

AF-DF and MRC based Hybrid Relay Selection for Cooperative Communication

Nitesh Tyagi
tyaginitesh94@gmail.com

Shivangini Morya
shivangini.saxena@trubainstitute.ac.in

Abstract – Cooperative communications can be extremely proficient in combating fading multipath channels and enhance scope with complexity and cost.

Furthermore there is also possibility of improving performance of cooperative communication by optimal relay selection strategies. In basic cooperative communication network there are three type of devices, a source, a destination and a set of relay devices. These relay devices are responsible for forwarding the overheard information from source node to the destination node, thereby providing diversity gain at destination node. But practically not all available relays are efficient. Application of relay selection scheme with cooperative communication techniques not only removes communication overhead from destination node but also will enhance system performance.

In this regard, this paper is focused towards a hybrid relay selection scheme of cooperative network with cooperative non-regenerative (AF) and regenerative (DF) relaying technique. Bit Error Rate (BER) performance is compared using Rayleigh, Rician and Nakagami fading environment.

Keywords – AF, Cooperative Communication, DF, MIMO.