Abstract

String matching problem is one of the most essential problems in many computer science fields, such as DNA analysis, artificial intelligence, internet search engines and information retrieval. Today, the speed and performance of string matching algorithms is critical and must be improved to meet recent developments in hardware processing environments. The improvement in performance gained by the use of a multi core processor depends very much on the software algorithms used and their implementation. However, the most important factor when writing a parallel algorithm is the fraction of the algorithm that can run simultaneously on multiple cores. In this paper, an efficient algorithm for string matching, Enhanced Pattern Matching Algorithm with Two Sliding Windows (ETWS), is adapted to be implemented under a real parallel environment (PETWS), to enhance the performance of the sequential algorithm through providing less execution time to make it more suitable for today’s applications.


**Index Terms**

Computer Science  
Algorithms

**Keywords**