

LIST OF FIGURES

Figure 2.1 Space Segment of Satellite Communications[20]	9
Figure 2.2 HTS Launch Trends.....	11
Figure 2.3 The Difference Beam Coverage Between Conventional Satellite and High Throughput Satellite[23]	11
Figure 2.4 HTS Communications Links[18].....	12
Figure 2.5 Multibeam Antenna Array Clusters[18].	14
Figure 2.6 Frequency Reuse Scheme Usage on HTS 3 Colors, 4 Colors,.....	15
Figure 2.7 A 4-Color Scheme on Square Grid Layout 2 Polarizations[26].	18
Figure 2.8 Beam Color With 2-Color Scheme[26].	18
Figure 2.9 CCI for Four Color Scheme at Ground Terminal Location with Adjacent Beam Interference in Uplink and Downlink.	19
Figure 2.10 CCI Mechanism at User Uplink and Downlink Communication.....	20
Figure 2.11 Self-Interference Between Beams on Multibeam Satellite Systems in Downlink Communications[21].	21
Figure 2.12 Directions for The Center Feed Antenna Showing Desired Coverage Area and Interference Areas[14].	22
Figure 2.13 Self-Interference Between Beams on Multibeam Satellite Systems in Uplink Communications[21].	25
Figure 2.14 Directions for The Center Feed Antenna Showing Desired Coverage Area and Interference Areas[14]	26
Figure 2.15 Antenna Radiation Pattern in Polar Representation[21].....	30
Figure 2.16 Antenna Radiation Pattern in Cartesian Representation[21]	30
Figure 2.17 Organization Structure of ITU[18]	39
Figure 2.18 Area Regions Map for Frequency Allocation-based ITU[31].....	41
Figure 3.1 Research Scenario Diagram.....	45
Figure 3.2 Research Flow	46
Figure 4.1 Frequency Plan of Indonesian HTS-A.....	52
Figure 4.2 Ku-band Coloring Beam in Indonesian HTS-A of Forward Downlink and	54
Figure 4.3 Graph C/N Comparison Before and After Interference	66
Figure 4.4 Graph of Capacity Comparison Before and After Interference.....	68
Figure 4.5 Graph Comparison of Revenue Before and After Interference	71

Figure 4.6 Comparison of Users and Revenue Before-After Interference.....	72
Figure 4.7 Graph of BHP Space and BHP Radio Station Percentage Before-After Interference	75
Figure 4.8 Frequency Plan Classical C-band	77