NS3 802.11b Throughput Performance

Freek van Tienen
4094123

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Abstract

With the help of NS3 simulations can be performed for several networking protocols. One of these protocols is the 802.11b protocol. This protocol allows us to communicate wireless between a STA(Station) and AP(Access Point). It is being used widely, and the most commonly used frequency range of 2.4GHz is becoming very crowded. This extensive use of the same frequencies using DSSS(Direct Sequence Spread Spectrum), makes it difficult to ensure a consistent performance in the 802.11b protocol. The amount of STA's using a single AP greatly affects the throughput of the STA's and therefor the performance. In this document we will analyse the performance impact of the amount of STA's on a single AP using NS3.

1 Introduction

2 Problem description

3 Design and implementation

4 Results

5 Conclusion

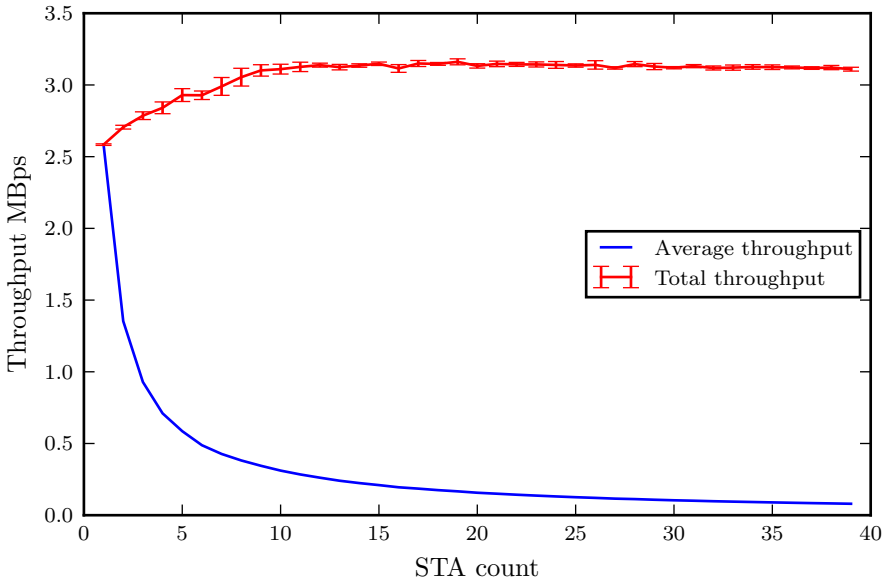

Figure 1: Throughput curve with 5Mbps.

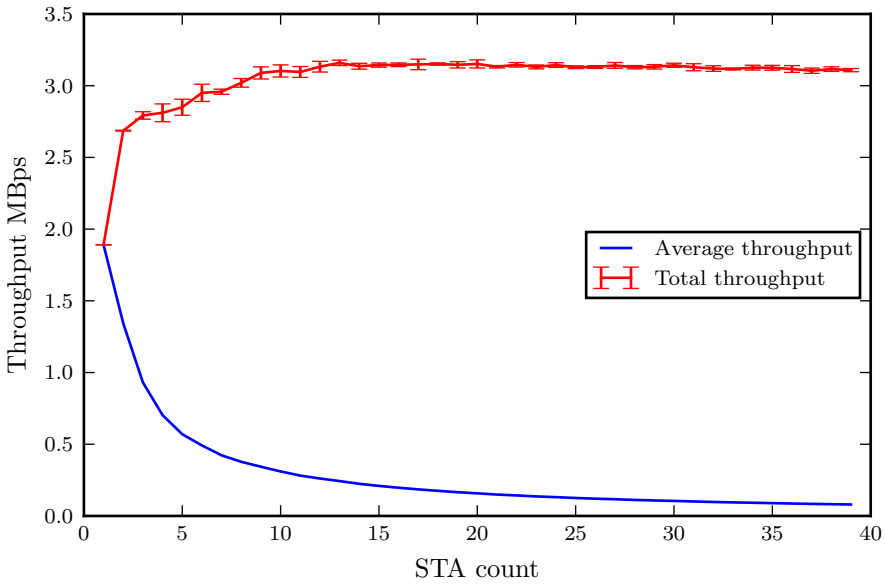

Figure 2: Throughput curve with 2Mbps.

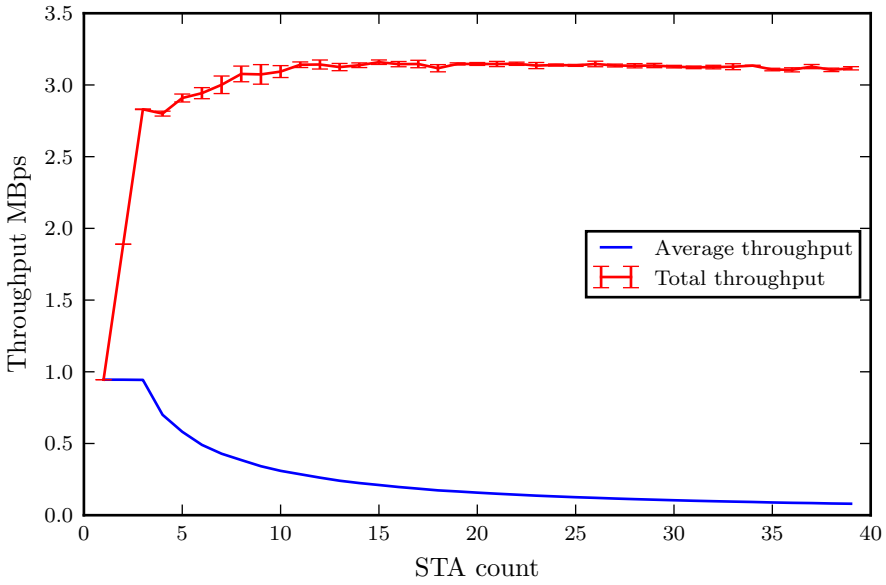

Figure 3: Throughput curve with 1Mbps.

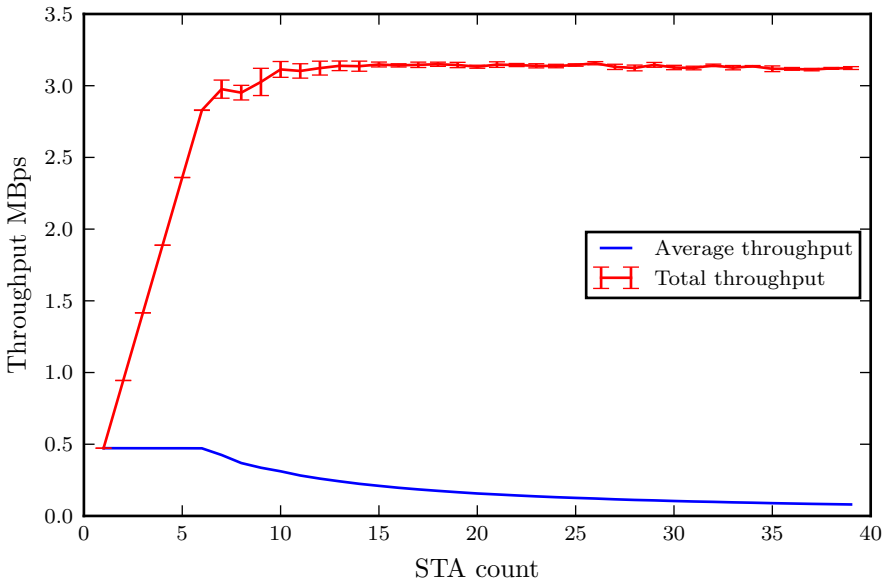

Figure 4: Throughput curve with 500Kbps.

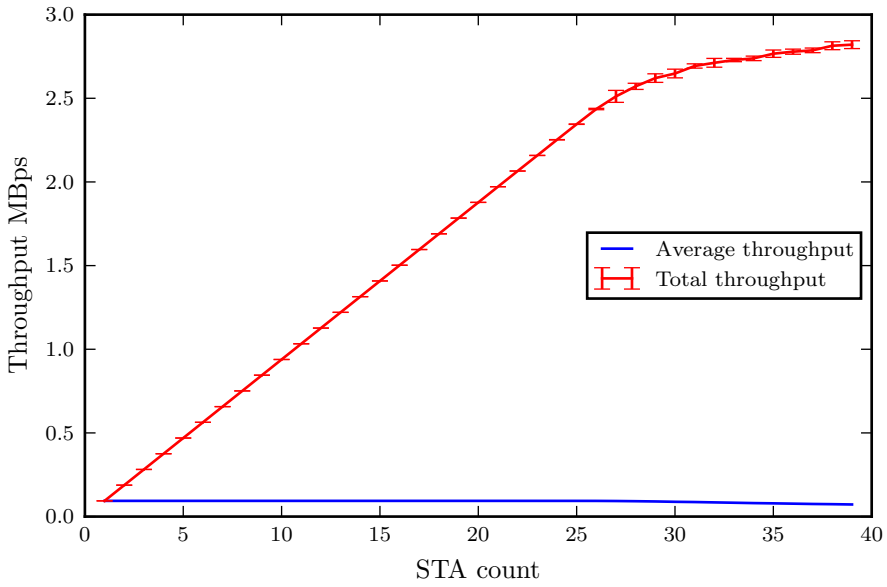

Figure 5: Throughput curve with 100Kbps.