Protocol:

1. Use RSA to allow the sharing of private keys.
   1. Put information upon textbook RSA
2. Once private keys are distributed, use AES for encryption, along with MACs.
   1. Put information upon AES version, its methods, and the MAC used
3. Use some sort of compression algorithm, one that can be proven to work securely removing redundancy within the file. Allows for easier transportation of files
   1. Both parties must have compression algorithm. Should be explained
4. The receiver analyzes the image with a trained machine learning algorithm that can tell if a cat is in an image. If the file is an image and has a cat, notify the receiver through email that they have gotten a cat.

Need sending folders and receiving folders on each end of the connection.