

Exercise No. 6
Peer-To-Peer Networks
Winter 2012/2013

Exercise 1 *Cuckoo Chord*

1. Implement a simulation for Cuckoo Chord from Awerbuch and Scheideler which provides join and leave operations for peers. Display the position of each peer and the regions of size k/n (rounded to the next power of two). It is not necessary to simulate or display the Chord pointers. Display the role of honest and dishonest peers by color.
2. Simulate a series of 100 join operation for $k = 5$ of 20 dishonest and 80 honest peers.
3. Now, simulate a rejoin attack to the first 5 regions of additional 5 dishonest peers. For this, repeatedly perform join and leave operations until all these 5 regions are occupied by a majority of dishonest peers.