Preliminary info:
We determined what patterns indicated what file types by uploading sample Word, Excel, JPEG, and zip files to nice, xxd'ing them into text files, and looking at the bytes and, where applicable, ASCII translations of bytes displayed in the text files.

We each exxd'd stick.raw into a text file stick.txt and manually searched it for the patterns found in the sample files.

Lastly, the case folder contains a C file "fileFinder.c" It was a work-in-progress program that we abandoned before we found any files. It was intended to help us find and extract files using file headers. Don't look at it too hard.

farmCredit.doc
i. Word file
ii. farmCredit.doc is a Word document containing tables with information
    on an insurance company's financial status.
iii.blocks [45964, 46103]
iv. Using vim, we searched stick.txt for "d0cf 11e0", a pattern that appears at the
    start of a Word file (or an Excel file). We recorded 0x1671800 as a byte where that pattern appeared and then searched for "Micr", which appears in the pattern that indicates the end of a Word file. When we found that pattern, which ends with a "q", we continued to the start of the next block and recorded byte 0x1683000 as the end of a Word file. We scrolled through the space between the two noted bytes and concluded that they made one complete Word file. We then ran rebuilder to extract bytes [0x1671800, 0x1683000) and made farmCredit.doc.

crowdAround.jpg
i. JFIF file
ii. crowdAround.jpg is a photo of four people crowded around a computer
    and one person farther away looking at it with a strange expression on his face.
iii.blocks [8285, 9972]
iv. Using vim, we searched stick.raw for "JFIF", which appears at the starts of
    JFIF files. Because we found everything after the "JFIF" tags of sample JFIFs unrecognizable (until we later learned of the end of file tag, but that didn't always help us), we simply scrolled down until we saw a sector with recognizable figures. We then hoped that the last sector of unrecognizable figures was the last sector of the JPEG. Thus, we ran rebuilder to extract bytes [0x040ba00, 0x04dea00) and created crowdAround.jpg.

scarlet.html
i. HTML file
ii. scarlet.html is a web page that contains text from a Sherlock Holmes story.
iii.blocks [4436, 4455]u[4486, 4501]
iv. We searched an xxd file of stick.raw for the <html> tag, then for the </html> tag, and

looked through the ascii output to piece together the fragments of the file. We ran rebuilder to extract bytes [0x022a800 0x022d000)u[0x0230c00 - 0x0232c00)

scrooge.html
i. HTML file
ii. scrooge.html is a web page that contains text from A Christmas Carol
iii.blocks [4456, 4485]u[4502, 4556]
iv. We searched an xxd file of stick.raw for the <html> tag, then for the </html> tag, and looked through the ascii output to piece together the fragments of the file. We ran rebuilder to extract bytes [0x022d000, 0x0230c00)u[0x0232c00, 0x02398e3).

alice.html
i. HTML file
ii. alice.html is a web page that contains text from Alice in Wonderland
iii.blocks [9,44]
iv. We searched an xxd file of stick.raw for the <html> tag, then for the </html> tag, and found the file contiguous (blocks 0-8 were a copy of a chunk of this file) We ran rebuilder to extract bytes [0x0001200 - 0x00058e3)

moby1.txt
i. ASCII file
ii. moby1.txt is a text file that contains chapter 1 of Moby Dick
iii.blocks [11823, 11848]
iv. We ran across this file by chance while searching an xxd file of stick.raw, and ran rebuilder to extract bytes [0x5c5e00, 0x05c9019).

COE.html
i. HTML file
ii. COE.html is a web page that contains the text of Comedy of Errors.
iii.blocks [27496, 27606]u[27978, 28196]
iv.We searched an xxd file of stick.raw for the <html> tag, then for the </html> tag, and looked through the ascii output to piece together the fragments of the file. We ran rebuilder to extract bytes [0x0d6d000, 0x0d7ae00)u[0x0da9400, 0x0dc484d)

porcupine.jpg
i. JFIF file
ii. porcupine.jpg is a picture of a restaurant named "The Porcupine".
iii.blocks [27607, 27977]
iv. We found porcupine.jpg by chance. Using Vim on an xxd file of stick.raw, we found it was imbedded between two fragments of another file, and had the JPEG tag at the top, so we ran rebuilder to extract bytes [0x0d7ae00, 0x0da9400), and it ended up being a complete JFIF file.

moby2.html
i. HTML file

ii. moby2.html is a web page that contains chapter cxxxiv of Moby Dick.
iii.blocks [28244, 28245]u[28307,28344]
iv. We searched an xxd file of stick.raw for the <html> tag, then for the </html> tag, and looked through the ascii output to piece together the fragments of the file. We ran rebuilder to extract bytes [0x0dca800, 0x0dcac00)u[0x0dd2600, 0x0dd7033)

tempest.html
i. HTML file
ii. tempest.html is a web page that contains the text of The Tempest
iii.blocks [29529, 29895]
iv. We searched an xxd file of stick.raw for the <html> tag, then for the </html> tag, and looked through the ascii output to piece together the fragments of the file. We ran rebuilder to extract bytes [0x0e6b200, 0x0e98f91).

heineken.jpg
i. JFIF file
ii. heineken.jpg is a picture of four computer scientists and three heinekens
iii.blocks [43434, 46909]
iv. We found this file by searching the xxd of stick.raw in Vim for the ffd8 marker for JFIFs. We found the marker for this file, then searched for the next marker, hoping that it would be a contiguous file, and ran rebuilder to extract bytes [0x1535400, 0x16e7c00).

challenge.jpg
i. JFIF file
ii. challenge.jpg is a digital image containing the words "DFRWS 2006 Forensic Challenge". We suspect that the the background of the image contains a hidden message, but we did not investigate it.
iii.blocks [46910, 94845]
iv. We found this file by searching the xxd of stick.raw in Vim for the ffd8 marker for JFIFs. We found the marker for this file, then searched for the next marker, hoping that it would be a contiguous file, and ran rebuilder to extract bytes [0x16e7c00, 0x2e4fc00).

saturn.jpg
i. JFIF file
ii. saturn.jpg is a readable fragment of an image of the planet Saturn
iii.blocks [94846, 25628]
iv. We found this file by searching the xxd of stick.raw in Vim for the ffd8 marker for JFIFs. We found the marker for this file, then searched for the next marker, hoping that it would be a contiguous file, and ran rebuilder to extract bytes [0x2e4fc00, 0x2eb1a02). Unfortunately, we couldn't find the rest of the file.

galaxy.jpg
i. JFIF file
ii. galaxy.jpg is a readable fragment of an image of a galaxy
iii.blocks [41611, 43433]
iv. We found this file by searching the xxd of stick.raw in Vim for the ffd8 marker for JFIFs.

We found the marker for this file, then searched for the next marker, hoping that it would be a contiguous file, and ran rebuilder to extract bytes [0x1451600, 0x1535400). Unfortunately, we couldn't find the rest of the file.