

ON-DEMAND CHANNEL RESERVATION SCHEME FOR COMMON TRAFFIC IN WIRELESS MESH NETWORKS

TECHNOLOGY DESCRIPTION

This technology is a wireless mesh networks (WMNs) which composed of mesh routers that collect and relay the traffic generated by mesh clients.

TECHNOLOGY FEATURES

This technology is stationary and equipped with multiple radio interfaces whereas mesh clients are mobile. One or more mesh routers provide the connectivity to other networks such as internet excess. There are two types of traffic that pass through the mesh router to the intended destination namely internet and local traffic. These two traffics will pass through the back bone nodes to reach the destination. This technology able to outperform the existing routing protocol by showing 30% higher throughput and 50% production in End-to-End delay. A new routing algorithm can be integrated to the existing routing device without any hardware changes. The new algorithm enhances the back bone capacity.

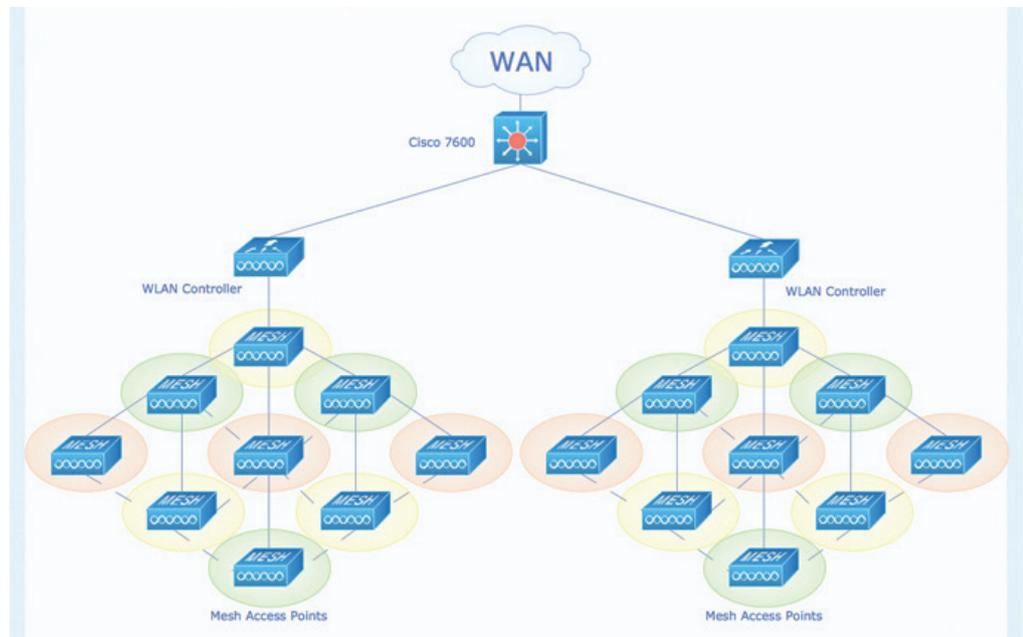
ADVANTAGES

- Easy development
- No hardware changes required
- Less transmission time
- Compatible with the standard reactive routing protocol

INDUSTRY OVERVIEW

Prospects: Wireless network & equipment provider

Similar to the global scenario, Malaysian wireless technology industry is expanding rapidly due to increased demand for convenient wireless connectivity. In 2012, there was more than 18 million internet subscribers in Malaysia, holding more than 60% of the population. It is estimated to reach 25 million subscribers in the next three years according to The Economic Report 2013/2014. This encouraging growth trend has continued, and most of the internet subscribers were eyeing for high speed broadband infrastructure in the near future. For this reason, Wireless Mesh Networks (WMNs) technology is expected to gain interest of various end-users including residential customers, enterprises, utilities, government, defense, and transportation. In terms of market competition, the current key players in the global market include Motorola Solutions, Inc., Tropos Networks, Inc., and Ruckus Wireless, among others. The market of wireless mesh networks has rapidly growth in the region of North America as they have large base of WLAN and Wi-Fi networks, while Asia pacific and Europe are expecting growth in demand of wireless mesh networks.



Prof. Dr. Mohamed Othman
 Faculty of Computer Science and Information Technology
 mothman@upm.edu.my