Chapter 6

Conclusion

6.1 Future Work

There are a number of improvements that can be made to the algorithm in the future. The primary element that could be improved the the synonym retrieval method. This is the primary reason why some words that are returned are not in keeping with the text. WordNet provides some more links between words, such as word1 “is a” word2, which could be used. One thing that was disabled in WordNet for this programs are exception rules, which show replacements for words that are not in the database, such as “completed” goes to “complete”. This were removed as they did not fit the synonym retrieval algorithm, but if they could be worked n they would help improve the bitrate.
The quality test could be improved by comparing words with the entire body of text, rather than just the preceding word. This will help keep words in context with the entire text.
The StegChat application, while only a low level prototype, could be expanded into a full fledged product. It would require a large number of extra features, such as being able to check the online status of contacts. A more substantial desktop application could also be produced, using the same principle as the evaluation program.

6.2 Conclusion

The goal of this project was to produce an lightweight and robust text steganography algorithm using the idea of synonym substitution. The output should be robust against both automatic and human analysis, simple enough for any user to understand, and lightweight enough that it can be performed on low power machines, and even by hand.
The algorithm in itself is very lightweight. You could give someone a printed version of the dictionary and corpus data, and with little explanation they would be able to perform the algorithm by hand (albeit with no speed!).