



SYNDEX EXECUTIVE KERNELS FOR FAST DEVELOPMENT OF APPLICATIONS OVER HETEROGENEOUS ARCHITECTURES (ThuPmOR4)



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* Abstract :

Future generations of mobile phones, including advanced video and digital communication layers, represent a great challenge in terms of real-time embedded systems. Programmable multicomponent architectures can provide suitable target solutions combining flexibility and computation power. The aim of our work is to develop a fast and automatic prototyping methodology dedicated to signal processing application implementation onto parallel heterogeneous architectures, two major features required by future systems. This paper presents the whole methodology based on the SynDex CAD tool, that directly generates a distributed implementation onto various platforms from a high level application description, taking real-time aspects into account. It illustrates the methodology in the context of real-time distributed executives for applications based on video codecs and telecommunication physical layers.