Abstract

The intrinsic parallelism in bit operations like AND/OR inside a computer word is known as bit parallelism. Since 1992, this bit parallelism is directly used in string matching for matching efficiency improvement. Some of the popular bit parallel string matching algorithms Shift OR, Shift OR with Q-Gram, BNDM, TNDM, SBNDM, LBNDM, FBNDM, BNDMq, and Multiple pattern BNDM. This paper discusses the working of various bit parallel string matching algorithms with example. Here we present how bit parallelism is useful for efficiency improvement in various algorithms.

References

- Ali Peiravi, "Application of string matching in Internet Security and Reliability", 

- Sanchez D., Martin-Bautista M. J., Blanco I. and Torre C., "Text Knowledge Mining: An Alternative to Text Data Mining," In the proc. of IEEE International Conference on Data Mining Workshops, ICDMW &apos;08, pp. 664-672, 15-19 Dec. 2008.
- JingboYuan, Jinsong Yang and Shunli Ding, "An Improved Pattern Matching Algorithm Based on BMHS," In the proc. of Third International Symposium on Distributed Computing and Applications to Business, Engineering & Science, 2012.
Bit Parallel String Matching Algorithms: A Survey

- Branislav Durian, Jan Holub, Hannu Peltola and Jarmo Tarhio, "Tuning BNDM with q-grams", In the proc. Of workshop on algorithm engineering and experiments, SIAM USA, pp. 29-37, 2009.

Index Terms

Computer Science
Algorithms

Keywords
String Matching  Bit Parallelism  Shift OR  BNDM  TNDM  SBNDM  LBNDM  FBNDM
Bit Parallel String Matching Algorithms: A Survey

BNDMq

SBNDMq

WW Algorithm.