

Nov-11-2014

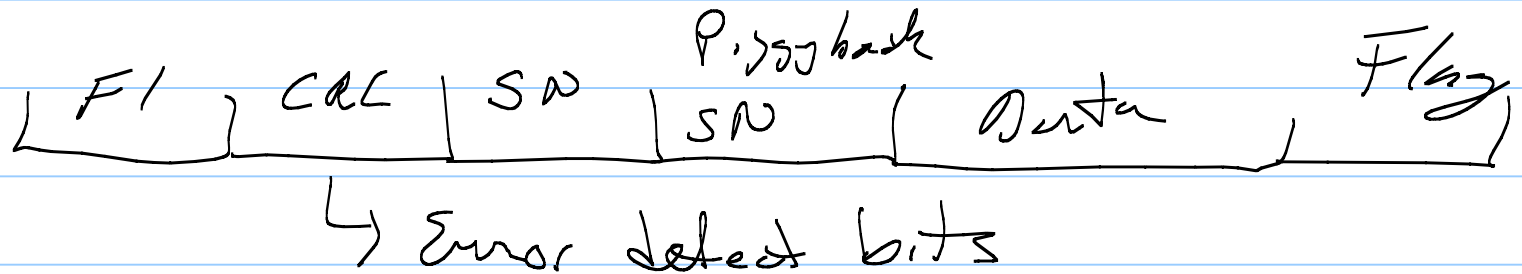
Note Title

8/28/2014

## Operation of DLC protocols

- Sliding window tx up N packets before getting ack.

## Frame structure



## Detecting errors

NACK

time out

What to Do?

SN

$n$  bits / seq

$$N_{max} = 2^n - 1$$

Go-back-N reject out of sequence packets  
 Selective Repeat accept out of seq packets

Performance (no errors)

Stop & wait ( $N=1$ )

$$g = \frac{1}{1 + \frac{2\tau R}{T_f}}$$

# frames in RTT

Sliding window N

Large window case  $N \gg 1 + \frac{2\tau R}{T_f}$

$$g \rightarrow 1$$

Small window

$$N \ll 1 + \frac{2\pi R}{\sigma_f}$$

$$g = \frac{N}{1 + \frac{2\pi R}{\sigma_f}} = \frac{R_{eff}}{R}$$

Limit source Tx rate by limiting  $N$