

## TABLE OF CONTENT

<b>SELF DECLARATION AGAINST PLAGIARISM .....</b>	<b>iii</b>
<b>APPROVAL PAGE .....</b>	<b>iv</b>
<b>PREFACE .....</b>	<b>vi</b>
<b>CHAPTER 1 INTRODUCTION .....</b>	<b>10</b>
<b>1.1. Background .....</b>	<b>10</b>
<b>1.2. Problem Statement .....</b>	<b>12</b>
<b>1.3. Objectives .....</b>	<b>12</b>
<b>1.4. Hypotesis .....</b>	<b>12</b>
<b>1.5. Research Methodology .....</b>	<b>13</b>
<b>CHAPTER 2 LITERATURE REVIEW .....</b>	<b>14</b>
<b>2.1. UAV (Unmanned Aerial Vehicle) .....</b>	<b>14</b>
<b>2.2. Lapan Surveillance Uav (LSU).....</b>	<b>21</b>
<b>2.3. UAV Technical Analysis .....</b>	<b>25</b>
<b>2.3.1. Link Budget .....</b>	<b>25</b>
<b>2.4. Economic Aspects .....</b>	<b>29</b>
<b>2.5 Regulatory Aspects.....</b>	<b>33</b>
<b>2.5.1. International .....</b>	<b>34</b>
<b>2.4.2. National .....</b>	<b>34</b>
<b>CHAPTER 3 DESIGN SYSTEM AND MODEL.....</b>	<b>36</b>
<b>3.1 Technical Analysis .....</b>	<b>37</b>
<b>3.1.1 Link Budget Simulation .....</b>	<b>38</b>
<b>3.1.2 Link Budget Telemetry and Telecommand (TTC).....</b>	<b>40</b>
<b>3.1.3 Coverage Analysis .....</b>	<b>41</b>

3.1.4	Capacity Calculation.....	42
3.2	Economic Scenario .....	44
3.3	Regulatory Scenario .....	45
<b>CHAPTER 4 RESULTS AND ANALYSIS .....</b>		<b>47</b>
4.1	Technical Analysis.....	47
4.1.1	Link Budget.....	47
4.1.2	Coverage Analysis.....	59
4.1.3	Analysis Capacity.....	59
4.2	Economic Aspects .....	60
4.2.1	Cost Analysis .....	61
4.2.2	Variable Comparative .....	64
4.2.3	Benefit Analysis.....	65
4.3	Regulatory Aspects.....	67
4.3.1	Introduction.....	67
4.3.2	Identification of Problems.....	70
4.3.3	SWOT Analysis.....	71
4.3.4	Related Regulations .....	73
4.3.5	National And International Regulation Gaps .....	79
4.3.6	Recommendation .....	81
<b>CHAPTER 5 CONCLUSION.....</b>		<b>82</b>
<b>Bibliography .....</b>		<b>83</b>