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# **Komodiam's implementation of Aho-Corasick algorithm**

## **By Barak Weichselbaum**

### **Introduction**

This manual covers how to use the CSuffixTrie class which implements the Aho-Corasick search algorithm ([http://en.wikipedia.org/wiki/Aho-Corasick\\_algorithm](http://en.wikipedia.org/wiki/Aho-Corasick_algorithm))

### **Overview**

I implemented this class to facilitate quick keyword search for parental control - to be integrated with "Komodiam's redirector" product (<http://www.komodiam.com/index.php?page=redirector.html>) The class is intended to be thread safe while read only, which is the normal usage for parental control after calculating the initial modified suffix trie.

### **Usage**

AddString – Adding a search string to the trie.

FindString – Search if a string is inside the trie.

DeleteString – Delete a string from the trie.

BuildTreeIndex – Once done adding/removing strings this method is called to generate the trie used in the algorithm search, it's important to note that you must call this function manually; calling the previous three string manipulation routines will not cause the trie to be recalculated since this is a time intensive method.

Clear – Will clear all strings in the trie.

GetAllStringsVector – Get all the strings stores in the trie in a vector format.

GetAllStringsSet - Get all the strings stores in the trie in a set format.

SearchAhoCorasik – Perform an Aho-Corasick search on a given string; will break when first occurrence is found.

SearchAhoCorasikMultiple - Perform an Aho-Corasick search on a given string - will find all occurrences.