

Discussion 1

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Question:

Please refer to page 50 in the slide L3_NCC. First, show that there is indeed no P_X such that P_Y is uniform under binary erasure channel.

And also, you may show that when **the sum of each column in the transition matrix induced by channel law has the same value**, output Y induced by uniform input distribution will be uniform.

Lastly, you are asked to discuss whether the condition in bold is a sufficient and necessary condition that P_Y can be uniform under some input distribution P_X .