Abstract

Performance analysis is a more efficient method of improving processor performance. This research work discusses heavily on performance analysis of Dual Core, Core 2 Duo and Core i3 Intel architectures. The study described the evolution of Intel architectures and gave the reason for testing the performances of the systems. All experiment will be carried out using Intel VTune Performance Analyzer, with all the systems running on Windows 7 and 8. It is a well-known fact that, overall performance is a major function of: path length of the application, frequency, and cycle per instruction. Based on the analysis from this research, it was confirmed that, Corei3 has two distinct advantages: faster core-to-core communication, and dynamic cache sharing between cores. The research also highlights other areas where Dual Core and Core 2 Duo can be preferred architectures over Core i3.

References

Performance Analysis of Dual Core, Core 2 Duo and Core i3 Intel Processor

- EPSRC. STFC Rutherford Appleton Laboratory. http://www.softeng-support.ac.uk/
- @WhatIf site. http://WhatIf.intel.com
- Levinthal D., Execution-based Cycle Accounting on Intel Core 2 Processors.
- Levinthal D., Introduction to Performance Analysis on Intel Core 2 Duo Processors.
- Levinthal D., Performance Analysis Guide for Intel® Core™ i7 Processor and Intel® Xeon™ 5500 processors.
- Parallelization Made Easier with Intel® Performance-Tuning Utility. Intel Technology Journal, Volume 11 Issue 04 Published, November 15, 2007 ISSN 1535-864X DOI: 10. 1535/itj.1104.02

Index Terms

Computer Science
Circuits And Systems

Keywords
Performance Multi-core Processor Microarchitecture.