Project Report

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November 26, 2017

1 Max Cut problem

The max cut problem can be reformulate as the following form

$$\begin{array}{rll} \max & \frac{1}{4}L \bullet X & \\ \text{s.t.} & A_j \bullet X & \preceq \quad 0 \\ & j = 1, \ldots, n & \end{array} \tag{1}$$

2 Results

ϵ	0.1	0.01	0.001	0.0001
η	0.1054	0.0101	0.0010	0.0001
δ	0.1	0.01	0.001	0.0001
# of rounds	19	633	7230	73228
$\|X - X^*\|_2$	8.9298	8.9171	8.9169	8.9168
$\|b^* - b\|$	1.9107	0.1908	0.0204	0.0011

Table 1: 10 nodes example

ϵ	0.1	0.01	0.001	0.0001
η	0.1054	0.0101	0.0010	0.0001
δ	0.1	0.01	0.001	0.0001
# of rounds	2777	49971		
$\|b^* - b\|$	3.2430	0.7318		

Table 2: 100 nodes example