

## Daftar Isi

Lembar Pernyataan .....	ii
LEMBAR PENGESAHAN .....	iii
Abstrak .....	iv
Abstract .....	v
Lembar Persembahan .....	vi
Kata Pengantar .....	vii
Daftar Isi .....	viii
Daftar Gambar .....	xi
Daftar Tabel .....	xiii
Daftar Istilah .....	xv
1. PENDAHULUAN .....	1
1.1 Latar Belakang Masalah .....	1
1.2 Rumusan Masalah .....	2
1.3 Tujuan .....	2
1.4 Batasan Masalah .....	3
1.5 Metodologi Penelitian .....	3
1.6 Sistematika Penulisan Tugas Akhir .....	4
2. TINJAUAN PUSTAKA .....	5
2.1 Software Engineering .....	5
2.1.1 Definisi .....	5
2.1.2 Software Process Models .....	5
2.2 Requirements Software .....	10
2.2.1 Functional Requirements .....	10
2.2.2 Non-Functional Requirements .....	10
2.2.3 Inverse Requirements .....	10
2.3 Requirements Engineering .....	11
2.3.1 Definisi .....	11
2.3.2 Requirements Engineering Goals .....	11
2.3.3 Requirements Engineering Process .....	11
2.3.4 Requirements Engineering Process Model .....	15
2.3.5 Requirements Engineering Tools .....	21
2.4 Knowledge Engineering .....	22

2.4.1	Definisi.....	22
2.4.2	Jenis dari <i>Knowledge Based System</i> .....	22
2.4.3	Case-based Reasoning .....	22
2.4.4	Nearest Neighbour Algorithm (NNA) .....	23
2.5	Technique Suitability Assesment Matrix (TSAM) .....	24
2.6	<i>Analytical Hierarchy Process</i> (AHP).....	25
2.6.1	Definisi.....	25
2.6.2	Metode .....	25
2.6.3	Contoh Studi Kasus pada <i>AHP</i> untuk <i>Prioritization</i> .....	25
2.7	Black Box Testing.....	26
3.	METODOLOGI PENELITIAN DAN PERANCANGAN SISTEM .....	27
3.1	Identifikasi Masalah .....	27
3.2	Studi Literatur .....	28
3.3	Identifikasi Kebutuhan .....	28
3.3.1	Kebutuhan fungsional TAPFREE .....	29
3.3.2	Kebutuhan Perangkat Lunak TAPFREE .....	34
3.3.3	Kebutuhan Perangkat Keras TAPFREE .....	34
3.4	Perancangan dan Desain.....	35
3.4.1	Deskripsi Sistem .....	35
3.4.2	Arsitektur Sistem .....	35
3.4.3	Kecocokan RE teknik pada <i>RE Process Model</i> .....	56
3.5	Implementasi .....	57
3.6	Pengujian.....	58
3.7	Analisis Hasil .....	58
4.	IMPLEMENTASI.....	59
4.1	Implementasi <i>User Environment</i> .....	59
4.2	Implementasi <i>Intelligence Support</i> .....	61
4.3	Implementasi <i>Requirements Engineering Management Tools</i> .....	63
4.3.1	Implementasi <i>Requirements Engineering Management Tools</i> sesuai <i>RE Process Model XP</i> .....	63
4.3.2	Implementasi <i>Requirements Management Tools</i> sesuai <i>RE Process Model Volere</i> .....	65
4.3.3	Implementasi <i>Requirements Management Tools</i> sesuai <i>RE Process Model RUP</i> .....	69

4.4 Pengujian Sistem .....	72
4.4.1 Skenario Pengujian Sistem .....	72
5. PENGUJIAN DAN ANALISIS.....	117
5.1 Pengujian Penelitian .....	117
5.1.1 Pengujian Kualitatif .....	117
5.1.2 Pengujian RE Knowledge .....	119
5.2 Analisis Hasil Pengujian Penelitian .....	119
5.2.1 Analisis Kualitatif .....	119
5.2.2 Analisis Hasil Pengujian RE Knowledge .....	122
5.3 Kesimpulan Pengujian.....	124
6. KESIMPULAN DAN SARAN.....	125
6.1 Kesimpulan.....	125
6.2 Saran.....	125
Daftar Pustaka .....	126
LAMPIRAN .....	130
Lampiran 1 Case Repository [9] .....	130
Lampiran 2 Technique Suitability Assessment Matrix [9] .....	140
Lampiran 2.1 TSAM Elicitation.....	140
Lampiran 2.2 TSAM Prioritization .....	141
Lampiran 2.3 TSAM Validation and Verification .....	142
Lampiran 3 Jawaban Kuesioner .....	143
Lampiran 3.1 Jawaban Kuesioner Kualitatif.....	143
Lampiran 3.2 Jawaban Kuesioner RE Knowledge Pretest.....	144
Lampiran 3.2 Jawaban Kuesioner RE Knowledge Posttest .....	144