Abstract

The emergence of new-generation networking technologies and the wide-spread use of computers and wireless devices are providing opportunities for a new generation of powerful network systems. Recently, many researchers proposed several channel assignment (CA) algorithms in multi-radio multi-channel assignment (MR-MCA) wireless mesh networks (WMNs) to utilize available channels set in the network topology architecture. One of the key challenges faces MR-MCA is how to reduce the interferences to ensure the maximum throughput by improving the aggregate network capacity. There are several studies that have classified these CA algorithms into several approaches. The aim of this paper is to discuss the current channel assignment approaches in MR-MCA in wireless mesh networks and highlighting the state of the art for MR-MCA, which can help researchers and developers in the field of WMNs.
State of the Art, Channel Assignment Multi-Radio Multi-Channel in Wireless Mesh Network

References

- Tran Minh, T., G. Hong Yong, and S. Park Jeong. A load aware hybrid channel assignment for Multi-radio Wireless Mesh Network. in Optical Internet (COIN), 2010 9th International Conference on. 2010.
- Luong, T.T., et al. Efficient channel assignment and routing protocol for multiple channels multiple interfaces wireless mesh network: IEEE.
- Mirzaie, S., M.A. Sarram, and V. Derhami. Throughput enhancement via channel assignment algorithms within Wireless Mesh Networks. in Wireless Communication and Sensor Networks (WCSN), 2010 Sixth International Conference on. 2010.
- Lave, et al. Multi-channel anypath routing in wireless mesh networks. in GLOBECOM
Workshops (GC Wkshps), 2010 IEEE. 2010.
- Bahl, P., R. Chandra, and J. Dunagan, SSCH: slotted seeded channel hopping for
capacity improvement in IEEE 802.11 ad-hoc wireless networks, in Proceedings of the 10th
annual international conference on Mobile computing and networking. 2004, ACM: Philadelphia,
PA, USA. p. 216-230.
- Raniwala, A. and C. Tzi-cker. Evaluation of a wireless enterprise backbone network
- Raniwala, A. and C. Tzi-cker. Architecture and algorithms for an IEEE 802.11-based
multi-channel wireless mesh network. in INFOCOM 2005. 24th Annual Joint Conference of the
- Kyasanur, P. and N.H. Vaidya, Routing and link-layer protocols for multi-channel
multi-interface ad hoc wireless networks. ACM SIGMOBILE Mobile Computing and
- Kyasanur, P. and N.H. Vaidya. Routing and interface assignment in multi-channel
- Ramachandran, K.N., et al. Interference-Aware Channel Assignment in Multi-Radio
Wireless Mesh Networks. in INFOCOM 2006. 25th IEEE International Conference on Computer

Index Terms
Computer Science
Wireless

Keywords
Wireless Mesh Network Channel Assignment Interference Multi Channel Multi
Radio Throughput