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# Multimedia Multiprocessor Systems

Analysis, Design and Management

Series: Embedded Systems

- Analyzing performance of multiple applications executing concurrently on heterogeneous multi-processor platforms This number of use-cases is exponential in the number of applications present in the system Systematic way to design and program multi-processor platforms Fast design space exploration technique

Modern multimedia systems are becoming increasingly multiprocessor and heterogeneous to match the high performance and low power demands placed on them by the large number of applications. The concurrent execution of these applications causes interference and unpredictability in the performance of these systems. In Multimedia Multiprocessor Systems, an analysis mechanism is presented to accurately predict the performance of multiple applications executing concurrently. With high consumer demand the time-to-market has become significantly lower. To cope with the complexity in designing such systems, an automated design-flow is needed that can generate systems from a high-level architectural description such that they are not error-prone and consume less time. Such a design methodology is presented for multiple use-cases -- combinations of active applications. A resource manager is also presented to manage the various resources in the system, and to achieve the goals of performance prediction, admission control and budget enforcement.

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