

DAFTAR ISI

| | |
|--|------|
| LEMBAR PENGESAHAN | i |
| BUKU CAPSTONE DESIGN | i |
| LEMBAR PERNYATAAN ORISINALITAS | ii |
| LEMBAR PERNYATAAN ORISINALITAS | iii |
| LEMBAR PERNYATAAN ORISINALITAS | iv |
| ABSTRAK..... | v |
| ABSTRACT..... | vi |
| KATA PENGANTAR | vii |
| UCAPAN TERIMAKASIH | viii |
| DAFTAR ISI..... | ix |
| DAFTAR GAMBAR..... | xii |
| DAFTAR TABEL..... | xiv |
| DAFTAR SINGKATAN | xv |
| BAB 1 GAGASAN SOLUSI | 1 |
| 1.1 Latar Belakang Masalah | 1 |
| 1.2 Analisis Masalah..... | 3 |
| 1.2.1 Aspek Teknis | 3 |
| 1.2.2 Aspek Pengguna..... | 3 |
| 1.2.3 Aspek Lingkungan | 4 |
| 1.3 Tujuan Capstone | 4 |
| 1.4 Analisis Solusi yang ada | 4 |
| BAB 2 SPESIFIKASI DAN BATASAN SOLUSI | 6 |
| 2.1 Dasar Penentuan Spesifikasi..... | 6 |
| 2.2 Batasan dan Spesifikasi..... | 8 |
| 2.2.1 <i>Fiber To The Building</i> | 8 |

| | | |
|--------------|---|-----------|
| 2.2.2 | Sensor Kadar Karbon Dioksida (CO ₂)..... | 9 |
| 2.3 | Pengukuran/Verifikasi Spesifikasi..... | 9 |
| 2.3.1 | <i>Fiber To The Building</i> | 9 |
| 2.3.2 | Sensor Kadar Karbon Dioksida (CO ₂)..... | 10 |
| BAB 3 | RANCANGAN SOLUSI | 11 |
| 3.1 | Alternatif Usulan Solusi..... | 11 |
| 3.1.1 | <i>Fiber To The Building</i> | 11 |
| 3.1.2 | Peningkatan Kadar Karbon Dioksida (CO ₂)..... | 12 |
| 3.2 | Analisis dan Pemilihan Solusi | 15 |
| 3.2.1 | Fiber To The Building | 16 |
| 3.2.2 | Sensor Kadar Karbon Dioksida | 17 |
| 3.3 | Desain Solusi Terpilih..... | 18 |
| 3.3.1 | <i>Fiber To The Building</i> | 18 |
| 3.3.2 | Sensor Kadar Karbon Dioksida | 19 |
| 3.4 | <i>Flowchart</i> | 20 |
| 3.4.1 | <i>Fiber To The Building</i> | 20 |
| 3.4.2 | Sensor Kadar Karbon Dioksida | 21 |
| 3.5 | Jadwal dan Anggaran..... | 22 |
| 3.5.1 | Jadwal Proyek <i>Capstone Design</i> | 22 |
| 3.5.2 | Rincian Anggaran <i>Prototype</i> | 23 |
| BAB 4 | IMPLEMENTASI | 25 |
| 4.1 | Deskripsi Umum Implementasi | 25 |
| 4.1.1 | <i>Fiber To The Building</i> | 25 |
| 4.1.2 | Sensor Karbon Dioksida (CO ₂)..... | 26 |
| 4.2 | Detil Implementasi..... | 27 |
| 4.2.1 | <i>Fiber To The Building</i> | 27 |
| 4.2.2 | Sensor Karbon Dioksida | 31 |

| | | |
|-------------------------------------|--|----|
| 4.3 | Prosedur Pengoperasian | 40 |
| 4.3.1 | Simulasi <i>Fiber To The Building</i> | 40 |
| 4.3.2 | Pengoperasian Alat Sensor Karbon Dioksida (CO ₂) | 41 |
| BAB 5 PENGUJIAN DAN KESIMPULAN..... | | 46 |
| 5.1 | Skenario Umum Pengujian | 46 |
| 5.1.1 | Pengujian Jaringan Fiber Optik | 46 |
| 5.1.2 | Pengujian Sensor Kadar Karbon Dioksida | 46 |
| 5.2 | Detil Pengujian..... | 47 |
| 5.2.1 | Pengujian Jaringan Fiber Optik | 47 |
| 5.2.2 | Sensor Karbon Dioksida | 54 |
| 5.3 | Analisis Hasil Pengujian | 58 |
| 5.3.1 | Hasil Pengukuran <i>Fiber To The Building</i> | 58 |
| 5.3.2 | Hasil Pengujian Sensor Karbon Dioksida..... | 60 |
| 5.4 | Kesimpulan | 61 |
| 5.4.1 | Hasil perhitungan jaringan fiber optik. | 61 |
| 5.4.2 | Sensor Karbon Dioksida | 62 |
| DAFTAR PUSTAKA | | 64 |
| LAMPIRAN..... | | 67 |