Dynamic Bandwidth Allocation in Fiber-Wireless (FiWi) Networks

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Abstract : Fiber-Wireless (FiWi) networks are a promising candidate for future broadband access networks. These networks combine the optical network as the back end where different passive optical network (PON) technologies are realized and the wireless network as the front end where different wireless technologies are adopted, e.g. LTE, WiMAX, Wi-Fi, and Wireless Mesh Networks (WMNs). The convergence of both optical and wireless technologies requires designing architectures with robust efficient and effective bandwidth allocation schemes. Different bandwidth allocation algorithms have been proposed in FiWi networks aiming to enhance the different segments of FiWi networks including wireless and optical subnetworks. In this survey, we focus on the differentiating between the different bandwidth allocation algorithms according to their enhancement segment of FiWi networks. We classify these techniques into wireless, optical and Hybrid bandwidth allocation techniques.