

CONTENTS

1. INTRODUCTION	6
2. MODELING OF VEGETATION EFFECTS ON MILLIMETER LINKS	7
2.1 Vegetation Effects	7
2.2 Model	7
2.3 Laboratory Experiment	9
2.4 Outdoor Experiment	11
2.5 Summary	12
3 NEW RAIN EVENT CLASSIFICATION METHOD	13
3.1 Rain influence on PMP Systems	13
3.2 Simulation Tool	13
3.3 Site Diversity Outage Improvement	15
3.4 Rain Spatial Classification	16
3.5 Summary	18
4. PROPAGATION MODELING FOR HIGH ALTITUDE PLATFORMS	18
4.1 High Altitude Platforms	18
4.2 Simulations of a 3G Mobile Network from HAPs	19
4.3 Propagation modeling for HAP Urban Scenarios	20
4.4 Influence of Antenna Radiation Pattern	22
4.5 Experiment	23
4.6 Summary	25
5. CONCLUSION	25
6. REFERENCES	26