

ECE6606 HW6

Project Assigned Oct 25, 2000, due November 20, 2000 (4pm).

Reed Solomon Encoder/Decoder:

- Design and implement the (63,57) RS code (coeffs come from GF(64)). Assume that GF(64) is constructed using the primitive polynomial $p(x) = x^6 + x + 1$.
- I will send you at least one garbled codeword of the form (r_0, \dots, r_{62}) differing from a codeword by f_1 erasures and t_1 errors. If $2t_1 + f_1 < 6$ your program should output the appropriate codeword.
- I will send you the received vector as integers in the range 0-62, 64, or f, where the integer entered corresponds to the exponent on x , except 64 which represents 0, and 'f' is an erasure. For instance,

I will send: 1 10 f 22 64
Which are the elements: 10 erasure 22 0

- Email must be sent back to me before November 20 at 8am containing the original and corrected codewords. No late projects will be accepted.
- You must also turn in hardcopies of your encoder and decoder programs.

Projects are to be done individually. No collaboration with colleagues is allowed.