

## Conclusion

This report describes a study of simulation programming for digital modulation system. This work investigates BER performance transmission system under AWGN channel condition.

Following items were investigated:

- a) Basic of simulation programming for digital modulation.
- b) Simulation of BPSK, DPSK, QPSK, DQPSK, and 16 QAM in the base band system.
- c) BER evaluation as a function of energy per bit to noise ratio under AWGN channel conditions.

From the simulation result indicate that the performance of simulation programming approximate the theoretical conditions.

Certain problems remain in the connection with this study. The solution of these problems would provide deeper understanding of the theory of digital signal processing, digital modulation technique and simulation programming. Furthermore, it would be very useful in the develop of simulation program for:

- a) Pulse shaping and filtering effect in the system performance.
- b) Spectral analysis of digital modulation signal.
- c) Common-channel interference and inter-symbol interference effects for system performance.
- d) Simulation programming of transmission system in the Rayleigh fading channel conditions.