



ACK and ACK_ECN

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Issues and Drawbacks with current design

- ACK_ECN increases in size as the number of marks increase over a connection
- No indication of what packets were marked
 - Creates an edge case with ACK loss where sum of marks is larger than number of packets acked. (Fixed issue [#1481](#))
- Separate ACK and ACK_ECN frames duplicates work

Original PR [#1372](#)

Option 2: Add a 'type' to each ACK block

2 bits from each ACK block taken to indicate type.

Cons: Inefficient for AccECN style of marking

Lose 2 bits of ack or gap length (64 -> 16)

Issue [#1439](#), PR [#1706](#)

Option 4: Optimize Status Quo

Size can be reduced by using an epoch encoding/decoding because ECN marks always increase

Merge 2 ACK frames by indicating the least significant bit of the type indicates whether the ECN section is present

Cons: Doesn't remove edge case with ACK loss

Wraparound is more complex to implement