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RESEARCH ARTICLE

CPU Power Prediction on Modern Multicore Embedded Processor

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Abstract— *In this paper we put a modern multicore embedded processor in a load controlled environment and test its actual power consumption during idle and on active state. In order to retain the highest accuracy during measurement, we carried out the measurement directly on the processor power supply line during runtime. The test processors are loaded at a specific threshold and the actual power consumption during execution are measured and logged in real time. We have found out that on a modern embedded processors such as on our test platform, the idle and active power requirement are more dependent on processor load rather than CPU vcore or CPU execution frequency.*

Keywords— *embedded linux; multicore; power efficiency; mobile computing*

Full Text: <http://www.ijcsmc.com/docs/papers/February2014/V3I2201499a67.pdf>