

# Hand in problem 3 in Information Theory (EIT 080)

VT 1, 2012

## Problem 3

The topic of this problem is the original Lempel-Ziv algorithm from 1977. Use LZ77 with  $S = 31$  and  $B = 15$  to compress the text

There are two minutes difference from four to two to two to two,  
and from two to two to two, too

Initialize the search buffer with the first  $S$  letters of the text. The result should be given as codewords in the form  $(j, l, c)$ , i.e. not in binary form. You should also find the compression ratio when assuming that the characters are encoded with 8 bits each.

## Hand in details

The problem can be solved by calculations by hand or with help from computer scripts (e.g. MATLAB). The solutions handed in should show all steps, and the source code for used scripts should be handed in as appendix to the solution. Hand in to `adnan.prlja@eit.lth.se` and/or `stefan.host@eit.lth.se`, preferably electronically. Do not forget to write your name and STIL or student ID.