

Software Decomposition for Multicore Architectures  
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Multicore Architectures cannot be fully and effectively utilized with sequential model based software. Software cannot be re-written entirely in order to utilize next generation multicore architectures. We have developed a 10-Step methodology which effectively reverse engineers existing (Legacy) software to convert it into concurrent model based software. The aim is to solve embedded software and real-time concurrency issues while partitioning code over multiple concurrent architectures. We utilize top-down representation, bottom-up annotation, and middle out analysis to effectively implement this methodology. We perform performance annotation by analyzing computation, communication and concurrency cost.