



UCL Department of Computer Science
CS M038/GZ06: Mobile and Adaptive Systems

Hailes, Jamieson, Karp

2008-2009, Term 2

One-pager: SampleWidth

Due: start of lecture, 4 February 2009

Instructions: answer the following question as succinctly as possible in 200–500 words (roughly one double-spaced, typed page). **Your answer should be mostly written in your own words, and if you include passages from the paper, you must enclose them in quotation marks.** Shorter answers are preferred.

Why did the authors choose to keep the slot duration constant when moving from one channel width to the other?

Based on your knowledge of 802.11 and CSMA, derive the throughput that two SampleWidth senders would achieve if the authors of SampleRate had not made this modification. I.e., if slot time were to scale inversely with bandwidth, like the other MAC timing parameters. You may assume two senders transmitting over lossless channels to a common base station, situated within mutual carrier sense range of each other.