In 1993, John Magliacane (K3B2D) designed a 1200bps BPSK modem using discrete electronic components. The objective of his design was to provide a low cost, high performance modem that interfaces between a packet radio terminal node controller (TNC) and an amateur satellite ground station. In our senior design project, we will implement the K3B2D design solely using programmable logic. Additionally, with the advent of partial configuration, we aim to swap components of our modem without needing to re-program the FPGA. modem using dynamic partial reconfiguration (DPR). Additionally, DPR allows us to implement different carrier recovery techniques. Unlike John’s modem that uses the square and divide by two method for carrier recovery, we considered a Costas loop.