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ERROR DETECTION AND CORRECTION

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DETECTION VERSUS CORRECTION

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- ▶ The correction of errors is more difficult than the detection.

ERROR CORRECTION

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- ▶ In error correction, we need to know the exact number of bits that are corrupted and, more importantly, their location in the message.
- ▶ The number of errors and the size of the message are important factors.
- ▶ If we need to correct a single error in an 8-bit data unit, we need to consider eight possible error locations; if we need to correct two errors in a data unit of the same size, we need to consider 28 (permutation of 8 by 2) possibilities.

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