

## DAFTAR ISI

**LEMBAR PENGESAHAN**

**LEMBAR PERSEMPAHAN**

**ABSTRAK .....** ..... **I**

**ABSTRACT .....** ..... **II**

**KATA PENGANTAR.....** ..... **III**

**UCAPAN TERIMA KASIH .....** ..... **IV**

**DAFTAR ISI.....** ..... **V**

**DAFTAR GAMBAR.....** ..... **IX**

**DAFTAR TABEL .....** ..... **X**

**DAFTAR SINGKATAN.....** ..... **XI**

### **BAB I**

**PENDAHULUAN .....** ..... **I.1**

    1.1    LATAR BELAKANG..... **I.1**

    1.2    TUJUAN PENULISAN ..... **I.1**

    1.3    PERUMUSAN MASALAH ..... **I.2**

    1.4    BATASAN MASALAH ..... **I.2**

    1.5    METODOLOGI PENULISAN..... **I.2**

    1.6    SISTEMATIKA PENULISAN ..... **I.3**

### **BAB II**

**LANDASAN TEORI .....** ..... **II.1**

    2.1    KONSEP DASAR WIRELESS LAN ..... **II.1**

        2.1.1    *Komponen Hardware Wireless LAN*..... **II.1**

            2.1.1.1    Access Points (AP) ..... **II.2**

            2.1.1.2    Client Card Adapter ..... **II.2**

        2.1.2    *Topologi Jaringan*..... **II.2**

2.1.2.1	Topologi Ad Hoc .....	II.3
2.1.2.2	Topologi Infrastruktur .....	II.3
2.1.3	<i>Media Transmisi</i> .....	II.4
2.1.3.1	Spread Spectrum Radio.....	II.4
2.1.3.1.1	Frequency Hopping Spread Spectrum .....	II.4
2.1.3.1.2	Direct Sequence Spread Spectrum.....	II.5
2.1.3.1.3	Orthogonal Frequency Division Multiplexing.....	II.5
2.1.3.2	Infrared.....	II.5
2.1.4	<i>Frekuensi Operasi Wireless LAN</i> .....	II.5
2.2	HOTSPOT.....	II.6
2.2.1	<i>Definisi</i> .....	II.6
2.2.2	<i>Komponen Penyusun Hotspot</i> .....	II.6
2.2.2.1	Mobile Stations .....	II.6
2.2.2.2	Access Point.....	II.7
2.2.2.3	Switch, Router, Network Access Component.....	II.7
2.2.2.4	Web Server.....	II.7
2.2.2.5	AAA Server .....	II.7
2.2.2.6	Internet Service Provider (ISP) .....	II.7
2.2.3	<i>Memahami Keinginan Para Pengguna</i> .....	II.7
2.2.4	<i>Lingkungan / Cakupan HotSpot</i> .....	II.8
2.2.4.1	Ukuran Area Cakupan.....	II.8
2.2.4.2	Jumlah User .....	II.8
2.2.4.3	Tipe-Tipe User .....	II.9
2.2.5	<i>Contoh Ilustrasi Dari Implementasi Hotspot</i> .....	II.9
2.2.5.1	Kafe.....	II.9
2.2.5.2	Hotel.....	II.10
2.2.5.3	Convention Center .....	II.10
2.3	PERENCANAAN HOTSPOT .....	II.10
2.3.1	<i>Pengumpulan Data</i> .....	II.11
2.3.1.1	Data User .....	II.11
2.3.1.2	Lokasi Service Provider yang Dibutuhkan .....	II.11
2.3.1.3	Lokasi Fisik.....	II.11

2.3.2	<i>Perhitungan Jumlah Access Point</i> .....	II.11
2.3.3	<i>Perhitungan Power Link Budget</i> .....	II.12
2.3.4	<i>Site Survey ( Pengukuran )</i> .....	II.14
2.3.5	<i>Analisa Perbaikan Coverage Area</i> .....	II.14

## BAB III

### TAHAP PERENCANAAN HOTSPOT

#### DI HOTEL BAHARI INN TEGAL.....III.1

3.1	TEMPAT PERENCANAAN RUANGAN HOTEL BAHARI INN TEGAL .....	III.1
3.2	TAHAP PERENCANAAN HOTSPOT UNTUK HOTEL .....	III.1
3.2.1	<i>Inisialisasi / Kompilasi Data Awal</i> .....	III.2
3.2.1.1	Spesifikasi Ruangan.....	III.2
3.2.1.1.1	Lobby Hotel .....	III.2
3.2.1.1.2	Meeting Room .....	III.3
3.2.1.1.3	Convention Hall .....	III.4
3.2.1.2	Spesifikasi Perangkat .....	III.5
3.2.2	<i>Perencanaan Kapasitas</i> .....	III.5
3.2.3	<i>Perencanaan Cakupan Area</i> .....	III.7
3.2.4	<i>Pemilihan Channel Dan Penentuan Sementara Posisi Access Point</i> .... .....	III.9
3.2.5	<i>Perhitungan Power Link Budget</i> .....	III.9
3.2.5.1	Maximum Allowable Path Loss (MAPL).....	III.11
3.2.5.2	Perencanaan secara Propagasi.....	III.11
3.2.5.3	Model Propagasi Indoor Multy Wall .....	III.12
3.2.6	<i>Daftar Parameter Hasil Perencanaan Lobby Hotel, Meeting Room Dan Convention Hall</i> .....	III.15

## BAB IV

### IMPLEMENTASI HOTSPOT

#### DENGAN PENGUKURAN DAN ANALISA DATA.....IV.1

4.1	TAHAPAN PENGUKURAN .....	IV.1
4.2	PERSIAPAN PERANGKAT .....	IV.2

4.3	PROSEDUR PENGUKURAN.....	IV.6
4.4	PEMBAGIAN LOKASI PENGUKURAN DAN TITIK-TITIK PENGUKURAN ..	IV.6
4.5	PENGOLAHAN DATA .....	IV.6
4.6	PLOT ULANG COVERAGE <i>ACCESS POINT</i> .....	IV.8
4.6.1	<i>Plot Coverage Lobby Hotel</i> .....	IV.9
4.6.2	<i>Plot Coverage Meeting Room</i> .....	IV.10
4.6.3	<i>Plot Coverage Convention Hall</i> .....	IV.11
4.7	ANALISA PERBAIKAN COVERAGE .....	IV.12
4.7.1	<i>Penambahan Power Transmit Access Point</i> .....	IV.12
4.7.2	<i>Penambahan Jumlah Access Point</i> .....	IV.12

## BAB V

<b>PENUTUP.....</b>	<b>V.1</b>	
5.1	KESIMPULAN.....	V.1
5.2	SARAN .....	V.1

## DAFTAR PUSTAKA ..... XI

### LAMPIRAN

- LAMPIRAN A : Data Spesifikasi Perangkat
- LAMPIRAN B : Capture Hasil Pengukuran Netstumbler 0.4.0
- LAMPIRAN C : Data Hasil Pengukuran
- LAMPIRAN D : Surat Keterangan Pengambilan Data