Fifteen Years of OpenMP: What Now?

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OpenMP BOF SC 2012
OpenMP: Past, Present, Future

• Gov’t agency tells a bunch of vendors to standardize on a parallel-do-loop directive

• What was going on with OpenMP from 1997 to 2005?

• Tasking was a major (r)evolution for OpenMP – do user’s understand it?

• Progress (depends who you ask) has accelerated
OpenMP: What is missing?

• A user focused book on OpenMP tasking

• Support for heterogeneous systems

• Streaming and pipelining style parallelism

• Support for memory hierarchies
OpenMP: Challenges

- Directives applied to more complicated base languages: C++11, Fortran 2008
- OpenMP constructs are now incorporated into base languages
- OpenMP is for shared memory programming
- OpenMP is a directive based approach for parallel programming