

# Programming for Performance

## Assignment 1

Your Name

January 30, 2013

### Part 2 - Benchmarking

These experiments were run on a ??? CPU. It has ? physical cores and ? virtual CPUs.

	Time (s)
Run 1	0
Run 2	0
Run 3	0
Run 4	0
Run 5	0
Run 6	0
Average	0

Table 1: Benchmark results for sequential execution ( $i = ???$ )

Refer to **Table 1** and estimate runtime with ? physical cores.

	Time (s)
Run 1	0
Run 2	0
Run 3	0
Run 4	0
Run 5	0
Run 6	0
Average	0

Table 2: Benchmark results for parallel execution ( $i = ???$ ,  $t = ?$ )

Refer to **Table 2**, does this agree with your predicted runtime? Write your answer here.

	Time (s)
Run 1	0
Run 2	0
Run 3	0
Run 4	0
Run 5	0
Run 6	0
Average	0

Table 3: Benchmark results for parallel execution ( $i = ???$ ,  $t = ?$ )

Refer to **Table 3** calculate the speedup, and verify it is less than ?.

	Time (s)
Run 1	0
Run 2	0
Run 3	0
Run 4	0
Run 5	0
Run 6	0
Average	0

Table 4: Benchmark results for parallel execution ( $i = ???$ ,  $t = ? + 1$ )

Refer to **Table 4**, calculate the speedup and compare it to **Table 3** (or **Table 2** if you don't have hyperthreading), which performs better? Write your explanation here.

Table 5: Hops per Byte					
ProblemSize	GRASP	EMAHD	Default	GGE	MAHD
8	1.43	1.48	2.22	2.18	1.83
16	2.98	3.76	5.36	3.88	4.02
32	2.94	4.05	5.88	5.19	4.30
64	4.34	4.72	8.19	6.04	5.43
100	2.56	2.74	3.84	3.86	3.16
128	2.92	2.91	3.49	4.21	3.51
144	2.73	2.61	4.25	4.16	3.22
192	3.73	3.56	5.12	5.37	4.06
200	3.14	2.77	4.30	4.05	2.83
216	1.84	1.73	2.99	2.83	1.90
250	3.66	3.39	5.50	5.37	3.45
300	3.42	3.29	5.66	5.16	3.73

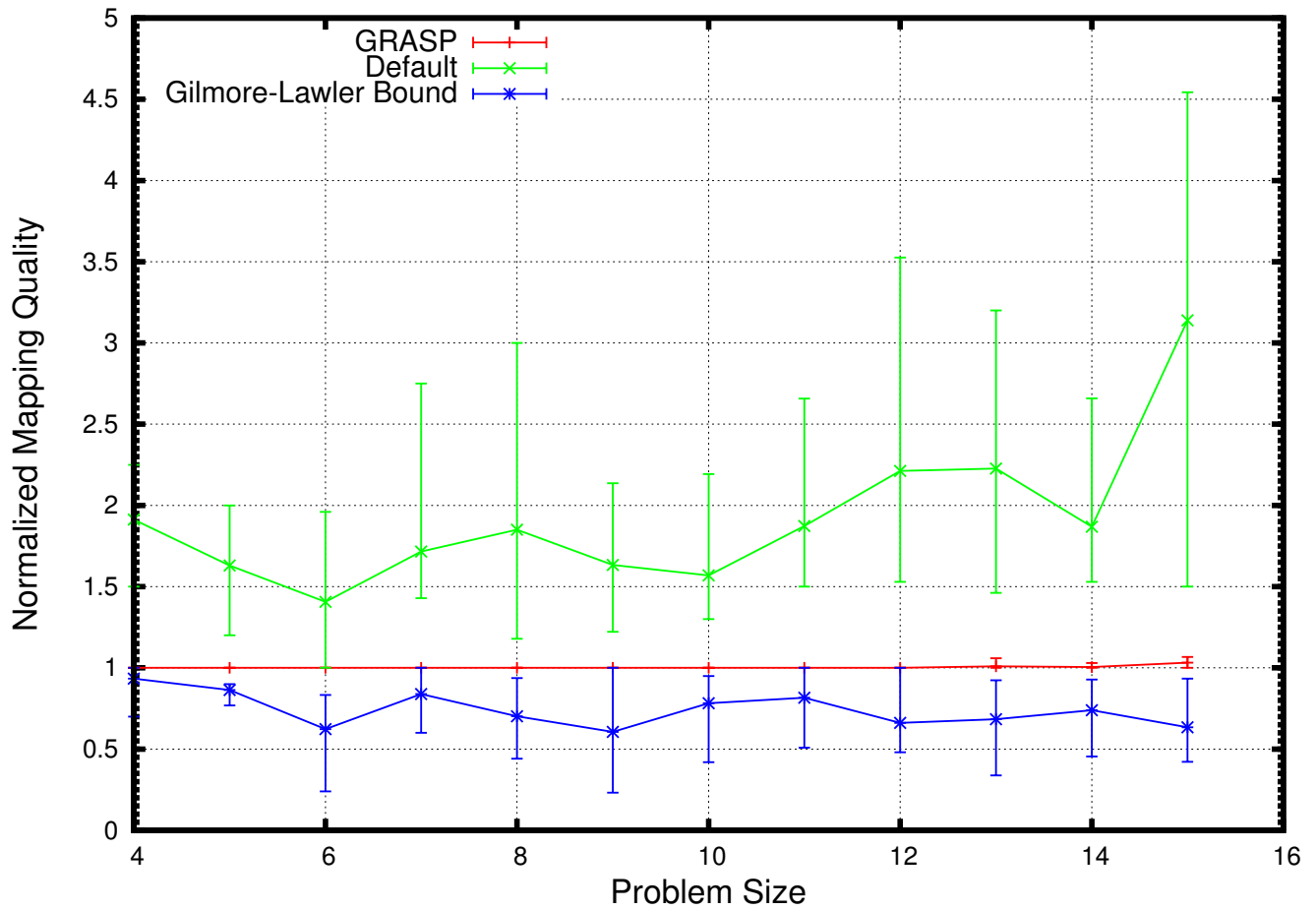


Figure 1: Quality of solutions on the binomial tree pattern for small problem sizes.