



Session 5: Multicore Environments

Robert Bond

**Massachusetts Institute of Technology
Lincoln Laboratory**

20 September 2007

0835 – 1100

Auditorium

This work is sponsored by the Defense Advanced Research Projects Agency, under Air Force Contract FA8721-05-C-0002. Opinions, interpretations, conclusions, and recommendations are those of the author and are not necessarily endorsed by the United States Government.

MIT Lincoln Laboratory

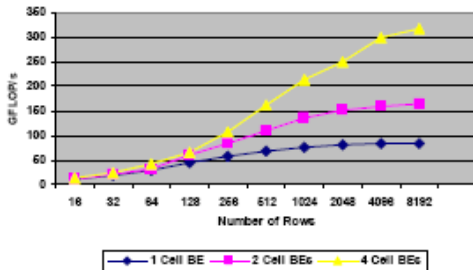


Multicore Environments - Session 5 -

High Performance Simulations of Electrochemical Models on the Cell Broadband Engine

James Geraci and Sudarshan Raghunathan

Multiple Cell BEs (3.2 GHz)

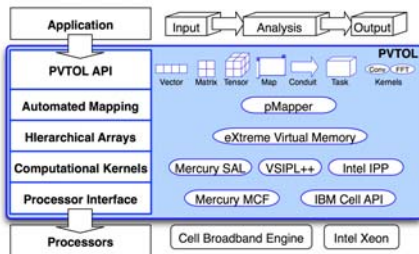


Sourcery VSIPL++ for the Cell/B.E.

Jules Bergmann et al

Programming Examples that Expose Efficiency Issues for the Cell Broadband Engine Architecture

William Lundgren et al

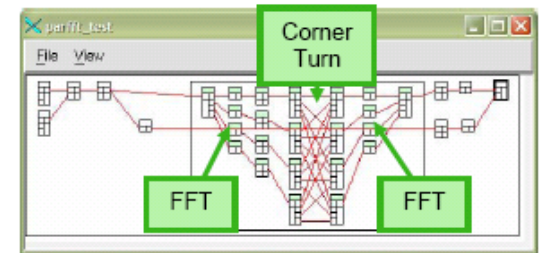
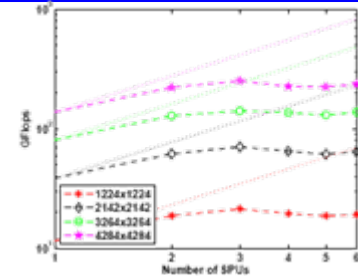


PVTOL: A High-Level Signal Processing Library for Multicore Processors

Hahn Kim et al

Defense Applications Implemented Utilizing the Parallel Processing Features of Sourcery VSIPL++

Thomas Steck et al



Processors	Time (s)	Speedup	Efficiency
1	4.89	1.00	100%
2	2.46	1.98	99%
3	1.65	2.96	99%
4	1.24	3.94	99%
6	0.84	5.82	97%
8	0.63	7.76	97%
12	0.43	11.37	95%