

### **Status report 4:**

#### **What was done?**

- Implemented a Huffman tree library
- Implemented a file string parser to build a database of characters and their frequencies
- Implemented a linked list library to be used to store a forest of nodes created from the character-frequency database
- Devised a solution for merging trees in a forest to eventually get down to a single Huffman tree

#### **What got in the way?**

- A simple assignment vs comparison syntax error was causing problems, and took a while to catch
- There is a segmentation fault problem when merging the final few trees in the forest, where when the forest gets down to approximately three trees in length, merging, and attempting to delete the old trees fails
- Pointers are cruel

#### **What is planned for the following week?**

- Fix the segmentation fault and build the Huffman tree properly
- Read the Huffman tree to generate prefix codes
- Encode the string
- Deflate the Huffman tree
- Write them to the file