

## DAFTAR ISI

<b>ABSTRAK</b> .....	<b>i</b>
<b>ABSTRACT</b> .....	<b>ii</b>
<b>KATA PENGANTAR</b> .....	<b>iii</b>
<b>UCAPAN TERIMA KASIH</b> .....	<b>iv</b>
<b>DAFTAR ISI</b> .....	<b>v</b>
<b>DAFTAR GAMBAR</b> .....	<b>vii</b>
<b>DAFTAR TABEL</b> .....	<b>viii</b>
<b>DAFTAR SINGKATAN</b> .....	<b>ix</b>
<b>BAB I</b> .....	<b>1</b>
1.1. Latar Belakang .....	1
1.2. Tujuan Penelitian.....	1
1.3. Rumusan Masalah .....	2
1.4. Batasan Masalah.....	2
1.5. Metodologi Penelitian .....	3
1.6. Sistematika Penelitian .....	3
<b>BAB II</b> .....	<b>5</b>
2.1. Arsitektur LTE <sup>[16]</sup> .....	5
2.2. Downlink Physical Resource <sup>[12]</sup> .....	5
2.3. OFDM <sup>[16]</sup> .....	6
2.4. Orthogonal Frequency Division Multiple Access (OFDMA) <sup>[12]</sup> .....	7
2.5. Multiple Input Multiple Output (MIMO) <sup>[7]</sup> .....	7
2.6. Noise dan Noise Figure <sup>[13]</sup> .....	7
2.7. <i>Multipath Rayleigh Fading</i> <sup>[3]</sup> .....	8
2.8. Algoritma Greedy <sup>[13],[9],[8]</sup> .....	8
2.9. <i>Asymptotic Time Complexity</i> <sup>[1]</sup> .....	9
2.9.1. Kelas Efisiensi Dasar <sup>[9]</sup> .....	11
<b>BAB III</b> .....	<b>13</b>
3.1. Model Sistem.....	13
3.2. Proses Simulasi .....	14
3.2.1. Diagram Alir Simulasi .....	14
3.2.2. Penebaran <i>User</i> .....	15
3.3. Pembangkitan Channel State Information (CSI).....	16
3.3.1. Proses <i>Selection Combining</i> MIMO(SC MIMO) .....	16
3.4. Proses Penjadwalan <i>User</i> .....	19
3.4.1. Algoritma Greedy <sup>[15]</sup> .....	20

3.4.2. Algoritma Greedy Termodifikasi.....	21
3.4.3. Algoritma Round Robin.....	25
3.5. Parameter yang Diamati .....	26
3.5.1. <i>Average User Throughput</i> <sup>[19]</sup> .....	26
3.5.2. <i>Fairness dan Proportionality</i> <sup>[19]</sup> .....	27
3.5.3. <i>Time Complexity</i> <sup>[9]</sup> .....	27
<b>BAB IV .....</b>	<b>28</b>
4.1. Tinjauan Umum .....	28
4.1.1. Parameter Simulasi .....	28
4.2. Proses <i>Selective Combining</i> pada MIMO 2x2.....	30
4.3. Alokasi Resource Block .....	31
4.3.1. Analisis Kondisi Kanal .....	31
4.3.2. Penerapan Algoritma Penjadwalan <i>Modified Greedy Algorithm 1</i> <sup>[25]</sup> .....	32
4.3.3. Penerapan Algoritma Penjadwalan <i>Modified Greedy Algorithm 2</i> .....	33
4.3.4. <i>Spectral Efficiency</i> dan <i>User Throughput</i> .....	34
4.3.5. Analisis Perbandingan Nilai <i>User Throughput</i> dan <i>Spectral Efficiency</i> dengan Algoritma <i>Round Robin</i> dan <i>Greedy</i> .....	38
4.4. Analisis <i>Time Complexity</i> .....	43
4.4.1. Algoritma Greedy .....	43
4.4.2. MGA1 .....	43
4.4.3. MGA 2 .....	44
4.4.4. Algoritma Round Robin.....	44
4.4.5. <i>Computational Time Complexity</i> .....	45
4.4.6. Analisis <i>Time Complexity</i> Menggunakan <i>O (The Big Oh)</i> .....	46
4.5. <i>Index of Fairness dan Proportionality</i> .....	46
4.5.1. <i>Index of Fairness</i> .....	46
4.5.2. <i>Proportionality</i> .....	48
<b>BAB V.....</b>	<b>49</b>
5.1. Kesimpulan.....	49
5.2. Saran.....	49
<b>DAFTAR PUSTAKA .....</b>	<b>51</b>
<b>LAMPIRAN A.....</b>	<b>53</b>
<b>LAMPIRAN B .....</b>	<b>57</b>