

Error Detection Technique

Checksum — operation At sender side.

- ① Break the original message in to 'k' no. of blocks with 'n' bits in each block.
- ② Sum all the 'k' data blocks
- ③ Add the carry to the sum, if any
- ④ DO 1's complement to the sum = Checksum

Checksum — Example

Consider the data unit to be transmitted is :

10011001111000100010010010000100

10011001	11100010	00100100	10000100
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Sender

1	0	0	1	1	0	0	1
0	0	1	0	0	1	0	0
1	1	1	0	0	0	1	0
1	0	0	1	1	0	0	1

1	0
1	1
1	0
1	0
1	1

1000100011

10

00100101

1's complement

110

110

10

checksum

Checksum

- ① collect all the data blocks including the checksum

- ② Sum all the data blocks & checksum

- ③ If the result is all 1's, Accept ;
Else , Reject .

Receiver

Checksum

~~1st cond~~

Accepted