

MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Department of Electrical Engineering and Computer Science  
Department of Mechanical Engineering

6A32 / 2A29

Information and Entropy

Fall 1999

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Homework 3

Date Due: Oct 5, 1999

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**ADVERTISEMENT:**

You just heard the lecture on Lempel Ziv Welch (LZW) data compression. Now you can live the legend! For a limited time only of one week, you have the chance to develop a message that can be compressed to the smallest size. If you have the winning message, you have the chance to win more Toscanini's gift certificates! And that's not all, what you come away with this offer is deep insight into how LZW works and why!

**MORE FINE PRINT:**

Your mission is to create a proper English sentence or sentences of at least 200 characters long including all necessary punctuation that will be compressed using the LZW data compression algorithm. The smallest compression will win. Concentrate on what LZW compresses and take advantage of it.

To assist yourselves with the analysis of your message, you can use the command at the Athena prompt:

```
compress filename
```

However, you should do the LZW algorithm by hand for a while to get the feel on how the algorithm works in order to win.

**SUBMISSION:**

Just e-mail [youli@mit.edu](mailto:youli@mit.edu) with your message.