

Phase Transition for Mutual Information - April 28, 2010

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In the past week, Raj and I were trying to extend the results of phase transition paper to the case of Convex combination of BSCs (CBSC channel). We have corrected some mistakes in our previous approach and were able to extend the results to the CBSC channel. We have found some interesting inequalities relating the transition threshold for the CBSC channel to the linear combination of the thresholds of individual BSCs. It seems that the threshold for the CBSC must greater than or equal to the linear combination of individual BSCs.

Furthermore, we have started to write the journal version of the ICST2010 paper. As soon as the results for the CBSC channel become ready, we will include it in the paper which makes it closer to being complete.