

Many compression techniques have been proposed to accommodate ever increasing software pieces into restricted memory area in embedded systems. Recently, these techniques have been shown to improve other design constraints like energy and performance. This paper proposes a blended dictionary model based on static/dynamic profiling that lead to best trade-offs on compression, performance and energy savings. We also propose a new dictionary based code compression algorithm, independent of the cache organization and processor, to support our experiments. A mix of benchmarks and MiBench suites reveals that compression ratios of 75% can be obtained while decreasing bus accesses to the cache by 31% for the Leon processor. These results approach simultaneously the best solutions of when using pure static or pure dynamic information based dictionaries techniques.