

DAFTAR ISI

HALAMAN PENGESAHAN	iii
BUKTI BEBAS PLAGIASI.....	iv
DAFTAR ISI.....	v
DAFTAR GAMBAR	vii
DAFTAR TABEL	ix
CATATAN REVISI DOKUMEN	x
INTISARI.....	xi
RINGKASAN EKSEKUTIF.....	xii
BAB 1 PENGANTAR	1
1.1 Latar Belakang	1
1.2 Rumusan Masalah	1
1.3 Tujuan dan Manfaat	1
BAB 2 DASAR TEORI PENDUKUNG	3
2.1 Global Positioning System	3
2.2 Bluetooth Low Energy Beacons.....	3
2.3 Estimote Location Beacon	3
2.4 Received Signal Strength Indicator (RSSI).....	4
2.5 Metode Weighted Centroid Localization	4
2.6 Metode Weight-Compensated Weighted Centroid Localization	4
2.7 Metode Weighted Centroid Localization based on Least Square method	5
2.8 Kalman-filtering	5
2.9 Android.....	5
2.10 Relasi jarak dan RSSI.....	6
BAB 3 ANALISIS STUDI PUSTAKA KUNCI DAN PEMILIHAN METODE.....	7
3.1 Metode untuk tahapan pengambilan nilai RSSI – Kalman-filtering	7
3.2 Metode untuk prediksi lokasi titik pengamatan	7
3.2.1 Metode Weighted Centroid Localization (WCL).....	8
3.2.2 Metode Weight-Compensated Weighted Centroid Localization (WCWCL).....	9
3.2.3 Metode Weighted Centroid Localization Based on Least Square Method (WCL-LS) – Shaoguo Xie.....	10

	3.2.4 Metode Weighted Centroid Localization Based on Least Square Method (WCL-LS) – Mu Yuan Jiang.....	11
	3.3 Metode perhitungan nilai error.....	12
	3.4 Pemilihan Metode	12
BAB 4	DETAIL IMPLEMENTASI	14
	4.1 Luaran yang Dijanjikan.....	14
	4.2 Hasil Luaran yang Diperoleh	14
	4.3 Batasan Masalah.....	15
	4.4 Detail Rancangan	16
BAB 5	PENGUJIAN DAN PEMBAHASAN	20
	5.1 Tahapan Kalibrasi	20
	5.2 Pengujian Filtering Data.....	21
	5.3 Pengujian Metode Lokalisasi	24
	5.3.1 Metode <i>Weighted Centroid Localization</i> – Gabungan	25
	5.3.2 Metode <i>Weighted Centroid Localization</i> – Terpisah.....	28
	5.3.3 Metode <i>Weight-Compensated Weighted Centroid Localization</i> – Gabungan	30
	5.3.4 Metode <i>Weight-Compensated Weighted Centroid Localization</i> – Terpisah	31
	5.3.5 Metode <i>Weighted Centroid Localization based on Least Square</i> – Shaogue Xie	33
	5.3.6 Metode <i>Weighted Centroid Localization based on Least Square</i> – Mu Yuan Jiang.....	35
	5.3.7 Metode <i>Weighted Centroid Localization based on Least Square</i> – Terpisah	36
	5.3.8 Analisa Keseluruhan Metode.....	38
	5.4 Pengaplikasian metode pada aplikasi <i>smartphone</i>	39
	5.5 <i>Improvement</i>	40
	5.6 <i>Future Work</i>	41
BAB 6	ANALISIS MENGENAI PENGARUH SOLUSI <i>ENGINEERING DESIGN</i>	42
BAB 7	KESIMPULAN DAN SARAN	44
	7.1 Kesimpulan.....	44
	7.2 Saran.....	44
	REFERENSI.....	45