Sensor Networks and Mobile Data Communication, Assignment 4

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1 Introduction

The simulated problem involves a delay-tolerant network (DTN), with two stationary nodes 0 and 2, positioned 10000 m apart, and a mobile node 1, moving between them. The initial position of the nodes are shown in Fig. 1.

The propagation loss model is constant range, which means that up to the given maximum distance (200 m initially) the packets are transmitted with the given transmission power (1.5 dBm in this case). Beyond the maximum range, the transmission power drops to -1000 dBm, which is effectively 0 [1]. Note that with Node1 travelling along the $y = 3$ line, it means that it needs to be at $x \leq 199.98 \approx 200$ to reach Node0, and at $x > 9800$ to reach Node2.

References

[1] Range Propagation Loss Model, NS-3 documentation, available online: `https://www.nsnam.org/doxygen/classns3_1_1_range_propagation_loss_model.html`