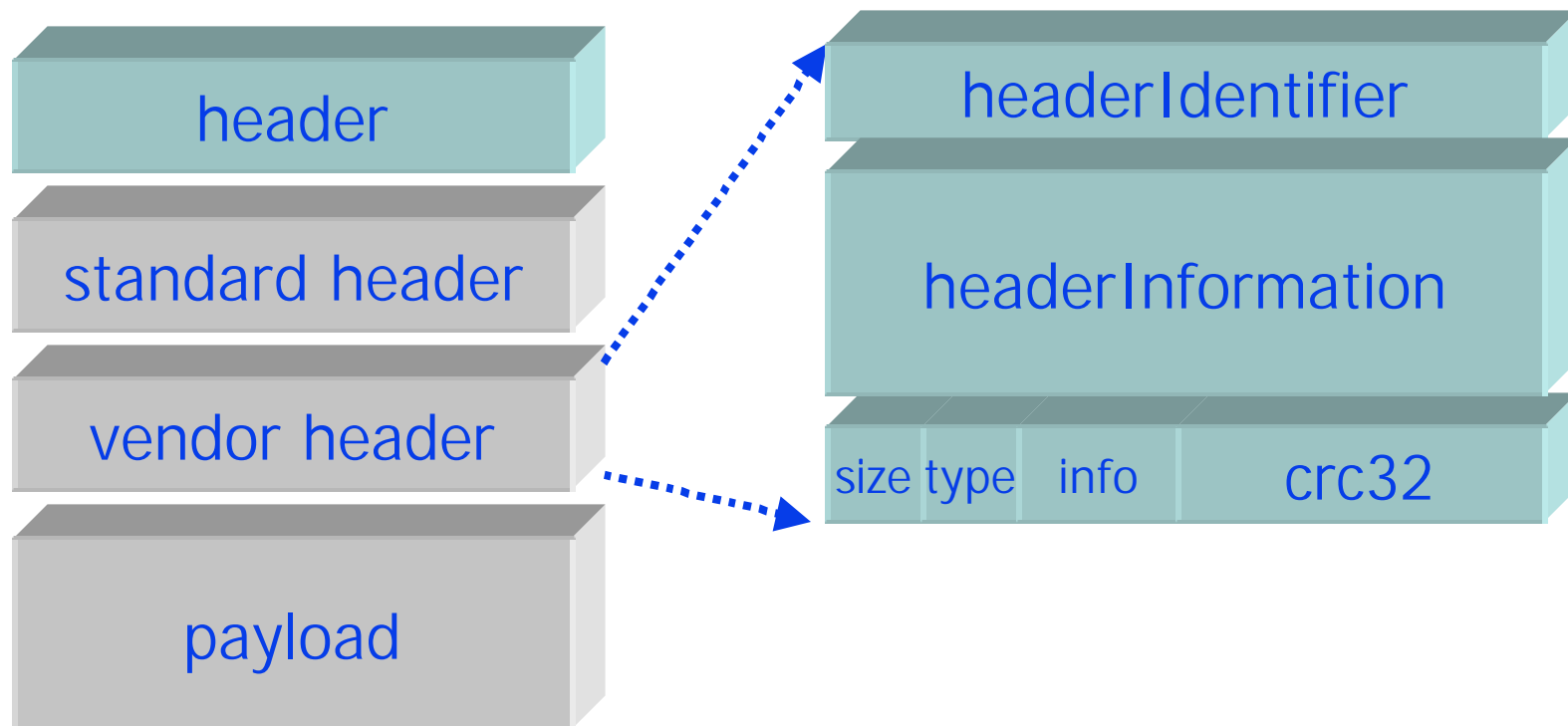


Packet formats

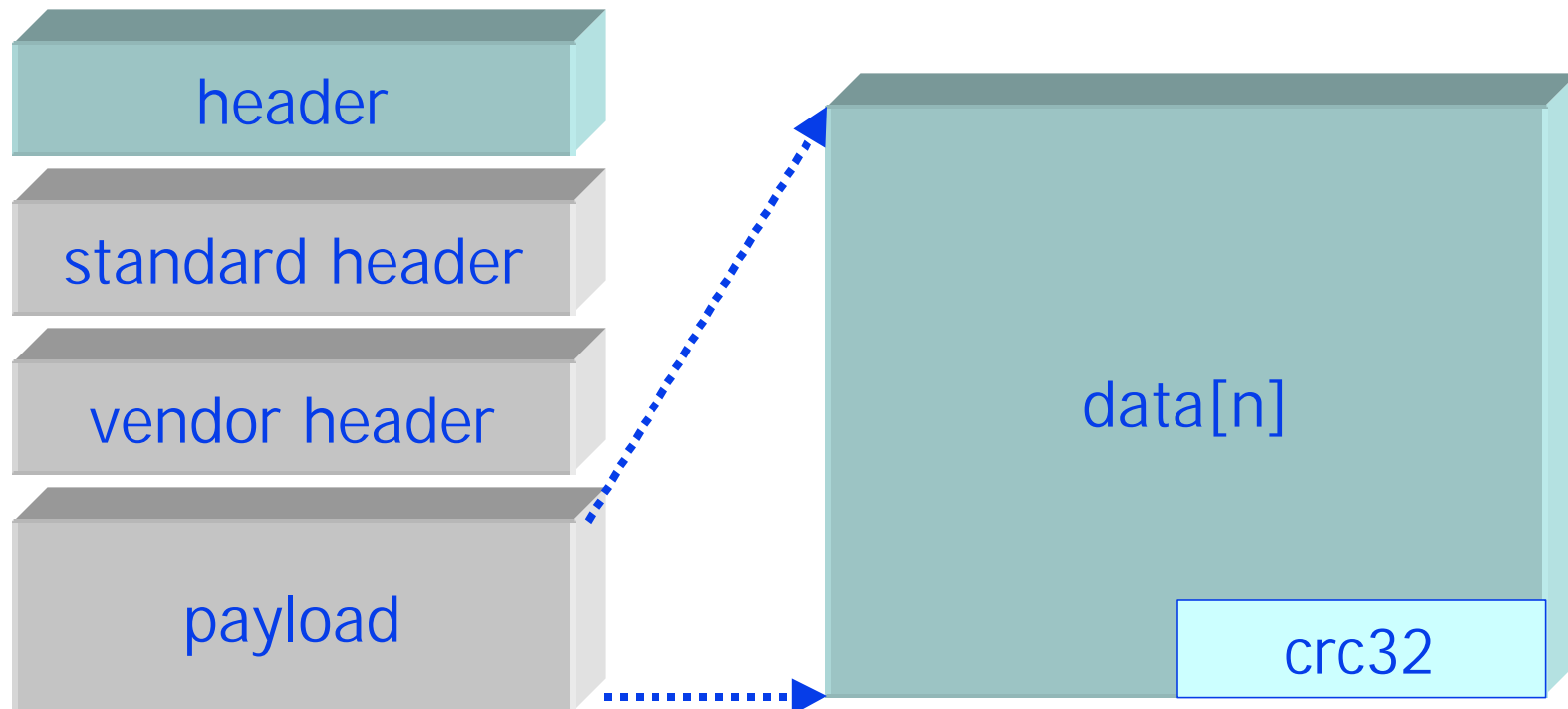
Packet header



Vendor dependent header



Payload



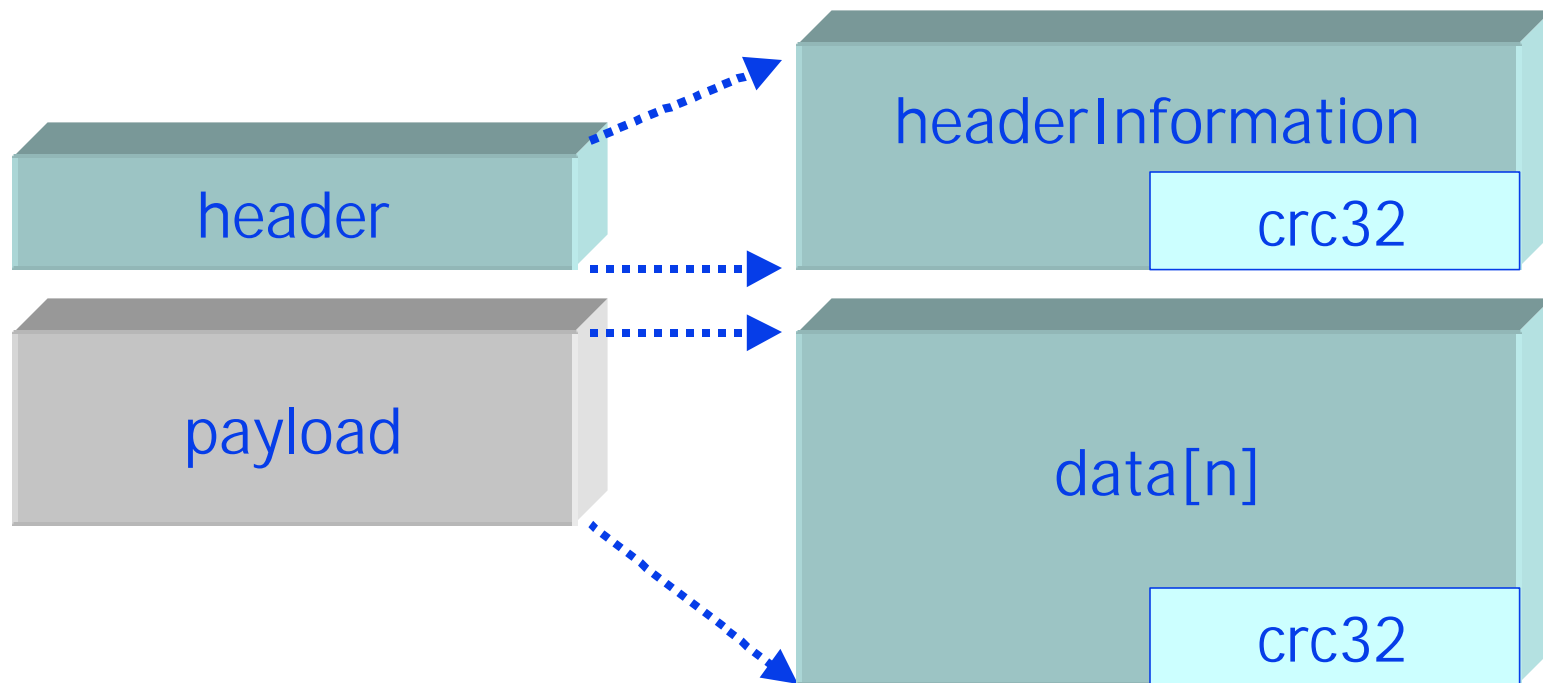


CRC processing

- **Store&forward/Cut-through agnostic**
- **Invalid data is effectively discarded**
 - store-and-forward discards
 - cut-through stomps the CRC
- **Maximize error-logging accuracy**
 - **Separate header&data CRCs**
 - “most” corruptions hit the data

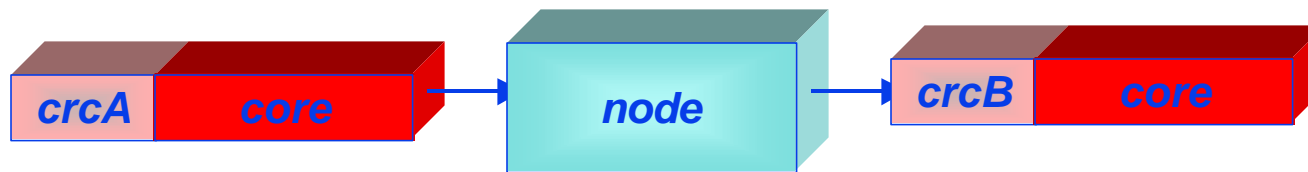


Separate header & data CRCs





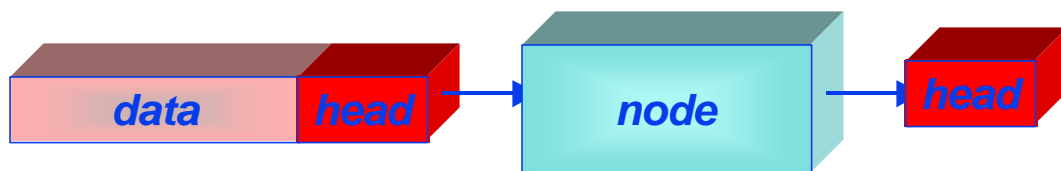
Cut-through CRCs



- Corrupted packet remains corrupted
- Error logged when first detected
- ```
if (crcA!=crc) {
 errorCount+= (crcA!=crc^STOMP);
 crcB= crc^STOMP;
}
```

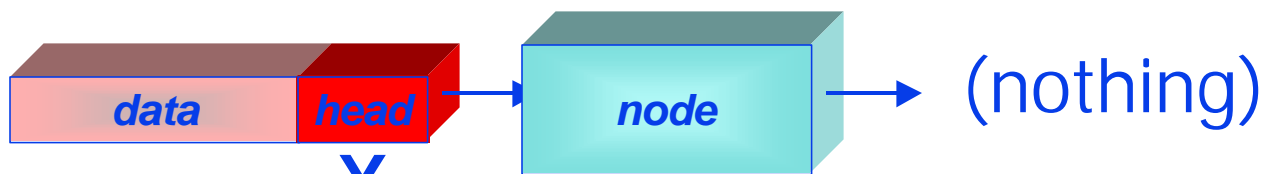


## Distinct CRCs reduces discards



X

- Discard the corrupted data

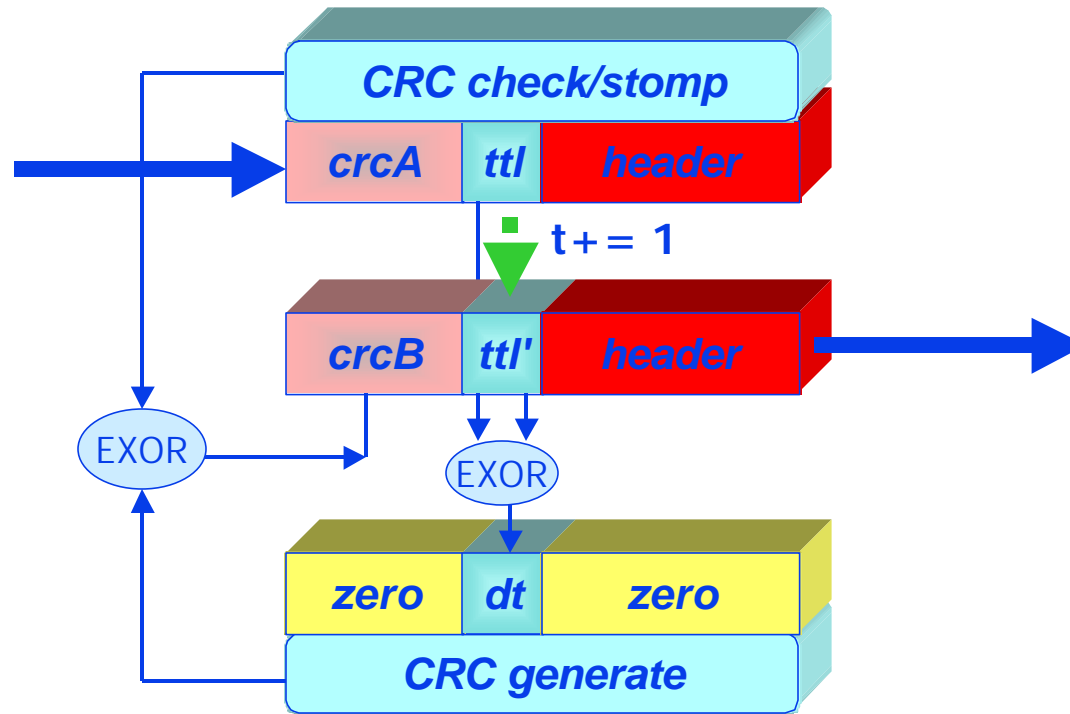


X

- Discard the corrupted packet



# End-to-end CRC protected TTL



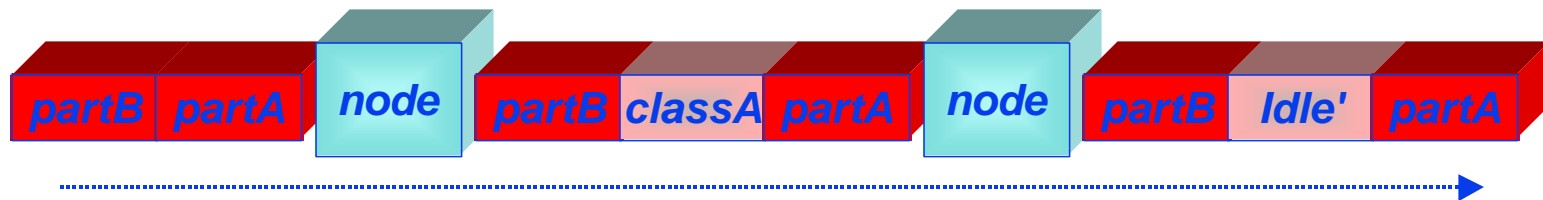


# Pre-emption

- **Suspend class-B/C for class-A packet**
- **Only one level is sufficient**
  - **class-A is the latency critical traffic**
  - **more levels complicate hardware**
- **Physical layer dependent**
  - **marginal for high BW & small packets**
  - **distinctive “suspend” symbol required**

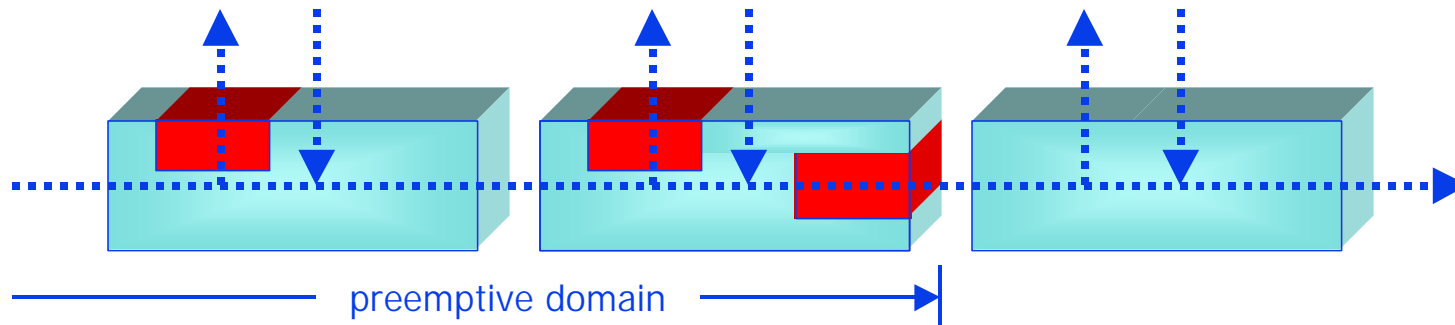


# Pre-emption fragments



- Packets can be suspended
- The class-A packet can be stripped
  - egress queues are store&forward
  - distinctive idle markers needed

# Pre-emption compatibility



- Pre-emption mandates egress S&F
- Simplistic node has no such S&F
- Interoperability burden on elegant
  - boundary node has S&F bypass
  - cut-through in preemptive domain