Scott Williams

Computer Science Part II Project Dissertation

STEGANOGRAPHIC FILE SYSTEMS WITHIN VIDEO FILES

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College:	Christ's
Project Title:	Steganographic filesystems within video files
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Project Originator:	Scott Williams
Project Supervisor:	Daniel Thomas

Original Aims of the Project

To investigate appropriate steganographic embedding methods for video and to develop a practical steganographic software package to enable the embedding of arbitrary data within video files via a file system interface. Raw AVI video files should be supported and a variety of steganograhpic embedding algorithms should be available. Basic file system commands should work within the presented logical volume.

Work Completed

A complete software package has been developed enabling the embedding of arbitrary files within many video formats (including MP4 and AVI) via a file system interface. A total of 9 steganographic embedding algorithms are supported, along with encryption and plausible deniability functionality. Basic file system operations work as expected within the mounted volume and the embedding process operates without any perceivable impact on video quality.

Special Difficulties

None.

Declaration of Originality

I, Scott Williams of Christ's College, being a candidate for Part II of the Computer Science Tripos, hereby declare that this dissertation and the work described in it are my own work, unaided except as may be specified below, and that the dissertation does not contain material that has already been used to any substantial extent for a comparable purpose.

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1 Introduction

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1.1 Motivation

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2 Preparation

2.1 Background

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2.1.1 Preliminaries

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References

[1] *Steganography in Digital Media.* Jessica Fridrich, 2010.