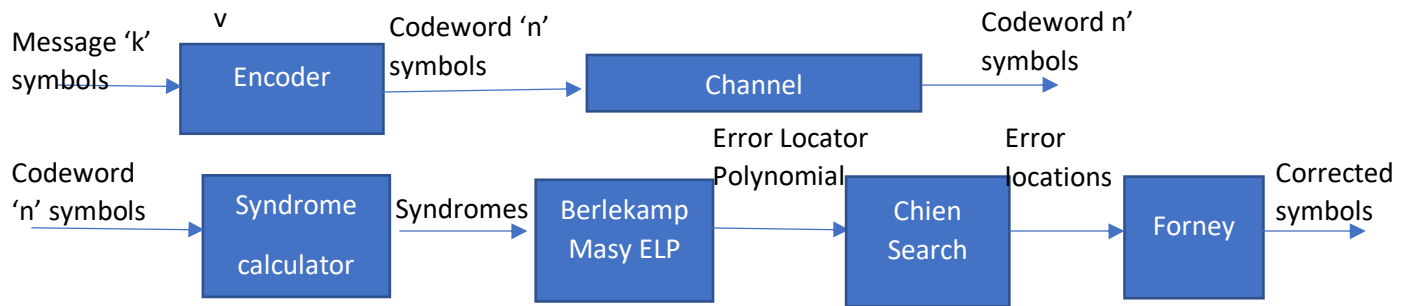


FEC based on Reed Solomon Code



Reed Solomon Code FEC has:

Galois Field arithmetic is done with primitive polynomial of degree 'm'

No iterative feedback in pipeline.

Encoder:

The RS Encoder gets 'k' symbols and generates the generator polynomial based on 'm', 't'. It then generates $2 \cdot t$ ECC parity symbols

Decoder:

- Syndrome Calculator:
 - It calculates $2 \cdot t$ Syndromes from codeword of 'n' symbols
- Berlekamp Masy Circuit:
 - It calculates 't' error locator polynomials from $2 \cdot t$ Syndromes
- Chien Search:
 - It searches for locations where errors were injected in the 'n' codeword symbols with 't' error locator polynomials.
- Forney Circuitry:
 - It gets the 't' Syndromes and 't' ELP and generates symbols useful for data correction in 'n' codeword symbols.

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RS Code Page : <http://secantecinc.com/rs-error-correcting-code/>