Efficient Parameterized Word Matching Using Bit-Parallelism and Partitioning the Text

Rajesh Prasad
Department of Computer Science
Yobe State University
Damaturu, Nigeria
rajesh_ucer@yahoo.com

***Abstract*— Word matching problem is to find all the exact occurrences of a pattern P[0…m-1] in the text T[0…n-1], where P neither contains any white space nor preceded and followed by space. In the parameterized word matching problem, a given word P[0…m-1] is said to match with a sub-word t of the text T[0…n-1], if there exists a one-to-one correspondence between the symbols of P and the symbols of t. Exact Word Matching (EWM) problem has been previously solved by partitioning the text into number of tables in the pre-processing phase and then applying either brute force approach or fast hashing during the searching process. This paper presents an extension of EWM problem for parameterized word matching. It first split the text into number of tables in the pre-processing phase and then applying prev-encoding and bit-parallelism technique, Parameterized Shift-Or (PSO) during the searching phase. Experimental results show that this technique performs better than PSO.**

***Index Terms*— Algorithm, string matching, prev-encoding, bitparallelism, shift-or**

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