

CSCI 530 Lab 1

Steganography Week assigned: 9/4 Week Due: 9/11

Overview:

In this lab, students will get familiar with a popular steganography tool for Windows, S-Tools. Students will understand how to properly hide a file inside of another file. Students will also learn how to reveal information from a file. Students will also understand how the file can be corrupted and lose the data.

Instructions:

1. Hiding a file using S-Tools
 - a. Obtain the program S-Tools, either from the CSCI 530 Shared Folder on the Instructor drive, or from the CSCI530 Lab website.
 - b. Open up S-Tools, after extracting the zip file.
 - c. Open up the folder My Documents → My Pictures → Sample Pictures
 - d. Double Click on the file *Sunset.jpg* to open the file using Microsoft Photo Editor
 - e. In Microsoft Photo Editor, go to File → Save As...
Under Save as Type, select Windows Bitmap (.bmp), and select Save.
 - f. Back to the folder, drag *Sunset.bmp* over to the S-Tools window. You will now see the picture in the S-Tools window.
 - g. Go to Start → Run, and type in **notepad** in the run line
 - h. Type in any text that you want into notepad, for example, "This is a test of the steganography tool"
 - i. Select Save, select the desktop on the left, and give the text file a name, such as *test.txt*
 - j. Go to the Desktop, where the file *test.txt* is saved. Drag the file *test.txt* over the picture displayed in S-Tools.
 - k. You will see a window saying "Hiding X Bytes", where X is the size of the file. You will be asked for a passphrase, to verify the passphrase, and an encryption algorithm. Type "Password" for the passphrase, and select **Triple DES** for the algorithm.
 - l. Another picture of the Sunset will appear, but with a title of "hidden data". Right click on the image, and select save.
 - m. Save the image as *hidden_sunset.bmp*
 - n. You have now hidden a text file within a bitmap
2. Revealing hidden text using S-Tools
 - a. Open S-Tools

