

## DAFTAR ISI

|  |      |
|--|------|
| ABSTRAKSI .....                            | i    |
| ABSTRACT .....                             | ii   |
| KATA PENGANTAR .....                       | iii  |
| DAFTAR ISI .....                           | v    |
| DAFTAR TABEL .....                         | viii |
| DAFTAR GAMBAR .....                        | ix   |
| DAFTAR SINGKATAN .....                     | x    |
| DAFTAR ISTILAH .....                       | xii  |
| <b>BAB I PENDAHULUAN</b>                   |      |
| 1.1. Latar Belakang .....                  | 1    |
| 1.2. Perumusan Masalah .....               | 2    |
| 1.3. Batasan Masalah .....                 | 2    |
| 1.4. Maksud dan Tujuan .....               | 2    |
| 1.5. Metode Penelitian .....               | 3    |
| 1.6. Sistematika Penulisan .....           | 3    |
| <b>BAB II LANDASAN TEORI</b>               |      |
| 2.1. Deskripsi Umum Sistem Bluetooth ..... | 4    |
| 2.1.1. Bluetooth Radio .....               | 4    |
| 2.1.2. Frekuensi Hopping .....             | 5    |
| 2.1.3. Link Control .....                  | 6    |
| 2.1.4. Link Manager .....                  | 6    |
| 2.2. Topologi Jaringan Bluetooth .....     | 6    |
| 2.2.1. Bluetooth Slave .....               | 7    |
| 2.3. Routing .....                         | 8    |
| 2.4. Stack Protocol .....                  | 9    |
| 2.4.1. Bluetooth Core .....                | 10   |
| 2.4.2. Cable Replacement Protocol .....    | 11   |
| 2.4.3. Telephony Control Protocol .....    | 12   |

|  |                                     |    |
|--|-------------------------------------|----|
| 2.4.4.   | Adopted Protocol .....              | 12 |
| 2.5.   | Kanal Fisik .....                   | 13 |
| 2.5.1.   | Pita Frekuensi dan Kanal.....       | 13 |
| 2.5.2.   | Time Slot.....                      | 13 |
| 2.6.   | Mode Transmisi.....                 | 14 |
| 2.6.1.   | Format Paket.....                   | 15 |
| 2.7.   | Kanal Propagasi .....               | 15 |
| 2.7.1.   | Kanal AWGN .....                    | 15 |
| 2.7.2.   | Kanal Rician .....                  | 16 |
| <b>BAB III WIRELESS LAN UNTUK HOME NETWORK</b>                 |                                     |    |
| 3.1.   | Jaringan Ad-Hoc.....                | 17 |
| 3.2.   | Propagasi dalam Ruangan .....       | 18 |
| 3.3.   | Throughput .....                    | 19 |
| 3.4.   | Power Class .....                   | 19 |
| 3.5.   | Pembentukan Scatternet .....        | 20 |
| 3.6.   | Sistem Bluetooth .....              | 22 |
| 3.7.   | Hamming Code.....                   | 23 |
| 3.8.   | Modulasi .....                      | 24 |
| <b>BAB IV ANALISIS WIRELESS LAN DENGAN TEKNOLOGI BLUETOOTH</b> |                                     |    |
| 4.1  | Desain Simulasi .....               | 26 |
| 4.2  | Visualisasi .....                   | 26 |
| 4.3  | Hasil Simulasi .....                | 28 |
| 4.3.1  | Bit Error Rate (BER) .....          | 28 |
| 4.3.1.1  | Kanal AWGN dan Rician .....         | 28 |
| 4.3.1.2  | Jarak Interferensi .....            | 30 |
| 4.3.1.3  | Jumlah Hop .....                    | 31 |
| 4.3.2  | Throughput .....                    | 33 |
| 4.3.3  | Path Loss .....                     | 34 |
| 4.4  | Analisa Perubahan Pola Trafik ..... | 35 |

|                            |                     |
|----------------------------|---------------------|
| BAB V KESIMPULAN DAN SARAN |                     |
| 5.1                        | Kesimpulan ..... 36 |
| 5.2                        | Saran ..... 37      |
| DAFTAR PUSTAKA ..... 38    |                     |
| LAMPIRAN ..... 40          |                     |