Joint Multi-User Beamforming

1 Brief Description

The project proposes to implement the idea described in [1]. The paper describes signal processing techniques to achieve phase synchronization required to implement a zero-forcing beamformer. The goal of beamforming is to ensure that each client can decode its intended signal without interference. In order to achieve phase synchornization in a distributed fasion, elect one AP as the master and other(hereafter called slave) APs have to maintain required phase offset with respect to the lead AP.

2 Details

3 Hardware Details

- TX = X300 + 2 CBX(1200 - 6000MHz)

- RX = X300 + 2 WBX(50 - 2200 MHz)

- Operating Frequency = 1850MHz

4 Requirements

References

[1] H. Rahul, S. Kumar, and D. Katabi, "JMB: Scaling Wireless Capacity with User Demands," *SIGCOMM*, August 2011.