



## **Komodiam's implementation of the Aho-Corasick algorithm** **By Barak Weichselbaum**

### **Introduction**

This manual discusses 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" (<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 suffix trie.

### **Usage**

AddString – Add a search string to the trie

FindString – Search for a string inside the trie

DeleteString – Delete a string from the trie

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

Clear – Clear all strings in the trie

GetAllStringsVector – Get all the strings stored in the trie in a vector format

GetAllStringsSet – Get all the strings stored in the trie in a set format

SearchAhoCorasik – Perform an Aho-Corasick search on a given string - breaks when first occurrence is found

SearchAhoCorasikMultiple - Perform an Aho-Corasick search on a given string - finds all occurrences