Delay Guaranteed Network Association for Mobile Machines in Heterogeneous Cloud Radio Access Network

ABSTRACT

- We consider two scenarios under the H-CRAN architecture with and without the assistance of the HPN in the network.

- By regarding APs/HPN in the H-CRAN as resources that allocated to mobile machines, a novel proactive network association concept is proposed, and then generalized from one-to-one to multiple-to-multiple case.

- With the assistance of Lyapunov optimization theory, effective bandwidth and capacity theory, we can prove that this proactive network association scheme can guarantee that the queueing delay performance.

EXISTING SYSTEM

- In a heterogeneous cloud radio access network, which consists of multiple access points providing smaller coverage and a high power node providing ubiquitous coverage, mobile machines can connect to multiple APs and a HPN by coordinated multi-point transmission concurrently to achieve ultra-reliable and low-latency communication.

- However, the current network association, which only focuses on switching between two base stations, may not be an efficient scheme in the H-CRAN.

PROPOSED SYSTEM

- In this paper, a proactive network association scheme that can provide multiple-to-multiple switches are proposed.

- We regard the network association as dynamic resource allocation in heterogeneous networks, with two different types of resources horizontal and vertical associations.

- This resource-allocation-based approach is quite different from conventional network association in cellular networks.

HARDWARE REQUIREMENTS

- Processor   -   Intel core i3
- RAM   -   2B
- Hard Disk   -   20 GB

SOFTWARE REQUIREMENTS

- Operating System : LINUX
- Tool : Network Simulator-2
- Front End : OTCL (Object Oriented Tool Command Language)

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