IEEE P802.11  
Wireless LANs

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| Proxy ARP comment resolution | | | | |
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| Author(s): | | | | |
| Name | Affiliation | Address | Phone | email |
| Gabor Bajko | Mediatek |  |  | gabor.bajko@mediatek.com |
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Abstract

This document provides resolution for CID#3209:



**TGmc Editor: modify section 10.24.14 as suggested below:**

**4.3.16.13 Proxy ARP**

The Proxy ARP capability enables an AP to indicate that the non-AP STA does not receive ARP frames, other than ARP announcements or Neighbour Advertisements, from other non-AP STAs or from outside the BSS.

**10.24.14 Proxy ARP (including Proxy Neighbor Discovery) service**

Implementation of the Proxy ARP Service is optional for a WNM STA. A STA that implements the Proxy ARP Service has dot11ProxyARPImplemented set to true. When dot11ProxyARPImplemented is true, dot11WirelessManagementImplemented shall be true. When dot11ProxyARPActivated is true, the Proxy ARP Service bit in the Extended Capabilities field shall be set to 1 to indicate that the AP supports the Proxy ARP Service. When dot11ProxyARPActivated is false, the Proxy ARP Service bit shall be set to 0 to indicate that the AP does not support the Proxy ARP Service.

When the AP sets the Proxy ARP field to 1 in the Extended Capabilities element, the AP shall maintain a Hardware Address to Internet Address mapping for each associated station, and shall update the mapping when the Internet Address of the associated station changes. When the IPv4 address being resolved in the ARP request packet is used by a non-AP STA currently associated to the BSS, the Proxy ARP service shall respond on behalf of the STA to an ARP request (IETF RFC826 and IETF RFC 925) or an ARP Probe (IETF RFC 5227).

When an AP receives an ARP Announcement (IETF RFC 5227) from a STA currently associated to the BSS, the AP may update its Hardware to Internet Address mapping. When the received ARP announcement from an associated STA does not result in an update to the mapping table, the AP shall not send out an ARP announcement to the BSS.

When the AP updates its Hardware to Internet Address mapping table, it shall send out an ARP announcement to the BSS on behalf of the STA whose address has changed.

When an AP receives an ARP Request from one associated STA or from the DS with a Target IP Address that corresponds to a second associated STA, the AP shall insert the second STA MAC address as the Sender’s MAC Address in the ARP Response packet.

When an IPv6 address is being resolved, the Proxy Neighbor Discovery service shall respond with a Neighbor Advertisement message (Section 4.4, IETF RFC 4861) on behalf of an associated STA to an Internet Control Message Protocol version 6 (ICMPv6) Neighbor Solicitation message (Section 4.3, IETF RFC 4861).

When an AP receives an Unsolicited Neighbor Advertisement (section 7.2.6, IETF RFC 4861) message from a STA currently associated to the BSS, the AP may update its Hardware to Internet Address mapping. When the received unsolicited Neighbour Advertisement message from an associated STA does not result in an update to the mapping table, the AP shall not send out an unsolicited Neighbour Advertisement message to the BSS.

When the AP updates its Hardware to Internet Address mapping table, it shall send out an unsolicited Neighbour Advertisement message to the BSS on behalf of the STA whose address has changed.