COMS20001: Concurrent Computing

Louis Heath, Jack Jones

		8 Workers		4 Workers		Sequential		
Image size	Num Pixels	2 Iterations (ms)	100 Iterations (ms)	2 iterations (ms)	100 iterations (ms)	2 iterations (ms)	100 iterations (ms)	
16x16	256	2	64	1	83	8	398	
64x64	4096	20	1032	28	1363	246	6505	
128x128	16384	84	4150	104		628	25792	
256x256	65536	324	16029	412	20864	2180	101929	
512x512	262144	1289	64462	1667	83356	8221	406300	
1024x1024	1048576	5154	257253	6649	332528			
1184x1184	1401856	6974						
1208x1208	1459264			9674				
Samo data as	s above, formatted	l for graph				Time taken per pixel per	iteration, calculated from	n 100 iteration data
Num Pixels			Sequential			8 Workers	4 Workers	Sequential
256	8 Workers	4 Workers 83	398			0.00250	0.00324	· ·
4096	1032	1363	6505			0.00250	0.00324	
16384	4150	5186	25792			0.00253	0.00333	
65536	16029	20864	101929			0.00233	0.00317	
262144	64462	83356	406300			0.00246	0.00318	
1048576	257253	332528	40000			0.00240	0.00010	0.01000
1010010		002020			Average:	0.00249	0.00322	0.01564
						8 workers is	6.28	times faster than sequenti
T7:	Figure 8: A graph to compare processing speeds of concurrent and sequential						1.29	times faster than 4 worker
		implementations ov	er 100 iterations	and softenesses		4 workers is	4.85901	times faster than sequenti
40000								
Time taken / ms 20000 20000	00							
ii 20000								
	0 0	250000	500000 7500	00 1000000				