Image Compression and Packet Video
November 9, 2009
Homework #5
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1. **Reading assignment: Sec. 8.1-8.5 (excluding Sec. 8.3.2)**
2. **Written assignment: (Due November 23, 2009)**
   Prob. 8.6,8.7

   MATLAB assignment. Code the arithmetic coder described in Example 8.4 in MATLAB (You can also do problem 8.7 using it). Adjust the algorithm to support more than three symbols. Use the occurrence frequency of each symbol in the sequence as the estimate of the probability of the symbol:

   Source Sequence: aacbaabaabaaaabcd

   Compare the result to scalar Huffman coding. Comment on the size of the code. Comment on the efficiency of the Huffman symbol "d" compared to the arithmetic encode. Do the same for the symbol "a". How far apart are the lower and upper limits after the last symbol?