Enabling Long Range Communications and Its Demonstration

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Abstract—The recent results paper introduces several technical considerations to enable long-range communications. The demonstration conducted between Jeju island and Jindo-gun show the achieved data rate ranged from 1.5 to 7Mbps.

Keywords—Long-range communications, the Earth's curvature, the Fresnel zone, beamforming

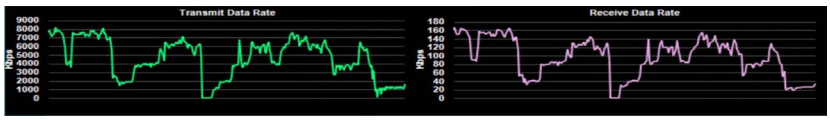
I. INTRODUCTION

The recent results paper introduces several technical considerations aimed at enabling long-range communications. These considerations encompass factors like the Earth's curvature, the Fresnel zone, and beamforming. The paper also includes a demonstration of successful communication over distances exceeding 100 kilometers. This demonstration was carried out between Jeju Island and Jindo-gun, Jeollanam-do.

II. MAIN RESULTS

During the demonstration, the carrier frequency was 5.2GHz, accompanied by a 20MHz bandwidth, and the transmission power was set at 20dBm. In the initial day of testing, the data rate achieved ranged between 4 to 7Mbps, while in the subsequent day's trial, it ranged from 1.5 to 3.5Mbps.

The following figures show the map of the demonstration site, the equipment at the test sites, and the achieved data rate .



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