Chip Multi-Threading and the SPARC Evolution

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The multi-core, multi-threaded (Chip Multi-Threading, or CMT) CPU is a disruptive technology arrived just in time to further boost computing performance at moderate energy cost. While similar to the SMP servers in the 90's, the richness of threads and the finer granularity of parallelism of CMT CPU-based systems do open up a new programming paradigm. System virtualization on such platforms makes the concept more intuitive and provides a "soft landing".

Sun Microsystems has been working on CMT SPARC processors since 2002. The success of UltraSPARC T1 and T2 processors released in December 2005 and August 2007, respectively, bodes well for the entire CMT SPARC processor roadmap. Sun has further made available to the community at large the OpenSPARC T1 and T2, open sourced versions based on the UltraSPARC T1 and T2 under GPL.

M. Xu et al. (Eds.): APPT 2007, LNCS 4847, p. 2, 2007.