

Parallel Computing Projects

Group 5

Peter Neubauer
0725263

Bruno Pfeiffer
0717311

January 26, 2013

Contents

1	Task	3
2	OpenMP: Prefix Sums	3
2.1	Recursive Implementation	3
2.2	Iterative Implementation	3
2.3	Hillis-Steele Implementation	3
2.4	Findings	3
3	OpenMP: Matrix / Vector Multiplication	3
4	Cilk: Task-parallel Prefix-Sums	3
5	MPI: Stencil Operations	3
6	MPI: Matrix / Vector Multiplication	3
7	MPI: Prefix Sums	3

1 Task

Short report, 1-3 pages per project plus performance plots (1-5 pages)

Discuss:

- What you have done
- How you tested (main cases, problems)
- What you've not done
- What you intend to show

2 OpenMP: Prefix Sums

Figure 1: Some beautiful code right here

```
//The code should be here.
```

2.1 Recursive Implementation

2.2 Iterative Implementation

2.3 Hillis-Steele Implementation

2.4 Findings

3 OpenMP: Matrix / Vector Multiplication

False Sharing!

4 Cilk: Task-parallel Prefix-Sums

5 MPI: Stencil Operations

6 MPI: Matrix / Vector Multiplication

7 MPI: Prefix Sums