Evaluasi Kualitas Transmisi Sinyal Digital Melalui Pengukuran Eye Pattern

---

Abstrak

Signal quality is an important aspect in transmission system. In the real world, the signal being sent in the transmission system is random-. In this experiment, Pseudo Random Signal Generator (PRSG) has been designed and constructed which can produce random but periodic digital signal that represents the signal in the real world. Because of the signal is random, it can represents many transition possibilities, including long high, long low, leading tow to high transition, leading high to low transition, trailing low to high transition, and trailing high to low transition. All of these transitions were shown on an oscilloscope, the transition signals synchronized to the signal clock will resemble the eye pattern. Eye pattern is a simple and useful method to understand the characteristics of digital signal and its quality in the transmission system. For the purpose of achieving a good eye pattern we have to match the characteristic impedance in transmission line with the termination. The measurement showed that the quality of signal also depends on the Baud rate and the length of the transmission line.