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# TEEARTS: Time and Energy Efficiency Analysis for Real Time Systems Framework

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**Abstract:**

In this paper we introduce TEEARTS (Time and Energy Efficiency Analysis for Real Time Systems) Framework. TEEARTS is being developed as an energy consumption measurement and estimation framework for embedded systems, with applicability especially in real-time systems. Beside the measurement modules, an energy estimation model is proposed, along with a methodology to determine its parameters. A set of experimental results regarding the use of this methodology and the energy consumption analysis framework on an embedded target are also presented and discussed.

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### I. Introduction

The main factors which influence the energy consumption of an embedded system are, on one hand, the hardware, with its particularities and on the other hand, the energy requirements of the applications which run on the system and the energy requirements of the operating system[1].

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Energy consumption, Current measurement, Real-time systems, Energy measurement, Power demand, Embedded systems

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embedded target, time and energy efficiency analysis for real time systems framework, TEEARTS, energy consumption measurement, embedded systems, energy estimation model, energy consumption analysis framework

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