Systems Theory - Homework 5

Ryan Spangler

February 7, 2011

Exercise 8.2

The system from figure 5.3 is rather simple, with a connection matrix of

$$\begin{pmatrix} 1 & 0 & 0 & 1 \\ 1 & 0 & 0 & 1 \\ 1 & 0 & 0 & 1 \\ 0 & 0 & 1 & 0 \end{pmatrix}$$

The first three states are identical in what their next possible states are, and the last has only one next state. In terms of Hartley uncertainty

$$I(A) = K \log_b |A|$$